

THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION

ROUNDTABLE ON MARKET DATA PRODUCTS,
MARKET ACCESS SERVICES, AND THEIR ASSOCIATED FEES

Friday, October 26, 2018

9:00 a.m.

U.S. Securities and Exchange Commission

100 F Street, N.E.

Washington, D.C.

Page 2	1 PARTICIPANTS: 2 3 SEC Participants: 4 Jay Clayton, Commission Chair 5 Yue Ding 6 Mark Donohue 7 Dan Gray 8 Hans Heidle 9 Robert Jackson, Jr. 10 Hester Peirce 11 Brett Redfearn 12 John Roeser 13 Elad Roisman 14 David Shillman 15 Kara Stein 16 17 Panel Four: 18 Robert Bartlett 19 Michael Blaugrund 20 Isaac Chang 21 Adam Nunes 22 Paul O'Donnell 23 Dominick Paniscotti 24 Jarrod Yuster 25	Page 4	1 PARTICIPANTS(CONT.): 2 3 Panel Seven: 4 Kevin Carrai 5 Bill Conti 6 Jeff Davis 7 Tyler Gellasch 8 Melissa Hinmon 9 Anthony Masso 10 Rich Steiner 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Page 3	1 PARTICIPANTS(CONT.): 2 3 Panel Five: 4 Kevin Cronin 5 Hubert de Jesus 6 Bryan Harkins 7 Emily Kasparov 8 Richard Ketchum 9 Michael Masone 10 John Ramsay 11 12 Panel Six: 13 Greg Babyak 14 Adrian Facini 15 Bradley Jonas 16 Marcy Pike 17 Brian Schell 18 Larry Tabb 19 John Yetter 20 21 22 23 24 25	Page 5	1 CONTENTS 2 3 PAGE 4 5 Welcome and Opening Remarks 6 6 7 Panel Four: Elements of the 9 8 Core Data Infrastructure 9 10 Panel Five: Governance of 80 11 Core Data Infrastructure 12 13 Panel Six: Funding of 153 14 Core Data Infrastructure 15 16 Panel Seven: Public Transparency 225 17 18 Closing Remarks 283 19 20 21 22 23 24 25

Page 6

1 PROCEEDINGS

2 MR. REDFEARN: So good morning, and welcome

3 back to the Securities and Exchange Commission staff's

4 Roundtable on Market Data and Market Access. I'm Brett

5 Redfearn, Director of the Division of Trading and

6 Markets, and I'll be moderating the first panel today.

7 I also want to introduce my colleagues and

8 panel moderators here with me, alongside of me. So Dave

9 Shillman and John Roeser, both Associate Directors in the

10 Office of Market Supervision within TM; Dan Gray and Yue

11 Ding, both Senior Special Counsels, also in the Office of

12 Market Supervision; Mark Donohue, Senior Policy Advisor

13 in the Office of Analytics and Research; and Hans Heidle

14 from the Division of Economic and Risk Analysis.

15 I would also like to welcome back the various

16 Commissioners, who, if they're not here and present, they

17 are very likely watching by webcast and multi-tasking, or

18 will certainly be catching up on all of this later.

19 So, before I start, I want to provide our

20 standard disclaimer that the views that the staff and I

21 express today are our own, and do not necessarily reflect

22 the views of the Commission, the chairman, the

23 commissioners, or other members of the staff.

24 So, for those of you who are here, and those

25 who participated as panelists yesterday, as well as all

Page 7

1 of you here today, thank you very much for your

2 engagement in this important discussion on U.S. equity

3 markets. Yesterday we covered a lot of ground and many

4 issues were raised, and we received a significant number

5 of very constructive suggestions as to how we can

6 potentially improve the core market data infrastructure

7 in U.S. equity markets.

8 Today we intend to pick up on the issues and

9 challenges raised, and explore potential policy solutions

10 that might be warranted. Along those lines, our theme

11 for today is TGIF, not just because we're thankful it's

12 Friday, but because TGIF is the acronym we are using to

13 categorize four substantive policy areas that we will be

14 covering today.

15 T will be for transparency. Yesterday several

16 panelists suggested that transparency is necessary for

17 evaluating market data and market access fees as we

18 continue to meet our statutory mandate of ensuring that

19 these are fair, reasonable, and not unreasonably

20 discriminatory. Today we would like to discuss where

21 there could be additional public disclosure to help

22 evaluate such fees.

