

1 U.S. COMMODITY FUTURES TRADING COMMISSION (CFTC)

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4 CFTC STAFF ROUNDTABLE ON NON-INTERMEDIATION

5

6 Wednesday, May 25, 2022

7 9:30 a.m.

8

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10

11 BEFORE:

12 Rostin Behnam, Chairman

13 Kristin N. Johnson, Commissioner

14 Christy Goldsmith Romero

15 Summer K. Mersinger

16 Caroline D. Pham

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19

20 U.S. Commodity Futures Trading Commission

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1 P R O C E E D I N G S

2 CHAIRMAN BEHNAM: Good morning, everyone. I
3 think it goes without saying that it's really wonderful
4 to see everyone here after a couple of years, breathe
5 some air and life into this building. Important issues.
6 But the Commission here, we are going to be in listen
7 mode.

8 We really welcome and appreciate everyone
9 coming to town. I know a lot of you traveled. But it
10 means a lot to us. As we know, the staff is going to
11 run this discussion. A special thanks to Clark and, of
12 course, Robert Steigerwald for moderating the
13 discussion.

14 So we're going to have a good day. Please,
15 everyone, we're going to be respectful of everyone's
16 opinions and keep things moving. A lot of discussion, a
17 lot of issues to cover, but I think we should be able to
18 have a really robust conversation.

19 So, with that, I'm going to give a couple of
20 seconds to my colleagues and start off with Commissioner
21 Johnson.

22 COMMISSIONER JOHNSON: Thanks so much, Chair.

1 Good morning. I want to welcome each of you,
2 established friends, new friends, and first-time
3 visitors to the CFTC. It is a pleasure to be here for
4 today's roundtable. We have a very full list of topics.
5 So I will be brief. I have been allocated a few
6 seconds.

7 I have met with many of you in recent weeks in
8 my office about the remarkable changes taking place in
9 our markets in the transformative impact of non-
10 intermediation. With today's roundtable, we're taking a
11 crucial step forward toward finetuning our understanding
12 of these critical questions. I have high hopes that
13 today's discussion, an introduction to important issues,
14 will enhance and enrich our understanding of the issues
15 presented, concerns raised, and opportunities for market
16 participants and customers in our markets.

17 I look forward to meeting any of you that I
18 haven't had the opportunity to meet. Our office doors
19 are open, and we welcome you. Thank you.

20 COMMISSIONER GOLDSMITH ROMERO: Good morning,
21 and welcome to the Commission. I also want to hear from
22 a wide range of views from the public and market

1 participants as the Commission considers issues that are
2 related to disintermediation. I want to thank the
3 chairman for bringing this forum together. I want to
4 thank the participants as well as the Commission staff.
5 I look forward to the discussion today. As Commissioner
6 Johnson said, a number of you have already met with me,
7 and I look forward to further engagement on these
8 issues.

9 COMMISSIONER MERSINGER: Good morning. I just
10 want to thank everyone for being here. I know you all
11 have day jobs, and I really appreciate taking time out
12 of your day to come and help us learn a little bit more.
13 And, hopefully, we walk away with a better understanding
14 of some of the decisions we have before us. Thank you.

15 COMMISSIONER PHAM: Good morning, everybody.
16 Thank you so much for coming here. I think today just
17 really exemplifies one of the proudest traditions of the
18 CFTC, which is to have the public come, market
19 participants come and talk to us about issues that are
20 before the Commission and, really, sharing their
21 expertise and their experience with us. So I thank the
22 staff for hosting this roundtable, and I thank all of

1 the market participants, who have traveled far and wide
2 to come and be here with us today so that we can have
3 the benefit of your expertise. Thank you.

4 CHAIRMAN BEHNAM: Thanks, everyone. And
5 before I hand it over to Clark, always a special thanks
6 to Alicia Lewis. She put us all together here. So
7 thanks to her.

8 And, Clark, I am going to hand it over to you.

9 MR. HUTCHISON: Good morning, everyone, I know
10 many of the people in this room. I don't know everyone.
11 So to the people I don't know, I hope I get to shake
12 your hands if I haven't already. And, of course, a
13 hearty welcome to everyone for the participation today.
14 As the commissioners have said and the chairman, we
15 really appreciate what I consider to be the experts in
16 this field coming today to uncover what it is that non-
17 intermediate clearing would be.

18 So I'm going to now just go to some practical
19 things to consider for the day. And then I am going to
20 turn it over to our moderator, Robert. So for practical
21 things, as a public service, we have Wi-Fi available.
22 And there should be cards on the table with the agenda

1 so that you know the Wi-Fi information.

2 Second, importantly, the restrooms are behind
3 you back there. So leave the room, turn to the right,
4 and you'll be able to find them should you need them.

5 We have tea and coffee in the back, as I think
6 many of you just discovered, as well as water.

7 The microphones, I think they're pretty self-
8 explanatory, but I think, as you can see, the red light
9 is on. And I'm speaking. There is a button to push if
10 you need it. Please lean into the mike as you speak so
11 we can all hear you. This meeting is simultaneously
12 webcast, and it's important that you keep your
13 microphone on and lean into your microphone so can be
14 properly heard.

15 If you would like to be recognized during the
16 discussion today, please raise your card like this or
17 hold it like this so that Robert can see it. And if
18 Robert doesn't, Alicia or myself or the chairman will
19 help Robert out in seeing things that he might not be
20 able to see.

21 Virtual participants. There should be an
22 ability for you to raise your hand virtually. And, just

1 so virtual participants know, you are on screens right
2 in front of the chairman and Robert and I. So we see
3 you very, very clearly. And so if you just want to also
4 go like this and wave your hand, I think it will
5 distract us. And we'll find you if you find that we
6 haven't seen it otherwise.

7 Abbreviations. I know that acronyms are
8 plentiful in this space. Not all of us know all of the
9 acronyms that everyone else knows. So if there's an
10 acronym that you use, if you wouldn't mind saying what
11 it is? And, then, I think we'll hopefully remember what
12 that means for the rest of the discussion, although I do
13 think we all know FCM. All right.

14 There will be a transcript of this roundtable,
15 which will be posted on our website.

16 And, finally, we're trying to limit remarks
17 per speaker for two or three minutes so we have a chance
18 for everyone to speak.

19 Now, we also have backbenchers and trying to
20 thread a needle with backbenchers. Clearly,
21 backbenchers are here because they're knowledgeable and
22 important. And the first idea would be if a backbencher

1 has something to contribute, perhaps a note can be
2 passed to the people around the table so we don't have a
3 lot of logistical getting up and getting down and
4 confusing things. On the other hand, there are unique
5 probably sets of knowledge that backbenchers have as
6 compared to maybe people at the table for certain
7 topics. And if we need to have a switcheroo, so to
8 speak, please let's try not to have that cause
9 commotion. But a switcheroo I think is allowable, but
10 let's try to keep that to a minimum if we can. What we
11 want is robust participation and certainly expert
12 participation. So I think you get the needle that we
13 are trying to thread. If you will do that, please?

14 So, with that, I am going to turn over from
15 logistics to the importance of the day. So sitting to
16 my right happens to be a very good and old friend of
17 mine, Robert Steigerwald. He also happens to be a good
18 and old friend of the CFTC, having hosted in the Chicago
19 Fed roundtables where we have participated as a CFTC,
20 but, also, he's been a very good contributing member of
21 our MRAC Committee. So, with that, I want to introduce
22 Robert Steigerwald, my friend, senior policy advisor at

1 the Chicago Fed, to kick off the roundtable for today.

2 So, Robert, welcome, and thank you.

3 MR. STEIGERWALD: Thank you very much, Clark.

4 It's a pleasure to be here with you today. I will share
5 with you that I stuffed myself into this suit today for
6 the first time in more than two years. It was a great
7 joy to see what fit and what did not. And I'm hopeful
8 that that will be the worst that happens to me during
9 the day today.

10 Thank you, Chair Behnam and commissioners, for
11 the invitation to play a role in facilitating this
12 important conversation. I will also share with you that
13 over the past weeks and months, I have had some
14 trepidation about the fact that I said yes when the
15 chair called me. I have written notes to myself to
16 learn to say no more often in the future.

17 I was a bit worried about the fierce passions
18 and competitive interests that the topic we will address
19 today have evoked in this community. But as time has
20 passed, I will tell you that I have the sense today that
21 this is exactly the right time to have a conversation
22 about the important ways in which technology is

1 reshaping our world. The world of social media and
2 education have been and are continuing to be reshaped by
3 these new technologies. And now we are prepared to
4 think about how fundamental change may or may not come
5 to core market infrastructures upon which the safety and
6 soundness of our markets clearly depend.

7 I want to thank Alicia and all of the CFTC
8 staff for helping me to prepare for this roundtable
9 discussion.

10 A few words about my role today. My intent is
11 to try to facilitate a discussion, a conversation of the
12 costs and benefits associated with emerging models of
13 central clearing. My objective and I think the
14 objective of the roundtable is not to solve problems, I
15 think that highly unlikely in the time available to us
16 and the difficulty and complexity of the issues, but,
17 rather, to promote a better understanding of the issues
18 at stake to help us in the course ahead of us to make
19 decisions, to come to conclusions about how we wish
20 market infrastructure to evolve in the coming days.

21 I will tell you that my own conception of the
22 moderator's role is extremely limited. I hope to guide

1 the conversation. And I plan to do so in a way that I
2 think will be novel. It's more Chicago style, I think,
3 than Washington. I'm going to play Professor Kingsfield
4 from The Paper Chase for any of you old enough to
5 remember that law school horror tale that terrified
6 generations of law students and really try to engage
7 with you. To do so, I will depart a bit from the usual
8 protocol relating to the signaling of your interest in
9 joining the conversation. I will certainly be on the
10 lookout for your interest in joining the discussion at
11 any point. And so please do use your name tents to
12 signal your interest. But I will reserve as a sort of
13 moderator's prerogative the right to try to guide the
14 conversation in a way that I think is helpful to the
15 overall discussion at hand while at the same time
16 looking to find an opportunity to give each of you an
17 opportunity to speak and to make sure that the
18 conversation is informed by a variety of perspectives.
19 My colleagues will find me or throw things at me or
20 whatever it takes to make sure that I am seeing you and
21 attending to you and offering you those opportunities.
22 Before I go into any further remarks, I

1 apologize, but it's incumbent upon me to remind you that
2 my remarks today are solely my own and not those of the
3 Federal Reserve Bank of Chicago or the Federal Reserve
4 System. In fact, I hope not to be making very many
5 important remarks at all as you are the experts that we
6 want to hear from. I would not feel comfortable,
7 though, if I didn't make at least a slight attempt to
8 shape the conversation.

9 As many of you know, I work in the Economic
10 Research Department at the Chicago Fed. And so I'm very
11 influenced by economic thinking in issues or relation to
12 issues concerning financial regulation and market
13 infrastructure. And so I'm reminded naturally of the
14 famous remark or construction of change in market
15 institutions offered by the Austrian economist Joseph
16 Schumpeter at the end of the second world war. He
17 coined the famous term "creative destruction" and said
18 it was the essential fact of capitalism.

19 More recently, economic commentators have
20 referred to this concept of creative destruction and
21 noted that it is a fragile process, exposed, as it is,
22 to political shortsightedness, inadequate contractual

1 environments, and financial underdevelopment. I take
2 from this a suggestion that we think not only about the
3 creative but the destructive aspects of change as we
4 consider the issues before us today for discussion.

5 At this point, I would like to introduce my
6 good friend and a very good friend over many years of
7 the financial markets group at the Federal Reserve Bank
8 of Chicago: Dr. David Murphy. David is a visiting
9 professor in the law school at the London School of
10 Economics and Political Science. He has published
11 extensively on derivatives regulation, central clearing,
12 and prudential policy, and is the author of a recent
13 text titled, "Derivatives Regulation: Rules and
14 Reasoning from Lehman to Covid."

15 David I think can be useful in setting a
16 foundation for the conversation we're about to have.
17 And after David's remarks, I will come back in and
18 explain to you how I would like to start the roundtable
19 discussion proper.

20 David?

21 DR. MURPHY: Thank you very much, Robert. And
22 my thanks to the chairman and the commissioners for

1 their very kind invitation to speak and to Robert,
2 Alicia, and Clark, colleagues, for their peerless
3 organization, very much appreciated.

4 I'm afraid I have a disclaimer, too. I
5 apologize. I have consulted for a number of firms
6 around this table on various aspects we are going to
7 talk about today. But, as I'm sure will become clear in
8 two minutes or less, my views will definitely be my own,
9 rather than those of any particular organization,
10 including LSE.

11 So I don't want to talk about crypto. I want
12 to talk about the structure of clearing. And I think
13 it's important to bear in mind that clearing has
14 developed over a significant period of time. Something
15 recognizable as a CCP, central counterparty, was evident
16 on both sides of the Atlantic from roughly the 1860s
17 depending on exactly what your criteria are. And since
18 then developments have been incremental, evolutionary,
19 and very much driven by market participants in the
20 large. We've built this thing slowly, it's important to
21 bear in mind.

22 On some occasions, innovations were adopted

1 rather late and only after stress. As a great example
2 of this probably most of you have not had a huge amount
3 of exposure to the deep history, if you like, of these
4 markets, but one of the most important markets of the
5 mid-Nineteenth Century, possibly the most important
6 futures market, was Liverpool cotton. In that market,
7 there was a proposal for margin, a formal proposal from
8 a major clearing member, that the clearinghouse adopt
9 margin in 1861. By 1883, they still hadn't done it. At
10 that point, an American speculator, evil American
11 speculator, clearly, tried to corner the cotton futures
12 market, failed, failed with enormous debts. And, as a
13 result, 12 other brokering firms, members of the market,
14 failed at the same time. So there is a cover 12 event
15 in modern terminology. Liverpool learned the lesson for
16 this innovation margin was actually pretty important and
17 adopted it pretty soon thereafter. So that's an example
18 of failing to get with the modern trend.

19 On the flip side, 106 years later in New
20 Zealand, there was a clearinghouse of, well, many
21 things, but including the benchmark New Zealand
22 government bond future. Again, a large position was

1 acquired by a market participant. He was actually a
2 fraudster. He claimed these were client parts,
3 positions when they weren't. And when that went wrong
4 on him, he fled. He was actually arrested at Tumbridge
5 Wells Railway Station with a suitcase full of cash. So
6 it's an almost movie-worthy example.

7 But it turned out that that position was not
8 auctionable. There was a meeting overnight to try and
9 sort out the default management before the market
10 opened. It couldn't resolve it. And, as a result, the
11 contract was torn up. So that CCP's waterfall turned
12 out to be margin, then tear up. They had a significant
13 amount of default insurance, but that could not provide
14 capital in time. I mean, it wasn't funded. There was a
15 serious loss of confidence. The CCP needed to do
16 something fast so what it did was tear up.

17 So that's an example of something where a
18 waterfall looked as if it was innovative and modern but
19 turned out not to be. So you can get it wrong in both
20 ways, in other words. You can fail to innovate and, as
21 a result, get into trouble. You can innovate too
22 quickly or too riskily and get into trouble.

1 Technology is also really important in this
2 context because that makes new things possible. As
3 recently as 2005 -- and I apologize to colleague from
4 ISDA for quoting this number, but if you look at the
5 2006's operations benchmarking survey, nearly 20 percent
6 of credit derivatives trades in that year for market
7 participants had to be rebooked due to errors, now,
8 manual processes all over the place. There was no
9 standardization. There was no automatic flow. We've
10 come on a long way since then, ladies and gentlemen.
11 We've figured out how to make markets better, quicker,
12 and safer. And that's great.

13 So, given all of this context, I really
14 support the Commission's desire to have an open
15 conversation about the benefits, costs, and risks of the
16 new clearing model that technology has enabled. What I
17 see this as is a dialogue about what would make us feel
18 better about a clearinghouse in this space using this
19 mode and what would make us feel worse. This is not a
20 yes/no, I like it/I don't like it, conversation. This
21 is a this would help/this would make things worse or
22 add-risk-type conversation and exploring the design

1 space, figuring out what features of the engineering of
2 this model are good and what are less good is the
3 conversation I hope that we can have today.

4 Thank you very much for your time.

5 MR. STEIGERWALD: Thanks very much, David. I
6 hope that all of us found your remarks informative and
7 useful for purposes of today's conversation.

8 It also occurs to me that I should take note
9 of the speakers who will be joining us in this
10 conversation who are unable to be with us in person for
11 this day.

12 Dennis McLaughlin, welcome. Thank you for
13 taking time out of your day from the U.K. And I also
14 see Dimitri Karousos on the screen. Dimitri, I
15 understand you find yourself in a difficult situation
16 that prevents you from coming out of your cocoon for the
17 moment we hope everything works out well, and we look
18 forward to seeing you again in person very soon.

19 So now I'd just like to make a few remarks
20 about the agenda you have before you. I thank Alicia
21 and her staff for putting together a very detailed
22 outline of how the conversation is meant to proceed in

1 terms of timing and sequence and such.

2 You will note that I have not added any
3 thematic suggestions to the modules that are reflected
4 in the agenda. That's intentional because I'm hoping
5 that we will start a conversation and that it will be
6 self-continuing, so to speak, self-perpetuating.

7 In broad outline, what I hope to do is two
8 things: spend the first module or as long as is needed
9 or useful discussing what is this thing that we are
10 calling non-intermediated clearing. It seems to me,
11 certainly, it has taken me weeks and months to wrap my
12 head around what that means after many years of thinking
13 about traditional intermediated markets. So I think
14 it's incumbent upon us to understand a little better
15 what actually is this thing, what is at stake.

16 And in a second step, whenever it seems
17 appropriate to move to that step, I'd like for us to
18 then start thinking about the systemic and idiosyncratic
19 implications of this new thing once we have a better
20 sense of what it is.

21 So that's the only thematic guidance I have to
22 offer. If we rapidly reach a satisfactory understanding

1 of what non-intermediation and clearing means, we will
2 quickly move to a discussion of implications. And we
3 can conclude this meeting whenever it seems appropriate
4 to do so. The only controlling factor is your desire to
5 think through issues and share your perspectives with
6 us.

7 As you know, we prepared a list of stylized
8 facts that is meant to support a discussion today of a
9 hypothetical DCO, or derivatives clearing organization,
10 that we after very great effort trying to come up with
11 an appropriate name we have decided to call DMDCO. That
12 literally just means direct and margined DCO. I was
13 voting for new DCO, but that didn't seem to add the
14 sizzle that that DMDCO has. So there we are.

15 The game we are going to play here today --
16 and I assure you that I understand it is a game and we
17 will lapse in following the rules of the game from time
18 to time -- is that we are discussing this thing that has
19 no application before the CFTC. It is not meant to be a
20 real proposal of any sort. And, yet, of course, it is a
21 shadow version of a very real proposal. So we'll be
22 slipping back and forth across that borderline.

1 I don't know how comfortable that will be to
2 you. I studied philosophy at university. So this seems
3 like akin to counting angels on the heads of pins. So
4 it shouldn't be too difficult, I think.

5 No. So to be serious about it, I hope that we
6 will be informed by actual proposals that are in the
7 works but not obsess about particular details concerning
8 any one of those ventures but rather think more broadly
9 about the big issues. And I hope the stylized facts
10 will assist us in doing so.

11 So having gotten that far, so here's the un-
12 Washington thing about it. I'm going to move around the
13 room. And I'm going to try to engage with you in a
14 conversation.

15 So, to start the conversation, I'd like for us
16 to think about -- and I know you can't read this in the
17 back of the room, but it simply says non-intermediation
18 and inverted commas in clearing. And, as I said, our
19 first objective for today is to understand what that
20 might mean.

21 I'm relocating myself into the bullring. And
22 I'm going to ask Mr. Bankman-Fried. I apologize. I had

1 hoped to have the opportunity to meet you before the
2 meeting, not to put you on the spot or anything. And
3 playing this game that we're talking about, DMDCO, would
4 you help us understand what the key features of a non-
5 intermediated model of clearing are?

6 MR. BANKMAN-FRIED: Yes. So the first thing
7 I'll say, just on the what even is non-intermediated
8 clearing, is that there may or may not be intermediaries
9 in such a system. You could absolutely imagine and we
10 do envision a world in which there is collateral,
11 initial margin held directly at the clearinghouse,
12 posted prior to positions being formed, the risk model
13 of the clearinghouse, but in which there still could be
14 intermediaries sitting between the clearinghouse and
15 customers who want to access it in that way.

16 But the core feature of it that I would say is
17 that the risk engine, the risk model, and the collateral
18 is all at the central counterparty. And there are
19 advantages and disadvantage to such a thing. I think
20 there are a lot of advantages to, at least in a lot of
21 systems. Basically, the way I envision it is margin is
22 posted with the central counterparty, with the DCO,

1 prior to positions being put on. That margin is treated
2 as the risk or a Z collateral for all positions, rather
3 than credit or handshakes or anything like that. And
4 the DCO is effectively running the risk model and margin
5 call model based solely on the collateral held with the
6 clearinghouse.

7 And what that enables, then, is in theory, any
8 type of participant could go straight to the DCO, to
9 DMDCO, through the DCM, obviously, for trading, with
10 their collateral posted with the DCO. Their order is
11 going straight there, again possibly through whatever
12 interface or intermediary they feel comfortable
13 accessing it from, but without those intermediaries
14 needing to serve as the first in the line of fire from a
15 risk perspective as the mutualization and without them
16 needing to make credit assessments or things like that
17 because the collateral is posted directly to the DCO.
18 That sort of is how I at least envision it.

19 MR. STEIGERWALD: Would I be correct in
20 thinking that a model of the sort you just described is
21 uniquely suited? Everything here should be taken in
22 brackets -- right? -- as potentially assuming the

1 integrity of the design and the implementation and all
2 of those important details but uniquely suited to a
3 market that operates in continuous time. Is that an
4 essential element or foundation for the risk model that
5 you are describing?

6 MR. BANKMAN-FRIED: I don't think it's an
7 essential one, although I think it's a valuable one.
8 And maybe to give, for instance, a hypothetical example,
9 let's pretend you had an asset class that traded 24/5
10 instead of 24/7, so an asset class that closed over
11 weekends. Right? That would obviously mean that in
12 some sense, you could have a real-time risk model, but,
13 in other sense, your risk model can't really be doing
14 anything at 3 p.m. on a Saturday because there's no new
15 market data. If there's no markets, there's no
16 liquidity.

17 This can still work, but the way that I would
18 envision that is, effectively, you have this big
19 volatility cliff over the weekend. Right? And you can
20 have a model for this volatility cliff the same way you
21 could have a model for anything else. And you say,
22 look, how much could markets in an extreme but plausible

1 scenario move over the weekends?

2 Let's say 15 percent. Right? I'm making this
3 up. Right? And, then, that would mean, well, over
4 weekends, such a model would need to require an
5 additional 15 percent margin from all participants.

6 So I think what I would say is to the extent
7 that the model is not operating 24/7 in real time, you
8 need to be whenever there are gaps in it running adding
9 an initial margin to cover the potential volatility over
10 that period, but I do think that it is a model which
11 functions very well in real-time environments given that
12 it is a single central counterparty with all the margin
13 with the risk engine that can operate in 24/7 without
14 needing communication.

15 MR. STEIGERWALD: Thank you.

16 So, Mr. Downey, this seems like a lot of
17 interesting things on the table there. What's your
18 reaction so far to the conception of a highly automated
19 risk and default management arrangement operating, in
20 particular, though not necessarily, in relation to
21 markets that trade continuously without the intervention
22 of an intermediary as a necessary feature of the model?

1 MR. DOWNEY: Yes. Thank you.

2 So I think I would start off with, obviously,
3 I want to thank everyone for us having the opportunity
4 to be here and having this conversation. It's an
5 important one on potential alternative market structure.
6 So we appreciate that and look forward to more dialogue.

7 But in regard to the model as described, I
8 think there are a couple of assumptions that are being
9 made. And one is essentially that an algorithm can
10 replace capital. I know there's been some conversations
11 previously about what capital is and what capital means.
12 And I want to clarify that margin and capital are two
13 completely different things in the world of financial
14 markets. I think in a layperson's, the way that they
15 would envision this, they think they potentially are the
16 same thing, but they're actually complements, not
17 substitutes.

18 When you deposit margin, whether you're an
19 FCM, whether you're a direct market participant in some
20 other sort of way, that margin is no longer capital.
21 And that margin, by definition, is designed to cover 99
22 percent to 99.5 depending on the way the margin is

1 structured of market moves. In other words, it's not
2 designed to cover tail risk.

3 In the market structure that exists today,
4 that tail risk is covered in a couple of different ways.
5 One is by virtue of the capital that is being held at
6 the participants, the direct participants, in the
7 market. And that capital is triggered off of margin and
8 exposure depending on the way you look at it. It's
9 triggered off of margin in the CFTC world, where FCMs
10 have to hold 8 percent of margin in capital. And that
11 capital is there to the extent that the margin is not
12 sufficient in the case of a default. And in bank
13 capital terms, it's a function of the potential future
14 exposure.

15 So I think the challenge of the model as
16 described is essentially it places reliance on margin,
17 and it eliminates the rest of the capital in the system
18 and places reliance on an algorithm. And I would just
19 point out that we've seen that movie before. In fact,
20 we saw it very recently with the algorithmic stablecoin
21 Terra, where there's an assumption that the algorithm
22 could make up for the lack of reserves.

1 And so the concern, at least from the
2 perspective of the world today versus this proposal, is
3 that there's insufficient capital in the system. And an
4 algorithm itself can't make up for that.

5 MR. STEIGERWALD: So taking all of that as you
6 say, I wonder how you see the traditional model of
7 intermediation working into a market that operates in
8 continuous time. Is it adaptable enough to deal with
9 situations where sharp market movements may occur while
10 an account holder or clearing member is not operational
11 in its home base? Is the traditional model infinitely
12 adaptable or do we need some kinds of technological
13 enhancements to make the system work?

14 MR. DOWNEY: I think that's a good question
15 and the reason that we're here discussing it. I think
16 we view the traditional model that exists today with all
17 of the resources that are available as quite adaptive.

18 And this performed in many different
19 circumstances. If you think about the 2016 election,
20 there's a lot of volatility overnight. If you think
21 about in June of 2016, the U.K.'s election to depart the
22 E.U., there was a lot of volatility overnight for U.S.

1 markets.

2 In both of those circumstances, the market
3 performed quite well. That doesn't mean that there
4 aren't technological innovations that could continue to
5 improve that, but I don't think we've observed as of
6 today any sort of market moves in overnight hours that
7 would suggest that the model doesn't work in the world
8 that we live in today.

9 MR. STEIGERWALD: So let me get the
10 intermediaries into the conversation. I know you've
11 been waiting for this moment, Mariam.

12 By the way, I'm avoiding this Terra incognita
13 that I'm not supposed to step into. So if it seems that
14 I'm taking the long way around, it's for good reason.

15 But let me come into this territory. So,
16 Mariam, what do you think about what you've heard so
17 far? The conversation today is about non-
18 intermediation. Do you regard that more as a threat or
19 as an opportunity to your firm?

20 MS. RAFI: So I think our primary interest is
21 in customer protection and stability and soundness of
22 markets. One of the things that we've been looking at

1 very carefully with the proposal is how the controls in
2 place are different than those provided by a traditional
3 FCM. So one of the first things that we're very
4 concerned about is customer protection.

5 Obviously, there's a very well-documented
6 bankruptcy regime as it relates to FCMs and protection
7 of customer collateral in the default for an FCM, which
8 doesn't exist in a direct clearing model as it relates
9 to DCOs. You might have contractual protections, but
10 those are different than the protections in a bankruptcy
11 scenario. And I think that is an incredibly important
12 point that needs to be examined as you look at customers
13 in the model.

14 I think, further, FCMs perform a variety of
15 control mechanisms, such as customer disclosures and
16 ongoing information provision, Bank Secrecy Act
17 requirements around AML and KYC that are different than
18 are required for a DCO.

19 And, then, finally, we act as an additional
20 check in looking at our customers' creditworthiness and
21 their ability to service the obligations that we're
22 putting through a DCO. And then we stand behind their

1 commitments. So none of that really exists in the same
2 level in this model.

3 Further, the requirement to have an algorithm
4 automatically liquidate client positions, particularly
5 if you have a situation where it is a 24/7/365 model,
6 where you can't post margin in real time, exposes people
7 further, the questions around customer protection for
8 additional margin posted, which would serve as a buffer
9 to the automatic liquidation, could be a disincentive
10 for people to post additional margins.

11 So there are a number of concerns that I think
12 raise safety and soundness concerns.

13 MR. STEIGERWALD: Thank you.

14 So I'm reminded that Dr. Murphy and I had a
15 conversation at dinner last evening. And I was thinking
16 about what seemed a historical curiosity to me that the
17 king, the king of England, at least, and other
18 principalities in Europe, in, oh, about 1200, 13, 14, 15
19 hundred, A.D., got to decide when markets would be held.
20 And there was a select day or week, perhaps a month,
21 each quarter when a market would take place. And, of
22 course, that was necessary to generate sufficient

1 liquidity for trading to take place. The buyers and the
2 sellers had to be in the same place at the same time.
3 They had to have monetary instruments of some sort with
4 which to trade.

5 But the idea of a market operating during a
6 business week was unknown at that time. And the idea of
7 markets operating in continuous time 24 hours a day,
8 seven days a week, 365 days of the year was
9 unimaginable.

10 So I wonder, Mariam. Again, I hear on one
11 side of the room a preference for vanilla and on this
12 side of the room a preference for chocolate. And I'm
13 not quite sure how to think about changes that are
14 happening regardless of your preferences that will
15 reshape the nature of intermediation, even if it's
16 there. I wonder how you think about the technological
17 challenge of changes in underlying markets of the sort
18 we're talking about.

19 MS. RAFI: Yes. Look, there's no question
20 that markets are getting more digitized, more
21 electronified. And the technology that underlies not
22 only the DCO systems but the FCM systems needs to keep

1 up with that as well. And that's something that we're
2 fully cognizant of and working on.

3 We do have intraday risk management systems as
4 well. So that if there are major market moves, we call
5 clients for collateral intraday. So that exists. I
6 don't think that the two are mutually different. I
7 think what we're concerned about is if you move to a new
8 model, that the financial resources and capitalization
9 that underscores the existing model aren't degraded
10 because of an assumption that the technology can replace
11 that.

12 MR. STEIGERWALD: So would I be correct in
13 characterizing that as an argument for substitution,
14 replacement, of some equivalent assurance of safety and
15 soundness, not a wholesale elimination of the basic
16 principles we like to see embedded in the construction
17 of our market infrastructures?

18 MS. RAFI: Yes. I think you need to have a
19 level playing field. So the obligations and controls
20 that exist in the existing marketplace should also be
21 there for any new market structure.

22 MR. STEIGERWALD: Right.

1 MS. RAFI: And, now, I mean, that's very
2 important. I appreciate that you have brought us to the
3 point where we get the competitive angle out into the
4 conversation as well because it's not just a question of
5 technical risk management, engineering. It is that, but
6 there are important competitive concerns at stake, as
7 there always are with creative destruction scenarios.