23 G is for governance. Questions around SIP

24 governance came up during yesterday's discussion,

25 including the voting structure of the NMS plans that run

Page 8

1 our core infrastructure today, which are the SIPs. Today

2 we will discuss potential steps to improve the governance

3 of core data infrastructure, which may include addressing

4 conflicts of interest, confidentiality policies, use of

5 executive sessions, and voting structure.

6 And, as a reminder, for today's discussion,

7 when we use the term "core data infrastructure," it's

8 intended to refer to the market data products and access

9 services that market participants need to trade

10 effectively in today's market structure, which may go

11 beyond the products and services currently offered by the

12 SIPs.

13 I is for infrastructure. Yesterday several

14 panelists provided their views on the content and latency

15 differentials between SIP data and exchanged proprietary

16 data. Today we will further explore what should

17 constitute core data infrastructure and the potential

18 steps to modernize core data infrastructure. And that

19 will be our first panel in just a moment.

20 F is for funding. Several panelists provided

21 views yesterday on how we should evaluate whether the

22 price for market data and market access is fair,

23 reasonable, and not unreasonably discriminatory. Today

24 we would like to discuss potential steps to assure that a

25 modernized core data infrastructure is appropriately

Page 9

1 funded, and that the associated fees satisfy the

2 applicable regulatory standards. And that assessment may

3 include a discussion about associated competitive forces,

4 or the lack thereof.

5 So, with that, let's kick off the first panel

6 of the day. Panel four, again, will focus on potential

7 steps to modernize the infrastructure for providing the

8 market data products and market access services that

9 market participants need to trade effectively in today's

10 market structure, which includes how we think about core

11 data and core access.

12 So, I'm going to ask our panelists to briefly

13 introduce themselves, their name, their organization,

14 role. We're not going to do long introductory remarks

15 today, so keep it very short. And then we will move on

16 to some of our specific questions and discussions.

17 So, Professor Bartlett, why don't we start with

18 you?

19 MR. BARTLETT: Yes, I'm Professor Robert

20 Bartlett at UC Berkeley. My research interests include

21 capital markets and market microstructure.

22 MR. BLAUGRUND: Good morning. Michael

23 Blaugrund, head of transactions at NYSE.

24 MR. CHANG: Hi. Isaac Chang, managing director

25 and co-head of trading at AQR Capital Management. AQR is

<p style="text-align: right;">Page 10</p> <p>1 a systematic asset management firm. Manage roughly 225 2 billion in AUM, roughly half of which is traditional long 3 only, and half which could be considered alternatives. 4 MR. NUNES: Adam Nunes, head of business 5 development at Hudson River Trading, which is a market- 6 making and proprietary trading firm. 7 MR. O'DONNELL: Paul O'Donnell, managing 8 director in Morgan Stanley's electronic trading group. 9 As you probably know, Morgan Stanley is a large financial 10 institution, and we service Main Street in a variety of 11 ways. In my particular area, it's through providing 12 equity executions to both institutional and retail 13 investors through our retail affiliate arm. 14 One note for my colleagues on the SIP operating 15 committee: angry Paul stayed home; this is happy Paul 16 today. 17 (Laughter.) 18 MR. PANISCOTTI: Dom Paniscotti, VP enterprise 19 architecture at NASDAQ. Prior to that I ran -- I was 20 head of infrastructure for a large market-maker, 21 electronic market-maker. And so, hopefully, I bring a 22 bit of perspective to the panel, as I'm probably one of 23 the only panelists who's actually gone to all of these 24 data centers and pulled the fiber that Doug showed you 25 yesterday on the dais.</p>	<p style="text-align: right;">Page 12</p> <p>1 access services that market participants feel that they 2 need in order to effectively participate in today's 3 marketplace. 4 As we heard from yesterday's panels, there is 5 currently an array of latency and content differentials 6 between SIP data and exchanged proprietary data. As 7 discussed during yesterday's session, one aspect of 8 latency differential is the time it takes for each 9 participant exchange to transmit data to the SIPs and for 10 receiving data from the SIPs. And that's because the SIP 11 is physically located in just one place, while the 12 various exchanges are located among several different 13 data centers. 14 And as an example, for a data recipient located 15 in Carteret, the information about quotes and trades on 16 NASDAQ for NYSE-listed securities would have to travel 17 from NASDAQ's data center in Carteret to the tape A 18 processor at Mahwah, and then back to the recipient in 19 Carteret. And it was mentioned yesterday the Carteret- 20 to-Mahwah geographic hop currently takes approximately 21 350 micro-seconds by fiber optic cable, which is used for 22 SIP data transmission. 23 The processing of consolidated information and 24 the calculation of the NBBO by the SIPs also takes time, 25 although technology upgrades in recent years have</p>
<p style="text-align: right;">Page 11</p> <p>1 MR. YUSTER: There we go. Thank you, Brett. 2 It's a pleasure to be here today. 3 My name is Jarrod Yuster. I'm the CEO and 4 founder of PICO. We provide infrastructure hosting, 5 exchanging network connectivity, and data services to our 6 clients. Our clients include global banks, broker- 7 dealers, systematic trading firms, exchanges, as well as 8 other financial technology vendors. Our clients are -- 9 include a wide variety of profiles for consuming data. 10 So it's a pleasure to be here. Thank you. 11 MR. REDFEARN: Okay, thank you all very much, 12 and thanks again for being here. 13 So today we're going to have Yue Ding, who is a 14 senior special counsel in the office of market 15 supervision, provide a framework for the panel 16 discussion, and just sort of outline some of the, you 17 know, sort of content and latency differentials that we 18 will be contemplating when we think about SIP data and 19 exchanged proprietary data. 20 So, Yue, over to you. 21 MS. DING: Thank you, Brett. And welcome to 22 our panelists. So this panel will be focused on core 23 data infrastructure. And as Brett just mentioned, for 24 purposes of this discussion, core data infrastructure 25 would encompass the market data products and market</p>	<p style="text-align: right;">Page 13</p> <p>1 significantly reduced SIP processing time. The average 2 processing time is under 20 microseconds for tape C 3 securities, which is the NASDAQ list of securities, and 4 about 130 to 150 microseconds for NYSE and other 5 exchange-listed securities. And so those are the tape A 6 and tape B securities. 7 As the panelists discussed yesterday, another 8 aspect of the latency differential between SIP data and 9 exchanged proprietary data is associated with the various 10 connectivity options. Exchanges currently offer various 11 types of high-speed connectivity options that are used in 12 the proprietary data space, but not used in the SIP 13 space. 14 For example, exchanges offer fiber and wireless 15 connectivity between data centers. And as we heard 16 yesterday, wireless connections can be 40 to 50 percent 17 faster than fiber connections, although fiber may be more 18 reliable overall, and less susceptible to weather 19 conditions. 20 As noted yesterday, data is transmitted to the 21 SIPs through fiber. And even though fiber connectivity 22 may be a more reliable option than wireless connectivity, 23 a combination of fiber and wireless connectivity could be 24 a faster alternative for transmitting SIP data. 25 Another aspect of latency differential is</p>

Page 14

1 associated with a different bandwidth and switches
 2 provided for connectivity. A larger bandwidth -- for
 3 example, a 40 gigabit connection -- could be important
 4 for a participant that has a greater message traffic and
 5 consumes a large amount of data. And a low latency
 6 switch provides for faster processing of orders that have
 7 been sent to the switch.

8 And it's also worth noting that once a market
 9 participant has physical connection to an exchange, they
 10 must also have logical connection to the exchange.

11 And exchanges offer various types of logical
 12 connections with different functionalities. For example,
 13 for trading and for receiving market data, and they may
 14 also have different latencies.

15 Finally, as discussed yesterday, while certain
 16 information is included in both SIP data and exchanged
 17 proprietary data -- for example, the best bid and offer
 18 and last sale information -- the exchange's proprietary
 19 data products include certain information that is not
 20 included in SIP data, and that includes quotations, depth
 21 of book data, auction imbalance information.

22 As the panelists discussed yesterday, some of
 23 this information could be necessary or very important to
 24 market participants. As an example, there are many
 25 occasions during which odd lots at the best bidder offer

Page 15

1 on a direct feed and they represent a better best bidder
 2 offer than the SIP NBBO, and this could be more often in
 3 high-priced securities, where there is more frequently an
 4 inside odd lot market that's not visible in the SIP data.

5 The content differential between SIP data and
 6 exchanged proprietary data run both ways. There are a
 7 number of areas where SIP includes information that's not
 8 in the exchanged proprietary data, such as regulatory and
 9 administrative messages. For example, the limit up-limit
 10 down price bands. And generally, these differences mean
 11 that, despite the potential limitations, SIP data is
 12 often a product that market participants must purchase.