8 MR. STEIGERWALD: Tom, I feel comfortable down
9 at this end of the room. I don't know. It has
10 something to do with the hair.

11 You've been around. You've seen a lot of
12 changes. I wonder. How do you feel about the
13 conversation as it's progressed so far today?

14 MR. WIPF: Well, I think when you talk about
15 vanilla ICE cream and chocolate ICE cream, there may be
16 strawberry ICE cream you want to find today as well. So
17 I suspect that when we when we think about these things,
18 I think the way to take this conversation to a really
19 constructive place is to think about things that I think
20 we can all agree on, which is that reduction in
21 settlement cycles reduces potential exposure. I think
22 that's hard to argue against.

1 As we think about this stuff, we're really
2 also digging in in terms of taking this down to the
3 plumbing. Right? And we think about market structure.
4 And I think outside rooms like these, there's a lot of I
5 think interchangeability of an exchange versus a
6 clearinghouse so when we when we think about changes in
7 market structure, the question then we always can get
8 to, can the clearing and settlement infrastructures
9 support those changes in market structure or what we
10 used to call below the blotter? When we think about
11 separating that out, I think the conversation will
12 always find its way back to, what is the plumbing?
13 We're looking at, obviously, very new plumbing here.
14 And then the question is, how will that play out during
15 business as usual, I think which we would understand, or
16 during many of these stress periods that I think we've
17 talked about? How does that work out? How do the storm
18 drains work?

19 And I think if we can separate the two topics
20 of market structure changes and clearing and settlement
21 changes, we've seen this. We've seen this with high-
22 frequency trading. We've seen this in a lot of places

1 where the speed that's taking place at the trade level
2 maybe oftentimes will outpace that. So I think the
3 conversation would be let's get right to the plumbing,
4 which is lay these, both models, out here end to end and
5 think about how they play out over periods and then I
6 think take that to the next order of business, which is
7 the "What thens?" during a stress period.

8 MR. STEIGERWALD: Thank you.

9 So would I be correct in understanding you to
10 be saying that there are changes underway that may have
11 specific application and require specific tailoring to
12 particular markets but that there's a broader emergence
13 a broader phenomenon occurring that we have to think
14 about the costs and benefits of? In other words, I
15 thought you described this as a market structure issue,
16 which I very much agree with.

17 MR. WIPF: Right.

18 MR. STEIGERWALD: You see, I did have a
19 statement, after all.

20 -- rather than a crypto issue.

21 MR. WIPF: Right.

22 MR. STEIGERWALD: Is that a correct

1 understanding?

2 MR. WIPF: I think that's right. I think,
3 obviously, when we again put these models side by side,
4 think about how that plumbing works. And, then, you can
5 think about how different assets will perform, but,
6 frankly, when you look at it, it's how will this work
7 across a period of stress, either model? What is the
8 value of the cushion, the cushions that exist, and what
9 is the value of some of the actions that would exist in
10 the proposed model?

11 So I think, really, digging in, again, the
12 constructive use I think of this day will be to get down
13 to those plumbing issues and think about what
14 enhancements are there because if we kind of take this
15 back up to just the overall market structure, that means
16 that sort of the trading piece of this. I think we'll
17 lose sight of the fact that we have to really just dig
18 down into the plumbing here today.

19 MR. STEIGERWALD: Thank you.

20 So I'd like to call on my good friend Dennis
21 McLaughlin.

22 Dennis, I can't see you yet, but I think

1 you'll be -- there we are, coming up on the screen.
2 Dennis, I think you may take a rather different view.
3 You may emphasize the importance of the technical
4 features, the what I call integrity because I haven't
5 managed to figure out a better term for the particular
6 asset that is proposed for purposes of this non-
7 intermediated model of clearing.

8 I wonder whether you'd share with us your
9 views about the broader market structure issues as well
10 as any thoughts you have about the application of that
11 market structure to crypto assets, in particular.

12 MR. McLAUGHLIN: Thank you, Robert. And
13 thanks to the Commissioner Behnam and the other
14 commissioners of the CFTC for organizing this.

15 I have no conflicts to report. I have no dog
16 in this fight. So I'm not going to comment on
17 intermediation versus non-intermediation, which is best.
18 All I can say, though, is that we're using the same
19 words to mean different things. And the old hearing and
20 settling and exchanges for the old-fashioned non-crypto
21 assets ultimately come down to a legal concept of
22 settlement finality and close out many, which are

1 absolutely the key to making sure the old system works.

2 Unfortunately, there is no such thing as legal

3 settlements for crypto assets. What it is, is a kind of

4 probabilistic notion of settlement where enough

5 consensus has occurred in the blockchain so that there

6 is a very low probability that the crypto asset has not

7 settled. And that's where you get into problems because

8 what's in your wallet, can I use it as a hedge position,

9 for example, if I'm hedging crypto against futures.

10 Well, if you just stay within the futures world, we're

11 okay because we can deal with that, a piece of paper,

12 but the minute we combine it with crypto and get this

13 wallet which has both kind of assets in there, the word

14 "settlement" means something very, very different. So

15 you could be in a situation where one leg is settled and

16 the other leg is probably settled. And that has

17 implications that reverberate around the system.

18 So as we saw about a year ago, although we're

19 talking about trades and valuing portfolios in literally

20 milliseconds, the actual settlement, probabilistic

21 settlement, didn't become regarded as being settled in

22 the industry for a number of days. The average

1 settlement time was close to three days. That's the
2 average. So there were many crypto trades that were not
3 settling and that had extended out days and even weeks.

4 So that is a big issue to deal with where you
5 have the overlay of very, very fast valuations with an
6 asset which doesn't really settle in the old sense of
7 the word. So there's no I think legal framework to deal
8 with that. And that to me needs to be thought through a
9 little bit better.

10 And the last thing I'd say is that when you're
11 trading in microseconds, it sounds fantastic, and when
12 you're valuing in microseconds, but, as Tom said, we've
13 seen this movie before. Things happen that you're not
14 prepared for when algorithms start interacting with each
15 other. We get flash crashes.

16 Now, if you have a flash crash and you're
17 valuing these portfolios so frequently and closing them
18 out, what happens during a bit of a flash crash? Well,
19 we're not really sure many times what's causing the
20 flash crash, but we could be in a situation where we
21 automatically just throw all of these investors into the
22 backstop liquidity providers that suddenly have an

1 avalanche coming in there. And it's all happening in a
2 very, very short timeframe because it's all automatic.

3 So I do think we need to think about some of
4 these issues before we come clean on which side of the
5 coin we end up.

6 MR. STEIGERWALD: Thank you, Dennis. Thank
7 you, Dennis.

8 Dimitri, I see that you want to join the
9 conversation. Please?

10 MR. KAROUSOS: Thank you, Robert. And, once
11 again, I just want to thank the Commission and everyone
12 for allowing me to participate remotely. I returned
13 from overseas travel to a COVID house and, despite the
14 fact that I live just down the road, thought it more
15 prudent to participate remotely. It's good to know that
16 not only the clearing community but its regulator stands
17 ready to respond in real time to rapidly changing
18 circumstances. So thanks again.

19 Robert, as you know, Nodal Clear is the last
20 clearinghouse to have launched an FCM intermediated
21 clearinghouse with margin. We clear for our parent
22 company, Nodal Exchange, but we also are the

1 clearinghouse for Coinbase derivatives. And we welcome
2 competition, of course. What I'd like to do is maybe
3 perhaps challenge a narrative which appears to be
4 emerging here of this discussion, being one of
5 innovation versus incumbent reticence to change.

6 We don't believe a major wholesale regulatory
7 framework rewrite is required to support innovation. We
8 are an incumbent and are big supporters of innovation.
9 We introduce granular risk management to the power
10 sector, launching locational power contracts to allow
11 participants to manage their true risk exposure. We
12 institute full portfolio risk checks in real time to
13 approve transactions all the way back in 2009.

14 And before clearing for FairX, now Coinbase
15 derivatives, we built position tracking at the retail
16 customer level so that we could measure risk throughout
17 the day; continue to support accurate, complete intraday
18 margin runs; and not rely on clearing members for
19 accurate positions. So we support innovation.

20 Our issue here is that we don't actually see
21 much innovation here. Instead, we see a combination of
22 existing practices presented as being innovations or

1 decisions that have already been considered and rejected
2 for good reason.

3 So, as I mentioned already, some
4 clearinghouses today already conduct real-time full-
5 portfolio risk checks before accepting new positions.
6 Likewise, many FCMs, including retail folks' FCMs,
7 typically perform this function today, requiring that
8 real-time checks and proposed orders occur before
9 submitting into an exchange-matching engine.

10 MR. STEIGERWALD: Okay. That is an important
11 point. I don't want to intrude on your remarks too
12 much, but I would ask you to wrap up your comments. And
13 we'll move on and come back to the points you've raised,
14 Dimitri.

15 MR. KAROUSOS: Maybe I will pause here, then,
16 Robert, and save the rest of my comments for some of the
17 implications. As you suggested, we will address that
18 later on.

19 MR. STEIGERWALD: Okay. Yes. I think that's
20 the right allocation of time. So I do hope that we will
21 come back, however, to the point you make about some of
22 these approaches to risk management being used today at

1 the FCM level. And I would invite everyone to think
2 about what it might mean to employ these same or similar
3 approaches to risk management, and especially default
4 and liquidation management, at the central node, at the
5 DCO, as opposed to in a more distributed way.

6 So some issues that have legal significance
7 but also important implications for customer protection
8 have been raised so far. So I'd like to ask Todd
9 Phillips, Center for American Progress, to address some
10 of what you just heard.

11 MR. PHILLIPS: Great. Thank you.

12 I wanted to just respond very briefly to what
13 the British gentleman who just spoke on the TV -- can't
14 remember his name --

15 MR. STEIGERWALD: Dennis?

16 MR. PHILLIPS: Dennis. He mentioned about
17 settlement finality, specifically with crypto. It's my
18 understanding that most crypto exchanges, including the
19 one that the CFTC is considering, settle transactions
20 off blockchain. So everything happens on the exchange's
21 own ledger. And things don't actually end up on the
22 public blockchain.

1 One thing that I'm not very sure of because
2 all of these things happen off chain is what the legal
3 final settlement issues are. That's one thing that I
4 don't think the legal system has really addressed. And
5 it's one thing that should be considered as all of this
6 is being contemplated.

7 I have some other consumer protection issues,
8 but I'm happy to raise them later.

9 MR. STEIGERWALD: Great. I think that's the
10 right division of labor for the moment.

11 Just to broaden the conversation I, saw Sam
12 very much engaged with that conversation. And I am
13 tempted to come back. I'm sure you will have other
14 opportunities during the course of the day, Sam, but I'd
15 like to diversify the conversation and come to Thomas.

16 Is it Chippas?

17 MR. CHIPPAS: It is.

18 MR. STEIGERWALD: Okay.

19 MR. CHIPPAS: Somebody would add to the
20 comment that I'm not quite sure what Mr. McLaughlin is
21 referring to but the events of some time ago, somewhere
22 between 1861 and now, I imagine, when these blockchain

1 transactions did or didn't settle, but most of the, if
2 not all of the, spot activity that takes place on
3 centralized exchanges settles in real time within the
4 confines of the exchange or clearinghouse depending upon
5 how the entity is organized. So that finality does take
6 place. And it's probably a separate roundtable for
7 another day to talk about finality on a public
8 blockchain.

9 I'd further add some comments were made
10 earlier to differentiate between margin and capital.
11 The word "credit" is thrown around quite a bit as well,
12 too. And perhaps there will be time today to talk about
13 the difference between those and how credit and the
14 ability to pay is something that a DCO typically doesn't
15 go after the end user for when they fail to pay debts
16 that they owe. And perhaps FCMs have a different
17 approach in reconciling those views as that's a
18 substantive difference between the proposed models.

19 MR. STEIGERWALD: Thank you.

20 So I'm thinking about the trading firm
21 interest in this discussion. So I think you -- Mr.
22 Creamer, is it?

1 MR. CREAMER: Creamer.

2 MR. STEIGERWALD: Perhaps you will share with
3 us your thinking about some of the issues that we have
4 been discussing so far.

5 MR. CREAMER: Sure. And thank you all for
6 having me today. I think for me, it would be
7 hypocritical to talk about change and disintermediation
8 when our industry from -- electronic trading firms
9 really disintermediated the trading floor. Right? I
10 mean, lots has changed.

11 From my perspective, I struggle a little bit.
12 I know the complexities of how many markets trade and
13 how they need to be harmonized together. And I also
14 really appreciate the simplicity of the model that has
15 been created, this disintermediated model. And I'm
16 trying to reconcile how these things fit together and
17 that's the hard part for me from a trading firm of what
18 are my risks. If I'm trading a complex portfolio and
19 there is an automated liquidation function that can
20 happen 24/7, could a flash event in any product make my
21 company insolvent?

22 And I think that there's surely a solution. I

1 think that the challenge for the industry, which prides
2 itself on innovation, is, how do you embrace a new
3 model, a new way of thinking, and find a way to apply it
4 in one that won't become disruptive to the critical
5 markets and ecosystems that we all rely on? How do we
6 advance? It can't be just no, and it can't be a full
7 yes. That's what I struggle with.

8 And I hear in a lot of conversations and
9 outside of the ones brought up today many views on it is
10 either one or the other. There is no way that we can
11 look at this model and find a way to embrace it without
12 it becoming a systemic problem throughout all the other
13 markets that we rely on, leaving us with no way to
14 innovate and test new things.

15 I hope that as a group and an industry, we can
16 find a way to do this. I think it will advance things
17 further, but, also, coming back to some of the comments
18 earlier about the slowness of the process, I feel that
19 we shouldn't rush into anything. And we need to think
20 through this and how it will work and not make any rash
21 judgments on it but also not be completely stuck in the
22 mud, so to speak.

1 MR. STEIGERWALD: Thank you.

2 Gerry, we've been talking about market
3 structure, intermediation yes or no. We've been talking
4 about crypto a bit. What about retail customers?
5 That's got to be something that's foremost in your
6 thinking about this issue.

7 MR. CORCORAN: Yes, for sure. This has been a
8 great debate. I think we're getting a lot out on the
9 table. But I think there are a lot of things that many
10 folks don't understand that exist today in the
11 marketplace we live in.

12 First of all, retail traders, even semi
13 farmers and ranchers, they're all subject to pre-trade
14 risk management. Their trades don't get into the
15 marketplace unless they have the cash in their account.
16 Okay? So that that's one gatekeeping risk feature that
17 a firm like RJO would provide.

18 Then where do we go from there? If the
19 markets move against our customers' positions, we don't
20 automatically liquidate these customers. We know their
21 balance sheets. We know their history.

22 There's also a series of intermediaries in

1 there, in some cases in introducing brokers as an
2 intermediary or credit buffer. Well, there's plenty of
3 credit buffers, but principally it's the FCM's credit
4 buffer.

5 And that's what I see going away in this
6 model, that the FCMs -- it is not about competition.
7 We've been around 107 years, you know. Bring on the
8 competition. We've embraced technology, and it works.

9 But the FCM's \$160 billion of capital that
10 sits between the exchange and the customers is really,
11 really important to when an exogenous event occurs.
12 Okay?

13 There's been some plenty of them where -- in
14 my world, we had mad cow disease. We had the cattle
15 markets go limit, limit, limit, limit, limit. We would
16 have wiped out all of the open interest in an automatic
17 liquidation event. We had WTI go crazy on a
18 Thanksgiving event. Okay? The market would have been
19 wiped out on auto-liquidation.

20 So auto-liquidation is not a new technology,
21 and it can be a weapon of mass destruction. It cannot
22 just be a yes or no decision. There has to be credit

1 involved. It has to be logical. And it has to say
2 what's going to happen because if it's used just a yes
3 or no, you're in or you're out, we are going to have
4 market contagion just from that. It will create boom,
5 boom, boom, boom, boom, a cycle. A flash crash has been
6 mentioned before. We just have too many other things to
7 worry about.

8 What about a portfolio? What about an option
9 portfolio? Is there theoretical pricing in this model?
10 Do you blow out an option portfolio based on theoretical
11 pricing? What about an illiquid product that doesn't
12 trade very often? FCMs play this role. We know where
13 option portfolios are, no matter where the market is.
14 We go, this is really priced here, it's not priced where
15 the market is. So if it's price where the market is,
16 sometimes you might blow out an option portfolio that
17 doesn't need to be blown out.

18 So it's so complex that the FCM plays a really
19 important role of evaluating the credit and really
20 determining, is the customer's position worthy of being
21 blown out? Has the customer got a big balance sheet?
22 What if it's a large multinational Fortune 500 company

1 that on Thanksgiving, the position goes against them?
2 Are you really going to blow them out of the market just
3 because you have auto-liquidation? So I think it's
4 really something that has to be drilled into.

5 MR. STEIGERWALD: Thank you. Thank you,
6 Gerry.

7 Neil, so one of the things that I think about
8 in this context is contract continuity. I've argued in
9 some of my semi-academic work that the thing that is
10 most unique about central counterparty clearing is its
11 propensity to a limit to assure contract continuity,
12 which I think is something that hedgers, for example,
13 take very seriously, as Gerry has pointed out.

14 I wonder if you would share your thoughts
15 about that or other aspects of the conversation that you
16 would like to.

17 MR. CONSTABLE: Yes, absolutely. So, first
18 off, thank you for having us here. One of the things
19 that I think Fidelity wanted to be on this stage with
20 all of you for is exactly this retail issue whereby over
21 history, Fidelity has continuously supported innovation
22 because it often creates more access to markets for more

1 people across the country at the end of the day. We do,
2 of course, in one way, shape, or form, help millions,
3 tens of millions, of Americans take care of their
4 financial well-being. And so as innovation can be
5 brought to bear to allow that extra access, whether it
6 be for individual retail investors or create new ways of
7 intermediating or tweaks, I should say, on the
8 intermediation model that many of my colleagues here
9 have been talking about, we certainly support that. And
10 so that aspect of it is fantastic.

11 But I also -- and I think someone else said it
12 better than I will, but I don't know the question is to
13 go -- it's not whether we go zero miles an hour or 100
14 miles an hour. It's certainly somewhere in between.
15 And there's a lot of gradation in between there.

16 And so one of the things, just to put make
17 that more concrete, I think it was the gentleman from
18 the CME was mentioning technology and capital are not
19 are not fungible -- right? -- but as technology evolves,
20 it could well be the case that with the right
21 application that technology suitably studied and
22 implemented, the system is, in fact, overcapitalized.

1 Right? We might be able to extract some capital from
2 the system and redeploy it elsewhere. And I would like
3 that to be the framing of the debate because at the end
4 of the day, as many people here are much more versed in
5 history than I, the major crises, even in my lifetime,
6 '87, '98, 2008, were ultimately saved by a massive
7 injection of actual unencumbered capital that could be
8 brought into the system.

9 So it's it seems hard to imagine that an
10 algorithm can completely replace that, but it may well
11 be able to do part of that job and in doing so open up
12 access to our clients and create new ways of everyone
13 around the table here dealing more efficiently with
14 their clients.

15 MR. STEIGERWALD: So there is a free lunch,
16 after all.

17 MR. CONSTABLE: Oh, I wouldn't say that.

18 MR. STEIGERWALD: I'm just joking because I
19 doubt very seriously you'll convince my employer that we
20 can reduce capital in the financial system, but God help
21 you if you can.

22 MR. CONSTABLE: Capital for the purposes of

1 clearing markets, it may be overcapitalized.

2 MR. STEIGERWALD: I understand.

3 MR. CONSTABLE: That's a question, not a
4 statement.

5 MR. STEIGERWALD: It's a serious question in
6 bank regulation as well.

7 MR. CONSTABLE: Yes.

8 MR. STEIGERWALD: It's just that we do seem,
9 as Dr. Murphy has explained eloquently in his new book,
10 to have a mindset that more is always better when it
11 comes to capital, irrespective of the fitness for
12 purpose.

13 So I introduced the question of hedging, not
14 realizing that FMR is Fidelity. I apologize for that.

15 It's my friends from the farm and ag community
16 that may wish to say something about the importance of
17 hedging and how you feel about this new technology if it
18 were applied to products that your membership is most
19 concerned about.

20 MR. NEALE: So, Reggie, maybe I can start.
21 Certainly, National Council Farmer Cooperative is
22 supportive of innovation. It's got a positive

1 connotation to it. And we're all looking to move to the
2 next level. However, in the context of this discussion,
3 I think we need to take significant care and understand
4 the distinctions between those who use these markets for
5 hedging and those who use these markets for speculation.

6 So in a scenario with the auto-liquidation
7 scheme, a crypto trader goes to bed at 11 p.m., wakes up
8 at 7 a.m. And, all of a sudden, he's been knocked out
9 of his position or liquidated, a bad day certainly but
10 perhaps not as bad if we considered the same scenario
11 for the American farmer. He goes to bed with a corn
12 position to hedge his physical inventory at 11 p.m.,
13 wakes up at 7 a.m. or probably a bit earlier, and he has
14 no position. All of a sudden, the value of his
15 inventory goes down considerably. And let's also
16 consider the cascading effects that could happen from
17 that situation for a natural hedger. He's got cashflow
18 obligations. He may have loan obligations that he may
19 no longer be able to commit to in that situation.

20 The other point to make in this type of
21 structure I think, as Gerry eloquently pointed out, is
22 this 160 billion of capital sitting in between the

1 customer and the exchanges. That buffer is important.
2 Without that buffer, I think we significantly increase
3 the customer-to customer risk that would come into play
4 with this model.

5 MR. STEIGERWALD: Please.

6 MR. GRIFFITH: Thanks.

7 So I would agree with everything Nelson said.
8 And I think Gerry brought up some very important points.
9 And just maybe to speak from a large commercial hedger,
10 I mean, when risk departments look at risk from the
11 commercial hedging standpoint, you've got to look at
12 both pieces of the pie. I mean, when they get nervous
13 is when the futures positions are low.

14 And so as we look at this entire model, I
15 think we have to assume that this opens the door for it
16 being applied to the ag markets, which is our number one
17 concern. And I think an auto-liquidation model, it may
18 protect the risk in the futures market. But all it does
19 is it multiplies that risk and it shoves it in the
20 commercial sector.

21 It could lead to defaults. It could lead to
22 problems up and down the food chain. And I think that

1 if you were to have to operate in a market like that,
2 you would have to hold so much at the DCO to ensure that
3 you were never liquidated on a 1 percent tail because
4 you cannot operate in a market where you go to bed or at
5 any point risk auto-liquidation. I mean, it wouldn't
6 work. I mean, the whole foundation of the futures
7 market would change. And it would cost an enormous
8 amount of money and really change the entire system if
9 you were to have to operate under that market.

10 MR. STEIGERWALD: Thank you.

11 Dave? So I think this is an opportunity not
12 only for you to have your say, which I will give you,
13 but also to think about what I consider the fallacy of
14 universalization of this argument. Right? So if we
15 allow it at all, it will become the new standard. It
16 will exclude all other arrangements. And that leads me
17 back to the conversation we had, in part, about the
18 fitness of this risk model to certain markets under
19 certain conditions.

20 And I take Sam's point that it may be
21 feasible, it may even be desirable, to employ this risk
22 technology across a variety of markets with different

1 characteristics. But I wonder how you think in response
2 to the concerns of the hedging community.

3 MR. OLSEN: Sure. Thank you very much to all
4 for having us here today.

5 I'm sitting in the principal trading group
6 slot, but I just want to disclaim that my comments are
7 my own today.

8 I work at Jump Trading Group. We are an end-
9 user trader in markets around the world.

10 It's interesting listening to this debate
11 because we sit in a little bit of a hybrid function.
12 Today, we are direct clearing members at the CME and ICE
13 and several other venues. We also make use of
14 intermediaries. We employ FCMs to trade on both venues
15 as well. So the flexibility to have access points,
16 either as an end user directly to the DCO or to go
17 through an intermediary, is optimal for us to arrange
18 our risks and get the appropriate amount of funding.

19 I do want to address auto-liquidation, though.
20 It's a very important topic. I share some of the
21 similar concerns about contagion and flash crashes. But
22 I don't think we've spoken enough about the ability to

1 get in front of a problem by taking action immediately.

2 I think a lot of the discussion so far has
3 assumed that markets will revert and recover. But if
4 you're waiting until T plus 1 to collect deficit margin
5 from a customer, there's no assurance that that market
6 is bouncing back. You could be on the first candle down
7 of a multi-day or multi-week price movement.

8 So I think that we should get a little bit
9 more balance in thinking about if we had addressed
10 problems earlier, when we had the first break in the
11 market, and gotten out of a position ahead of time, we
12 could be saving some damage later on.

13 MR. STEIGERWALD: Chris, I see you shaking
14 your head. Join the conversation.

15 MR. PERKINS: Yes. I couldn't agree more.
16 When there's a flash crash, you don't know it's a flash
17 crash at the time.

18 But, stepping back, when you think about --
19 and, by the way, thank you for having me here. I'm
20 incredibly excited about the opportunity to embrace
21 technology to put forth responsible innovation, which I
22 think is being discussed today. So I've really

1 appreciated the conversation.

2 When you think about risk management, people
3 have talked about monitoring risk in real time in the
4 existing system. But the problem is, is that we're not
5 collateralizing that risk in real time. And that is a
6 material difference.

7 Everyone in the room I think will agree that
8 the defaulter-pays model is the ideal model for risk
9 management, meaning risk takers are paying for their own
10 risk. The issue with today's markets is that that's not
11 the case. It's a socialization of risk. And, now, the
12 realities of 24/7 markets are upon us. And we're
13 dealing with a legacy batch process that only reconciles
14 that collateral once a day. That leads to an
15 accumulation of risk. Right? And that's an issue.

16 And so what does that result in? It results
17 in FCMs. I used to run one not having the capacity to
18 include market participants. It results in a
19 derivatives market in crypto, where over 90 percent of
20 that market is overseas because we just simply don't
21 have the capacity and we lack some inclusion.

22 And so, then, finally, I think it's a great

1 opportunity for competition. I don't think that my
2 friends from the agricultural community should be forced
3 to engage in this model. I think that they should exist
4 hand in hand. And I think it's going to unlock
5 incredible new opportunities for FCMs to provide new
6 agency services to ensure that collateral obligations
7 are made from an operational perspective via collateral
8 management to stop instances of auto-liquidation, but at
9 the end, risk takers need to pay for their own risk in
10 any model that you look at.

11 MR. STEIGERWALD: So it's interesting to me.
12 I wonder whether you will share my impression that we've
13 spent a decade or more worrying about latency in the
14 trade execution pipeline.

15 And I hear you, correctly or incorrectly,
16 talking about latency in the supporting financial
17 support, payment, support for those trades.

18 I wonder, is it too tepid halfway to wonder
19 whether improvements in the operation of the payment
20 system might be an appropriate response to that latency
21 in settlement transactions, as opposed to a wholesale
22 change in the risk management logic?

1 MR. PERKINS: To me, the important thing is
2 always focusing on defaulter-pays, where the risk taker
3 is paying for their own risk. You make a great point
4 around the issues of settlement and risk accumulation.
5 It's very expensive if you're a broker dealer in FCM to
6 have to reserve the capital to meet those liquidity
7 calls.

8 And, again, that's another thing that's
9 holding up the inclusivity of our markets and so
10 settlement needs to be focused on, no matter what. But,
11 again, how do you reconcile 24/7 markets with this slow,
12 arduous, once-a-day true-up from a collateralization
13 perspective? We need to improve and innovate.

14 MR. STEIGERWALD: Thank you.

15 Christine, you wanted to make a comment.

16 MS. PARKER: You didn't ask me, but I will say
17 I do think we should perhaps think about updating both
18 the payment rails and potentially the risk management
19 system.

20 That's actually not the point that I wanted to
21 make.

22 MR. STEIGERWALD: Okay.

1 MS. PARKER: But I do want to ask a clarifying
2 question. And I think that Chris and David sort of
3 touched on this. Are we talking about -- and I know
4 we've got the stylized facts before us, which were very
5 beautifully written and I think very clear and crisp in
6 in sort of the challenges that we're facing today. But
7 are we really talking about a disintermediated model or
8 a direct clearing model? Because I think we're sort of
9 conflating the two. And I think it's perhaps more
10 helpful, based on what Sam has said and what others are
11 saying, that we're actually really thinking about a
12 direct clearing model, where the end-user has the
13 principal relationship with the clearinghouse.

14 There may or may not be intermediaries in the
15 space serving certain types of functions. And I think
16 that's very different than a just clearly
17 disintermediated model, where you just have the end-user
18 and the DCO.

19 So I apologize. It adds a lot of complexity
20 to this discussion, but I think it's helpful to just
21 clarify where we think this is ultimately going. And
22 then we can sort of build in the so what are the

1 intermediaries doing in this space in this direct
2 clearing model versus the sort of purely end-user to DCO
3 and that's the model that we're working with.

4 MR. STEIGERWALD: I think you make a very
5 important point. And, again, apologies for those of you
6 who can't read my scribbles on the whiteboard up there,
7 but what I put at the top of the flipchart from the
8 beginning was the title of the topic, the topic
9 description for today's event, "Non-intermediation and
10 Clearing." And as the conversation has gone on, I've
11 increasingly used differing colors to call into question
12 how important the non-intermediation aspect is as
13 compared to other features of the risk management
14 system. So, hopefully, we will come to a slightly
15 better understanding of what's involved in this thing
16 and then in the next segment of the conversation, when
17 we're ready for it, then talk about the costs and
18 benefits of the approaches.

19 Sam, I want to let you back in, but Sean had a
20 point. And then we'll come to you. I'd like to return
21 to you when I do to talk about that continuous time
22 model again. It's come up. And I'm a little less

1 certain than I was at the beginning of our conversation
2 about whether the DMDCO model is uniquely suited to
3 markets that trade in continuous time or to other
4 markets as well, so just to prepare you for that. Sean?

5 MR. DOWNEY: Thank you. I just wanted to
6 quickly address the defaulter phase point.

7 Conceptually, I think that's correct. It's a
8 good idea for defaulters to pay for the risk or risk
9 takers to pay for their risk, but, by definition, margin
10 is business as usual 99 percent. And, by definition,
11 with the stylized facts, it's nonrecourse. In reality,
12 these participants are not paying for the risk as
13 currently designed because they're not paying for tail
14 risk. So to the extent that you want to focus on a
15 defaulter-pays model and have one, the only way to
16 address this as constructed here today is to margin at
17 stress because, effectively, that's the only way you're
18 actually paying for all of the risk that you're taking.

19 MR. STEIGERWALD: Sam? So there we are. You
20 got us launched. I think I'm seeing some clarity, but
21 issues still hover on the margins of my understanding of
22 this proposal.