13 So for this panel we will be discussing the
 14 elements of core data infrastructure. Given the various
 15 differentials among market data and market connectivity
 16 offerings today, we would like to hear the panelists'
 17 views on what market data products and what market access
 18 services participants feel that they need to effectively
 19 participate in today's marketplace.

20 We would also like to hear the panelists' views
 21 on whether the current SIP infrastructure, both in terms
 22 of speed and content, is adequate for core market data
 23 infrastructure, or should the SIPs be improved or
 24 replaced in order to meet the minimum requirements of
 25 modernized core data and core infrastructure.

Page 16

1 And with that, I'll turn it back to Brett.

2 MR. REDFEARN: Thank you, Yue. So today, what
 3 we want to do to start is we're going to have a few brief
 4 presentations on some of the specific alternatives that
 5 have been discussed so far.

6 So, as many of you would know, these things
 7 have been around for a while. There have been various
 8 discussions. We're going to have Michael Blaugrund from
 9 NYSE talk about the distributed SIP concept. This was --
 10 also came up yesterday.

11 Paul O'Donnell from Morgan Stanley is going to
 12 be talking a bit about sort of what's known as the
 13 competing market data aggregator model.

14 And then Adam Nunes is going to walk us through
 15 what I think he would refer to as the one fee, one speed
 16 proposal.

17 And then we're going to sort of build from
 18 there with various sort of commentary on some of these
 19 different elements.

20 So, with that, Michael, let's start with you.

21 MR. BLAUGRUND: All right, thank you. As I
 22 said before, my name is Michael Blaugrund from NYSE. I
 23 also have the privilege of serving as the chair of the
 24 distributed SIP subcommittee of the SIP operating
 25 committee, which -- I believe I'm the first to hold that

Page 17

1 title.

2 The subcommittee was formed two years ago. And
 3 while we haven't made a formal recommendation to the
 4 operating committee, a lot of what I'm going to discuss
 5 has been, you know, sort of formulated in those
 6 discussions. So all of the good ideas are from the
 7 advisors; any bad ideas are my own.

8 That was a nod to you, Paul.
 9 (Laughter.)

10 MR. BLAUGRUND: You know, any change to the
 11 SIP's design would have significant implications and
 12 costs for the industry, and merit a truly robust cost
 13 benefit analysis. But speaking, you know, today, based
 14 on what we know, we think that a distributed SIP
 15 implementation of the existing processors would be the
 16 simplest, least costly approach for the industry to
 17 minimize delays when consolidated data and single market
 18 proprietary data are received in distant data centers.

19 In the distributed SIP model, SIAC and NASDAQ
 20 UTP would establish instances of their systems in
 21 multiple data centers -- namely Mahwah, Carteret,
 22 Secaucus, and Chicago. Exchanges would simultaneously
 23 broadcast their quote and trade updates to each SIP
 24 instance. And data recipients could consume consolidated
 25 data for tapes A, B, and C securities from one or more of

1 the SIP locations.

2 As a result, market data would never have to
3 travel more than one hop before it would be available to
4 a recipient in any major data center. Each instance of
5 the SIP would operate in parallel, consuming quote and
6 trade data directly from the participants, but
7 independently consolidating the data, and republishing it
8 to recipients.

9 To limit complexity, we recommend that
10 regulatory messages like limit up-limit down price bans,
11 be calculated by only one SIP instance, probably the SIP
12 instance located in the listing exchange's data center,
13 and then republished by the other SIP instances.

14 And in this model, a recipient that wished to
15 continue using the existing SIP sources without making
16 any changes would be free to do so, while others could
17 choose to consume all three tapes' consolidated data from
18 a single data center. As Yue pointed out, the potential
19 benefit in overall latency would be significant. For a
20 market data recipient in Secaucus, the SIP latency for a
21 BZX quote in a BZX-listed security would be reduced by
22 more than 80 percent.

23 The range of possible architectural changes to
24 consider -- we will talk about many today -- but at least
25 preliminarily, we think that multiple instances of the

1 through a single plan processor." Arguably, because SIAC
2 and NASDAQ UTP would still be the sole processors, albeit
3 with multiple installations, this change could be
4 implemented without a change to Reg NMS.