1 MR. BANKMAN-FRIED: Yes. Oh, boy, there's a
2 lot going on here. I'm just going to tweet, probably, a
3 lot of things I'm thinking. I am not going to be able
4 to talk about all of them.

5 There's, frankly, been a lot of things that I
6 think are pretty wrong that have been said. And a lot
7 of things have been pretty helpful and really appreciate
8 the latter.

9 In terms of the real-time point that you
10 brought up, what I would say is that, at least as I
11 envision it, this sort of direct clearing model is best
12 suited to digitally settled markets, to markets where
13 the core liquidity and collateral are digitally settled
14 and, thus, could be efficiently brought to the DCO,
15 physically but digitally as collateral. I think when
16 you talk about, like, wheat or corn, that is a different
17 topic -- right? -- because, all of a sudden, you have to
18 start addressing questions about, well, could you post
19 physical corn in a warehouse as collateral for a corn
20 futures position? That's an interesting question. It's
21 an important question. And it's why I think more
22 thought would be needed before I would feel comfortable

1 deploying this for a physical market or a market which
2 is primarily physical with primarily digital markets.

3 I think it makes more sense on the real-time
4 thing. I think it combines well with real-time markets.
5 I think that the fact that it is all automatable and
6 that it is all essentially cleared makes it able to
7 operate 24/7 and makes it natural for 24/7 markets.

8 I don't think it's, strictly speaking,
9 necessary that it's a 24/7 market, but you do have to
10 increase the margin requirements if it's not a 24/7
11 market, at least as you approach and go over periods of
12 lack of market access or illiquidity in order to cover
13 for that fact. And you would need to meet the same
14 margin standards as everything else would there.

15 A few other brief points. I completely echo a
16 lot of what Christine said about, first of all, the
17 thing that is sort of like disintermediates here, at
18 least to some extent; whereas, direct, is the margin at
19 the clearinghouse and the risk engine at the
20 clearinghouse. There still may be intermediaries. And,
21 in fact, they may be involved in the margin posting if
22 they choose to be with their customer.

1 But to Chris' point, what this means is that
2 in the end, the margin is posted in real time with the
3 clearinghouse. And so other market participants aren't
4 exposed to whatever credit decisions one intermediary
5 might choose to make with their customers. That's just
6 a deal between them.

7 And the last thing I will say, just briefly,
8 is on this topic of, like, is there even enough capital
9 backing this system. I think that the numbers that keep
10 getting quoted are the margin in the traditional system,
11 which is incredibly important. We have margin errors,
12 like, okay, in DMDCO, also would presumably require
13 margin, posted to the clearinghouse, which would reflect
14 that that number FTX International unrelatedly, just the
15 roundtable, has tens of billions of dollars of
16 collateral today, posted by customers protecting the
17 positions with the DCO. So there's sort of like
18 equivalence between what the various words mean in the
19 various systems.

20 Anyway, I will sort of like that after that.

21 MR. STEIGERWALD: Thank you.

22 So Gerry? And then I'm going to come to Chris

1 and then Claire.

2 MS. LEWIS: Robert, you also have Mariam over
3 here.

4 MR. STEIGERWALD: I'm sorry.

5 MS. LEWIS: And you have Mariam and --

6 MR. STEIGERWALD: And I'm starting to see a
7 population.

8 MR. CORCORAN: Okay. So --

9 MR. STEIGERWALD: And we've got to get to
10 JPMorgan as well. All right. Is this the point where I
11 run for cover? Okay.

12 Gerry, quickly?

13 MR. CORCORAN: I just want to make sure,
14 especially for the commissioners since we have new
15 commissioners, that the current model today is not
16 settlement T-1. We are settling all day long. Any
17 great FCM or any reasonably run FCM is going to have
18 intraday margin calls with their clients throughout the
19 day.

20 At RJ O'Brien, we don't have any large
21 outstanding margin call at the end of the day, period.
22 And that's globally. So this potential misunderstanding

1 that FCMs are waiting to the next day to settle risk is
2 largely gone. It doesn't exist.

3 MR. STEIGERWALD: But I wonder whether you're
4 concerned about latency in the settlements your
5 customers make to you.

6 MR. CORCORAN: There is latency, but it's not
7 24-hour latency. Okay? And then you back it up with
8 know your customer. Okay? You're doing business with
9 customers for years in/years out. You're checking their
10 balance sheets quarterly. The customer is going to meet
11 a margin call in an hour or two, sometimes less. So
12 there is latency, but it's not 24-hour latency. It's
13 not T-1. It's a very tight system.

14 MR. STEIGERWALD: Thank you.

15 Chris?

16 MR. EDMONDS: Yes. So I think we have to keep
17 focused on whatever the asset class is and where the
18 actual rubber meets the road. And if we're going to
19 evaluate any proposal, we need to understand how that
20 individual entity, whether it's a person, company, or
21 whatever, ag farmer -- when they're making that decision
22 and what we owe them.

1 We have a job to do no harm here. We have a
2 job to facilitate and facilitate a set of rules that
3 people can depend on and have great confidence in.

4 And at Chris' and Dave's point around the idea
5 of defaulters pay, I get that, love that. Right? And
6 that works really well for guys who are in big shops
7 because they never default. They want to tell you they
8 never default. And we're just going to call that out at
9 the moment. But at the beginning of the pandemic -- I'm
10 not going to name the person, but they're in the room --
11 there was a technical issue at the end of the day. And
12 I was on the phone with this person the entire time.
13 And they're like, yes, we're going to pay, yes, we're
14 going to pay.

15 To Sam's point, he doesn't have to worry about
16 that in the proposed model. Right? That's not there.
17 But it would have been cataclysmic at that moment in
18 time.

19 We knew the issue. To Gerry's point about
20 know the customer, we knew where it was. And we chose
21 to give the appropriate amount of time not to dislocate
22 the market and create a bigger stress on that.

1 So for us, at the end of the day, it's our job
2 to do no harm. It's our job to hold everyone. It's the
3 question of when you're calling the default.

4 There are lots of examples in the history that
5 many of us around this table have lived around. And I'm
6 going to say, you know, I think they're in default.
7 Gerry may say, nope, they're not in default at that
8 point. And at that consensus when that default takes
9 place, we react pretty well.

10 But I had the keys to the castle at that point
11 in time. And it would have been a very bad day. And
12 that person sits in this room, and they know exactly who
13 I'm talking about.

14 MR. STEIGERWALD: So I'm reminded at this
15 point of a phrase that Craig Pirrong from the University
16 of Houston sometimes uses to describe the tight fit that
17 occurs in central clearing as compared, for example, to
18 OTC uncleared markets, where renegotiation is possible
19 at any time given changes in states of affairs, states
20 of the world. And he calls it tight coupling. And he's
21 concerned about how central clearing in its traditional
22 form implements tight coupling.

1 But, leaving that aside, the model that's
2 before us in the DMDCO takes tight coupling to a new
3 level, it appears. Does that capture in some way the
4 concern that you're expressing about the embedded
5 flexibility and responsiveness that is a feature of the
6 current system as compared to some highly automated
7 systems?

8 MR. EDMONDS: No, notwithstanding comments
9 that have been made here around certain ag products, for
10 example, might be different. But let's assume they're
11 not because this is a hypothetical conversation that
12 we're having today. Okay? And let's assume at some
13 point in the future, someone may agree that they're
14 going to apply a similar model, maybe not the folks in
15 this room but the next innovator that stands before you.
16 When that price in the morning, then, and the farmer
17 uses it to put a position on, in today's point, it may
18 not ever mean revert. You're right. When are we going
19 to call the default. Right?

20 But if it does and you just cost him the farm,
21 what do we as an industry have to hold, then? Because
22 both have happened in our history. We've both lived

1 through them. I mean you make the call.

2 They're going to go in there with eyes wide
3 open and do the best job they can. And we're going to
4 have an algorithm sitting here and saying you know what?
5 It's absolute now. I don't care that 40 minutes from
6 now, you're going to be in a much better equity position
7 in your portfolio. It doesn't matter. You're out.

8 I don't know how we answer. And this is what
9 I said in my first set of comments. We have to
10 understand what it means to each individual user before
11 we can at the top of the house understand what it means
12 to the whole industry because it's all going to go back
13 there.

14 MR. STEIGERWALD: Thanks.

15 So I must compliment you all for playing by
16 the rules of the game so nicely. I didn't expect that
17 you would be so compliant. Maybe it's being in front of
18 the cameras that does something.

19 MR. EDMONDS: It's round 1.

20 MR. STEIGERWALD: Yes. Yes, it's round 1.

21 And what I'm going to do at this point, then,
22 is to just go down the line and just take you in order

1 if you have a contribution to make to the conversation.

2 I know, Emma, you signaled a desire to
3 intervene. So we'll welcome that.

4 David, let me offer you a couple of minutes.
5 And then we're going to try to move expeditiously around
6 the table.

7 MR. MURPHY: Thank you. Thank you so much,
8 Robert.

9 So, look, what I've heard is that FCMS bring a
10 number of things to the table and we all either need to
11 say in a new model that we don't need them anymore and
12 justify that or we need to say where they're coming from
13 otherwise. Right? One of those is financial resources.

14 Well, there are other sources of financial
15 resources. And those financial resources isn't a fixed
16 dollar amount. It is not the case that we need \$160
17 billion in this system, no matter how it is structured.
18 Some structures need more. Some need less. Because
19 that 160 billion is a function of risk not an inherent
20 property of the system. So let's ask what resources we
21 need given the risks in the system firstly and where
22 they should come from. Right? I am not saying that the

1 current number is right or wrong but just that's how to
2 think about it.

3 Secondly, I think that FCM is bringing its
4 client due diligence. That's, obviously, important and
5 needs to be done.

6 Current asset protection. Again, we need
7 somebody doing that. We need a robust structure there.
8 That, speaking as a European, is one of the glories of
9 the American system. I think you guys do it very well.
10 But, again, that is not an insurmountable barrier. We
11 just need to answer it.

12 Governance. I think that is something that we
13 haven't heard yet and I think is quite important. FCMs
14 bring scrutiny to the DCOs they clear. And that could
15 be helpful. It's always helpful to have somebody
16 looking over your shoulder and telling you what they
17 think of how you do things. So that's important to
18 factor in.

19 And, finally, default management FCMs help
20 with that. But there are other ways of getting access
21 to risk capital in the market. Right? The fundamental
22 question is, how do you connect the defaulter's

1 portfolio with the risk capital that's going to take it
2 out most effectively? I would argue that holding an
3 auction late in the day at which four people who are
4 invited to a phone don't understand the portfolio is
5 probably a pretty bad way of doing that. And perhaps
6 some of you know the example I'm referring to in the
7 recent past.

8 So sometimes that works really well in
9 traditional CCPs. Sometimes it works less well. This
10 model offers an alternative mechanism that I think we
11 need to look at and say, how well does it do that?

12 Thank you.

13 MR. STEIGERWALD: Thanks.

14 Cody, anything to --

15 MR. ALVAREZ: Well, the idea of the non-
16 intermediate model both having FCMS and not having FCMS,
17 I find that a little confusing, by definition.

18 But, also, I find it hard to imagine a world
19 where you could have a non-intermediate model, have both
20 options, and then FCM survive. It just seems like if a
21 customer has an option for direct access or access
22 through an intermediary -- and it may be the additional

1 cost of doing that. Then they're naturally going to go
2 the non-intermediate route.

3 MR. STEIGERWALD: Well, so I hear two things
4 going on here: the inherent complexity of thinking at
5 one and the same time about an intermediated and a non-
6 intermediated model, but that may just come with greater
7 familiarity with the proposal underway, and then
8 important questions about business viability and demand
9 for this kind of service.

10 Mariam?

11 MS. RAFI: Thanks.

12 I just wanted to go back to some of the
13 comments made around defaulter pays and the frequency of
14 margining.

15 Similar to the comments Gerry made, we do call
16 our clients for intraday margin if the markets are
17 moving significantly and we're concerned from a risk
18 perspective. That absolutely happens. We have the
19 ability to do that, and we do it.

20 Defaulter pays to me means a couple of things.
21 Right? One is that the fundamental concept is that the
22 person who brings the risk pays for that risk. And FCMS

1 have to go after losses that are in excess of the
2 margin. That's under rule 1.56. That's a CFTC
3 requirement. That doesn't exist, as I understand it, in
4 in the current proposed model, which is which is a major
5 difference. And it is a difference from defaulter pays
6 in my mind.

7 The other part of default pays is that margin
8 should be sufficient to cover the losses without going
9 to mutualized resources. And we need to understand how
10 the margin adequacy is sized if you don't have the
11 additional buffer of the significant guaranty funds that
12 that other clearinghouses have behind them. I don't
13 think the premise of instantaneous liquidation is
14 sufficient to cover that aspect of the risk.

15 MR. STEIGERWALD: Okay. That's an important
16 reminder.

17 I am pushing us a little over the time
18 scheduled for the first section, but I think the
19 conversation is at a point that I would not like to stop
20 it just now. So I'm thinking maybe 20 more minutes.
21 And then we would break. Does that seem acceptable? I
22 act at your pleasure. So signal me off if I'm pushing

1 it too far.

2 MR. HUTCHISON: No. I think that's right. I
3 think you've done a nice job of going back and forth,
4 and I think you're doing the right thing by going around
5 the horn. And then once around the horn, we probably
6 all need to take a break.

7 MR. STEIGERWALD: I think so as well. I know
8 I do.

9 So important questions about the end of the
10 waterfall, which I'm proposing we address more directly
11 when we resume our conversation. Very important.

12 Tom, I want to give you your opportunity. I
13 also want to just say if it's more about the need to
14 protect customers, which is your business, I fully
15 appreciate that, and I want to give you a full
16 opportunity to address that. It may be that that will
17 be better in the next segment but you are at liberty to
18 make any observations you'd like at this point.

19 MR. SEXTON: Let me just, first of all, thank
20 the Commission for inviting NFA to participate today.
21 I'll make two very high-level observations, just in
22 light of the discussion.

1 As you all know, we're in a very kind of
2 unique position. We don't operate a DCM. We don't
3 operate a DCO. We're not an FCM. We regulate FCMs. I
4 think market structure -- and we've dealt with various
5 market structures throughout the years and have adapted
6 to those. Market structure obviously impacts customers,
7 both who are institutional customers, but, in
8 particular, our retail customers, enlisted derivatives.
9 And we would like to talk about the customer protection
10 issues. And Mariam and Gerry have raised a few.

11 The second thing it impacts is just the
12 regulatory structure itself and whether or not there's
13 an independent SRO in this structure who is going to
14 regulate this combined entity because it not only blurs
15 the lines between these entities, but there are no
16 lines. And so I think that that's also a very important
17 discussion to have.

18 MR. STEIGERWALD: Thanks, Tom.

19 Ann?

20 MS. BATTLE: I think, just very quickly, thank
21 you for the opportunity for ISDA to sit at this
22 important roundtable today.

1 While we have not been vocal on I think some
2 of the direct clearing or issues raised by DMDCO, we
3 have for many years been extremely active with almost
4 all of you in looking at CCP best practices. And my
5 colleagues, including Ulrich Karl and others, have
6 written with you a number of papers on that.

7 I think the main point we wanted to make today
8 is that those best practices which go to the issues that
9 have already been raised around safety and soundness of
10 the financial system, protection of customers and
11 including protection of non-defaulting customers as well
12 as non-defaulting clearing members, need to apply in
13 whatever model comes out of this important discussion.

14 MR. STEIGERWALD: Thank you.

15 Jennifer?

16 MS. HAN: Well, first, thank you to the chair,
17 commissioners, and staff for organizing this. I think
18 this is a very timely discussion. We are very
19 supportive of innovation and competition. At the same
20 time, we think it's really important for the rules of
21 the road to be very clear to understand from maybe the
22 benefit of some modeling of extreme circumstances and

1 what would likely be the result of those. Also, I think
2 the stylized facts are very helpful in understanding
3 some of the scenarios.

4 It would also be very helpful to understand in
5 some extreme circumstances, the facts, how would they
6 intersect with the CFTC's default rules, bankruptcy
7 rules. What would happen in those circumstances as
8 customers would be members of CCPs? And so that's quite
9 a change. And so it's really important for us to
10 understand in those scenarios how they would play out.

11 MR. STEIGERWALD: Indeed. Well-understood.

12 Joe?

13 MR. CISEWSKI: Thank you.

14 I work for a venture capital firm, but I speak
15 for myself today.

16 In the 2008 financial crisis, we experienced
17 some significant stress. It was an extreme event by any
18 measure. Some thought it was plausible. But, to Sean's
19 point at the outset, the current derivatives market
20 structure performed fairly well, for all of its flaws.
21 And so I think it's reasonable for the Commission and
22 for the staff to think very carefully before deviating

1 from a model that's performed very well in extreme
2 stress events.

3 But I do want to talk a little bit about the
4 law, which hasn't come up yet and --

5 MR. STEIGERWALD: Okay. I'm just going to ask
6 you to think about whether some of that detail might be
7 deferred until the next conversation. But, please, by
8 all means, give us a give us a hint of what you're
9 trying to get to.

10 MR. CISEWSKI: So I think Congress was clear
11 in the Commodity Exchange Act about the objectives of
12 the statutory framework and its important context
13 because it directs the CFTC to promote responsible
14 innovation and fair competition in the markets.

15 Now, those modifiers, "fair" and
16 "responsible," are important. And, obviously, that's
17 the subject of much of this discussion. So I'd like an
18 opportunity to come back and talk about that.

19 MR. STEIGERWALD: Okay.

20 MR. CISEWSKI: I don't know what the topic of
21 the next panel is, but perhaps I can lead it.

22 MR. STEIGERWALD: Yes. So one of the dangers

1 of a free-flowing conversation like this is that we wind
2 up confusing everybody and nobody knows what the agenda
3 is.

4 So, just to go back to what I said at the
5 beginning, my thought was that we would take our initial
6 opportunity to get to know each other, to share our
7 ideas, and get some sense of what this thing is that
8 we're calling non-intermediated or direct clearing. And
9 then, after a break, when it's ready, when we're
10 prepared to go on to the next step, I would propose that
11 we discuss what the implications of that model are and
12 what issues remain to be addressed and, certainly, among
13 them, important legal questions. I just didn't want to
14 get too far down into that conversation before we've
15 concluded some opportunity to shape this thing.

16 I want you to feel like you're welcome to
17 speak your mind. I just am trying to sequence the
18 conversation. Okay.

19 So anything really critical? Because,
20 otherwise, I'm trying to get to folks who haven't had a
21 chance to speak yet. Michael?

22 MR. WINNIKE: Well, thank you for giving us

1 the opportunity to participate today. And so I work in
2 market structure at BlackRock. And we look at this
3 proposal through the lens of, how does it advance or
4 challenge our mission to create better markets for our
5 clients, considering constantly evolving technological,
6 regulatory, commercial change? And I think, in looking
7 at the proposal through that lens -- and some of this we
8 can definitely delve into in the more detailed session.

9 I think there are important gateway issues
10 around market access, which are interesting to consider,
11 and how a direct access model or maybe a hybrid model in
12 terms of what we're leading towards could lead to more
13 efficient markets in terms of being able to bring
14 together broader pools of buyers and sellers, which
15 would certainly advance our goals.

16 And we also think, though, about, how does the
17 model maintain orderly markets in times of stress, which
18 we'd love to talk about in more detail in terms of auto-
19 liquidation and, then, also, importantly, customer
20 protections. And we think it's definitely right to
21 center the conversation on more CCP skin in the game but
22 would like to delve into other issues around managing

1 co-customer risk.

2 MR. STEIGERWALD: Thank you. So, Tom, you've
3 had your say? Is all good?

4 Emma, we got here.

5 MS. RICHARDSON: Thank you. But, actually, I
6 was thinking a lot of the topics I wanted to mention, we
7 probably will delve into in the future sessions as well.

8 MR. STEIGERWALD: Okay.

9 MS. RICHARDSON: So I think we touched on
10 margin advocacy, but we haven't really talked about
11 default fund adequacy. Sorry. And so I'm happy to save
12 them for the later session this afternoon as well.

13 MR. STEIGERWALD: Thank you. Thank you. I
14 hope that that will contribute to a more coherent and
15 useful conversation if we try to take it in some order,
16 recognizing, of course, that in this area, almost any
17 point of entry requires us to think about all of the
18 issues at the same time.

19 Claire?

20 MS. O'DEA: Thank you for the opportunity to
21 the roundtable today.

22 I would also like to state that LSEG are also

1 supportive of innovations bringing efficiencies to
2 market. I think one thing to bear in mind is,
3 obviously, the systemic role that CCPs play in the
4 marketplace today and that when considering non-
5 intermediated clearing models, that they play by the
6 same rules that we play by today to ensure that the same
7 risk management standards are met; so, for example,
8 having the financial resources to weather unforeseen
9 events. If you consider DCOs today they hold billions
10 worth in default fund resources determined by
11 considering extreme but plausible market events. And
12 that should be core to any DCO model to ensure those
13 principles are upheld.

14 MR. STEIGERWALD: Thank you very much.

15 And, Sean?

16 MR. DOWNEY: A couple of seconds. I just want
17 to clarify again that the 160 billion is capital at
18 FCMs. CCPs, we have 225 billion in margin at the CCP.
19 I don't know what your numbers are, but those are two
20 separate things. So when we talk about the 160, the
21 170, whatever it is, it's not the CCP margin.

22 MR. STEIGERWALD: Okay. Thank you.

1 Alicia?

2 MS. CRIGHTON: Great. Thank you. And thank
3 you very much for the opportunity to be here today. We
4 really appreciate it. I think focusing the discussion
5 around innovation is critically important. When we
6 think about it gives us the opportunity to not only
7 reflect about the current model and some of the
8 challenges and weaknesses we observe in the current
9 model, many of which we've talked about and debated in
10 this very room, it also gives us the ability to really
11 reflect on new models that are being proposed.

12 And, Tom, I will borrow your comment: to
13 think about, then, a third flavor. Right? But I think
14 our duty and our responsibility as market participants
15 is to think about what is the right structure in terms
16 of protecting customers, protecting market integrity,
17 and what the role is that the regulator should be
18 playing in that. I think it ups the stakes dramatically
19 from a margin perspective.

20 If you think about the resilience of CCPs and
21 DCOs and the role that FCMs play, we are the first line
22 of defense. We are also the last line of defense.

1 Right? We think about how we manage the client. And
2 we're also the pool of capital, the 160 billion in terms
3 of capital, that backs up the CCPs in that. Taking
4 those layers away is interesting, but it does change the
5 dynamic from a regulatory perspective.

6 MR. STEIGERWALD: Thank you. Bis?

7 MR. CHATTERJEE: Thank you, Tom, and to the
8 Commission for giving us the opportunity.

9 As a firm that operates both as a self-
10 clearing member and the DCO -- sorry -- as an FCM, I
11 think, from our perspective, what I'd like to say,
12 again, my personal opinion here, is that the debate
13 seems to very quickly want to jump to liquidation. I
14 think the focus should be on introducing risk into the
15 system, make sure it's introduced in a safe and sound
16 manner, and make sure that the risk is managed in a safe
17 and sound manner.

18 Liquidations are very stressful events. And
19 the prospect of liquidation, small or big, creates a lot
20 of nervousness in the markets. I think Chris alluded to
21 an example where they held off liquidation. And I think
22 that's something we have learned from the financial

1 crisis, is that the safety and soundness in creating
2 barriers and firewalls and having multiple layers where
3 not only do you test the risk being introduced into the
4 system but you also manage the risk from spiraling out
5 of control is extremely important.

6 And so I would really from the perspective of
7 the debate like to really focus on the fact that as we
8 support innovation, new market structures, what can we
9 do to shore up those firewalls on an ongoing risk
10 management basis and not really jump to focusing on
11 default management and liquidation?

12 MR. STEIGERWALD: Thank you. So I'm going to
13 skip over some folks who have had a chance to speak.
14 And I may come back depending on time.

15 Graham, you haven't had a chance yet.

16 MR. HARPER: Yes. Just a couple of quick
17 things. I mean, I think the innovation aspects of this
18 are interesting. The ability to move margin 24/7 I
19 think creates a lot of flexibility as compared to the
20 traditional banking rails. So that's one thing that I
21 think this model presents a lot of opportunities on.

22 Most of the rest of my points I'm going to

1 come back to later. Thanks.

2 MR. STEIGERWALD: Okay. Great. Stephen?

3 MR. BERGER: Thank you.

4 Let me just preface my remarks today by saying
5 that for well over a decade, we've I think been some of
6 the most pro clearing market participant that I can
7 think of across asset classes and geographies and
8 including trying to innovate with respect to access
9 models that are available to additional types of market
10 participants, so welcome further innovation in the space
11 but want to make sure it's done in a way that maximizes
12 the benefits of clearing while still making sure we
13 mitigate risk, protect customers, et cetera.

14 So I'll save most of my comments for the
15 follow-up discussion around the implications of this
16 because I think there are two sides to the debates
17 around how capital-intensive this model would be versus
18 the current model and whether it promotes efficiencies
19 or creates inefficiencies. So I look forward to
20 discussing that.

21 One point I would just make for now with
22 respect to sort of the market structure considerations

1 around this is the model we're sort of considering in
2 the abstract places a lot of reliance on the quality of
3 price discovery and liquidity occurring on a specific
4 central limit order book, 24/7/365, in contracts that
5 are also traded in other liquidity pools across the
6 market. So, like, the importance of that mark-to-market
7 and the integrity of that price that's struck every 30
8 seconds becomes essential, as opposed to a once-a-day
9 valuation. So, like, the discipline that has to go into
10 that because of everything that's then linked to it
11 becomes very, very important. So I think we need to
12 think through the confidence we have in that, whether
13 it's market-wide or just reflective of the liquidity on
14 a specific venue and you know what the implications of
15 that are.

16 MR. STEIGERWALD: Thank you, Stephen.

17 Andrew?

18 MR. SMITH: I did it. First, I just want to
19 thank the chair, the commissioners, and the staff for
20 having us. As you know, as many folks know, Virtu is a
21 huge advocate for competition and innovation. The
22 proposal that that we have been discussing, the nameless

1 proposal that we have been discussing here, I think it's
2 a wonderful opportunity for us to figure out how to
3 embrace new innovative ideas while protecting the
4 existing benefits of the current infrastructure and the
5 market structure and regulatory structure that we have
6 today.

7 I think the biggest thing that jumps out to us
8 when we sit back and think about it at Virtu is it's not
9 a zero-sum decision. Right? It's not mutually
10 exclusive. There are benefits of the proposal that are
11 really exciting that we should be able to embrace.

12 I think the biggest thing that comes to mind
13 is Sam's comment right off the bat to say it's not
14 necessarily disintermediated. Right? There is the
15 ability for an FCM to compete there. And maybe there's
16 a model, and it's not our place. But maybe there's a
17 model where FCMs are on the platform. And the FCMs can
18 help make sure there's always sufficient capital to
19 avoid those auto-liquidations for their customers and
20 charge their customers accordingly for it. And so you
21 kind of have a model that requires the discrete amount
22 of capital that's required for individuals who want that

1 service and/or use an FCM that don't want that or that
2 do want that service and pay for that service.

3 MR. STEIGERWALD: Thank you.

4 Todd?

5 MR. PHILLIPS: Thanks.

6 Really quickly, I just want to remind folks
7 that we are frequently talking about retail investors
8 who don't understand default waterfalls. And I think
9 it's difficult for folks who are trading really volatile
10 assets, like crypto, to compete directly against
11 professionals. I think, generally, it's important to
12 have a professional intermediary working with retail who
13 enters into contracts or negotiations with other
14 professionals. I think just having someone standing
15 between retail and professionals is really important.

16 MR. STEIGERWALD: Thank you.

17 And Hilary?

18 MS. ALLEN: Bringing up the rear. So thank
19 you again for the invitation. So my perspective on
20 this, I'm a professor who studies financial crises and
21 the regulations needed to prevent or mitigate them.

22 We've heard a lot about sort of different ways

1 this proposal could go. Will there be intermediaries?
2 Will there not? Regardless of how that goes, the
3 proposal on the stylized facts seems to depend entirely
4 on margin as the risk management tool. It eliminates
5 all other types of loss absorbency. And so we're
6 entirely dependent on margin to protect not only the
7 consumers or the investors. We're also dependent on it
8 to protect the stability of our financial system.

9 Now, while I sort of see the rhetorical appeal
10 of the defaulter-pays model, as has already been pointed
11 out today, that doesn't work when you can't figure out
12 what the actual risk is. And there is always a tail
13 risk. And we have had, like, a significant amount of
14 financial history showing us that tail risks will always
15 eventuate. We've seen problems with VAR models, et
16 cetera. But the point I want to make today, which
17 hasn't been made yet, I think, is that this model,
18 whether it could be used for a variety of different
19 things for trading, the primary use case, or at least
20 the initial use case, is going to be crypto. And trying
21 to calculate the risks associated with crypto in order
22 to figure out an adequate margin, I don't think we're in

1 a place where that can be done.

2 There are so many new aspects of this market.
3 We have a very short market history. We don't have
4 established valuation models. And, then, another aspect
5 that we haven't really thought through is what's the
6 tail risk associated with one single algorithm
7 potentially being responsible for so many risk
8 management decisions that would ultimately spark fire
9 sales, which, again, I'll get into later this afternoon.
10 I don't want to go too far down that path now.

11 But I think, really, we're not in a position
12 where we can assess what an appropriate margin is for a
13 crypto investment.

14 MR. STEIGERWALD: Thank you.

15 So I'm reminded at this point of a time in the
16 1990s when people would come to Chicago, and what they
17 wanted to see was the trading floor. They wanted to see
18 those guys running around in those colorful jackets,
19 screaming and yelling at each other. Nobody ever wanted
20 to visit the clearinghouse. It's a pretty sleepy place.
21 Right? I had a hard time convincing the senior
22 management of the Federal Reserve Bank of Chicago -- oh,

1 boy; there goes my employment -- that clearing was the
2 place to watch, clearing was where the risk lived. It's
3 important to understand how the trade gets done, matters
4 a whole lot, but everything after that point is at the
5 clearinghouse.

6 So there was a time when we were trying to
7 wrap our heads around traditional clearing. And now
8 we're trying to wrap our heads around an innovative --
9 desirable or not, I don't know -- evolution in clearing.
10 And so all of the cautionary notes that have been
11 sounded are well-taken.

12 But I'm also reminded that the late Nobel
13 Laureate Merton Miller famously observed in connection
14 with central clearing, by the way, that no one today
15 remembers that the steam engine was invented to pump
16 water out of mines. It wasn't the initial-use case in
17 in the event of steam engines that mattered but the
18 application of the technology to new problems of
19 transportation, communication, locomotives, steamships,
20 global communication, global travel that the inventors
21 of the technology couldn't have imagined and didn't
22 imagine at the beginning.

1 I thank you for helping me through this part
2 of the conversation. I don't know how you feel. I am
3 exhausted, and I need a break. I suspect you do as
4 well. Clark, I will turn it over to you, and you will
5 give us our instructions for the next segment.