5 We recommend the Commission undertake an
6 analysis of the cost and benefits to the industry for any
7 of these decentralized architectures. At this stage we
8 suspect that the benefits of both objective, measurable
9 improvements, as well as eliminating the perception of
10 the two-tiered system might be well worth those costs.

11 MR. REDFEARN: Thank you, Michael.
12 Paul?

13 MR. O'DONNELL: Thanks, Michael, and thanks for
14 your sterling leadership of the SIP distributed
15 subcommittee.

16 I want to start -- I want to take half-a-step
17 back. There is a threshold question here that we need to
18 answer. And this may be the only thing that Dominick and
19 I agree on all day, which is what's the problem we're
20 trying to solve here.

21 If the problem we're trying to solve is that
22 the SIP is for Main Street eyeballs, then we -- this
23 simply becomes a content question: What's the data
24 content? The current SIP is perfectly adequate, from a
25 latency perspective, for Main Street eyeballs.

1 existing processors may be the best alternative for a few
2 reasons.

3 First, as I said before, recipients would not
4 be required to make any changes to their existing
5 technology or procedures, unless they chose to do so.
6 Firms without sub-millisecond latency concerns could
7 simply continue to consume tape A and B data from SIAC in
8 Mahwah, and tape C data from NASDAQ in Carteret, while
9 those with geographic latency concerns could shift their
10 consumption to the nearest possible instance of each SIP.

11 For those that chose to migrate, it presumably would be
12 a very lightweight technology shift, in many cases
13 probably not requiring code changes at all.

14 While the SIP outputs would differ between data
15 centers based on the time and sequence of trade and quote
16 messages received, the system's processing logic would be
17 identical, and provide consistent behavior.

18 Third, it would preserve the operating
19 committee's clear responsibility for operating and
20 administering a highly reliable Reg SUI system, versus
21 the potentially ambiguous liabilities that could exist
22 among many different competing technology providers.

23 And fourth, Reg NMS current requires that SIP
24 plans "shall provide for the dissemination of all
25 consolidated information for an individual NMS stock

1 If, however, we're trying to say that the firms
2 represented in this room who are providing services to
3 Main Street eyeballs should have choice in whether they
4 can use the SIP or the direct feeds, then we need to do
5 something pretty drastic about the SIP, because currently
6 that's not the case. If you're providing any kind of,
7 you know, market-making service or brokerage service, or
8 service for either Main Street eyeballs directly or via
9 an institution like Isaac's, you need -- and you want to
10 use the SIP, the SIP needs to be a lot better.

11 So I'm going to start from the assumption that
12 the answer to that question is yes, we do want to give
13 those firms that choice. But I can see a world where
14 maybe you don't. And that brings a whole set of
15 different policy questions we would need to address.

16 So I think Michael did a good job of explaining
17 the technology, and I would agree that the technology
18 architecture that he laid out is pretty compelling. I
19 think you need three things to make that work.

20 One is the content that you're getting from the
21 SIP needs to be sufficient. And we may get into a little
22 later about exactly what that content is, so I won't go
23 into that now.

24 Secondly, you need a fast consolidation engine
25 proximate to where your trading system is -- next door,

1 in the same machine, you know, \$189 cable length away,
 2 something like that.
 3 And thirdly, you need a fast network between
 4 the exchange and the consolidator. And also, Michael had
 5 a good idea yesterday that -- he recommended that
 6 exchanges provide their direct feed over wireless into
 7 the SIP consolidators. That's a good idea, too.
 8 MR. BLAUGRUND: Paul is pointing that out
 9 largely because it was his idea.
 10 (Laughter.)
 11 MR. O'DONNELL: Thank you. And CMDA, from a
 12 technical aspect, really incorporates all of those
 13 things. But those things aren't particularly different
 14 from a technical aspect than what Michael has already
 15 suggested.
 16 I think that if we took, you know, a SIP with
 17 the characteristics of the UTP SIP, 16 microseconds is
 18 their median, 99.9 percentile is something like 50
 19 microseconds. All of that is well inside the geographic
 20 latency. That is pretty compelling. I don't know
 21 exactly how it stacks up against all of the commercial
 22 offerings, but it's certainly in the right ballpark.
 23 If you took a SIP like that and fed it with
 24 wireless feeds -- and there are a couple of different
 25 offerings of wireless feeds -- and put that in Secaucus,