6 MR. HUTCHISON: Thank you, Robert.

7 So a couple of things. First, I want to
8 extend a thank you for everyone. I know it's hard with
9 a big group like this, with many opinions and many
10 questions, and not able to always speak exactly when you
11 wish to. So I appreciate everybody's patience. And
12 what we are trying to do is have a good exposé of a lot
13 of things that we brought up in the first session.

14 So I have notes here that I'm going to discuss
15 with Robert about the next module. Let me just talk
16 about that for a minute. So we are making this up on
17 the fly because we didn't want to interrupt a good
18 conversation just for the sake of having a break, but I
19 think we have come to a point where it's a good time to
20 have a break.

21 And so the suggestion on the fly is it's about
22 11:27. And I think at 11:45, we should reconvene. So

1 that gives us all 15 or 18 minutes or so. And then what
2 I would like to do is make sure we have an adequate
3 lunch break.

4 So we're going to have a short second module,
5 from maybe 11:50 or so to 12:30. And Robert and I after
6 some of my notes will try to narrow down maybe just one
7 thing to talk about for 40 minutes. Maybe we'll get the
8 luxury of two things to talk about. But we have things
9 that we've postponed, with your indulgence and patience,
10 that we should come back to. So we'll figure out what
11 would be good for a 40-minute discussion or so to bring
12 that item back up for discussion, a singular or perhaps
13 two items.

14 So let's take a break. We'll see you back at
15 11:45, and we'll have a short session until 12:30 for a
16 lunch break. Okay. Thank you.

17 (Recess taken.)

18 MR. HUTCHISON: So a couple things to say.
19 First of all, I want to thank you all again. And I
20 think it is important to recognize an observation of
21 mine. As you know, I haven't worked at the CFTC all of
22 my life, but now I'm approaching my third year. And

1 what is important to me as an observation, generally
2 speaking, over the course of my career, is the
3 relationship the CFTC has with all of you. And I think
4 that relationship is one where we bring facts to the
5 table, we have good conversations based on facts, and we
6 have respect for one another, but we also figure out
7 things that haven't been figured out. And I think
8 that's what in my experience has made the CFTC
9 different, is that we enjoy conversations at the CFTC
10 with people who do the doing. who do the plumbing, who
11 raise to us the important questions. And I hope we, in
12 return, consider those things in a practical way and
13 make theory and practice come together with elegance.

14 And so it's important to me that what we did
15 this morning was very helpful and I think consistent
16 with our tradition. And I hope this afternoon will be
17 the same.

18 But when we think about theory and practice
19 coming together, I think it's important that we also
20 talk about the theory. We talked a little bit
21 theoretically this morning and a little bit about
22 practice this morning, but I said that we'd have a

1 short, 40-minute-or-so, module. And I'm sure you're all
2 wondering what that is. Well, we're going to talk about
3 the law.

4 So we have theory, but the theory has to take
5 place within a construct. And, then, that construct can
6 help perhaps guide how the plumbing goes.

7 So, with that, I'm going to ask Robert to
8 again be our moderator. And I know that there are
9 topics that we said we would put off until other times,
10 but I thought we could do perhaps the law in 40 minutes.
11 And so Robert will lead a discussion about that, the
12 context in which all of this exists or maybe
13 modifications which might have to be made.

14 So, with that, Robert, you're back in the
15 ring. Thank you.

16 MR. STEIGERWALD: Thank you. Olé.

17 Joe, in the last conversation, I thought I
18 would signal to you that this opportunity was coming.
19 I'm sorry that I cut you off before. How about sharing
20 with us some of the issues that you had wanted to
21 address before?

22 MR. CISEWSKI: Yes. I think it's important

1 context, to use the word that Clark used. And what I
2 was saying is the 2008 financial crisis was a real
3 stress scenario. And if extreme but plausible
4 circumstances were ever to be sort of empirically
5 weighed, it would be during the 2008 crisis.

6 And I thought Sean's comments about how well
7 the futures market performed, for all of its flaws, are
8 important to consider. And I can understand the staff's
9 sort of careful analysis before deviating from the
10 traditional market structure that has been used in the
11 futures markets.

12 The Commodity Exchange Act makes some
13 judgments about policy issues and, in particular,
14 directs the CFTC to promote responsible innovation and
15 fair competition. So the modifiers to those words I
16 think are very important. So responsible I hope is what
17 we're mostly talking about today, which is to say how do
18 we set up a risk management framework for a novel
19 clearing model that achieves the other public interest
20 objectives in the statutory framework but at the same
21 time furthers innovation. In terms of fair competition,
22 I think we want to talk about uniform minimum standards

1 that everyone can comply with and compete on a level
2 playing field.

3 So, with those things said, I do want to kind
4 of direct a few questions to Sam, actually, and give him
5 a chance to address some things but --

6 MR. STEIGERWALD: Let's just make sure that
7 we're keeping this at the level of addressing a general
8 concept.

9 MR. CISEWSKI: Yes. Well, DMDCO, Sam is very
10 familiar with the DMDCO stylized fact. So yes.

11 MR. STEIGERWALD: Okay. All right. I mean --

12 MR. CISEWSKI: But in my opinion, we should be
13 in a posture probably to approve this novel application
14 but focused on those modifiers, like responsible
15 innovation, fair competition, or, differently stated, we
16 should be talking about how to do this and not whether
17 to do it. And I think that's an important way to frame
18 the whole discussion.

19 There are some interests in the derivatives
20 markets that are quite dominant. And I think the
21 context here, again, going back to Clark's point, is
22 that you have six to eight very large FCM clearing

1 members that control the vast, vast majority of margin
2 in our clearing system in the U.S. You have derivatives
3 markets which are highly concentrated. And it's not
4 necessarily because of anti-competitive behavior, per
5 se, although it's kind of noteworthy that the Department
6 of Justice actually has looked into this and expressed
7 some concerns about the derivatives market structure as
8 it exists today. And so with that concentration should
9 come some urgency for looking at different models and
10 introducing competition to overcome network effects and
11 some of the economics around you basically trading
12 models in general.

13 So one thing that does concern me a little bit
14 with those comments having been made is just to kind of
15 better understand how the risk model and liquidation has
16 performed in a real-life stress scenario. And when we
17 started this conversation, Robert, there was a lot of
18 theory that we were discussing. And, actually, in the
19 last month with the meltdown of parts of the crypto
20 markets, we have a real-life test. And it would be
21 really good to hear, how has FTX, essentially, performed
22 or how has the clearing system, the stylized clearing

1 system, performed with these real-life stress scenarios?

2 And just the last point since I probably won't
3 get another chance to speak for a while, I do also have
4 some concerns about this cascading liquidation concern,
5 basically the idea that you could exacerbate price
6 pressure by triggering automated liquidation. I'd love
7 to hear what kinds of market-wide or contract-specific
8 risk controls can be put in place to address that.

9 MR. STEIGERWALD: Okay. So it seems proper
10 for me at this point to make sure that we use the term
11 "liquidity" in a consistent fashion. There's actually a
12 splendid paper by an ECB economist which examines the 24
13 or 25 different uses of the term "liquidity" in the
14 economics literature. So it is very important that we
15 be clear about what we mean.

16 Commonly, today, economists distinguish
17 between market liquidity, meaning what happens when you
18 bring a trade to the floor or to a screen -- right? --
19 versus funding liquidity. Unfortunately, we use the
20 same noun to describe both scenarios.

21 There is some sense, some potential that what
22 we're doing is trading off a problem of funding

1 liquidity that arises in connection with the exchange of
2 variation settlement, this latency in the payments that
3 we've been talking about today, for a concern about
4 liquidity in the underlying market, meaning market
5 liquidity.

6 So I just offer that as a foundation for any
7 observations that we might want to make. I'm not
8 expressing an opinion about the wisdom of one model or
9 another.

10 Allison, it seems that a question has been
11 posed to Sam. So I'm inclined to go there and then come
12 to you.

13 So, Sam, you know we're playing this game.
14 And I don't know how or if you care to respond, but I
15 think it would be helpful to all of the participants in
16 the discussion to have some better sense of how you see
17 the issue of the dependence on market liquidity of a
18 highly automated risk management system and perhaps
19 share with us some sense of how you have fared during
20 the recent turmoil in the market.

21 MR. BANKMAN-FRIED: Yes, absolutely. And I
22 think this is one of the most important questions. In

1 the end, above all, what matters is, does it work? Does
2 it successfully manage risk? Does it successfully
3 balance protecting customers with protecting in systemic
4 risk. And that's actually why we started FTX in the
5 first place, was that some of the existing models in the
6 digital asset ecosystem back then did not do a great job
7 of this.

8 It's fared pretty well. We've had a few
9 hundred billion dollars of daily volume through the
10 market volatility. Obviously, there's been volatility
11 in every market, including crypto for the last month.
12 We've had single days with 10 to 20 percent moves in the
13 underlying asset classes, tens of billions of dollars of
14 open interest and volume. And there have been -- I
15 mean, we have never mutualized losses. There certainly
16 haven't been any mutualized losses through that. The
17 guaranty fund action has been way less than 1 percent
18 during the biggest days of what we would be proposing in
19 our application.

20 Markets remain decently liquid and orderly.
21 Obviously, liquidity ebbs and flows during times of
22 extreme volatility, but they have remained orderly,

1 despite those large market moves. No customer positions
2 have been sort of unfairly impacted with this.

3 Yes. And this sort of mirrors what we saw in
4 May of last year and March of the year before, just sort
5 of the two previous very large move weeks, I would say,
6 in the ecosystem where the model did what it needed to
7 do during that.

8 The other thing I would just say briefly about
9 the cascading liquidations point, which I think is a
10 really important point brought up, is that I think there
11 are ways in which real-time marketing can be risk-
12 reducing for those factors.

13 In the end, if there is a client position and
14 that position is underwater and the client doesn't have
15 assets to protect it, there may need to be a margin
16 call. That's true in any margin model. But what having
17 a real-time model allows you to do is escape the dilemma
18 of either having to margin call very early, way before
19 it might be necessary, and maybe liquidating a position
20 that didn't need to be liquidated or wait longer and end
21 up with an underwater position in an LME nickel type
22 situation. Being able to have that real-time

1 measurement of collateral and position size and real-
2 time action allows you to not deleverage a customer
3 position until it actually is necessary while still
4 being able to do so prior to creating systemic risk.

5 So I actually think there are advantages of
6 it. There are pros and cons, but I think there are a
7 lot of advantages from that perspective as well.

8 MR. STEIGERWALD: Thank you.

9 So, Allison, we talked at a very high level of
10 generality this morning just in an effort to gain our
11 footing to have an idea of what this thing is. And now
12 we've started the turn towards the legal and regulatory
13 conversation but with a bit of specificity about the
14 factual environment in which the model that is under
15 consideration has operated in other spheres, outside of
16 the DCO sphere proper, in light of recent events. But
17 that brings us to an important set of questions that my
18 colleagues on the CFTC staff and I wrestled with in the
19 preparation of the stylized facts, which was how should
20 we or should we attempt at all to describe the legal and
21 regulatory environment in which this thing would exist.
22 Maybe you can help us --

1 MS. LURTON: Right.

2 MR. STEIGERWALD: -- start down that path.

3 MS. LURTON: Thank you. Thanks very much for
4 that setup. That was helpful.

5 I think this morning's discussion was very
6 interesting because it gave us all an opportunity to
7 talk about where we think we can harness true innovation
8 to improve the market. I think as we transition to this
9 module, we all recognize we're still tethered by the law
10 and the regulations. And so I think one of the things
11 we're listening for is once this group; the industry;
12 and, importantly, the regulator has decided where this
13 moves forward, what elements of the regulations need to
14 be revisited? And what parts of the law are we still
15 bound by or would need to be revisited, too?

16 At a very high level, most of you know,
17 looking back slightly at ancient history, this agency
18 and then Congress codified core principles for certain
19 entities. They did not codify core principles for FCMs.
20 Those were determined to be entities so critical to the
21 system that they needed prescriptive regulations. They
22 are a highly regulated entity.

1 Because of that, we believe that was
2 intentional. And so if we are considering a model where
3 the FCM is not present, what is lost by that change? It
4 may not be insurmountable, but we would hope that
5 certain regulations are at least revisited for their
6 purpose so that we can figure out if an entity that is
7 bound by core principles, which we're highly supportive
8 of as well, would there need to be changes, whether they
9 be more prescriptive ones or additional rules.

10 We hope that the agency is looking at
11 rulemaking because in our mind -- and I'll point to two
12 just to keep the conversation moving. There are a few
13 that we think would need to be at least revisited to see
14 if they are compatible in what I think is proposed in
15 the stylized facts, recognizing there are some
16 variations. One is we've talked a lot about the non-
17 recourse element and how important that is to the
18 success of the model in the proposed facts.

19 There was a rulemaking, I believe in the early
20 '80s, 1.56, where the agency considered how important it
21 was for FCMs, those entities that interact directly with
22 customers, not guarantee losses. It was felt to be a

1 systemic problem for FCMs. Perhaps there were bucket
2 shops at the time. The concern was, will they still be
3 around? If they're guaranteeing loss, how much can they
4 guarantee before they fail and we lead to a systemic
5 incident?

6 That rule was put in place. It is one that
7 can be binding on the FCM at times. We work through it
8 constantly. And, yet, the model that we're hearing
9 proposed would have a DCO not bound by that rule
10 actually guaranteeing against loss. Perhaps that's
11 where we want to go. But if that's the case, can we
12 look back at what that rule was proposed for?

13 The other one I'll point to because it's
14 highly important is, as I understand the Part 190 rules,
15 the protections that flow through to customers of FCMs
16 are different in Part 190 than they are for those
17 customers of DCOs. I believe the agency should look
18 closely if those rules need to be revisited. If we
19 believe those protections are important, important
20 enough for customers of FCMs, they should be protected
21 in revisiting 190.

22 Those are just two examples. And I think my

1 ultimate point is we would like this innovation
2 conversation to continue but with the understanding of
3 which laws should we look at and consider updating.

4 Thank you.

5 MR. STEIGERWALD: That seems quite
6 appropriate.

7 Robert?

8 MR. CREAMER: Well, first of all, Allison, I
9 think that's a very important conversation. I felt like
10 after Joe's comment, which wasn't a legal comment -- we
11 were kind of taking the time on it. We left at a point
12 where I feel like we're missing a little bit of common
13 ground. And I don't want to put Sam on the spot, but he
14 is the foremost expert in a hypothetical model that
15 might work this way.

16 We talked about the suitability of this model
17 in crypto assets and how well it worked. And it worked
18 through all these different stages of volatility and
19 whatever else. As a firm, we don't trade everything.
20 We trade things that meet criteria that meet the way
21 that we engage in markets.

22 I'm curious. In the effort of finding common

1 ground, Sam, do you see or can you envision certain
2 market types in which your model the way that it's
3 constructed or contemplated would not work as
4 effectively as you would like or that market
5 participants would expect?

6 MR. BANKMAN-FRIED: So I think that there
7 would be a lot, like many more, questions that would
8 need to be addressed about markets where the primary
9 settlement or liquidity happens physically, rather than
10 digitally. I think that's the most obvious example --
11 right? -- when you're looking at physical agricultural
12 products. Those are things which would be -- there
13 doesn't currently exist an easy way to post those as
14 collateral for a futures position for a hedge on a
15 marketplace. And that would make the real-time margin
16 calls. Well, the question is, what margin is posted
17 there? And that goes down to without credit extension.

18 I don't want to say those are unsolvable
19 problems, but they're problems that would require
20 further work and further thought. And I would feel much
21 more, like, comfortable with this, and I only intend to
22 do this, for digitally settled products, where the

1 primary liquidity does happen digitally. I think that
2 it's a really good point.

3 I think, also, when you look at, like,
4 extremely illiquid assets, you have to think harder
5 about -- and I think there are ways to do this with the
6 current model, but I do think a lot of the assumptions
7 you have been making are when you're looking at at least
8 moderately liquid assets. If you're looking at an asset
9 with a daily trading volume of \$1 million globally, I
10 think that then you have to think about what the margin
11 model looks like. How wide would price bands need to be
12 for that? How would margin scale with a large position
13 in that, given that \$10 million would be a very large
14 position in such an asset?

15 So I think those are a few comments on that,
16 but I think it totally makes sense.

17 MR. CREAMER: Thanks.

18 And sorry, Allison. I wanted to pull it back
19 to that because I really do think that's important.

20 MR. STEIGERWALD: No. That's very helpful.
21 And I admit that I'm starting to understand a little
22 better what you mean by "digital settlement," Sam. I'm

1 an old guy. So I'm accustomed to the distinction
2 between physical settlement of corn or wheat or soybeans
3 or those sorts of things and cash settlement. And I
4 think you mean something other than cash settlement.
5 And I'm sorry that it's taken me all morning to figure
6 that out. But would you comment on that?

7 MR. BANKMAN-FRIED: Yes. I think I would mean
8 something stronger than cash settlement. So anything
9 which you would call physically delivered, I would agree
10 would not be digitally settled, but by "digitally
11 settled," I do mean something stronger than financially
12 settled, a financially settled contract on wheat, where
13 the reference price is a physical warehouse delivery and
14 where the primary market liquidity and market
15 settlements happening in physical underlyings I would
16 classify as in the sort of like non-digital category for
17 this.

18 So I'm talking about, I mean, cryptocurrencies
19 are sort of like the most obvious example of a fully
20 digital asset, but there do exist other important
21 sectors of our economy right now. Today, I think
22 equities are one example and equity indices and things

1 like that that are primarily handled digitally, as
2 opposed to many agricultural products, which are
3 primarily physical.

4 MR. STEIGERWALD: Thank you.

5 Emma?

6 MS. RICHARDSON: Thanks.

7 I was just going to make just a point just
8 about this. I know the stylized facts. And we keep on
9 coming back to crypto. But around that point of the
10 suitability of this model for other asset classes, I
11 think when we think about it from a regulatory
12 perspective, I think one of the questions we have to ask
13 is, what is the gating mechanism as we think about the
14 ability for platforms to be able to add new products to
15 this model? And so I think that maybe something that
16 would need to be considered is around the ability to
17 self-certify new products and how we would be able to
18 slow down that process a little bit as products outside
19 of crypto are proposed to be added to the
20 disintermediator model.

21 MR. STEIGERWALD: So that brings up the always
22 interesting and contentious issue of self-certification.

1 Anyone want to? Chris?

2 MR. PERKINS: Thanks.

3 I think regulation should be principles-based.

4 And to the extent that we apply it to a direct DCO or
5 another DCO, it should be the same. I think things like
6 extreme but plausible tests for collateralizing the
7 system -- right? -- maybe if we come up with a design
8 for the direct model, we should also apply that design
9 to the other CCPs because we need to stay principles-
10 based throughout. And the same should apply.

11 MR. STEIGERWALD: Thanks.

12 Alicia, I'm going to put you on the spot. I
13 think Goldman had a view about self-certification when
14 the time came for some traditional DCOs to list crypto
15 contracts. I'm wondering how you're thinking about it
16 in this context.

17 MS. CRIGHTON: Yes. Again, kind of similar to
18 the points that we made before, I think the notion of
19 self-certification, product suitability, completing the
20 circle around what is the risk profile of the product,
21 is the product suitable to be listed on an exchange, and
22 centrally cleared, again, where all the protections that

1 we bring to the system are backstopping that product, we
2 have to do a better job I think of considering the
3 implications in the self-certification model. And I
4 don't think we have enough protections in that regard.
5 So I do think that's a really important point. It's
6 something we've advocated for heavily over time. And I
7 think it would be critically important here.

8 While I have the mike, if you don't mind --

9 MR. STEIGERWALD: Yes.

10 MS. CRIGHTON: -- if I raise one other point?
11 And I think it's probably related to where Allison's
12 comments were going.

13 I think the other piece that is important for
14 us to think about is, how do these models coexist? How
15 do we think about a model where you have direct
16 participants, direct retail participants in the CCP or
17 in the DCO? Are they clients? Are they participants?
18 What protections do they get? And what does that mean?
19 And when you have intermediaries in that model, what is
20 the regulatory structure that allows those to coexist?

21 So I think those are part of the questions
22 that we do need to ask, so sorry, unrelated to the kind

1 of product suitability and self-cert. But I just wanted
2 to make sure that --

3 MR. STEIGERWALD: Robert?

4 MS. CRIGHTON: -- we got that on the table.

5 MR. STEIGERWALD: Apologies. I'll come to you
6 in a moment, Robert, but I just want to pick up on
7 Allison's comments because, Allison, you introduced sort
8 of the distinction between business as usual and then
9 the land of Part 190 and the Bankruptcy Code. And
10 Alicia references certain ambiguities, at least to me,
11 surrounding the notion of what is a customer, especially
12 when you have different kinds of customers potentially,
13 I'll use the word, commingle but not in any particular
14 legal sense in a single clearing entity. Is that part
15 of the package of things that you were introducing as
16 legal and regulatory issues?

17 MS. LURTON: Yes. I mean, I think that would
18 be worth revisiting. Again, the goal here is not to
19 prevent innovation. It's to make sure that the rules,
20 which we believe were written entirely dependent on
21 multiple entities in the clearing ecosystem -- it is
22 true that we have direct clearing models now, but they

1 exist differently than the one we're talking about. And
2 so for the typical clearing model, when DCO rules,
3 regulations, and core principles were written, it was
4 assumed there was an FCM in the mix. And so in order to
5 make sure the core reasons the agency wrote, the FCM
6 rules, the DCO rules, and the DCM rules, as they did,
7 and if we were to upset that in some way -- and perhaps
8 I used the wrong word by using "upset." If we were to
9 innovate that, which rules would need to be revisited
10 because you are taking out some of the -- those rules
11 are intended intentionally redundant in some places, and
12 there was a reason for that. So just removing the FCM
13 without revisiting the DCO may not do it.

14 To your point, the definition of customer I
15 think throughout should just be revisited. As we
16 understand it, the clearinghouse that would be operated
17 by at least one entity that these facts are based on
18 would clear for an entity that allows 100 margin
19 products and leveraged products. And all of those
20 customers, whether they be in one avenue or not, would
21 be in the same customer pool should there be a failure
22 of that DCO.

1 Perhaps that's not the result the CFTC would
2 want. Maybe it is. But, in any event, revisiting those
3 rules would probably be wise.

4 MR. STEIGERWALD: So I'm reminded again as you
5 speak about that delicate balance between creativity and
6 destruction that we can't escape as we think seriously
7 about innovation.

8 So I offer to my friends at the CFTC the
9 opportunity to make any comment they would like to make.
10 It's been a long time since I've considered myself a
11 practicing lawyer, but I do understand it to be the case
12 that while there's a sort of implicit assumption of the
13 presence of an FCM in the clearing ecosystem, in fact,
14 there's no technical obligation to have an FCM. So I
15 wonder how that affects your thinking.

16 Tom, I see I've animated you. May I just give
17 you a brief opportunity. And then I want to get back to
18 Robert. So go ahead if you'd like.

19 You want me to go ahead?

20 MR. STEIGERWALD: Well --

21 MR. SEXTON: So you're right. I don't think
22 that there's anything in the act that says that you have

1 to have an FCM as part of the clearing. I think, as
2 Allison said, I think that's just the way the framework
3 works with all these inner linkages that provide
4 supervision and risk between the DCO, the DCM, and the
5 FCM. That's just the way that it has been understood.

6 I will say, though, that this goes back 20
7 years, when Congress looked at creating different levels
8 of marketplaces. And they created this thing called a
9 DTEF. They were very clear at that time, though, at
10 least for -- and these were direct markets that they
11 created -- that you could have ECPS for those markets,
12 but if you have retail, they have to go through an FCM.
13 Now, that was rescinded and SEFs were put in in 2010,
14 but I think congressional intent was fairly clear and
15 understood that if you have retail participants, the
16 FCMs are a key player here.

17 MR. STEIGERWALD: Thank you.

18 Thank you for your patience, Robert.

19 MR. CREAMER: No, no problem. I'm probably
20 doing too much talking. And this is more of a question
21 than anything.

22 I will say everything you're saying, Allison,

1 seems incredibly sensible to me. And I think it seems
2 like we're all in agreement a little bit on that, that
3 with the principles, there should be rules of the road
4 that guide how everybody participates in our markets.
5 We don't have a new entrant, all of a sudden, gets a
6 free pass somewhere and somebody else gets penalized
7 because they're an incumbent. But that makes a lot of
8 sense to me.

9 One thing that I'm unclear about that is a
10 legal matter is, is there a way legally if a I'm going
11 to call it intermediary optional model came out that --
12 who has the authority? And is it strong enough to
13 prevent an unsuitable market from being self-certified
14 or being deployed on an unproven model for that market?
15 I'm just curious if anyone has a legal answer to that
16 because I honestly just don't know.

17 MR. BANKMAN-FRIED: I mean, the CFTC can
18 object to self-certifications. They can review margin
19 models only for particular products or asset classes.
20 DCR has that that power. I would expect them to
21 exercise reasonable and responsible judgment in doing
22 so.

1 I will also note that, I think, as you noted,
2 like, maybe a little bit confused about some things
3 people are saying. Like, there are already direct
4 models that existed and have existed for a while
5 including some run by people in this room. Yes. I'm a
6 little bit -- are you saying those are illegal or -- I
7 don't know.

8 MS. LURTON: Yes. That's an interesting
9 question that we spent some time on, too. I'd ask the
10 CFTC historians in the room. I've done it already with
11 a few people who aren't present, but I've asked. When
12 direct models were approved because they do exist, was
13 there a discussion about what it meant to remove the
14 FCM.

15 And nobody that I've spoken to can recall if
16 that happened. I can say, though, that for those who
17 were in the building at the time, it's possible that
18 because most of the direct models are 100 percent
19 collateralized, the risk was seen as low, the fact that
20 the FCM was not there. The introduction of margin is
21 where the FCM really plays the key role. If you look at
22 the definition, that's what it talks about.

1 And so it's possible that most of the direct
2 models, they just never thought about FCMs. Again, the
3 historians in the room may know that conversations took
4 place, and I could be wrong.

5 There is a model that does allow leverage.
6 And that one I think is unique. And someone else at the
7 table could better speak to it, but it involves a very
8 concise set of players who are credit-checked. Their
9 business is scrutinized in that respect. And they can
10 take physical delivery of a very specific product.

11 So I don't have a good answer for you Sam or
12 for the room other than it's possible the CFTC didn't
13 conceive of a model until now, where you're offering
14 leverage to retail without the FCM. There are other
15 models, but they're all distinguishable in slight ways
16 at least.

17 That's all I have to offer on that.

18 MR. STEIGERWALD: Chris?

19 MR. PERKINS: Yes. I have a question. We've
20 heard other CCPs also put forth that they would like to
21 have a direct model. I would just like to know how they
22 would structure it in a novel way that would perhaps

1 address some of their concerns.

2 MR. STEIGERWALD: Is there anyone who would
3 like to address that? Chris?

4 MR. EDMONDS: Well, I'm fairly certain that we
5 are the model that Allison ended her comments
6 referencing in our Canadian business that we have. We
7 do have real-time credit checks. We are directly with
8 those institutions. But it is different.

9 It is also regulated by the Alberta Securities
10 Exchange. There's another level that's there. And it
11 is a very specific product because it determines who
12 turns their heat and lights on in their house. And so
13 there's a physical delivery that if we had to step in,
14 we know that the local utility -- we have access to
15 those pipes in order to deliver that mission-critical
16 service that goes there.

17 But it is for a very small subset of the world
18 that lives in one particular geography. And it existed
19 primarily under the Alberta Security Commission's rules
20 until we came in. And as a U.S. facility taking it
21 over, we put that through the same real scrutiny that we
22 have today, notwithstanding the comments made about

1 FCMs. And there was no activity around that. So we put
2 that in there and had all of the other checks that we
3 would normally see if an FCM were involved in that.

4 And the point on self-certification, I agree
5 with Sam that the Commission certainly has the right and
6 the ability to from time to time inject or object to
7 certain self-certification, but the real-time process of
8 how that normally happens most of the time -- and I know
9 that there are a number of folks in the room from the
10 CFTC staff that will at least internally nod their head.
11 There's a lot of information that goes back and forth
12 before you get to that point. And a lot of that comes
13 from the fact that we have this consensus that's built
14 around the other market participants that are there,
15 whether it be an FCM or others, that we know that if
16 we're going to put a self-certification in, that we're
17 not going to have an immediate set of folks against it
18 at that. And we've tried to do that legwork up front.

19 It's uncertain that if you are in a smaller
20 set of that and you don't have that type of consensus-
21 building process going on along the way, whether the
22 CFTC staff has enough time and expertise on that to make

1 that decision. Time will tell over that. I'm not
2 saying you do or you don't. We don't know at this
3 point.

4 MR. STEIGERWALD: Thank you.

5 Neil?

6 MR. CONSTABLE: Yes. No. Thank you.

7 I wanted to bring this back to I think
8 probably where we started, but this idea of not whether
9 we should be doing this but how. And how could mean
10 very, very, very slowly. It could mean slightly faster
11 depending.

12 But I think the consideration here about the
13 FCM, the non-intermediation part, where FCMs are, let's
14 say, for a certain segment of the participants, taken
15 out of the loop or they're not present, in the proposed
16 model, in our stylized facts, there's a big role played
17 -- and we'll probably talk about the details later this
18 afternoon -- but a big role played by the backstop
19 liquidity providers.

20 And with FCMs, imagine them out of the loop
21 for a second. A lot of the risk absorption, the spare
22 capacity is going to fall back on these on these BLPs.

1 And so there, that seems to me a place that's very ripe
2 for the more legally minded people in the audience and
3 the CFTC itself to think about given that FCMS are so
4 highly regulated and they need to be in the existing
5 system, how much of that needs to port over to these
6 backstop liquidity providers, if at all. Do completely
7 new rules need to get written for them?

8 That feels to me where the conversation ought
9 to be happening because it's a concrete example that's
10 in the proposal. So I'll leave it at that.

11 MR. STEIGERWALD: So I've been trying to wrap
12 my head around the role and function of the backup
13 liquidity providers as well. And I'm reminded of the
14 discussion that has been going on for some years now
15 about auctions, default auctions, within CCPs and the
16 fragility that those processes can exhibit under some
17 adverse circumstances. And I know that the established
18 DCOs have spent a good deal of time thinking about how
19 to manage a default waterfall, juniorization procedures
20 to encourage clearing members to participate fully.

21 And I'm wondering whether participants in that
22 conversation or related conversations have anything

1 they'd like to add, especially from a legal and
2 regulatory perspective but more broadly if necessary,
3 about this concept of an external source of what
4 otherwise I think we would think of as a forced
5 allocation, which used to exist.