1 that's pretty compelling. We could use that for a lot of
 2 our business. Maybe not all of it. Maybe Adam couldn't.
 3 But certainly it starts to become a real choice at that
 4 point, and we'd be thinking hard about where we use that,
 5 versus where we don't.
 6 The problem is now you've enshrined in the plan
 7 the current state of technology and the current state of
 8 which data centers happen to be competitive. So in a
 9 couple of years' time, maybe 16 microseconds isn't a
 10 benchmark any more. Maybe someone comes out with a fast
 11 chip, or maybe one of the microbe vendors moves their
 12 tower across the street, and now it's two micro-seconds
 13 faster between my wire and Carteret. Or maybe someone
 14 comes up with a better laser system, and it's a little
 15 bit more reliable in bad weather. I don't think either
 16 the Commission or the plan wants to be in the business of
 17 having to decide which is incrementally the next phase of
 18 technology that we need to decide. That's not a good use
 19 of any of those people's time.
 20 A more dramatic example would be let's say a
 21 new exchange pops up and decides to open a new data
 22 center. Maybe they go back to Weehawken, or maybe --
 23 another example, Michael runs an exchange which trades a
 24 certain number of ETFs in Chicago. Michael, it'd be
 25 great if you would ship those quotes over wireless from

1 Chicago to New York. But it's not entirely clear to me
 2 that that's the right answer. Maybe it is, and maybe
 3 there's a case for that, and maybe it's not. But it's
 4 difficult to sit in this seat and make that decision.
 5 So you really need a market to help make these
 6 decisions for you. So CMDAs are way off, trying to
 7 create a market solution for that. Having said that,
 8 recognize that in Reg NMS this was contemplated and
 9 rejected for a good reason, which is that if we have a
 10 market that -- such that exchanges sell their data at
 11 whatever price, and then consolidators pick it up,
 12 consolidate, and sell it, you basically end up where you
 13 are today, which is that there is not a lot of price
 14 control around the exchanges data, because everybody
 15 needs to buy it. So CMDA is a more incremental approach.
 16 So let's start with a couple of assumptions.
 17 Let's assume for now that the market data pool from the
 18 SIP is -- I don't know how much it is, because apparently
 19 we can't handle the truth. But let's say it's \$400
 20 million. And then some piece of that gets sliced off to
 21 pay the admin fees, to pay the processors, et cetera, et
 22 cetera. And that's a pool that actually runs the thing.
 23 And then the rest of it gets allocated to the exchanges
 24 based on their data.
 25 So let's assume for now that that's the right

1 number. And I'm sure that the funding committee will
 2 come up with an answer as to whether it is or not. CMDA
 3 basically takes a slight variation of it. Let's carve a
 4 piece of that off -- 10 percent, 20 percent, maybe it's a
 5 hard number, maybe it's a number that comes up via some
 6 bidding process -- and let's call that pool sort of the
 7 operation and subscriber pool. The rest is a data pool
 8 that goes to exchanges, just as it does today.
 9 The difference is, rather than taking that
 10 operations pool and giving it to processors who are
 11 appointed in perpetuity, let's have a series of competing
 12 consolidators. Each of them has to jump through a number
 13 of hurdles. They have to be Reg SUI-compliant, they have
 14 to make various standards. One of the jobs of the
 15 governing body -- this is the standards of how odd lot
 16 should be aggregated, this is the data that should be on
 17 the SIP, et cetera, et cetera. So everyone's at least
 18 looking at the same SIP data.
 19 Once you've met that hurdle and you get a gold
 20 star from Brett that says you're now an authorized SIP
 21 provider, you can then run your SIP, and you get the data
 22 from the exchanges, so the exchanges would provide their
 23 data via direct feed to these things, just like they
 24 provide it to the plan today.
 25 Then those SIP guys go out and start selling.

1 And they get -- for every subscriber they sign up, they
2 get a piece of that operations pie. We call it the
3 subscriber pool.

4 Now these guys are in the business of competing
5 with each other. It's up to them to decide do I want to
6 be in Weehawken, do I want to be in Secaucus, do I want
7 to be in some new data center that someone set up an
8 exchange in. So a lot of the micro-decisions around what
9 technology you're going to use, how data gets shipped
10 around, do I need to buy this next new, faster FPGA card
11 or not, those now get driven by market forces, which is a
12 much better way of handling this, because it can be
13 managed by supply or demand.