6 MR. HUTCHISON: Hey, Robert?

7 MR. STEIGERWALD: Yes?

8 MR. HUTCHISON: I'm going to exercise forced
9 allocation.

10 MR. STEIGERWALD: Yep. Okay.

11 MR. HUTCHISON: How's that?

12 MR. STEIGERWALD: Yep.

13 MR. HUTCHISON: So we're sort of at 12:19.
14 And I'm thinking about the afternoon. And I know we
15 kind of touched on legal aspects but kind of did not.
16 So that module I'm going to declare temporarily over.

17 MR. STEIGERWALD: Okay.

18 MR. HUTCHISON: And I think we should break
19 for lunch and I have a note here to myself where I think
20 the last words that were said I think were the
21 articulate ones of what's been brought up this morning,
22 which are risk absorption, backstop liquidity providers,

1 cascading. I use the term besides "cascading," perhaps
2 "hunting for stops," capital, and margin auctions. I
3 think we can start this afternoon with a bang about all
4 of that. I'm going to just call it colloquially
5 financial stuff that I think we all wonder about and
6 have a good debate about that. I think that would be a
7 good way to come after lunch.

8 So I am force-allocating lunch on us, but I
9 think we're not going to be able to talk about auctions
10 for two seconds and then break for lunch. So I thought
11 let's give ourselves a break.

12 Now, we have in the stylized schedule lunch
13 12:30, back here at 1:15. So that gives us a little bit
14 less than an hour but pretty close. So why don't we use
15 that time to our advantage? And I'll see you all back
16 here at 1:15.

17 (A luncheon recess was taken at 12:24 p.m.)

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1 to how to launch this conversation. And, like this
2 morning, with the more general concepts, it's a tricky
3 question. Where do you start? It's like the parable of
4 the blind man trying to identify an elephant by touching
5 various aspects of the beast and coming to different
6 conclusions.

7 So, on the fly and with some trepidation, I
8 must say, we've concocted a very basic stress example
9 that's not meant to reflect any particular product on
10 any particular market but that explores the dynamics
11 used by both the traditional clearing models and the
12 novel non-intermediated model for dealing with extreme
13 stress situations.

14 So, Chris, I've invited you to think about
15 this scenario that we concocted on the fly. Sam, you
16 will have an opportunity to follow Chris. And what we
17 would like to do is think about a situation where an
18 unexpected event has occurred. Just think of it as
19 something. Economists sometimes talk about sunspot
20 events, just out of the blue, completely unexpected,
21 sharp market movement. Market movement is severe
22 enough. The two or more of your largest clearing

1 members face variation margin calls exceeding the amount
2 of their initial margin. So there's a margin breach
3 problem. And they are unable to meet their variation
4 calls on a timely basis on that day.

5 What happens next, Chris? How is that
6 managed?

7 And, by the way, I must add the caveat that at
8 some point, we get into terra incognita, certainly for
9 me, not for Mr. Wasserman, where we deal with Part 190
10 rules, Chapter 7 bankruptcy proceedings under those
11 rules, and even potentially resolution under Title II of
12 the Dodd-Frank Act. All of those are real possibilities
13 in some scenarios, but we are not using today's event to
14 discuss those issues, as important as they are.

15 Chris, is there anything I need to add to the
16 scenario to provide a sound foundation for you to talk
17 us through the traditional CCP response to a default
18 scenario?

19 MR. EDMONDS: No, I don't think so. I'll try
20 to abbreviate this as much as possible. If you look at
21 layers of protection, many of the traditional models say
22 the membership criteria. So that's gone now and all of

1 that. So we don't have to go back to that.

2 So, basically, what you're saying is we've now
3 called two members in default. We are now taking those
4 positions and those two member portfolios. We have
5 taken all of the collateral that those members have
6 posted with us -- that is now property of the
7 clearinghouse -- in order for us to in the most
8 judicious way get off risk at that point in time. We've
9 begun to hedge those portfolios depending on what the
10 asset class would be and the tools that are available in
11 their various scenarios based on the asset class that
12 you would do. All of that would be covered in the
13 governance structure of our risk committees and other
14 I'll say general committees that are out there and with
15 the regulators, both ours and theirs, depending on the
16 type of entity it might be. We've now hedged a
17 portfolio, and we're beginning to work on an auction
18 process where a series of members who as part of their
19 membership requirement have agreed to be there as
20 default participants in that. We have a portfolio that
21 we're making a decision that we're going to that.

22 We have probably had some conversation about

1 portability, don't know that that's appropriate here,
2 but let's know that some of that portfolio construction
3 piece was -- I'll pick on BlackRock because you're in
4 the room. You know, if BlackRock has member suitability
5 to move some of their accounts to another member, assume
6 that we've done that for the sake of this. Otherwise,
7 we're going to be here until 3 o'clock in 5 weeks from
8 now. So we've done all of that.

9 Now we have the portfolio that's the actual
10 risk that we can't solve any other way. We're going to
11 auction that off. We'll go to that auction. There will
12 be predefined levels that we expect, meaning you can't
13 bid one bid at 100. Right? We know what the previous
14 close was. We're continuing to watch the markets as
15 they develop.

16 Assuming that the auction is successful, the
17 portfolio is transferred. We're off risk. For the sake
18 of this conversation, let's assume it's not. Okay? So
19 we'll run a couple of options that -- for some of that,
20 we will run through the process where we have auctioned
21 off all that we could. We still have some tail risk
22 that's there, for whatever the reason. We'll get to

1 that point. We'll have that conversation. If we can't
2 cure that, we're hitting our ICE's contribution because
3 it's front of the waterfall. It's the first time any of
4 the mutualized piece has been put at risk. We have 250
5 million up across some of the clearinghouses that's
6 there in an insurance policy. We'll do that to buy
7 time, cure that piece.

8 Assume that that is now paid and gone. Now
9 it's our hard dollars that are up there. That's there
10 and paid. And if we still haven't been able to cure
11 this whatever remaining tail risk that we're talking
12 about at that point in time, now we're going to hit a
13 mutualized guaranty fund. Everyone's going to pay their
14 pro rata share that's a member.

15 If, still, that remaining tail risk is not
16 satisfied of the market, we can't clear the risk, at
17 that point in time, and now we have assessed the
18 members, depending on the clearinghouse somewhere
19 between two, four times, depending on where that is, if
20 we've assessed the members to that, all of our
21 assessment rights have been exhausted. Now you get to
22 the point, only then, when it's at that level. We're

1 either going to do a partial tear-up or the variation
2 margin haircut to get that. And, then, that would only
3 be as we're facing the extinction in the clearinghouse.

4 The market has a choice the entire time based
5 on their membership rights and obligations, to be clear,
6 what part of that they're going to participate in and
7 how deep that would go.

8 So that's as abbreviated as I think I can put
9 those. And I'm happy. I'm sure we'll get into other
10 questions about more specific pieces. But is that what
11 you were looking for?

12 MR. STEIGERWALD: Indeed, and very succinctly
13 put, I think.

14 So, Sam, that's one way of approaching the
15 problem. And I'd like you now to explain how this
16 hypothetical process would work if it followed the
17 protocols that are essential to the stylized design.

18 MR. BANKMAN-FRIED: Absolutely. And I'm just
19 going to put some hypothetical numbers on this and sort
20 of walk through this, stepping back from before there is
21 a margin call. I'm assuming it's the largest
22 participant on the exchange they have a very large

1 position on. So all of these margin numbers are going
2 to reflect increased margin requirements because those
3 do scale up with position size. And I'm going to use
4 something like what would happen on FTX International
5 today. Obviously, we're -- well, separately, there is
6 an application related to FTX U.S. derivatives. I'm
7 going to put that aside, although I anticipate similar
8 answers to this.

9 So some customer, our largest customer, our
10 largest two, but let's just go through one of them to
11 start with, has a position on. It is some number of
12 billions of dollars of notional. And let's say that,
13 given the position that they have on, our risk engine
14 assesses an initial margin requirement of 40 percent, a
15 maintenance margin requirement of 25 percent, and an
16 auto-close margin fraction of 15 percent. And I'll get
17 through what each of these means as we go down this
18 waterfall. Those actual numbers are made up, but
19 they're plausible for big positions.

20 They start out with 50 margin, which is to say
21 they have a position of X and they have X over 2 assets
22 in their account. And note that in our model, that

1 margin is posted with the clearinghouse directly. They
2 cannot open this position until they've already posted
3 the collateral. So, in fact, step one is they wire some
4 number of billions of dollars to the clearinghouse.
5 That lands. They get credit in their account. And then
6 they put on a position twice that big in futures
7 contracts. So they have 50 percent margin remaining.
8 The margin is with the clearinghouse.

9 Markets begin. Let's say for now that they're
10 long, a contract. Markets begin to fall. Markets fall
11 10 percent. And they now have about 40 percent margin
12 left because we're in real time sort of marking to
13 market their position and transferring collateral based
14 on that.

15 So they had 40 percent left. They've hit
16 initial margin. This means they cannot open up a
17 further position. They cannot withdraw any assets. So
18 they can't do anything risk-increasing, but they can
19 still do risk-producing things and all of this while
20 there are various emails and notifications and things
21 that we were sending to the client alerting them of
22 their position. Put that aside for a sec.

1 Markets continue falling. They fall another
2 15 percent. So this client now has hit their
3 maintenance margin of 25 percent. At that point there
4 -- and, again, along this pathway, there have been a
5 large number of notifications issued to this client
6 about their endangered position. At this point, we
7 begin to slowly deleverage their position. And what
8 that means, that the risk engine will basically close it
9 piece by piece in the order book just with standard
10 nonpunitive orders, just as if this person had chosen to
11 start closing down their position there or had stop
12 losses there or something like that. We do it slowly,
13 and we do it in line with a small percentage of
14 prevailing market volume so as to not overwhelm the
15 temporary liquidity on the order books.

16 So their position is starting to decrease in
17 size. And in some scenarios, either markets would
18 recover or they would stabilize. And the lowered
19 position size would mean that they are now back above
20 this 25 percent maintenance margin level. At that
21 point, we would cease V deleveraging. We would cease
22 liquidating them.

1 But let's take the other scenario, where
2 markets keep crashing. And, although we are
3 deleveraging this position, it is not happening fast
4 enough for their effective leverage to be decreasing
5 because markets are also going down at the same time.
6 So that their fraction of margin remaining keeps
7 decreasing. Markets now move another 15 percent, let's
8 say, but they've also closed down some of their
9 position. And they now have 15 percent margin left in
10 their account.

11 Again, usually, it doesn't get to this point.
12 Usually, that first step of just standard order book
13 deleveraging would be sufficient to bring client back
14 above maintenance margin. But it doesn't happen in this
15 case. We're looking at March 2020, the day that global
16 markets crashed because of COVID-related fears. All
17 right.

18 So now they hit the auto-close margin fraction
19 ACMF at 15 percent margin remaining in their account.
20 So, again, they're still above water, although without
21 that much remaining and they still have a sizeable
22 position on. If their position were now small, we would

1 not require as much margin for it. But in this
2 hypothetical, let's say that this hasn't been enough and
3 that we didn't just liquidate them faster in the order
4 books. That would have undue temporary impact. We're
5 not going to send a \$10 billion market order and in the
6 order book. Any liquidation is going to have market
7 impact, but we attempt to mitigate the short-term impact
8 such that it is hopefully not larger than the fair,
9 efficient market, longer-term impact.

10 So we're at this 15 percent level. This is
11 where the backstop liquidity provider system begins to
12 kick in. So at this level, the sort of theory behind
13 this is the order book liquidations aren't working fast
14 enough. They've already dropped to below half of their
15 or around half of the collateral that they had,
16 collateral level that they had, when we started
17 liquidating them. So there's a serious danger that if
18 we just keep doing this and keep it within a small
19 fraction of volume, that their account will not be
20 closed down.

21 And, again, this whole time we're margin
22 calling them, we're sending them emails, reaching out to

1 them. They could top out at any point. And we register
2 deposits 24/7/365 in real time. So if they sent more
3 collateral to their account, we would instantly stop the
4 margin call. And so we're trying what we can to get
5 them to do that, but in this hypothetical, they just
6 don't have any money left. Right? Like, they're like,
7 sorry, we're out of money, there's no more coming, be
8 this what it may. Backstop liquidity providers kick in.

9 At this point -- and the backstop liquidity
10 providers are sophisticated, you know, quantitative
11 trading firms, market-making firms, other large market
12 participants who had prior opted in to become backstop
13 liquidity providers. And when you do this, you specify
14 a set of contracts you'd like to BLP for and a rate
15 limit. That rate limit is effectively, like, dollars
16 per minute. And so a hypothetical large multinational
17 trading firm might say, "We're willing to take \$1
18 million per minute of BLP fills in bitcoin futures,"
19 whatever, something like that. Each of the these BLPs
20 has specified that.

21 Given that they have specified all of that
22 beforehand, we now start to close down this position

1 against the BLPs. And the BLPs can't say no at this
2 point. That's what they signed up for. They signed up
3 for taking these fills, whether they like them or not
4 when it came. And so we are, effectively, closing down
5 this customer account that is getting deleveraged
6 against the backstop liquidity providers. We do a pro
7 rata to the rate limits that they had given.

8 Again, piece by piece, we take a small chunk
9 of the remaining position, pass it out to those BLPs,
10 and pass out a portion of the remaining collateral to
11 them as the stuff that they now have backing that
12 position to try and get out of it. They can do what
13 they want with it. Some of them are probably going to
14 go to other marketplaces to hedge their exposure. And
15 that is one of the mechanisms by which we bring global
16 liquidity from all venues to the order book, through
17 this. Some of them are probably going to decide that
18 they are comfortable taking this position on and holding
19 it longer term. Some of them might decide to hedge in a
20 correlated assets. You might see them taking on a
21 bitcoin quarterly future BLP and hedge by selling S&P
22 500 futures on CME or something like that on the grounds

1 that this is a correlated market move. But maybe
2 bitcoin has moved too much, making this up. Right?
3 They're all going to do what they will with that. And
4 we are closing down this customer account against those
5 backstop liquidity providers. Hopefully, that works.

6 And, again, if we've closed down part of it
7 and it gets above the auto-close margin fraction again,
8 above the 15 percent, we seize the BLP process and go
9 back to the normal deleveraging process. And if it, in
10 fact, takes it above 40 percent remaining margin or 25
11 percent in this scenario, then we'll seize liquidating
12 the account at all or if they wire money in or deposit
13 tokens or something like that, we'll immediately seize
14 liquidating the account if that brings them above
15 fraction.

16 Okay. So now you're at the BLP layer. And,
17 again, the vast majority of things that didn't make it
18 through the order book layer are resolved with this
19 layer. But let's say that this still fails. And at
20 this point, it's worth noting that there are actually
21 two different things going on here, two different types
22 of risk and two different types of failure. One type is

1 looking at the position, and the other type is looking
2 at the collateral.

3 So one thing that could happen is a lack of
4 ability to find people to take on the positions, to be
5 willing to take on the long futures position, that this
6 client had. Another type of problem you could run into
7 is there are people willing to take that on at some
8 price, but that price would put their account below
9 bankruptcy. In other words, they would have negative
10 margin left in their account at that price.

11 MR. STEIGERWALD: Let me just interject that
12 we're using the term "bankruptcy" --

13 MR. BANKMAN-FRIED: Ah. Sorry.

14 MR. STEIGERWALD: -- in a very specific sense.

15 MR. BANKMAN-FRIED: That's correct.

16 MR. STEIGERWALD: Okay?

17 MR. BANKMAN-FRIED: Yes. That's correct.

18 Sorry. Very good point. I don't mean bankruptcy in the
19 legal sense.

20 MR. STEIGERWALD: Right.

21 MR. BANKMAN-FRIED: What I mean by -- I'll use
22 zero value instead. It means that their account on FTX

1 has mark-to-market zero value left, that their negative
2 P&L on this futures contract is exactly equal to the
3 margin that they deposited onto FTX prior to putting it
4 on. Whenever I said, "bankruptcy," replace it with
5 that, that statement, the zero price, so to speak.

6 And the risk engine really has two core goals.
7 One core goal is to ensure the orderly passing of risk,
8 to ensure that this client's positions are passed off to
9 the market in as orderly as possible a way and as rarely
10 as possible. We don't want to deleverage a client if we
11 don't have to. The secondary goal that it has is to do
12 this while avoiding accounts going negative in value
13 because as soon as that happens, there is a loss in the
14 system.

15 So now let's explore both of those two cases.
16 The case where there is a negative value remaining is a
17 case where we successfully end up closing down its
18 positions, let's just say, whether it's on the order
19 book or through the backstop liquidity providers. But
20 markets move so far, so fast, that the account has
21 negative value left by the time that's done. And so the
22 account no longer has a position in it. Those have been

1 passed off to the BLPs. But it has negative \$300,000 of
2 collateral.

3 In this case, the guaranty fund kicks in. The
4 guaranty fund, \$250 million is what we have proposed to
5 start for FTX U.S. derivatives. And that is entirely
6 our own corporate cash. That is not mutualized. That's
7 not other participants. And that is fully segregated.
8 It's just sitting in a Bank of America account right now
9 in anticipation. That comes in to, effectively, top up
10 the account to zero and fill that "hole" in the system
11 or you can think of it as to pay the collateral transfer
12 to those who had the opposite side of the position.
13 It's a hundred percent our skin in the game with this
14 level. So the guaranty fund is the next layer here in
15 terms of the account value, and that will top up any
16 accounts that effectively got negative.

17 There are a few ways of reframing this. You
18 could be reframing it as the fill prices that happen.
19 It's all the same thing in the end.

20 Further down this layer here -- I want to be
21 careful about how I frame this. I'm going to remove
22 myself from legalistically talking about any

1 applications right now. And I'm going to just speak in
2 terms of, like, what I would do as an operator of an
3 exchange and what I would project I would feel would be
4 appropriate and what has happened in terms of how we
5 think about the international venue -- we haven't had to
6 do this -- which is that if we, the DCO, are the ones
7 running this risk model, then I don't want our customers
8 to the extent possible to ever have to worry about the
9 sanctity of their funds or their positions or their
10 collateral. I want it to be the case that a position is
11 a position and that you get paid out what should
12 straightforwardly get paid out.

13 I would be very tempted at that point to say
14 that the next layer here is our company, is that the
15 cash that we have -- like, that is a thing that I can
16 tell you I would be tempted by. I'm not making a
17 legalistic statement here. It is not a proposal for
18 something, but I feel that that would be a morally
19 appropriate thing to do. And I would want to protect
20 the sanctity of the customer positions and collateral
21 above our corporate P&L.

22 You go below that, though. Right? And at

1 some point, you would have to go below that. And at
2 some point, there is basically the equivalent of
3 variation margin haircutting. Right? At some point,
4 there just isn't enough money in the system to pay out
5 the positive P&L. And some of that would have to be
6 haircut.

7 Again, we've never gotten to that point
8 internationally. I would never want to get to that
9 point. I would do what I could to prevent ever getting
10 there. That is at the bottom.

11 The other leg of this, which is actually
12 fairly similar, is on the position, actually taking on
13 the position. And at some point, you hit a point,
14 again, beyond these layers, where you could have partial
15 tear-ups because the BLP capacity has been exhausted,
16 the order book liquidation has been exhausted in terms
17 of fraction of volume, the account's already way under
18 water, and it's just nowhere close to being able to
19 actually close down this position. There isn't
20 liquidity for it in the markets. It just isn't there.
21 And at this point, you're likely also dealing with a
22 guaranty fund scenario because it's likely already below

1 zero value, but, separately, its position has not yet
2 been closed. And, again, at this point, I would want to
3 find a way to do what it takes, morally speaking, not
4 making a specific statement, in order to make all
5 customers whole here, even if that came at an expense to
6 myself or the company.

7 But, putting that aside, at some point, you
8 get two partial tear-ups here, where you're, I mean,
9 doing the intuitive thing, tearing up the people who
10 have an opposite-sided position against the agency open,
11 effectively, unclosable margin call position. That is
12 the essential nature of the waterfall here.

13 There's one last point I want to make. I
14 didn't talk about intermediaries here at all. And that
15 is very intentional because the DCOs risk process does
16 not consider intermediaries. It just considers accounts
17 and collateral with the DCO. Separately from this --
18 right? -- maybe Alice is a user on the exchange and Bob
19 is an FCM and Alice is accessing the exchange through
20 Bob. And Alice and Bob might have some credit agreement
21 with each other. Bob might be posting collateral on
22 behalf of Alice or might be topping up the account on

1 behalf of Alice. That's abstracted away from the risk
2 engine, and it's abstracted away because of that from
3 contagion with any other members. And Bob and Alice
4 might have their own arrangement with respect to Bob
5 margin-calling Alice or something like that, but, one
6 way or another, the correct amount of margin was posted
7 to the clearinghouse prior to that position being put on
8 from some combination of them, in one way or another.
9 So the risk engine isn't concerned with that piece. Nor
10 does it impact the other participants.

11 So, anyway, that's the summary.

12 MR. STEIGERWALD: Thank you.

13 MR. EDMONDS: Hey, Robert? Can I just --

14 MR. STEIGERWALD: Yes.

15 MR. EDMONDS: -- add one thing? I appreciate
16 Sam's point around while not committing to it, not
17 legally, all of that.

18 MR. STEIGERWALD: This offer is not valid in
19 the District of Columbia.

20 MR. EDMONDS: We could have another roundtable
21 about what is valid, but that's a different
22 conversation.

1 I do think it's important, though, to say that
2 many of the exchange clearing groups that are out there
3 today being publicly traded, that there is this moral
4 compass there in a similar manner, that if we were to
5 say, "You know what? This clearinghouse, just it's too
6 much of a pain in the backside. We're going to let this
7 go" sort of ends our business as well. So I think we
8 share the motivation of finding the right level of
9 resolution for in a utilitarian fashion at that point in
10 time. So I appreciate Sam saying that.

11 I think everyone that operates in this
12 business has to find some way to act as a utilitarian
13 along the way in order to protect your shareholders and
14 the future value of the enterprise.

15 MR. STEIGERWALD: So it strikes me that if
16 this were strictly a question of moral philosophy, we
17 would not be seated here at the CFTC. We might be at
18 Georgetown University or Washington Cathedral pondering
19 the morality of all of this.

20 Sam, several points came to my mind. You
21 mentioned at one point the possibility of topping up a
22 collateral account, as I understood you, using tokens.

1 Would you expand on that, please?

2 MR. BANKMAN-FRIED: Yes. So this is not a
3 comment on any pending applications before the
4 Commission. This is not a comment on whatever. That's
5 TBD. Let me talk about the international platform for a
6 second.

7 Everything on FTX International in the end is
8 denominated in U.S. dollars, so positions. We talk
9 about position sizing in U.S. dollars, notional. We
10 talk about collateral in U.S. dollars, notional. And
11 dollars are one of the predominant, the biggest form of
12 collateral posted but is not the only allowable
13 collateral format posted on FTX International today.
14 Bitcoin, as an example, can also be posted as
15 collateral. Now, again, we denominate in dollars, and
16 we haircut. So if someone posts a bitcoin as collateral
17 internationally, they don't get quite one-to-one
18 treatment on that.

19 The philosophy behind this is actually very
20 similar to the philosophy behind the margin required for
21 a futures position, where in an extreme scenario, we may
22 have to liquidate that bitcoin for dollars. Like, it

1 may have to convert that into dollars in order to fund
2 collateral transfer. And, as such, there is some cost,
3 some impact associated with that. So there's a haircut,
4 and that haircut grows, the larger that collateral
5 position is. But we do allow multiple assets, including
6 some tokens, as collateral with some amount of
7 haircutting on the international platform.

8 And so, getting to your point of 24/7 top-ups,
9 what does this mean? I will list again on international
10 the ways that one could top up their account at, let's
11 say, midnight on a Saturday. So one could not send an
12 ordinary wire transfer from one bank to another bank
13 because that is not going to clear at midnight on a
14 Saturday. What one could do is the following. As we
15 said, one could deposit bitcoins, and those will be
16 immediately credited, within minutes, to their account
17 as collateral. One could deposit a stablecoin. So
18 these are tokens backed one-to-one by dollars in U.S.
19 bank accounts but that move on blockchain rails and,
20 thus, can move 24/7 in real time. So you can deposit
21 stablecoins, too, as collateral at midnight on a
22 Saturday, again, cheap and instant. You can deposit

1 dollars via some methods.

2 So most of the banks that we have bank
3 accounts at have an intrabank settlement network,
4 sometimes specifically cryptocurrency-related, sometimes
5 not, where if you have a bank account at that same bank
6 as we do, you can do a 24/7 instant, free transfer of
7 dollars to the clearinghouse. And it's, effectively, a
8 ledger transfer from that bank. So if you're banking at
9 the same place as us, you can, effectively, do the
10 equivalent of a wire transfer 24/7 to us. There are
11 some countries that just have 24/7 standard rails for
12 fiat currencies. And so there's that.

13 And, then, the last thing which is worth
14 noting is, again, going to this intermediary FCM point,
15 where, even if you don't have an asset that moves 24/7,
16 if you're going through an intermediary that does, they
17 could top up on your behalf. Maybe they already have
18 funds stored separately with FTX in case there is a
19 client of theirs whose account they want to top up.
20 Again, I'm not going to the legal details of how exactly
21 this works, just talking internationally for now. So
22 they could do it on your behalf and say, "Hey, I trust

1 you. You've got a day to increase your collateral with
2 me, the intermediary, but, in the meantime, I've topped
3 up your account with the assets that we had on hand,
4 either with the clearinghouse or separately that could
5 be transferred 24/7, in order to reach there."

6 MR. STEIGERWALD: So, before turning back to
7 the group for discussion, one other point that stands
8 out to me is your reliance on these contracted-for
9 backup liquidity providers. So I wonder how you think
10 about the possibility of strategic default by these
11 important liquidity providers. There is a reliance that
12 the traditional clearinghouses place on their members to
13 participate actively in a default auction, for example,
14 and the clearinghouses have created incentives for their
15 clearing members to participate actively and not opt
16 out. How do you think about that problem?

17 MR. BANKMAN-FRIED: Yes. So a few things.
18 The first thing is that, while I believe that the BLP
19 system does give an added layer of liquidity to this
20 system, mechanically, again, putting aside any current
21 applications or things like that, it wasn't necessarily
22 a necessary piece of this because there's still the

1 order book deleveraging that one can do. Right? And
2 you could just remove this BLP stuff if you wanted to
3 and keep going with the order book closing down. The
4 reason that we have the BLP system is to try and address
5 cases where there is basically temporary illiquidity in
6 order books, where our exchange doesn't happen to be the
7 most liquid, where whatever. Make up your own reason
8 for why this is as a backup layer of sophisticated
9 market participants who understand risk well and can do
10 things like transport risk and liquidity between venues,
11 can think about holding risk if they find it appropriate
12 or just like, effectively, supplement market depth
13 through the BLP system. That is sort of the layer that
14 it plays. And I do think it is helpful on that front.

15 And, again, when you have these participants,
16 they don't have the ability to say no in real time.
17 It's not a, you know, we're asking if you would like
18 this. It's as you are getting this position. And
19 that's what they've signed up for. Now, no one has to
20 be a BLP, but the people who have agreed actively to be
21 BLPs are signing up for that. And so there isn't an
22 ability for them when the time comes to say, actually,

1 "No, I'm not interested in providing here." And there's
2 a programmatic algorithm for how much collateral they
3 get these positions on with and they're allowed to
4 specify again just the limit of how much a position
5 they're willing to take on through this.

6 I'm not sure if -- I think there might have
7 been another question that I didn't fully understand
8 baked into what you asked. That's the general answer,
9 but is there another thing?

10 MR. STEIGERWALD: There may have been another
11 thing that I don't even remember, but your answer does
12 trigger another thought. I'm old enough to remember
13 when people were getting notification of positions they
14 didn't like especially. At least this is an apocryphal
15 story, if not real, that they would reach for the outlet
16 for the teletype machine and pull a cord --

17 MR. BANKMAN-FRIED: Yes.

18 MR. STEIGERWALD: -- out of the electric
19 outlet. That's a story that's told, for example, about
20 the failure of Bankhaus Herstatt in 1974. So it sounds
21 to me like your backup liquidity providers don't have
22 the modern equivalent of an electric cord to pull out.

1 They are somehow automatically getting the position,
2 whether they like it or not.

3 MR. BANKMAN-FRIED: Yes.

4 MR. STEIGERWALD: And, at best, they can,
5 what, close shop and go out of business?

6 MR. BANKMAN-FRIED: Well, I mean, it's
7 nonrecourse to them in that it's limited to the
8 collateral that they have on FTX as well. And it's
9 limited by the rate limits that they have chosen to set.
10 And so they could say, "We're not willing to take it
11 beyond this total size, beyond this limit of dollars per
12 minute."

13 And, again, we're not forcing anyone to be a
14 BLP. These are people who have chosen to accept this
15 responsibility in this role. But if they choose to do
16 that, then they do have to accept these positions in
17 real time. And that is the current point of it. Like,
18 this is going to be the most painful time for many
19 people to take on positions. That's when it's most
20 important for them to take it on. And so we don't want
21 to have a negotiation with them when they're most
22 needed. We want to come up with a contract beforehand

1 that they are comfortable with agreeing to. And then
2 the risk engine just runs, and it does it in real time.
3 So yes. They can't. I mean, they can unplug their
4 computers, but they're still getting the positions.
5 They're just not looking at it.

6 MR. STEIGERWALD: Okay. I must say, the older
7 I get, the more -- the less, I actually should say, the
8 less, confidence I have that contracts are always
9 observed. And there are always circumstances, tail
10 circumstances, where people will say, "Sue me." But
11 perhaps I don't understand the technology well enough to
12 know what consequences would follow from such a
13 decision.

14 MR. BANKMAN-FRIED: They could threaten to sue
15 us if they wanted to. I think it would be a frivolous
16 suit, but they could threaten to. But note that here,
17 we have their collateral. It's at the clearinghouse.
18 Right? The risk engine is printing these fills in their
19 account. It's not sending an API request and asking for
20 a response. It's sending them a notification that it
21 happened. And so, like, they technologically do not
22 have the ability to say no to these fills.

1 MR. STEIGERWALD: Okay. Okay.

2 MR. BANKMAN-FRIED: Like, they would have to
3 object, try and find a way to object, to it, but, like,
4 if they just say, "No, I'm not interested," it just
5 happens anyway.

6 MR. STEIGERWALD: Yes. So I feel at this
7 point, that I'm somewhat like the customer who's looking
8 for the place where I put my gas in my electric car
9 there's a mismatch between my expectations of what
10 happens at a certain point of time and the new thing
11 that has been created. So I apologize for that, that
12 disjunction.

13 Chris, I like some of the crispness of the
14 plan. I worry about not completely grasping it as
15 personally and feeling very dependent on others to tell
16 me that the technology either does or doesn't work and
17 the liquidity either is or isn't there, but it has some
18 compelling features. In fact, a similar model is used
19 by some FCMS in relation to some customer accounts, as
20 I've given to understand. Maybe it's a horse of a
21 different color once we get to the DCO level. I'll
22 grant you that, different order of systemic importance

1 perhaps.

2 At the same time, I'm attracted by the
3 opportunity that exists in the traditional system to
4 find the point at which the clearing membership, the
5 clearing community, is willing to say, "No mas!" Right?

6 So I think of this. I try to think in the
7 terms that my colleagues, the economists, think of. And
8 I think of that spot as the place where the marginal
9 cost of continuing to fund variation margin or
10 allocations, or whatever the demand for liquidity is in
11 a default scenario, exceeds the marginal benefit of
12 holding on to the positions. And while that's an
13 indeterminate point, it's something that's sort of
14 discovered. It's a price, I think, that's discovered
15 through the interaction between the CCP and its clearing
16 members. I don't know whether you agree with that, that
17 conceptualization, but the idea is that there's an
18 opportunity interactively to do some things that I think
19 are missing, but I also may be missing some of the
20 content of what Sam has been describing.

21 Does that give you enough to talk with?

22 MR. EDMONDS: I mean, look, there are other

1 CCPs sitting here, but I'll take a stab at that. And
2 they can correct me in their rule set.

3 I mean, I think, ultimately, at the end of the
4 day, on a philosophical level, this is a function of
5 time. And so it's not by mistake. And the FCM sitting
6 around the table probably would agree with me at the end
7 of the day that it's much better when defaults happen on
8 a Friday than they happen on a Monday morning. Okay?
9 So there is a function of time. And, while
10 scientifically what Sam has articulated through their
11 model is very finite in the amount of time and the
12 decisions that are made and when they're made, how
13 they're made, automatic fills, we're not asking, it's
14 going in, whatever -- I'm sure you'll get to cascading
15 at some point, and we'll have that debate -- there is
16 not a lot of time. You'll make your own decision
17 whether that time is valuable.

18 If you look at the crisis in '08, everyone
19 gathered in a room, and we needed time. And we are
20 still cascading in that. So make no mistake. I mean,
21 lots of people around this table felt the pain of that
22 cascading that took place.

1 So while there is a tremendous amount of
2 science and there will be in the future a tremendous
3 amount of science that positively impacts the operations
4 of our market, at the end of the day, there is a little
5 bit of art. And the question is, are you making a bet
6 on the art in that time of stress or purely the science?
7 You know, that will be a decision that everyone makes
8 with their own dollars along the way.

9 I tend to think that the history of the
10 traditional model has provided the time necessary to
11 find not the most pleasant but the most applicable
12 solution, but others may have different points they want
13 to add.

14 MR. DOWNEY: Just to take it a little bit out
15 of art and morality and just think a little bit about
16 what's in writing and since we are talking specifically
17 about models, I just wanted to point out a few things.
18 To the extent that you're going to de-risk or conduct
19 settlement via a stablecoin or crypto, or whatever it
20 may be, I noticed that there are references to haircuts.
21 As far as we can tell, those haircuts out offshore are 2
22 and a half to 5 percent, which are significantly less

1 than we might expect otherwise. And that's when you are
2 referring to bitcoin and Ethereum and other cryptos.
3 Notice that some of the stablecoins have different
4 haircuts, and terracoin had a haircut of 20 percent
5 before it went down 70 in one day.

6 And, then, lastly, I would just point out that
7 it's a very good point that we would all seek to ensure
8 that the market continues to operate, but if you just
9 look at the rulebook -- and in this case, I'm talking
10 about the rulebook for the U.S. application, which we're
11 not really supposed to talk about -- there is an ability
12 to conduct partial tariffs as a first line of defense.
13 So we can talk about the fact that we would all put up
14 additional capital. CME actually provided a guarantee
15 if you go back far enough in time, but, ultimately, the
16 rulebook and the technical details of what we're talking
17 about here is not necessarily supported by what we would
18 like to see happen in a more moral universe.

19 MR. STEIGERWALD: There are so many things
20 that are disappointing about living in a non-moral or
21 amoral universe.

22 Claire?

1 MS. O'DEA: Yes. I just had a few questions,
2 really, just to really understand how the BLPs work
3 given they're so fundamental to this model. So I'm
4 still a little unclear who they. Are they regulated
5 entities? Is there a particular criteria or credit
6 checks that happen to ensure that they can be a BLP.
7 And how do you ensure they turn up because, obviously,
8 if everyone turns around and hasn't got the appropriate
9 collateral to take the positions, that could be an issue
10 and, similarly, with fair pricing as well because the
11 BLPs themselves could potentially -- and I think, Sam,
12 you mentioned this in your presentation before. They
13 can potentially feed into the negative feedback loop and
14 come in with low prices and see an opportunity to make a
15 profit themselves.

16 MR. BANKMAN-FRIED: So a few things on that.
17 First of all, I don't think I necessarily see them as
18 fundamental, as being as fundamental to -- I think they
19 are an important and valuable piece of it. You could
20 have this exact same model without the BLP layer just
21 using the order book for deleveraging. I think the BLP
22 layer does add an extra layer of liquidity. And I do

1 think it is an important one, but I don't think it's a
2 necessary one.

3 I think, second thing, in terms of who they
4 are, I can't divulge customer information. We can look
5 into whether there are BLPs who are willing to have
6 their information disclosed, but I can say they are, by
7 and large, a lot of firms that you would have heard of,
8 standard large participants in global liquid
9 marketplaces who have large balance sheets and are used
10 to handling large volume, large positions.

11 And, to your point about the pricing of these,
12 the BLPs don't choose the pricing that they get. The
13 fills at those prices are just based on market price and
14 the amount of collateral left in the account. It's not
15 an auction from the BLPs.

16 And the last thing, which I think is a good
17 point that you brought up, is about the amount of
18 collateral that the BLPs actually have. And the answer
19 is quite a bit internationally, but I think that that --
20 and, again, I want to avoid making a sort of, like,
21 declarative legal statement about any pending
22 applications or anything like that, but I do think that

1 some amount of assurances around the collateral that
2 BLPs have on the platform could be appropriate and
3 helpful for providing transparency around the amount of
4 liquidity backstopping the system.

5 Just one final last thing that I'll note is,
6 like, on the collateral haircutting, the risk engine
7 worked fine for the spot assets on those days because it
8 didn't take a day to close down a position. It takes
9 quite a bit less than that. And so, again, just talking
10 internationally, not in the U.S. for now, the 20 percent
11 haircut was sufficient, even during one of the largest
12 moves we've ever seen in the cryptocurrency ecosystem to
13 avoid any mutualized losses, any substantial guaranty
14 fund draws, and to keep markets orderly.

15 Despite that, this is not a statement about
16 what collateral levels would necessarily be or haircut
17 levels would necessarily be on any hypothetical U.S.
18 applications. That is a separate thing to note.

19 I note again also that if you have a large
20 amount of collateral in any of these, those haircuts do
21 get quite a bit steeper.

22 MR. STEIGERWALD: Okay. We're starting to get

1 more and more interest in joining the conversation. I
2 promise you I will get to you. Let me move around the
3 room a bit. Stephen?

4 MR. BERGER: Yes. I just want to pick up, not
5 to labor the point around the BLPs. And I'm looking at
6 the language from the stylized example for the avoidance
7 of doubt.

8 I guess, so the first question I was trying to
9 wrap my head around is, the margin from the BLPs with
10 respect to the positions they're meant to absorb, are
11 they prefunding that or is it on the back of just excess
12 margin they happen to be holding associated with their
13 existing portfolio? So is our expectation that BLPs
14 would have to prefund the margin associated with their
15 commitment to absorb positions? And there's another I
16 guess reference in the stylized example that says
17 positions may be allocated to the BLPs, if necessary, at
18 a discount. And that discount is funded by the guaranty
19 fund. So is the expectation that the margin is
20 prefunded or the margin comes out of the guaranty fund
21 when the BLPs have to step in and take those positions?
22 So that's, like, my question with respect to

1 the primary BLP system, but, then, there is all this
2 discussion of a secondary BLP system. And in that
3 instance, it's not clear to me whether market
4 participants are signing up to be the secondary BLPs or
5 they're just being on-the-spot nominated as you're now
6 my secondary BLP because the language here says, in this
7 event, the DMO/DCO will turn to the secondary BLP
8 system, represented by the largest market participants
9 with offsetting positions to the liquidated accounts.
10 So in that instance, active market participants, who
11 just happen to have large positions that are on the
12 other side of the market from the people who are being
13 liquidated, are going to have positions assigned to
14 them. They happen to be people who are right about the
15 direction of the market. So are you incentivizing the
16 right behavior by telling the people who did the
17 research to be on the right side of a market move that,
18 "Sorry. Because these other people are getting
19 liquidated, we're going to assign their positions to you
20 now?"

21 MR. STEIGERWALD: Thank you.

22 Sam?

1 MR. BANKMAN-FRIED: Yes. So a few things on
2 that. When you talk about the price of the BLP
3 transfers, the BLPs need to have collateral prefunded in
4 their account prior to taking these on. The thing about
5 the guaranty fund there is that if the account that is
6 getting BLP, that is getting margin called, has negative
7 value left in it, that would correspond to, like, they
8 could only pass a position off at prices bad to the
9 current market, to the BLPs. And in that case, the
10 guaranty fund makes up that difference in pricing,
11 effectively. So the BLPs still get fills that are
12 reasonable that are good mark-to-market. And if the
13 account doesn't have collateral left in it to do that,
14 then the guaranty fund kicks in that funding. So the
15 guaranty fund is not taking on a position here, but it
16 is, effectively, topping up accounts to the point that
17 they would need to be. And you can think of whatever
18 sort of schematic you want for whether that collateral
19 is transferred to the account that then gets BLP
20 normally or whether the BLPs will still have them and
21 then BLPs are compensated sort of the same, the same
22 thing. So that that's the answer to that question.

1 And the answer to the question about the,
2 like, secondary BLPs, at that point you're starting to
3 get into the realm of, basically starting to get into
4 the realm of, position, partial position, tear-ups. I
5 think those are bad, and those are things that should
6 never happen unless absolutely unavoidable, that I would
7 intend to never happen on FTX. And that would come
8 after everything that we can do to prevent that.

9 And, obviously, partial tear-ups are something
10 that every counterparty, every CCP has to have somewhere
11 in their waterfall because if everything else in the
12 world fails, there's nothing else one can do. But I
13 would put that after the clearinghouse having done
14 everything they can to avoid that because I agree it
15 would not be at all fair to routinely go to people with
16 large winning positions and say, "Sorry. That's not
17 your money. We fucked up on our risk engine." That is
18 that is not fair, and that gets back to my moral
19 statement about doing everything I could to prevent
20 that. That would happen before you get to the secondary
21 level there. And yes.

22 MR. STEIGERWALD: You did say, "forked up,"

1 right?

2 MR. BANKMAN-FRIED: That's correct.

3 MR. STEIGERWALD: Okay. Just for the record.

4 MR. WINNIKE: Thank you.

5 And, to continue to delve into the BLPs, I
6 think when we look at both the default waterfalls that
7 ICE presented and FTX presented under the model --
8 right? -- customers are at the bottom of the waterfall,
9 which we care about. And we think that is appropriate.
10 And the question is, how much risk is absorbed in
11 between and capital is in between us and an allocation
12 of loss?

13 And I think when we take a look at the
14 traditional model, we have a fair amount of transparency
15 into the players, like the FCMs, who are there to
16 participate in funding the default fund, potentially
17 being involved in assessments, as well as their overall
18 equity, kind of their financial strength.

19 And so the question I would have is, could
20 this model with BLPs have similar levels of
21 transparencies? Maybe today, it wouldn't be allowed
22 under confidentiality agreements, but could you have

1 transparency to investors, both in terms of identity but
2 also kind of in real time, how much capital is on the
3 platform and committed? And do you think the model
4 would work with that level of transparency?

5 MR. BANKMAN-FRIED: Again, this is not a legal
6 statement. It is not a statement about any pending
7 applications. This is a moral statement from Sam.

8 And I would tell you that I could see it as
9 being entirely appropriate to do something like give
10 real-time disclosure about the aggregate amount of
11 collateral that BLPs had free on the platform. I'm
12 making up that, but something like that, I could see
13 being or maybe some -- so we're not showing like real-
14 time P&L of customer accounts, which could be
15 proprietary information, maybe some bucket around that,
16 like, give it like what is the sort of, like, a factor
17 of two range within -- I don't know -- I'm making this
18 up exactly but some amount of transparency around what
19 that level of assets are I could see being entirely
20 appropriate.

21 And, obviously, worth knowing here as well,
22 you are guaranteed that there is margin held at the

1 clearinghouse that is above the initial or at least
2 above maintenance margin of all the positions there.
3 And that is prefunded with the clearinghouse. So they
4 are sort of automatically transparent. So they would be
5 at a lower limit for the amount of those funds.

6 And then the guaranty fund as well, I could
7 see it being entirely appropriate to give real-time
8 information about the sort of current size of the
9 guaranty fund. We've made very public what that is
10 proposed to be starting out at as well.

11 MR. STEIGERWALD: So, again, we're attracting
12 a lot of interest in the conversation. I would ask for
13 your patience just for a moment. We have Dennis
14 McLaughlin on the line from the U.K.

15 Dennis, thank you for joining us and staying
16 with the conversation. Would you make your
17 intervention, please?

18 MR. McLAUGHLIN: Yes. Thank you, Robert. One
19 question I had -- and I don't quite understand. In
20 traditional clearing of normal assets that we deal with
21 every day, discretion does come into the picture at some
22 point, especially if it's a stress event and the entire

1 market is melting down.

2 Given the speed at which we're talking about
3 here in terms of marketing portfolios moving to backstop
4 liquidity providers, the rapid nature of the information
5 coming and the actions being taken on the back of that,
6 where in this whole picture does discretion play a role,
7 if any? And how does the regulator get involved or is
8 the action already over before you even know about it?

9 MR. BANKMAN-FRIED: So you're correct that in
10 the clearinghouse model here, there's not a lot of
11 discretion. Technically, when you get down to the very
12 bottom ends of this waterfall and we start talking about
13 tear-ups, partial tear-ups, then the risk committee
14 starts to get involved. So there is a point at which
15 that happens, but it does attempt to stave that point
16 off until the last moment.

17 And the core first layers here are automated.
18 However, first of all, again, this is limited to the
19 collateral that people have on with the clearinghouse
20 that they have already pre-delivered to it. And, then,
21 the other thing worth noting is that if you wanted to
22 access it from a more discretionary or a more sort of

1 bespoke standpoint, you could go through an intermediary
2 that would have whatever relationship or agreement or
3 timescale the two of you work out in terms of credit,
4 between you two in terms of topping up, in terms of
5 delivery and settlement. And that intermediary could be
6 the one that is, effectively, handling the real-time
7 margin posting and delivery to the clearinghouse if that
8 was how you felt comfortable accessing markets, as many
9 people, especially many institutional firms, do today.

10 MR. STEIGERWALD: Thank you.

11 MR. McLAUGHLIN: And the regulator? How does
12 the regulator get involved or do they get involved at
13 all in this process.

14 MR. BANKMAN-FRIED: I mean, it is not. The
15 regulator is always welcome to get involved and,
16 obviously, at some point would likely get involved in a
17 sort of, like, all-out market route, where markets were
18 massively disorderly probably across many asset classes.
19 I think it's like beyond me to speculate how they would
20 choose to get involved, but, I mean, here, like in other
21 assets, it's going to be hard for them to get involved
22 within 13 seconds of a move. And there is going to be

1 volume that happens there. It's going to be trading.

2 There are going to be market moves.

3 And it is true that in this case, there might
4 be account deleveraging that happens on shorter
5 timescales as well, but if the regulator wants to reach
6 out and get involved, they obviously can do so. And we
7 were to probably expect reach-outs in very extreme
8 scenarios.

9 MR. McLAUGHLIN: Thank you.

10 MR. STEIGERWALD: Thanks, Dennis.

11 And thank you, Gerry, for your patience.

12 MR. CORCORAN: No worries.

13 An observation here and in these examples that
14 have been presented. If that customer that is
15 defaulting in your firm is at a traditional FCM, the
16 traditional FCM is going to absorb that hit up to the
17 extent of their capital before we get into a liquidation
18 situation that occurs under the model that we're
19 discussing today. So this is a real obvious example of
20 why the FCM layer is really a protective layer for the
21 system as a whole because that FCM will absorb that loss
22 until up to the last drop, as we'd say. And then it

1 would go into Chris' world or Sean's world. So that's
2 just an observation.

3 The other question I have about the BLPs is,
4 like, why would they do this? What's the compensation
5 for BLPs that at some point in time, you can just assign
6 them a boatload of positions that are losing a lot of
7 money? Why are they there? What is the compensation
8 and motive for BLPs to be at your side?

9 MR. BANKMAN-FRIED: So on the second one, the
10 BLPs do get the fills at a price which is good mark-to-
11 the-market at the time they get them using a portion of
12 the remaining collateral that's in the customer account
13 that is getting BLP'd off. And so there is a trade-off
14 there, obviously. You get a fill which is good mark-to-
15 market, but you're you may be catching a falling knife.
16 It's a volatile market environment. That's sort of what
17 they're balancing. And so they tend to be firms that
18 are very sophisticated in their handling of risk,
19 especially in real time, that can access multiple
20 marketplaces, do arbitrage, and sort of make
21 sophisticated decisions on this and are willing to take
22 the, effectively, compensation of the good fills mark-

1 to-market in return for that.

2 To your first point, I do think that that is a
3 really valuable function that FCMs fill for some
4 clients. And we would be excited to connect with any
5 FCMs in this room or not to talk about filling a similar
6 role on our venue, where internationally we have similar
7 types of intermediaries today that are, to the extent
8 that they choose to, deciding to put their credit on the
9 line with their customer. It is pre-delivered to the
10 clearinghouse, but they can choose to back that position
11 up with their own funds, rather than having it being
12 deleveraged. I think that can be a healthy role in the
13 market and a valuable one for many clients. And we'd
14 love to work with FCMs on that.

15 MR. CORCORAN: But I see the role of the FCM
16 is to make sure that client is creditworthy and that in
17 this particular example, that customer could be
18 creditworthy, but in your world, they don't have time to
19 meet the margin call, where in an FCM world, they will
20 say, "Okay. This is a very large company. We have a
21 long history with them. They're going to be wiring \$20
22 million in in the next 15 minutes. We don't need to do

1 a liquidation on this."

2 So, again, this is not to take a shot, so to
3 speak, of your model but to really put forward the
4 importance of an FCM, the role the FCM plays in keeping
5 the marketplace orderly.

6 MR. STEIGERWALD: Emma, you have been patient.

7 MS. RICHARDSON: Thanks.

8 I didn't actually want to ruin the flow of the
9 conversation because I feel like it's more around the
10 specifics of the model. My question was really much
11 more from a principles-based approach around the default
12 fund and the adequacy of this. I think there's a
13 specific number that is being discussed here but was
14 really more thinking about how the traditional way that
15 a default fund is constructed under the existing
16 regulatory framework might not be appropriate for some
17 of these new direct participation models. So that was
18 the point I wanted to make, but I feel like maybe if
19 there are specifics more around this model, maybe it's
20 best to address that question later in the session.

21 MR. STEIGERWALD: Okay. Very good. No. I
22 take your point. Many of us have been scratching our

1 heads about what cover 1 and 2 or anything more than
2 that mean in this context and how do we go about
3 evaluating the adequacy of financial resources that
4 would be deployed in this new model.

5 MS. RICHARDSON: Yes.

6 MR. STEIGERWALD: So let's get to that as we
7 as we can.

8 Nelson?

9 MR. NEALE: Sam, I wanted to follow up a
10 little bit to Stephen's question, I think a little bit
11 to Gerry's remarks, just so I understand it. If we get
12 into a situation where you have to transfer risk to a
13 BLP in the stylized facts guide, there was mentioned a
14 discount. So, number one, are you providing them those
15 positions at something less than market. I think you
16 said no and it transferred at market. So I'm trying to
17 figure that out.

18 And, number two, given, say, a commercial
19 entity that doesn't have time to post its margin and it
20 heads down this BLP track, why don't you open? If there
21 is a discounted opportunity, why don't you open it back
22 up to all market participants versus strictly going down

1 to the signed-up BLP route of participants.

2 MR. BANKMAN-FRIED: So, first -- and I think
3 there might be confusion over discount versus premium
4 depending on the direction of the position that they
5 flip. So let me just take an example here to make it
6 explicit because I may have said the wrong things. I
7 may have misinterpreted something.

8 Let's pretend that the position is a long
9 position that is getting closed down against the BLP.
10 That BLP will get that position passed off at an
11 effective fill price that is below the market price. So
12 the BLP will get a fill which is good for the BLP mark-
13 to-market in exchange for being forced to take that risk
14 off. And that will happen, effectively, using some of
15 the collateral that is in the customer account. So,
16 yes, the answer to that thing is yes, it does happen in
17 a fill, which makes sense for the BLP.

18 MR. NEALE: So they would get a favorable
19 fill?

20 MR. BANKMAN-FRIED: Yes, that's correct.

21 MR. NEALE: Okay.

22 MR. BANKMAN-FRIED: Well, favorable if you

1 ignore the fact that it is --

2 MR. NEALE: Understood.

3 MR. BANKMAN-FRIED: -- forced and risky.

4 In terms of opening up to everyone, there's
5 obviously an opportunity for everyone to post liquidity
6 in the order books in order to get this in the previous
7 step where it was happening with the order book
8 liquidations. And that is how we start this process
9 off, is just with standard order book liquidations.

10 And we get to the BLPs if the account is
11 rapidly trending towards zero remaining collateral and
12 the order book was not capable of doing it. I think you
13 could imagine us building out a system where,
14 effectively, anyone could sort of like instantly opt
15 into being a BLP if they wanted to. And right now,
16 anyone can be a BLP if they want to. They have to
17 prearrange that, however, before the market move. What
18 you're saying is, effectively, could you have people
19 sort of pop up and say, actually, "I'd like to be a BLP
20 for the next hour."

21 MR. NEALE: I'm basically saying --

22 MR. BANKMAN-FRIED: Yes.

1 MR. NEALE: -- if you are offering a favorable
2 fill --

3 MR. BANKMAN-FRIED: Yep.

4 MR. NEALE: -- against the market --

5 MR. BANKMAN-FRIED: Yep.

6 MR. NEALE: -- then is it going to be
7 exclusive to five large players or is it going to be
8 opened up because there may be some market participants
9 that say, "Hey" --

10 MR. BANKMAN-FRIED: Yep.

11 MR. NEALE: -- "I want to play in that space
12 if I get a favorable fill."

13 MR. BANKMAN-FRIED: Yes. Well, I would, first
14 of all, just encourage them to reach out to us and
15 become a BLP so that they can get those fills. So
16 that's my first answer, is they should then be a BLP.

17 There's a separate question if they chose not
18 to become a BLP earlier but now decide they actually do
19 want to be one. You know, you could imagine us opening
20 up a sort of like auction-like venue such that people
21 could in real time go in and out. It would be
22 potentially messy, could be cool. It's not a piece of

1 technology that we I think have built. I don't know
2 that it would be that hard. I don't know how much
3 demand there would be for it. I think it's not a crazy
4 idea to do. But my core answer is a firm in that
5 position should reach out to us ahead of time to be a
6 BLP because that seems to be what they would want
7 according to your hypothetical.

8 MR. STEIGERWALD: Thanks.

9 Chris?

10 MR. PERKINS: Yes. I want to start by saying
11 it pains me, it really pains me, to hear my colleague
12 talking about international -- right? -- the
13 capabilities that international players have that we in
14 the United States do not. I'm on the buy side. I would
15 love to deploy derivatives as they're designed to
16 comprehensively hedge my risk, but those capabilities
17 are simply not available for cryptocurrency markets.

18 And I'll remind everyone that the realities of
19 24/7 markets are here. I've been through many default
20 situations. I've been through liquidations. They're
21 brutal. They're arduous. They're timely. Right? And
22 in many cases, they're manual, like it or not.

1 And so I would encourage us to start thinking
2 about how we can deploy and leverage technology to
3 expedite the process because I love it when bankruptcies
4 or insolvencies happen on the weekend. That's
5 wonderful. But guess what? It doesn't always happen
6 like that. And so we need to focus on ways to innovate
7 and how to automate this process.

8 And I would love to ask the other CCPs, how
9 can we have comprehensive 24/7 derivatives markets
10 focused on cryptocurrencies? How can they adjust their
11 default management processes to give Americans the same
12 capabilities that are being given to folks overseas that
13 allow us to hedge our risk?

14 MR. STEIGERWALD: So it seems to me that
15 that's a terribly important question for us to get to.
16 I'm going to just put it on hold for the moment. And
17 we'll see how the conversation develops.

18 Dave?

19 MR. OLSEN: Thank you.

20 I do have a question, but I want to address
21 the ad hoc BLP conversation that just took place. I
22 think if you think about a BLP pre-committing to a risk

1 exposure that they don't know the instrument or the
2 direction and the compensation for that is an
3 advantageous fill, if and when it happens, I think the
4 emergence of the ability to participate as an ad hoc BLP
5 when you have a lot more information about the market
6 might erode the benefit of -- you might not see many
7 participants agree to that risk in peacetime. You could
8 just wait until you have more information and go from
9 there.

10 But I wanted to ask Sam. We've been focused a
11 lot on the worst-case scenario. I assume that in the
12 worst-case scenario, we've got a lot of dislocation of
13 markets, big price movements. One of the chief problems
14 at the LME, even though there were proposals for years
15 to say you've got to have price bands, you've got to
16 have circuit breakers, those were not implemented and
17 the core meltdown kind of ensued. It's tough to
18 separate the default characteristics from some of the
19 other controls. So I'd be interested in, what are you
20 thinking from a trading halt or circuit-breaker
21 standpoint? What are you thinking about from a
22 concentration-of-large-position standpoint? And how

1 does the liquidation mechanism work if you're in a
2 circuit breaker moment at that time?

3 MR. BANKMAN-FRIED: Yes. Thank you.

4 So I guess addressing these, again, not
5 specific to any application but internationally, how do
6 we think about the sort of question of circuit breakers
7 and price bands and things like that. The core sort of
8 philosophy behind it is if markets are trying to go to a
9 price and that is going to be the efficient market
10 clearing price, that needs to happen. And delaying that
11 doesn't help anything. Delaying that just causes people
12 to be unable to hedge their risk in the meantime, but
13 that what you want to prevent are basically illiquid,
14 inefficient market moves, fat fingers, misprints,
15 temporary illiquidity in order books, and other things
16 that could cause an erroneous or sort of unnecessary
17 print way away from what the sort of, like, true market
18 clearing price of the asset really is.

19 So the way that we manage risk bands
20 internationally is we have, effectively, short timescale
21 price bands that, to give an example, say, things like,
22 well, in any 20-minute period, markets can't move more

1 than 10 percent. And so that prevents any sort of,
2 like, weird short-timescale thing, algorithm gone awry,
3 misprint or just like a sort of like temporary liquidity
4 on one side of the markets, whatever it is, from causing
5 sort of bad basically dumb market data that would
6 potentially trigger liquidations that needn't happen,
7 but that when you look at, like, day timescale, hard
8 price bands, I think those often do more harm than good
9 because at some point, markets really actually just have
10 move. They are trying to move. That is where the
11 efficient new clearing price is. And if you delay for a
12 day, it is just going to be there tomorrow except you
13 will have failed to margin call anyone. In the
14 meantime, you'll fail to give people an ability to
15 hedge.

16 And you saw this happen with LME, where it's
17 like every day, day after day after day, things are just
18 hard-up limit. No liquidity can occur. There's no
19 trading because the fairer price was actually just
20 higher than what the price bands could allow. So that's
21 on sort of the price-band side. And that also means
22 that the price-band movement scale lines up with the

1 sort of scale on which the risk engine is taking place.
2 So the risk engine isn't prevented for a day from
3 deleveraging positions when it needs to do so and that
4 the price band width is meant to be such that if you
5 have a sufficiently collateralized position, a well-
6 collateralized position, you don't have to worry about a
7 random jerk in markets that sort of would quickly revert
8 from triggering a margin call on the account.

9 The second thing about concentration of large
10 positions, again, internationally, what we do is we have
11 increasing margin requirements the larger your position
12 is. And so if you have a position of size \$10, maybe
13 you will require a 10 percent margin for it, but if you
14 have a position of size \$10 billion, you might require
15 75 percent margin for it. And this scales up
16 algorithmically with the size of the position based on
17 the, effectively, liquidity and volatility of the
18 underlying asset to kind of recognize the fact that this
19 is a higher impact position being put on.

20 MR. STEIGERWALD: So thank you.

21 I just want to come to Mariam, but I want
22 Dimitri to know that we see you. We'll come to you

1 next. Lots of interest in joining the conversation.

2 Just give us a moment.

3 Mariam?

4 MS. RAFI: Thank you. I think one of my
5 challenges in comprehending all of this is that there's
6 a lot being said that isn't actually documented in the
7 rulebook or maybe conflicts with what's in the rulebook,
8 such as the priority order of the secondary backup
9 liquidity providers and in terms of when they're
10 assigned the positions, but as it goes back to FCM
11 participation, which has been cited, that's another
12 construct that isn't currently permitted by the
13 rulebook. And we've been trying to figure out how FCMs
14 could actually participate within the framework of the
15 current CFTC rules. The Rule 1.30 prevents unsecured
16 lending by an FCM because we aren't allowed to take a
17 security interest in positions. And that's my
18 understanding of what is contemplated by FTX because if
19 we were to advance margin, we wouldn't retain a security
20 interest back in that margin. So it would be helpful to
21 get some more specificity in writing within the rulebook
22 about how these mechanisms should operate. And I think

1 it would also clear up a lot of confusion around how the
2 BLP program works.

3 One further note that we had about the BLP
4 program is just how conflicts of interest will be
5 addressed. For instance, if there are associated
6 parties with the DCO who are actually also backup
7 liquidity providers; whereas, within the CFTC rules
8 between swap dealers and FCMs, there are very clear
9 conflict-of-interest rules, how would that operate in
10 this sort of circumstance.

11 MR. STEIGERWALD: Thank you.

12 Demitri?

13 MR. KAROUSOS: Thank you, Robert.

14 That last point was actually one of my points
15 just to be clear whether the BLPs are, in fact,
16 independent of the DMDCO in the stylized rules or not
17 because, otherwise, you might imagine conflicts of
18 interest and potentially further exposure to the DMDCO
19 if there is equity overlap between the two entities.

20 One of the other questions I had on the BLPs,
21 but I don't want to stop there because I have a couple
22 other comments, is just a recognition that, of course,

1 their own collateral may not be sufficient during the
2 move. The assumption is that these are also market
3 participants whose portfolios themselves may be impacted
4 by the activity.

5 What I'm struck by, though, Robert, was in
6 your startup of this session of understanding how the
7 waterfalls compare between the traditional model and the
8 one that's proposed, they're actually quite very
9 different scenarios in the sense that the defaults that
10 ICE was describing, what's happening in that situation
11 is that some tremendous market volatility may have
12 occurred and someone or maybe a pair of entities
13 actually failed to make payment. Right? So they
14 actually defaulted.

15 The other scenario is one in which a price
16 moved, which impacts everybody. And now potentially a
17 lot of people don't have time to respond with additional
18 collateral. I appreciate that emails are going out and
19 so on -- but who knows? -- or how much time they have to
20 respond before this auto-liquidation kicks in. So it's
21 a very different scenario between market moves that
22 impact a lot of entities and only one or two may not

1 have the wherewithal to respond given the normal timing
2 of a default margin cycle, of a regular margin cycle,
3 versus market moves impacting everybody and nobody
4 having time to respond to that. So that's a very real
5 cascading effect, but it's also a very different
6 scenario than your largest participant defaulting.

7 The other issue that was brought up was this
8 question about price bands and also what I guess I
9 consider a bit of a false dichotomy of the 24-hour
10 market requiring a radically different system. I mean,
11 our system today is anywhere from 9 hours to 23 hours in
12 trading. And we still choose, along with the other
13 clearinghouses, to do either one or two margin cycles a
14 day, not continuous margin cycles, partially because of
15 this question on price. Right? Every tick that happens
16 in the pricing of a contract is not a settlement in
17 price. And that's on purpose.

18 A settlement price is what you then determine
19 after reviewing the trading activity for the day and
20 where markets have ended up and whether anything unusual
21 happened and should certain transactions be excluded
22 from your settlement price consideration based on

1 concerns you may have from a surveillance perspective.
2 Those are very important considerations that happen in
3 setting settlement prices. Why? And we do this twice a
4 day. Because the settlement prices determine margin,
5 and they determine variation margin, the profit and
6 loss. That's on purpose. That's not a bug in the
7 system. That's a feature. We take time to determine
8 settlement prices because they determine those two
9 important things: initial margin and variation margin.

10 So the idea that every tick, every movement
11 can trigger these kinds of liquidations, we need to
12 pause and think about what that really means. It's a
13 very big departure from practice that is a conscious
14 choice, not one that is somehow because we can't
15 technologically do it. Of course, we could. It's a
16 conscious choice to take time on developing settlement
17 prices.

18 MR. STEIGERWALD: Thanks, Dimitri.

19 I would turn it back, but, Sam, we've been
20 riding you pretty hard. So why don't you take it easy
21 for a couple of minutes?

22 I suspect that both sides of this discussion

1 think they are offering the market features, not bugs.
2 So, you know, how do we decide which is the better of
3 the features, under what circumstances, essentially is
4 the problem we're struggling with here. Hilary?

5 MS. ALLEN: So we can go to someone with no
6 dog in this fight.

7 So from this description of the model, it
8 seems like a lot of things have to go right for it to
9 work. Right? So, first of all, the models have to have
10 assessed the right amount of margin, and the decision
11 about the number of the guaranty fund has to be
12 accurate.

13 It's very difficult, as I mentioned earlier,
14 to make risk assessments with regards to crypto because
15 there is no backing for the asset. And it can go to
16 zero very, very quickly. So, for that reason, investors
17 investing in the space are very vulnerable. They have
18 to get their alerts, and they have to get their alerts.
19 You know, they could be sleeping, but they have to get
20 their alerts in time to respond. If they're highly
21 leveraged, in a highly volatile asset, they can go to
22 zero really quickly. And so they can get liquidated

1 really quickly.

2 When things start getting worse, we've been
3 told that there's a combination of people making
4 decisions and algorithms making decisions. And I'm not
5 clear exactly on the division of responsibility of where
6 the people make the decisions and where the algorithms
7 are automating things. But we're told that people need
8 to do the moral thing, and then the algorithms have to
9 perform as expected. So that means they can't have
10 bugs, which they often have. They can't have
11 vulnerabilities that can be exploited, which they often
12 do. And they have to know how to respond to unexpected
13 problems, which is not the thing that algorithms
14 typically can do because they have no discretion. And
15 so we've taken all of the discretion out of this. We've
16 left very little space for the regulators to intervene,
17 which is usually a failsafe that we have in most
18 markets. Normally, you have a closure, for at least
19 some period, where the regulators can intervene. So
20 we've taken that out as well.

21 So we have a lot of stuff that needs to go
22 right for this to work. So I think it's important to

1 take a step back from the how and really ask the
2 question of why we should do this. What's the point of
3 this model? And so what I understand is that it has
4 been proposed to allow retail investors to have 24/7
5 margin trades in the crypto world.

6 So what are sort of the positives of that?
7 Yes, it's innovative, but, as we've talked about
8 earlier, innovation needs to be responsible. It can't
9 just be innovation. And we don't just leave it at that.

10 So one argument that you hear is the financial
11 inclusion one, that this will offer investment
12 opportunities to investors who wouldn't otherwise have
13 had them. So I think we need to sort of be a little
14 careful about there, there's a lot of predation in the
15 crypto markets. We've just talked about the conflicts
16 of interest that the backup liquidity providers could
17 have. So, in addition to that, I mean, even separate
18 and apart from people who have conflicts of interest,
19 there are also sophisticated professional traders for
20 whom these highly margined retail traders could be
21 sitting ducks. So I think it's worth thinking about the
22 potential for market manipulation, exploiting them.

1 So then we hear sometimes that this is useful
2 from an efficiency perspective, but increasing
3 efficiency basically delivers diminishing marginal
4 returns. Anyone familiar with complex systems knows
5 that you need some redundancy, some friction, some lag
6 in there. Otherwise, the system simply becomes too
7 fragile. And if this breaks, it's not just a
8 consequence for the people who have invested in this
9 space.

10 So what we have is basically potentially mass
11 liquidations being decided by one algorithm. So if that
12 happens, what does that do to prices in other assets?
13 There's tight correlations between crypto assets, and it
14 may not stay combined, even to the crypto ecosystem. If
15 people are trying to meet margin calls, what are they
16 selling off in order to raise cash and selling off fast
17 because they're being liquidated fast? What are they
18 selling off to raise the money to satisfy the margin
19 call? So this isn't necessarily going to stay within
20 its own little universe. There are potentially
21 spillover effects as well.

22 So we've heard that this is supposed to

1 increase liquidity. There's a lot of liquidity sloshing
2 around. Liquidity is valuable when things go wrong.
3 Unless this can provide liquidity in those sort of dire
4 circumstances, then it's not really adding, really, to
5 the useful liquidity in the pool.

6 So I'm seeing the signs that I've gone a
7 little over time. So that's just my plea to think about
8 this in the broader context of why are we doing this,
9 not just how could we do it.

10 MR. STEIGERWALD: Thank you.

11 Todd? Oh, go ahead.

12 And I'll come to you, Christine.

13 MR. PHILLIPS: Great. Thank you. Two quick
14 things. It was sad before that in this model, some of
15 the margin that investors can put up could be crypto.
16 I'm just wondering if it's possible that your margin
17 could be, say, bitcoin and you could be long bitcoin
18 futures. And if bitcoin futures move against you, your
19 margin could also decrease at the same time. That
20 sounds really problematic. And I just would want to
21 know if the backup liquidity providers understand that
22 this is a possibility. Also, if backup liquidity

1 providers are also market participants here, is it
2 possible that their backup liquidity could also be
3 crypto that could be moving in the wrong direction.

4 And I just wanted to, finally, add that I
5 agree with Demitri and Hilary that 24/7 trading for
6 liquidation for retail investors seems really
7 problematic. If the market moves against you in one
8 moment, even if it moves back a minute or two minutes
9 later, you could be wiped out. And we really want
10 retail investors to be protected. I don't think retail
11 investors really understand all of the ways the market
12 can move. I don't think retail investors really
13 understand that there are perhaps people who are much
14 more sophisticated and professional trading desks
15 trading against them. And I just don't think that
16 margin crypto is something that we really want our
17 retail investors to be getting into. It just seems very
18 problematic for people that we need to be protecting.

19 MR. STEIGERWALD: So I understand the thrust
20 of what you're saying, I think. Those are many of the
21 kinds of remarks I might make as an old man. I do try
22 to inherit something by osmosis, being located in

1 Chicago, of the Chicago school approach. And I try to
2 avoid unnecessary paternalism, especially in a social
3 environment where casinos are coming to downtown
4 Chicago, apparently. So this is a different world.

5 So I wonder whether we should be deciding for
6 customers who have a chance to receive information and
7 to demonstrate that they seem to know what it means,
8 that they shouldn't take a shot at becoming the next
9 crypto billionaire.

10 MR. PHILLIPS: If I can just jump in really
11 quickly and say I think this is the reason that Congress
12 created the CFTC and put five commissioners on the
13 Commission to make decisions about what is appropriate
14 for investors. And, I mean, I have my own thoughts
15 here, but I think the commissioners need to take a look
16 at some of these products and decide, are margin bitcoin
17 trades really what we want retail investors to be
18 getting into?

19 MR. STEIGERWALD: Yes. That's surely an
20 important point, and I'm sure that the Commission in due
21 course will take full account of that issue. It's an
22 important issue.

1 I have forgotten my friend down here. I'll
2 come back to you, Andrew.

3 Christine?

4 MS. PARKER: Yes. We have a lot of thoughts
5 here at Coinbase about retail traders investing in this
6 space and what they should and should not have access
7 to. We have spent a lot of time looking at where retail
8 traders are trading in crypto, where they're trading in
9 derivatives, how they're trading, what they like, what
10 they don't like.

11 And this is all sort of based on what we see
12 overseas and where the huge concentration of volume and
13 liquidity is. And it's really generated by retail
14 traders. And it's a trading environment that's not
15 available in the U.S. And so here at Coinbase, we very
16 much want to bring that into the U.S. and have it be
17 regulated by the CFTC under the auspices of their
18 regulatory regime.

19 One point I want to make and then -- sorry,
20 Sam. I am going to ask you a question. I think for a
21 lot of us in this space, the way that the retail traders
22 trade in the crypto derivatives markets is very, very

1 different than what we're used to in the traditional
2 futures and derivatives markets in the U.S. They have
3 different sort of expectations of what that trading
4 experience will be. They've got different expectations
5 of what they want to get out of that trading experience
6 than traditional futures traders in the U.S., both on
7 the institutional side and on the retail side.

8 So we don't really have a good view here in
9 the U.S. of what a retail trader in the crypto space,
10 all things being equal, the market that they would
11 design. Those seem to be largely overseas markets that
12 we see. And they have the features that Sam has been
13 describing.

14 So one question to Sam is, when thinking about
15 these retail traders, I know that there's a lot of
16 consternation around the auto-liquidation. And that is
17 something that institutional customers that are using
18 these markets to hedge, from what I'm hearing, it seems
19 to be untenable here in the U.S. But my question is to
20 you, what are your observations about retail traders
21 overseas when they are auto-liquidated? What is their
22 response? Do they stay away do they come back? Is

1 there any information that you can share for us, really
2 focusing on the retail trader in crypto derivatives?

3 MR. BANKMAN-FRIED: Yes. And maybe sort of
4 combining a few of those together, retail's not a
5 monolithic word. It's being used to refer to a pretty
6 wide variety of people. The vast majority of the volume
7 on FTX internationally comes from users trading at least
8 a hundred thousand dollars per day of volume. So that
9 gives you some sense of what retail might mean in this
10 context. There is a pretty wide gulf between has never
11 thought about a trade before and ECP, that there is a
12 wide, wide range contained within that category. You
13 could also think about tests that were based more on
14 knowledge than on wealth. I think there are things to
15 be said for that as well.

16 I think I feel pretty compelled to say this,
17 and I say this with the utmost respect. But I actually
18 found something a little bit offensive that was said.
19 I'm going to be pretty blunt. Most of the traders on
20 our platform know a lot more about these contracts than
21 many of the people in this room, including many of the
22 people in this room who are condescendingly talking to

1 them about what they do and don't know and should and
2 shouldn't be offered. Anyway, I just had to get that
3 off my chest a little bit.

4 And I think it's to some points about consumer
5 choice here. I'm not saying that should be a sort of
6 like be all and end all, but I think there is something
7 to be said for it. And I think that that there's some
8 irony in some of the statements made by people
9 attempting to protect those who know massively more than
10 they do about the topic and who understand these
11 products extremely well. Most of our users do. We have
12 a lot of suitability tests for that that we have been
13 developing. And I interact with a lot of them to get a
14 sense of how they are viewing these markets and thinking
15 about them.

16 And I think customer protection is extremely
17 important. I think a lot of the features we have I view
18 to be potentially, in many cases, helping to protect
19 customers by avoiding unnecessary margin calls because
20 of the ability to have precise knowledge of where the
21 collateral is and how much it is and the ability to wait
22 until it's absolutely necessary, the non-recourse nature

1 of it, the ability to give financial access to those
2 users, and an equitable playing field. And I think
3 those are things I think are valuable. Not everyone has
4 to agree on that. It's also worth noting -- I don't
5 want to belabor this point too much, but I think that
6 some of the statements made, at least didn't to me, seem
7 to be cognizant of the fact that there are already
8 leveraged cryptocurrency futures available to retail in
9 the United States regulated by the CFTC. I'm just going
10 to, like, make that point and move on but, like,
11 whatever. That is what it is as well. And I
12 acknowledge comments that this might increase that and
13 that that is sort of the world that we have come from.
14 But, certainly from a rules and regulations perspective,
15 that is a thing, which is already live here.

16 MR. STEIGERWALD: Thank you, Sam.

17 So let me tell you I'm soaking wet, my back is
18 killing me, my feet hurt. Yes, I'm an old man. What
19 can I tell you?

20 We're going to take a break shortly. Before
21 we do, Dave, you tell me you have a point that's
22 directly related to this let's keep it short and then

1 take a break.

2 I see that we have others who want to join the
3 conversation. When we come back from our break, we will
4 go around the room. And Clark will give us some
5 instructions about how that will proceed if I may just
6 give Dave just a moment or two.

7 MR. OLSEN: Thank you.

8 Sam touched on half of my point, which is that
9 there are already micro contracts designed for retail
10 engagement that are offering levered bitcoin exposure
11 from exchanges in the U.S.

12 The other one, though, Todd brought up the
13 auto-liquidation feature for retail. And in my
14 experience, if you go to any equity brokerage firm and
15 you borrow on margin, there's not this relationship-
16 based conversation about when you might send in more
17 money or anything like that. It's just gone out of your
18 account, auto-liquidated, and that's the experience that
19 tens of millions of margin-using retail equity investors
20 are using in the U.S. today.

21 MR. STEIGERWALD: Thanks, Dave.

22 MR. HUTCHISON: Okay. I think it's time for a

1 break, and we'll let Robert have his feet back.

2 I want to give you something to think about as
3 we wrap up the afternoon. I think it's been a long day.
4 And I don't know that we need to go for a long, long
5 time, but I think it's fair that we go around the room
6 again to have everybody have a chance to say something.
7 We'll keep it short. But what I'd like you to think
8 about and perhaps have a challenge before we go is to
9 say, is there a middle ground?

10 So I think people have expressed their views,
11 and that's been helpful. And I have more about that in
12 my concluding remarks, but I think part of the challenge
13 is we all encounter innovation and perhaps destruction
14 in different ways, but one of the challenges is, can we
15 think of a solution as middle ground? So I'd like to
16 invite people to propose if they can think of one, a
17 middle ground that we might be enlightened by that we
18 haven't thought of ourselves.

19 So, with that in mind, we'll come back here in
20 -- let me just do this. I've got 3:02, so let's say
21 3:12. Okay? Great. Thank you.

22 (Recess taken.)

1 MR. HUTCHISON: Hopefully, Robert's back has
2 recovered, and his feet have recovered for just the last
3 little bit here. I think we've covered a lot of ground.
4 And my desire would be that we go around the table,
5 everybody has a chance to say one last thing that comes
6 to their mind, again with maybe the two-minute rule, and
7 then with the challenge if they do have something to say
8 or if they don't, a thought about perhaps what a middle
9 ground might look like, if that's possible, just another
10 way for we at the Commission to think about things that
11 maybe we haven't thought of ourselves.

12 So, with that, I'm going to turn it to Robert.
13 And, just so you know, when we're done, I'm going to
14 turn it to Chair Behnam. And then it will come from him
15 and the commissioners back to me, and we'll close for
16 the day. Okay.

17 MR. STEIGERWALD: Thank you, Clark.

18 MR. HUTCHISON: Okay, Robert. Off you go.

19 MR. STEIGERWALD: I've got it. Last clear
20 chance to fail, right?

21 Before we go around the room, I'm afraid that
22 if I wait until the very end, I will forget or not have

1 the time to say how very much I've enjoyed this
2 conversation. It gives you an insight into my idea of
3 pleasure, but I expected something far more contentious.
4 And there are important and contentious issues at stake,
5 but you have all participated very kindly and supported
6 the objective that the chairman, Clark, the staff, and I
7 devised when we thought about what we could accomplish
8 today.

9 I said at the beginning we wouldn't solve
10 problems, we wouldn't answer a lot of questions. We've
11 put a lot of information out in the public domain.
12 We've shared our concerns. We've staked out positions
13 without being obnoxious, I think. And I think it takes
14 some effort to accomplish that. And so I'm very proud
15 of you. And thank you for engaging with me and with us
16 in this process. So that's what I have to say about the
17 day.

18 I'm going to start with my friend David Murphy
19 here for our last go-around. And apologies to those of
20 you who didn't get to ask your specific questions in
21 turn. Perhaps you can fold your points into the coming
22 remarks.

1 MR. MURPHY: Thank you. Thank you so much,
2 Robert. And thank you so much to everyone for a great
3 discussion.

4 So, look, I'm going to have a first go AT
5 answering the where-best question. And I look forward
6 to hearing other answers. Where does this work best in
7 my view? Well, there's a continuum of liquidity in
8 markets from really deep most of the time and quite
9 deep, even in stress, through to by appointment only.
10 This does not work very well in by-appointment-only
11 markets. It works best in deep and liquid markets.

12 In terms of default management, it works best
13 if the BLPs can, effectively, connect situations where
14 there isn't enough market capacity locally to the risk
15 capital that can take you out of the risk. So the BLPs
16 need to have wide enough pipes. There needs to be big
17 enough BLP capacity. They need to be contractually
18 committed. They need to actually have the collateral
19 there. There needs to be enough of them. They need to
20 be sufficiently uncorrelated in terms of their capacity
21 to perform with the underlying market stress. There
22 needs to be a robust answer to what happens if you get

1 BLP capacity wrong. Either BLP capacity needs to be
2 plainly enough to deal with really stressful situations
3 or you need some kind of answer to what if we got that
4 wrong. I don't know what that looks like, but I think
5 that's a useful question. So in my view, this looks
6 like something that's interesting in quite liquid
7 markets where you thought hard about the tales to talk
8 to a discussion we've had a lot of times in CCP policy.
9 It's not about medium stress. It's not even about very
10 high stress. It's about extreme but plausible, really
11 genuinely extreme but plausible, circumstances.

12 So as long as we maintain that standard,
13 which, by the way, should be uniform across ordinary
14 CCPs and new CCPs, we shouldn't hold new CCPs to a
15 higher standard than the traditional one, but we should
16 accept that there are uncertainties which need to be
17 captured. So I am distinguishing here between risk and
18 uncertainty right in the classic 19 sense. So as long
19 as we have the same standard, we have answers to these,
20 I think not insoluble but quite difficult, questions
21 about capacity in extreme circumstances, then maybe
22 there is a way tentatively, slowly, incrementally,

1 experimentally to think that this might be useful.

2 But yes. I don't think this is a no. I don't
3 think this is a yes. I think this is interesting.
4 Here's the place, it seems for me, at least, most
5 interesting.

6 Thank you.

7 MR. STEIGERWALD: Thank you, David.

8 Cody, do you want to go to Dimitri? Okay.
9 Dimitri?

10 MR. KAROUSOS: Great. Thank you, Robert. And
11 I, too, extend my thanks to the Commission and to you
12 for moderating the panel today.

13 I just would maybe want to summarize my
14 thoughts with this first observation that as we think
15 about these potential proposals, it is really important
16 to understand that time is an important but not sole
17 defining determinant of managing a default situation.
18 It needs to be managed against other considerations,
19 such as the cost of liquidation, potential for
20 contagion, as well as the potential for other curative
21 steps. So I think that's just a point I'd like to leave
22 with the Commission.

1 There were a couple of other minor points I
2 just wanted to be able to stick in there. There was
3 this question about in terms of numbers that Clark
4 wanted us to talk about and consider before. In the
5 stylized example, there was a proposal or a suggestion
6 that the guaranty fund be sized at 10 percent of the
7 initial margin. That's actually somewhat comparable to
8 the funding, the funded portion of guaranty funds that
9 exists today, but it would highlight that the unfunded
10 portions, the assessed powers, as it was already noted,
11 is anywhere from two to five times larger than that. So
12 there's quite a lot more in the cushion in the
13 traditional waterfall that is being proposed today. And
14 I think, just to give everyone else a chance, I think
15 I'll leave it with that, do appreciate the ability to
16 contribute here and thank everyone else for their
17 contributions.

18 MR. STEIGERWALD: Thank you very much.

19 Allison?

20 MS. LURTON: Thanks, Robert. And thanks to
21 the Commission for giving everyone here a chance to talk
22 about these issues.

1 At the risk of underestimating how
2 transformative some of what we're discussing today, I
3 guess I'd say I've heard some talk of it being us versus
4 them or new versus old. And I'm not sure I see it
5 entirely that way. Instead, I think the conversation
6 has showed that there's some more wood to chop and
7 basically what regs and laws are important enough
8 related to customer protection, system soundness,
9 whether the default sizing analysis is sufficient,
10 whether those rules are important enough that they need
11 to stay present in whatever model goes forward and if
12 so, in what form. That analysis still needs to be done.
13 So, even though it's been characterized as us versus
14 them, I thought today's conversation really just
15 highlighted those places where we want to do that
16 further analysis.

17 I think that's all. I'll leave it there.
18 Thanks, Robert.

19 MR. STEIGERWALD: Thank you. Tom?

20 MR. SEXTON: Thanks, Robert. And I certainly
21 want to thank the Commission again for inviting us to
22 participate.

1 I think our view is essentially that I'm not
2 so sure that the congressional framework, regulatory
3 framework, and the CFTC's regulations quite fit this
4 model yet. And what I mean by that is we spent a lot of
5 time talking about clearing today. Our emphasis, again,
6 is on customer protection and retail customer
7 protection. Certainly retail participants, customers,
8 whatever we call them, are going to trade this market.
9 They've been trading margin products for years. It's
10 fundamental, though, that we have protections in place
11 for those participants. And that's everything from how
12 sales solicitation start to how their customer funds are
13 protected to risk disclosures that should be given to --
14 we didn't spend a lot of time on it today, but what
15 happens in the event of a bankruptcy?

16 None of us ever want to talk about that. I
17 can tell you that they happen. And when you have member
18 funds from FCMs, you have participant funds, you have
19 this this entity's own funds, how is that divided up in
20 bankruptcy, particularly when you might have a structure
21 that incentivizes customers to avoid auto-liquidation by
22 depositing XX funds in their account?

1 So those are all issues I think that that need
2 to be further resolved. The framework I think needs to
3 guide those issues, I think, and resolve those issues.

4 The last issue is very important and that is
5 who regulates this particular entity. If somehow we
6 make this entity also an FCM, not requiring FCM
7 registration, certainly, the DCM might be an SRO. The
8 DCO, I think by order the Commission, might say they're
9 an SRO. But are we really going to let this entity
10 govern and oversee its interfacing with participants who
11 are retail customers.

12 Today, we have very robust programs at NFA and
13 the CME and other SROs that guide that and examine for
14 that, but in the absence of an independent SRO looking
15 at this, if the Commission is not going to let this
16 entity be its own SRO with regard to the customer
17 interfacing, it falls largely on the Commission, their
18 staff, their resources. And I can tell you we have
19 robust programs every day where we look at our FCMs
20 making sure that funds are at the FCMs. And that falls
21 largely on the regulatory structure, falls on taxpayers,
22 and something that I think that we should also keep in

1 mind.

2 So, as I said in my in my opening remarks,
3 market structure is always an interesting issue. It
4 fundamentally impacts customers and also the regulatory
5 structure in place.

6 Thank you.

7 MR. STEIGERWALD: Thank you.

8 Ann?

9 MS. BATTLE: Sure. Thanks.

10 As mainly a listener in today's discussion, I
11 think one thing that has been very apparent,
12 particularly in the discussion about the default
13 management process, is that there are a lot of key
14 issues that everyone around this table has been
15 discussing for some time. And while today's discussion,
16 I think, focused on applying those issues, transparency,
17 right-sized resources, protection of customers, and non-
18 defaulting clearing members, a lot of the issues that
19 were raised are also raised in the context of what we're
20 calling the existing model. And so if that goes to the
21 question of whether there can be a middle ground,
22 perhaps the answer is yes because there is actually

1 already a lot of common ground with respect to what is
2 important to the market. And perhaps What we have today
3 is not perfect. Perhaps what we're considering is also
4 not perfect but if we look at this principles-based,
5 then I think we need to get to a place. And maybe there
6 is more than one way to get there.

7 The other thing that I will just say that I
8 think goes towards not a position with respect to DMDCO
9 that we're considering today but where we go from here,
10 I think it was also raised early on that there are some
11 real impediments to intermediate clearing, especially in
12 the United States. There are some extremely valuable
13 protections that that model provides for customers but
14 also impediments, which is evidenced by the increased
15 concentration. And so, again, without expressing an
16 opinion on DMDCO, I think the market coming together in
17 forums like this and considering alternatives that may
18 take some of those impediments off the table is the
19 right thing to do in the coming months, years, however
20 long it takes.

21 MR. STEIGERWALD: Centuries. Thank you, Ann.
22 Jennifer?

1 MS. HAN: Great. Thank you. And, again,
2 thank you for putting together such a great group of
3 diverse representatives from the industry. I think that
4 hearing all of the different views, we raised a lot of
5 really good questions.

6 I think, coming back to some of where the
7 conversation was going, what's really evident is,
8 certainly for markets, for market participants, I think
9 there is a real interest and hunger for some regulatory
10 certainty for the continued growth of this area. So I
11 think that that is probably a given for and agreed by
12 from everyone around the table.

13 That being said, again, in hearing some of the
14 various comments, I do agree with Allison. As we think
15 about it, it doesn't seem like a us versus them either.
16 As buy-side representatives, I think, in looking at both
17 the models, again, a lot of support for in continued
18 innovation and competition in this area. And, again,
19 the us versus them, I think our members realize,
20 recognize that FCMs provide a lot of very valuable
21 services.

22 And so, again, when it comes to competition,

1 looking at the various models, it's possible that our
2 members will be interested in both or how FCMS may also
3 be using the more DMDCO model. So I think all of this
4 works together.

5 Again, Tom mentioned bankruptcy. No one wants
6 to talk about it. We do want to understand exactly how
7 these rules are going to play out. This current
8 framework, does that support customers that are going to
9 be members of CCPs? Do they need to be tinkered with so
10 that as we are looking at this different model, it works
11 today?

12 MR. STEIGERWALD: So thank you, Jennifer.
13 It's easy to exclude some of those really difficult
14 issues on a day like today, but, sooner or later, we've
15 got to get around to that. I think there's wide
16 agreement. I know that Bob is taking careful note and
17 looking forward to the day when we can take a deep dive
18 into those issues.

19 MS. HAN: You always want to look at the bad
20 things when everything's good and we're all friends.
21 Right?

22 MR. STEIGERWALD: Absolutely. Joe?

1 MR. CISEWSKI: I just want to return to the
2 how question again. I do think there are some open
3 issues that have been discussed a bit, obviously with
4 respect to risk controls, market-wide risk controls, but
5 also contract-specific risk controls. And that's pretty
6 granular stuff that the staff is going to have to deal
7 with. And it relates directly, I think, to correlated
8 correlated liquidations, which is something we've talked
9 about at length here.

10 Something we did not talk about much is the
11 application of the cover standard in terms of sizing the
12 guaranty fund. And I think that's a really big and
13 important issue. We probably should return to that,
14 just as a group of commentators, on the set of issues.

15 And I listened to some of the commentary on
16 retail investors. And I just want to note that Congress
17 made a policy judgment in the statutory framework -- I
18 hate to go back to that, but I will -- about retail
19 access to derivatives markets. And that judgment was
20 that if you're going to trade through the most highly
21 regulated markets with appropriate safeguards, like
22 DCMs, and if you're going to clear through DCOs and

1 comply with the full panoply of regulations under the
2 statute, retail investors should be protected. And
3 these are contract design and market design, market
4 integrity, contract integrity issues. They're not
5 merit-based approval decisions based on what the
6 underlier is to the contract. And so I hope as the
7 Commission and as the staff considers these issues,
8 though, just keep in mind the statutory framework and,
9 for example, Congress also made a decision not to allow
10 retail investors in other types of markets, like SEFs.
11 So that's basically my comment.

12 MR. STEIGERWALD: I'm simply reminded that
13 Congress also has prohibited trading futures on onions.
14 So you never quite know what you get out of the
15 legislative process.

16 So okay. I hear you.

17 Nelson?

18 MR. NEALE: Great. Thank you, Bob.

19 Just to start, we and those who I represent
20 come in with an open mind. And we'll exit this session
21 with an open mind as well. But I was struck by one of
22 the comments that Dr. Murphy made at the outset of this

1 conversation. And he said that innovation was typically
2 a product of stress. What I'm not seeing, at least at
3 present, is a stress situation that has demanded a new
4 solution for the way business is currently conducted.
5 We've spent decades, if not beyond, refining our current
6 market and the solution solutions therein. And it's
7 served us well through a myriad of crise.

8 Certainly representing the agricultural
9 community and that community of physical players who
10 hedge, I don't necessarily see a particular answer or a
11 solution to a problem. Having said that, though, if
12 there are opportunities to ring fence to digital
13 settlement or some of the ideas that Sam had, again, we
14 would enter with an open mind and exit with an open mind
15 as well.

16 MR. STEIGERWALD: You might exit faster than
17 you realize under certain models. Neil?

18 MR. CONSTABLE: Yes. Thank you. And thanks
19 for having us here.

20 I might start at a really high level. Since
21 we're talking about the retail investors Fidelity is
22 quite literally about serving retail investors. That's

1 basically our entire business model. It's about
2 bringing financial products the advice and the education
3 needed to understand how to use those products to our
4 clients. And so, with that in mind, thinking about how
5 to create access to new, innovative financial products,
6 how that can be, how to get the new financial products
7 in to our clients -- "democratization" I guess is the
8 word I was struggling to find just a second ago. This
9 kind of proposal means we want to be very engaged in
10 trying to find ways to get this into the hands of our
11 clients because we do believe with the right amount of
12 education, with the right amount of disclosures, of
13 course, and the right amount of transparency, in this
14 case particularly around things like the BLPs, where the
15 actual capital that needs to be in the system is really
16 sitting, and whether it's there or not, those types of
17 things are very, very critical. And many people have
18 said it more eloquently than I.

19 But, given all of that, this is something that
20 we very much think is as much how do we make it happen.
21 And, again, it could go much slower than people want it
22 to, but it's about how, not if, in our mind and how do

1 we get our clients access to that.

2 And I think the middle ground, to take you up
3 on your challenge, isn't really so much about the polar
4 opposite. It's not the do-it-yourself that we often are
5 talking about here or the fully intermediated model of
6 the FCMs, which I agree are very valuable service
7 providers, but opening up this access, direct market
8 access, creates the opportunity for entities -- and I'll
9 put us up there for Fidelity -- to create ways for
10 clients to interact with this market in ways that don't
11 currently exist. Right? Our clients once they are
12 educated, once they understand what's out there and
13 what's possible, how can we, then, facilitate them to
14 engage with this market in a way that is best for them.
15 Right? And I think that's what we would ask to work
16 with the Commission on, is to find out ways to put in
17 place the regulatory framework to achieve that outcome.
18 So I'll leave it at that.

19 MR. STEIGERWALD: Thank you, Neal.

20 Michael?

21 MR. WINNIKE: Thank you very much.

22 So I think Professor Murphy kind of did lay

1 out very eloquently sort of in the broad strokes --
2 right? -- how this model could work and where it might
3 work better and where it might be under more strain.
4 And I think moving from kind of the general model we're
5 looking at to really advancing the conversation, the
6 devil is absolutely going to be in the details. Right?
7 So we have pretty well-understood protections that FCMS
8 provide the system today that are being replaced --
9 right? -- under this new model with additional CCP skin
10 in the game that maybe is dynamic and scales to risk,
11 rather than a cover 3 system, an auto-liquidation model,
12 an initial margin model, proprietary to the exchange, as
13 well as a backstop liquidity provider program. And I
14 think the real rigor put behind getting to actual
15 numbers and stress testing assumption of each of these
16 components is essential and not only that they be
17 assessed with rigor but that there's transparency,
18 ultimately, for and investors who are trying to make
19 informed decisions and manage risk. So what are the
20 liquidity and volatility assumptions -- right? -- that
21 are behind the decisions being made? You know, educated
22 investors will ultimately be better protected in making

1 choices to move forward.

2 And, then, in terms of other middle ground, I
3 think that FCMs do provide important roles to
4 institutional investors beyond just risk management.

5 And many firms may want to access an exchange through an
6 FCM. I know there's interest in pursuing a potential
7 hybrid model, but there's obviously a lot of work to do
8 in terms of how an FCM would necessarily fit into this
9 model today and what the customer protections would be
10 and would there be a level playing field between direct
11 members as well as intermediate members.

12 MR. STEIGERWALD: Thank you.

13 Emma?

14 MS. RICHARDSON: Thanks, Robert. And thanks
15 to the Commission for providing the opportunity to
16 participate in this healthy debate.

17 So I think the current ecosystem has evolved
18 over many years. And as we look forward, there should
19 always be room for consideration given to innovation and
20 evolution and further competition. I think it's clear
21 that there's really critical roles and responsibilities
22 on a framework required to ensure sound and stable

1 markets, including appropriate governance, adequate
2 financial resources, transparency, and customer
3 protection. And I think as the market continues to
4 evolve, how and who they are performed by needs further
5 consideration, as does how does the model fit into the
6 current regulatory framework. And we very much look
7 forward to being part of that discussion.

8 MR. STEIGERWALD: Thank you.

9 Gerry?

10 MR. CORCORAN: Thank you. Fascinating day
11 today. Thank you for leading the discussion. I think
12 we learned a lot today.

13 Sam, thank you and for your graciousness under
14 fire. A lot of things were pointed in your direction.
15 I thought you did a great job. Thank you for that.

16 I love the spirited debate. I think we
17 learned a lot of things that we say, okay, that can
18 work, but we learned that we have to dig deeper on some
19 of the other matters that I'm not going to repeat here.

20 I agree with Allison and Tom. From a
21 regulatory viewpoint, how does this fit in? As an FCM,
22 I don't view it as competition. It could be a new modal

1 for an FCM to operate. So I'm not so sure about it.
2 But I do know when this industry runs into trouble when
3 we have an event, it hurts all of us. It hurts the
4 confidence in the marketplace. It causes a lot of
5 disruption. So the new model, we really have to make
6 sure when we get there, that we've covered all our bases
7 and that there's good oversight and we understand the
8 risk related to the model. And thank you so much.

9 MR. STEIGERWALD: Thanks, Gerry. I just will
10 take a moment to observe you've been around long enough,
11 as I have been, to know that back in the day, the
12 Chicago Board of Trade, which I represented as outside
13 legal counsel for a period of my career, and the Chicago
14 Mercantile Exchange were bitter rivals. You either
15 didn't walk down a certain part of Jackson Boulevard or
16 you didn't walk down a certain part of Franklin Street
17 or then Wacker Drive once upon a time.

18 But you make an important point. There were
19 occasions when bad things happened and they affected
20 both markets, sometimes because the member involved was
21 a member of both exchanges, but there may have been
22 other circumstances where the exchanges, bitter rivals,

1 though they may have been, pulled together to do the
2 best that could be done for customers and to restore the
3 market confidence and public confidence in these
4 markets. So that's an intangible that I think is
5 important to take account of. So thanks for bringing it
6 up.

7 Claire?

8 MS. O'DEA: Yes. So in terms of finding
9 middle ground, I think from a risk management
10 perspective, there's clearly two key themes. One of
11 them we managed to get into a little bit of detail here
12 today. That was the default management principles and
13 the process that's followed. That's clearly key to any
14 DCO model. And the other one that we didn't really get
15 a chance to get into, but it's obviously worth important
16 consideration, is the financial resources. DCO is
17 having robust stress-testing procedures, a robust
18 framework that looks at theoretical scenarios and not
19 just at the history, especially in the asset class,
20 where the history clearly isn't as deep as other asset
21 classes as well. So I want to underscore that as being
22 an important consideration for finding middle ground

1 moving forward.

2 And thank you for the invitation to
3 participate today.

4 MR. STEIGERWALD: Thank you.

5 Thomas?

6 MR. CHIPPAS: I'll start by saying thank you
7 to the Commission. Discussing and considering
8 structural change to markets is never easy and sometimes
9 not very popular. Taking the time to listen today is
10 very much appreciated.

11 We support innovation. Eris launched in 2019.
12 We built a platform for spot and derivatives exchanging
13 clearing from the ground up to support this asset class.
14 We are here because we innovate.

15 Our new parent company, CBOE, launched a
16 bitcoin future back in 2017. ErisX was the first to get
17 approved and launch a CFTC contract for ethe. futures in
18 the U.S. We support innovation.

19 With that stated, I would say firmly nothing I
20 heard today here has anything to do with technology
21 innovation. Every technology thing you've heard today
22 exists today. Much of it already operates in the

1 market, whether it be in equities and FX futures. All
2 of the things you're hearing about liquidation in real
3 time exist and live and breathe in the market today.
4 It's not a technology question. And I think that means
5 the questions we've heard today all go to market
6 structure. Requests made domestically to change market
7 structure should engender conversations like the ones we
8 have had today. Outcomes from international markets
9 that have experimented and failed or experimented and
10 succeeded will have copious amounts of data that we can
11 look at, outcomes we can tangibly view and see that
12 should all come into any consideration of a market
13 structure change. It should be used in furtherance of
14 our analysis, but it doesn't mean that we should conform
15 to what others have done.

16 What I take from today is, more than anything,
17 we need a fulsome and deep analysis of the questions at
18 hand and what would happen to our markets if we were to
19 make some of these changes. Others have made eloquent
20 and accurate references to specific rules that might
21 need to be reviewed, but, more than anything, whatever
22 the outcome of that analysis is through whatever form

1 best delivers that outcome, a common rule set with a
2 common starting line for all market participants will be
3 the most fair outcome that hopefully we can arrive at
4 together.

5 MR. STEIGERWALD: Thank you. Sean?

6 MR. DOWNEY: Thank you.

7 My goal here is to be the most succinct. So
8 thank you to everyone. I'll make this brief and to
9 focus on risk management. Those are the comments that I
10 have made today. I don't want to diverge from that.
11 But, effectively, the question that we get asked and the
12 question I think most policymakers and regulators ask is
13 not, did it work. It's, will it work. And if you think
14 about it from a "Did it work?" perspective, then looking
15 at CME, for example, we've covered every event that ever
16 occurred in margin. That doesn't suggest -- and I don't
17 know if my CFTC DCR colleagues will disagree with this -
18 - that margin is the only thing necessary to cover what
19 comes in the future. So I think the question that needs
20 to be asked as we continue to analyze this is, will it
21 work, not did it work in the past.

22 MR. STEIGERWALD: Thank you.

1 Bis?

2 MR. CHATTERJEE: Thank you, Robert.

3 You know, a lot of the discussions that have
4 been happening today, I'm trying to put in my head into
5 two different buckets, like what is it that we are
6 trying to achieve and support and comes to innovation
7 and application of technology versus how are we doing
8 that to support it. And it seems very clear to me that
9 a lot of the innovative operators, Sam and the peers,
10 have brought to us a marketplace with a new set of
11 participants where there's a need to execute and
12 transact 24/7. And that's something I don't think we
13 can put back in the bottle. It's almost like what has
14 happened to us post the pandemic, where we are used to
15 executing trades in our personal lives, buying
16 toothpaste in the middle of the night, which didn't
17 happen or didn't exist earlier, but what I can see the
18 experience is to support that need or desire to execute
19 trade and support markets that are all over the world
20 that don't follow time zones. Do we need a settlement
21 and clearing mechanism? And is direct clearing the only
22 way to solve for that? And I certainly think, going

1 back to Director Hutchison's comments, is, like, can we
2 support -- and this may be the hybrid option -- can we
3 support a live trading marketplace 24/7 with a model
4 that is not very different than our current FCM model.

5 And a lot of the terms that I'm hearing in the
6 debate, "maintenance margin," "excess margin, "backup
7 liquidity providers," seem to package very well under
8 what FCMs and liquidity providers currently provide in
9 the market today. So is there a mechanism in which we
10 can support 24/7 trading?

11 And I certainly see that in the consumer
12 retail marketplace. If I place an order before 10 p.m.,
13 it will be delivered tomorrow, but if I place it after
14 10:01, it will be delivered day after, which means that
15 the clearing settlement mechanism is really not 24/7.
16 It's really the execution mechanism.

17 So I think if we go back to basics and say
18 what is it that we are really trying to solve for, we
19 try to separate that debate for how we're trying to
20 solve for I think we may get to a path where we start to
21 really focus on the main problem.

22 MR. STEIGERWALD: Your reference to retail

1 transactions at Amazon or other similar platforms
2 reminds me that as I was desperately searching for my
3 dress shirts over this past weekend, in preparation for
4 this event I found a place where you can order semi-
5 bespoke, carefully measured, tailored men's shirting
6 online, which I did at 3 in the morning that night. So
7 it is a different world that offers many potential
8 advantages. And the question is how to get there with
9 the fewest possible costs, I guess.

10 Robert?

11 MR. CREAMER: Well, I've done a fair amount of
12 talking today, but I just want to reiterate thanks to
13 the Commission for allowing me to participate. I echo
14 everyone's sentiment about how engaging this
15 conversation has been. The application to remain
16 nameless, the participants behind what may be here I
17 feel have definitely held their own and really defended
18 themselves, put a lot of time into it. And I think it's
19 a fantastic debate to have.

20 I go back to the ideas that I put forth before
21 that our industry does need to innovate. And I often
22 get caught up. I'm guilty, as many others are. I think

1 it's common to end up in the trap of kind of thinking
2 what is the best model and that there's one model and a
3 superior model. And it's hard to really refine and
4 develop models without taking a very empirical sort of
5 approach and really focusing on data.

6 And I know that there's an importance of
7 looking forward and trying to be anticipatory of how the
8 world could move. And I think that's required right
9 now. But I do think that there is an opportunity for us
10 to better understand, certainly for myself, to really
11 apply data really understand what this sort of model as
12 it's been launched in the past, how it operates would be
13 very, very helpful. And I think that I certainly
14 wouldn't want to rush into anything.

15 But I think that the individuals at this table
16 have built a pretty impressive business. And there's a
17 lot of retail globally that is really attracted to some
18 sort of solution or this sort of solution that is
19 meeting their needs but just want to thank everyone for
20 having me here and hope that over the coming time we can
21 find some solution that works for everyone.

22 MR. STEIGERWALD: Thank you.

1 Christine?

2 MS. PARKER: Yes. I don't know if this is
3 part of Clark's grand plan or your skillful moderation,
4 but I feel like we've somewhat landed in a middle ground
5 because what I'm hearing today is we're contemplating a
6 direct clearing model, which is something that exists
7 that we're familiar with with some role for
8 intermediaries. And, again, there is a sort of a
9 traditional known role for intermediaries. And we're
10 trying to expand our thinking about that while
11 incorporating some features and functions from different
12 marketplaces that we know about and seen and observed
13 and sort of bring it all together into the same place.
14 So that feels kind of like the middle ground. It's not
15 completely new. It's not completely -- it doesn't
16 replicate an existing market structure today. And so I
17 think -- I don't know. I think under any definition,
18 that would be a good middle ground to start from.

19 Obviously, the devil is in the detail. So we
20 are super excited to sort of dig in and see how this
21 progresses.

22 And my last point is just thank you to you for

1 putting your body on the line today --

2 (Laughter.)

3 MS. PARKER: -- and to the chairman and the
4 commissioners and the staff. This is very hard
5 conversation to facilitate, and it's very welcome. And
6 we just appreciate having a seat at the table.

7 MR. STEIGERWALD: You're very kind. I thank
8 myself for my service.

9 (Laughter.)

10 MR. STEIGERWALD: Sam, we've put you through
11 your paces today. You've held up very nicely and
12 graciously. Thank you for participating in the
13 conversation. And you have your opportunity to wrap up
14 your thoughts.

15 MR. BANKMAN-FRIED: Yes. Thank you. And
16 thank you to all of the points made by people. There
17 have been a lot of really constructive ones and
18 appreciate that.

19 Very briefly, I mean, as makes the most sense
20 for digitally settled markets, I thank you for clearing
21 up what that meant, something stronger than financially
22 settled. And I think that this makes the most sense, as

1 people said, for decently liquid marketplaces or at
2 least would otherwise need pretty economically
3 uncompetitive margin requirements in some cases. And I
4 think that there are a lot of good ideas that have been
5 given about transparency we can provide on various
6 figures. We'll go back and sort of workshop things on
7 that.

8 The last thing I'm going to say is just like -
9 - and I really do mean this -- we really, really do want
10 to engage with everyone here and work with you guys. We
11 have a lot of existing work streams with FCMs about what
12 that integration could and, as importantly, should look
13 like. And we would love you all to be a part of that
14 discussion. We want to make sure that we are designing
15 the right integration and that we're thinking about what
16 makes the most sense for you and for your customers.

17 Absolutely reach out if you have any interest.
18 We will start those conversations immediately and make
19 sure that you're involved in thinking about how that
20 process could work. To all of the people looking to use
21 the services in any other way, obviously, welcome you.
22 If you want to be a BLP, we'd love to have that

1 discussion as well, love to get as many people working
2 on this as we can.

3 And the last thing is a huge, huge thanks,
4 above all else, to, I mean, all of the time we know that
5 the Commission has been putting in to this and to all of
6 you for showing up here for this roundtable and the
7 house hearing and common period and everything else.

8 MR. STEIGERWALD: Thank you, Sam.

9 Chris, just before you go, I just want to
10 share with the others that we have a special connection.
11 Semper Fi. I did my service from birth to about age 10.
12 That was my military service my father was a China
13 marine.

14 But it's a reminder of how the world changes.
15 Right? Just a few years ago, before the pandemic, I was
16 walking the streets of Shanghai, where my father was
17 fighting with the nationalist troops before Mao Zedong
18 achieved hegemony in China. So the world can change in
19 remarkable ways.

20 You made a passionate statement about
21 international competition. We didn't get to that fully
22 today, but that's another important dimension we should

1 talk about. Thanks.

2 MR. PERKINS: No. Thank you. Robert, thank
3 you for your service and to the Commission. Thank you
4 for your proactive approach and also for your service.
5 It's not an easy job. And thank you for stepping up and
6 providing your leadership across derivatives markets.

7 Derivatives. I think we would all agree that
8 derivatives are one of the great innovations of finance
9 because they allow individuals to hedge and lay off
10 their risk. And I want to remind everyone again that
11 those markets are changing. The middle ground here is
12 to stay principles-based. Right? And what does that
13 mean? It means mitigating systemic risk. Real-time
14 collateralization makes a lot of sense to me. It means
15 ensuring that we have inclusive markets.

16 And I also want to throw out another acronym:
17 ESG. I think there's a very good ESG story here that we
18 need to think about.

19 And, then, finally, competition is a very good
20 thing for markets.

21 And so I would encourage us. We spent a lot
22 of time today focusing on the defense, trying to poke

1 holes in various models. And that's important. But I
2 also think we should go on the offense. And I think we
3 should, as people who own businesses in this room, think
4 about how we can move forward to deliver comprehensive
5 derivatives markets to allow industry participants,
6 including retail, to lay off the risk.

7 Thank you.

8 MR. STEIGERWALD: Thank you.

9 Dave?

10 MR. OLSEN: Thanks. Thank you.

11 We've talked about the middle ground. And I
12 think there may be some contour. Sam, I think you said
13 you're going to workshop some of the ideas that we
14 thought about today. I think there are various ways to
15 do that.

16 But I want to talk just for a second about why
17 it's important to move these markets forward. I had the
18 privilege of running an FCM in the aftermath of the
19 financial crisis. And there's been a lot of talk, in
20 this room and elsewhere, about the fragility of the FCM
21 model. I actually think that FCMs are on a little
22 firmer footing than the general consensus, but they're

1 on a firmer footing because of the optimization work
2 that had to be done, especially for bank-affiliated FCMs
3 in the advent of new capital rules and the new market
4 reality. And what that's led to is a filter of
5 economies of scale.

6 So it used to be in an FCM, you had a
7 salesforce. You would try to onboard as many customers
8 as you could. You would charge them rack rates of some
9 kind and give them access to the futures markets and
10 other clearing markets.

11 What's happened since is the revenue hurdle to
12 take on a new customer, at least as we've heard from
13 FCMs, is around the \$250,000 per year of revenue mark.
14 That's the threshold past which a lot of bank-affiliated
15 FCMs won't consider new business.

16 But there's another dimension, which is how to
17 add a new product as an FCM. And to add a new product,
18 you have to pay typically Sungard a six-figure charge to
19 onboard that new contract spec, let alone a new DCO.
20 And, even if you are comfortable with the merits of the
21 offering, it just might not be in your technology budget
22 that year or the next year to add that market access.

1 So I think finding a pathway that allows
2 innovation in the U.S. to give access to markets, maybe
3 in a sandbox kind of a way, but to move that model
4 forward is going to be very healthy.

5 Thanks.

6 MR. STEIGERWALD: Thanks, Dave. Graham?

7 MR. HARPER: Yep. Thanks, Robert.

8 So I want to echo the comments around
9 innovation and competition particularly. One thing that
10 Dave sort of touched on but we haven't talked a lot
11 about is the concentration that's happened to date in
12 the FCM world.

13 I don't think there's any reason to say that
14 this model is better or worse than the existing model.
15 I think they can exist side by side. And I think
16 customers can choose where they choose to interact.

17 I think there have been several regulatory and
18 practical issues that need to be worked through that
19 have been raised today. So I appreciate the
20 Commission's continuing to work through that.

21 Thanks.

22 MR. STEIGERWALD: Thanks, Graham.

1 Stephen?

2 MR. BERGER: Thanks.

3 I just wanted to close by, as succinctly as I
4 can, just flagging, I think, four questions and
5 considerations as we consider the market-wide costs and
6 benefits, not of any one proposal but of moving to a
7 clearing model that is premised on prefunding of margin
8 and the need, frankly, for maintaining excess collateral
9 at the CCP to guard against the need to avoid
10 liquidation.

11 So I think the four quick things I'd flag:
12 first, is this model, like, less capital-intensive or
13 more capital-intensive? And from the perspective of a
14 market participant, like, I'm worried that it is more
15 capital-intensive due to the need for prefunding and
16 maintaining excess. And, then, how do you solve for
17 that? I think, again, at a macro level, that I think
18 has the risk of driving more consolidation and
19 concentration to address the attendant capital and
20 efficiencies that could stem from that. So I think we
21 need to sort of at least just think through the
22 implications of that.

1 Second, again, to the extent that there's like
2 inefficiencies in how you allocate capital when you need
3 to put on positions, like, what are the resiliency
4 impacts of that? Because you're not going to
5 necessarily, like, leave all your working capital at one
6 CCP or another just to have the ability to put on a
7 position at a given point in time. So, like, does it
8 impair market participants' ability to, like,
9 dynamically readjust their portfolios across different
10 products?

11 The third question I have that I think is
12 just, again, worth debating is, like, are there
13 inefficiencies introduced from, like, the loss of the
14 end of the netting benefits that are associated. Like,
15 if we look at the debate that's been had in the equities
16 markets, there was this discussion about, do we go to
17 real-time gross settlement or we just try to move from T
18 plus 1. And there was sort of an appreciation that,
19 like, there's inefficiencies that will be introduced by
20 moving to real-time gross settlement. You get
21 inefficiencies from end-of-day netting. And that's why
22 we sort of landed for the time being on the move to T

1 plus 1.

2 And, then, the last point I think. And I want
3 to make sure we don't create incentives for certain
4 market participants, maybe in the institutional space,
5 to, like, avoid the cleared ecosystem and, instead, do
6 instruments, like, on swap in the OTC space because they
7 don't want to deal with, like, disincentives that stem
8 from a specific clearing model. And I think it's all of
9 our interests to have everyone participating in a
10 cleared ecosystem.

11 So, again, I throw those out there. There's
12 trade-offs with different models. Everyone has sort of
13 acknowledged that. But I think these are at least four
14 issues that I still think probably are worth debating in
15 terms of the costs and benefits of different clearing
16 models.

17 MR. STEIGERWALD: Thank you. Andrew?

18 MR. SMITH: All good comments. A lot's been
19 said. I don't want to repeat too much, but I will
20 repeat gratitude to the chair and the commissioners and
21 the staff as well for having us and for engaging the
22 industry. That's a big step forward. It's great to be

1 here. It's great to have this dialogue with folks and
2 I'm learning a lot and be able to contribute a tiny bit
3 but definitely learning a lot as well.

4 As I said previously, the new model that we
5 discussed today isn't mutually exclusive. We're a big
6 believer that there is a way to maintain customer
7 protections and the robustness that we have in our
8 system that we enjoy today. We don't have to get rid of
9 that.

10 I have four kids. In a lot of ways, it's like
11 listening to, "Well, I like this about Elliot, but I
12 like that about Benson." And you're kind of going back
13 and forth at the end of the day like you like them all
14 and there's room for all of them in the family. And I
15 think in in some ways, that's the way I kind of feel
16 about these different clearing models. At least for
17 now, there's room for all of them in the family, but
18 we'll see how they grow up.

19 I think at the end of the day, like, we see
20 this as a proposal not to change how all models work but
21 to create choice, to create the ability for new entrants
22 to come into the model and to use this new clearing

1 model as it actually helps grow the market. I think
2 that's the biggest thing that we see as this being
3 additive to the market.

4 Of course, with the right customer
5 protections, Allison raised a lot of good questions that
6 were nowhere near my radar, but now she's got the wheels
7 turning. And I think there's a lot of things that need
8 to think about that as well as how to fit this into the
9 existing ruleset that we have or what needs to be
10 changed to accommodate this if this is the path forward
11 for the industry.

12 And you did a great job moderating.

13 MR. STEIGERWALD: You're very kind, but I
14 can't help but say amazing things can happen from
15 conversation. Right? You occasionally can learn
16 something.

17 MR. SMITH: It's just like I tell my kids.
18 Use your words, not your fists.

19 (Laughter.)

20 MR. STEIGERWALD: I hear you.

21 Todd?

22 MR. PHILLIPS: Great. Well, thank you so

1 much, Robert, for moderating. Thank you to the
2 Commission for having this and having us here.

3 I would just say that I think the initial
4 thing that the Commission needs to think about is the
5 need to ensure that there isn't systemic risk in
6 anything that happens. I spent a lot of time here
7 focusing on retail investor protection. I think that
8 retail investor protection is paramount, whether it
9 comes to trading crypto or trading cotton. I recognize
10 that what might be appropriate for institutional
11 investors may not necessarily be appropriate for retail.
12 And I think that as the Commission considers things
13 going forward, it's important to keep that dichotomy in
14 mind.

15 For retail, I personally believe that it's
16 important to have intermediaries, like brokers or FCMs,
17 involved with best execution requirements, taking care
18 of liquidation decisions, things like that, that have
19 incentives that are aligned with retail. And, then,
20 having entities like the CFTC or SRO policing what those
21 intermediaries do is a great way to ensure aligned
22 incentives.

1 MR. STEIGERWALD: Thank you. Hilary?

2 MS. ALLEN: Bringing up the rear again.

3 So as the Commission considers this proposal,
4 I hope they focus on the systemic risks associated with
5 a move to more automatic liquidation. So what we saw in
6 2008 was that systemic risks don't disappear when you
7 take them out of an institution. They just move into
8 the markets. And so I think it's really critical to
9 think about as we increase the volume of automated
10 liquidation, what that could do to prices in the market
11 and the consequences of those fire sales. And I think
12 those fire sale externalities should be front and
13 foremost as you consider this proposal, and I hope it
14 will be.

15 But I thank you for the opportunity to be here
16 and say these things to you. And thank you again for
17 doing such a wonderful job moderating.

18 MR. STEIGERWALD: You're very kind. Thank
19 you.

20 How about -- oh, Dennis? Dennis, please
21 appear. I dream of Jeannie? No? No good? Okay.

22 So I just would like to conclude my part and

1 suggest that we give each other a round of applause.

2 You've done a great job. Thank you.

3 (Applause.)

4 CHAIRMAN BEHNAM: Yes. Yep. Thanks,
5 everyone. This is great. I think after two and a half
6 years, we were reminded of the endurance that it takes
7 to stay in this room all day but great discussion.

8 And I will note that a few months ago, when I
9 was thinking about this event and talking to Clark and
10 talking to Alicia, there was no doubt, I think,
11 collectively, in our mind that Robert was the right guy.
12 So I really just want to take this time to thank all of
13 you but to thank Robert.

14 (Applause.)

15 CHAIRMAN BEHNAM: And everything that happened
16 today was a decision point that he wanted to run by us,
17 including the active professorial in the ring, which I
18 think worked out great and kept everyone engaged.

19 But, again, great to see everyone. Thanks for
20 being here. And I'll give my fellow colleagues an
21 opportunity to say anything, if they'd like, before we
22 pass it back to Clark.

1 COMMISSIONER JOHNSON: I think I just want to
2 say thank you for all of your thoughts, ideas, your deep
3 and careful interrogation of where we are and maybe
4 where we're headed. There was so much to learn here
5 today that I'm hopeful this is just the beginning of a
6 healthy conversation about some really important issues
7 that each of you will have an important impact on
8 influencing. So thank you all for coming.

9 COMMISSIONER GOLDSMITH ROMERO: Thank you.
10 I want to echo the comments of the chairman
11 and Commissioner Johnson, just say how grateful we are
12 to have you so engaged, to have you come in and give
13 your thoughts in a very succinct, which I know is
14 difficult, careful, thoughtful, open way. And I can't
15 tell how incredible that is for us to hear.

16 I have told many of you I am very open-minded.
17 I leave here today, continue to be open-minded but with
18 a lot more that has been said, that I will be thought-
19 thinking through all of this.

20 I also just want to say I think this is
21 terrific to have a full five in the Commission for this
22 consideration. I think everyone is in agreement on

1 that. And I'm grateful to have all of the chairman and
2 my fellow commissioners here today. But thank you all.

3 COMMISSIONER MERSINGER: I just want to say
4 thank you to everyone, especially to Robert. You're
5 masterful in your moderation. So we greatly appreciate
6 that.

7 I will just say when I came to this job, I
8 didn't think it was going to be easy. So thank you all
9 for reminding me that it's not. And, as someone else
10 who has four kids, I will say that probably one of the
11 greatest gifts anyone can provide is your time. And you
12 have all given it in abundance today, your time and your
13 knowledge. And it's going to help us do our job better.
14 So I greatly appreciate that. So thank you.

15 MR. HUTCHISON: Okay. It's back to me. So
16 you should know that I don't often have planned remarks.
17 I kind of wing it. And so I'm winging what I'm about to
18 say. I decided that I'd give you a bit of personal
19 reflection that might be helpful in closing the day.

20 So over my 42 years of working in derivatives
21 and one might say a very misspent youth, therefor, I've
22 come up with maxims. And I shared one with you earlier

1 today. I've always thought that theory and reality need
2 to meet. And sometimes that's ugly, and sometimes it
3 can be elegant. And one of the challenges we have
4 today, as I said before, is having that theory and
5 reality maxim come together.

6 But another maxim I have is that regulation
7 should be a two-way street. Good regulation involves
8 communication. And I want to step back for a second and
9 just have us reflect on just how unique today is. Over
10 the time that I've spent being on the other side of the
11 fence and now at the side of the fence of the CFTC,
12 there is something unique about what we're doing. And
13 that is we have a relationship in this ecosystem amongst
14 all of us that's unique: FCMs, market participants,
15 exchanges, DCMs, DCOs, fellow regulators, even
16 international regulators, we interact in a way that's
17 different than in other marketplaces. And what we've
18 been able to do today is again demonstrate that
19 interactiveness that is so unique. And I just want to
20 say that it's characterized by notions of
21 approachability, honesty, and due diligence, good
22 listening.

1 Awkwardness is articulated and tolerated,
2 willingness to take risk, demonstrated expertise in
3 collegiality. We all know one another, and we will meet
4 again. And I think that's a hallmark of how we grow and
5 how we have this creative destruction, is that we have a
6 little bit of destruction, but we come back and we do it
7 again, and we stay collegial.

8 So, with that, there's another maxim that we
9 should have or it is at the CFTC, that someone like me
10 shouldn't speak on behalf of the Commission, but I'm
11 going to be daring today. I think, speaking on behalf
12 of the Commission, I can assure you that we were
13 informed today. All of us learned something.

14 Secondly, I think being informed makes us
15 smarter and makes us more sensitive to some of the
16 things that we have to think about.

17 But, with that said, finally, it can assure
18 you that we will be both deliberate and I think open-
19 minded in some of the decisions that we have to make
20 going forward. So with apologies for breaking a maxim,
21 but I think we all would agree today has been a big
22 success.

1 So I thank you all, number one; and, number
2 two, wish you safe travels. Thank you.

3 (Whereupon, at 4:11 p.m., the meeting was
4 adjourned.)

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