14 That's probably enough for now. We can
15 certainly come back to some of the -- you know, there's a
16 lot more detail underneath that we can come back to, but
17 let me pause there, let Adam give his proposal, and then
18 we can come back.

19 MR. REDFEARN: Thanks, Paul. I would only say
20 that the decision might be made by -- to the extent that
21 this is a plan -- maybe made by the operating committee
22 of the plan, and not by division of trading and market.
23 But that remains to be seen.

24 So, with that in mind, so Adam certainly has
25 the catchiest name for his proposal, so tell us about one

1 exchange, order it, and they say, you know, here is where
2 you -- you know, here's your port and IP to receive that
3 data, but the SIP data could be delivered in the same
4 framework. Instead of calling an exchange, you would
5 call the administrator, and they would coordinate your
6 access to the data. That would open up the data to
7 whatever, you know, innovation and consolidation that,
8 you know, that market participants and vendors want to
9 do.

10 So I think -- and this is, to me, kind of a
11 pretty minor point -- the biggest difference between my
12 kind of view and Paul's is kind of what type of -- you
13 know, like, do you want them to be SEI, you know,
14 compatible, or are we happy to just have a bunch of
15 vendors who can put the data together and just kind of
16 what -- like, do you want a lot of hurdles in the way of
17 that competition?

18 So I think that's a -- you know, an important
19 point, but kind of relatively minor, compared to do we
20 just want a SIP that is as fast as the direct feeds.

21 And, you know, I felt, listening yesterday, there seemed
22 to be a notion that we can't have that. And I think
23 that's, you know, categorically false.

24 So the framework exists, we know what we need
25 to do. You know, my, I guess, argument against the

1 feed, one speed.

2 MR. NUNES: I kind of feel like I should just
3 hand that name over to Paul, because I think my thinking
4 is only incrementally different than his. And frankly,
5 my notes are only incrementally different than his, which
6 is a little weird. But I'm going to say them, anyway.

7 So from my perspective, before we start
8 discussing the various ideas for this, we need to define
9 what goals we're trying to achieve. And to me, it comes
10 down to do we want the SIP that is as fast as direct
11 feeds, do we want an infrastructure that is flexible
12 enough to evolve as technology evolves over the coming,
13 you know, 10, 20 years, or are we happy with a SIP that
14 is better, but just less worse than direct feeds, which I
15 think kind of the distributed SIP would be. It would be
16 better than it is now, but kind of structurally worse
17 than a direct feed would be.

18 So, from my perspective, I agree with Paul that
19 I think we want a SIP that is as fast as direct feeds.
20 And from my perspective, the -- you know, there's a
21 framework that exists to do that, and it is the framework
22 we use to deliver direct feeds.

23 So the notion that I have would be the way to
24 make the SIP data available would be similar to the way
25 direct feeds are made available, where you call an

1 requirement to have the, like, SEI, you know, stamp of
2 approval is that would remain, we would keep forcing the
3 SIP data through a consolidator that they would then hand
4 off to firms that then have to consolidate it themselves.

5 So it would keep an extra hop in that mix, where I think
6 that, you know, the way that technology is involved in
7 consuming data, you know, that's not necessary.

8 So, you know, that's a pretty minor point in
9 the grand scheme of things, given where we are and what
10 we're talking about. But I think it's an important one.

11 MR. REDFEARN: And it may be that all of these
12 proposals aren't necessarily mutually exclusive.

13 But that being said, so at this point in time I
14 think we have a few different ideas that are thrown out
15 on the table, and I think we want to go to our panelists
16 now and ask to see, you know -- basically, just get some
17 initial commentary related to what's been discussed so
18 far.

19 So maybe we will start with Professor Bartlett.

20 MR. BARTLETT: Sure, thanks. And thanks for
21 having me participate as the one person here who has no
22 industry experience or connection. But that won't stop
23 me from weighing in on my -- with my opinions.

24 So, as I sort of see things and hear these
25 proposals, I mean, I am reminded that in some sense we're

1 sort of here because of a policy decision, you know, with
2 Regulation NMS, not to have a consolidated limit order
3 book. If we had gone that road, we wouldn't be here
4 talking about this.

5 The problem is that once we decide to have
6 multiple venues sending out sort of their own best top-
7 of-the -- their best bids and offers, you're in a regime
8 of the possibility of having multiple NBBOs. And I think
9 the problem I see is that that creates an enormous amount
10 of distrust and uncertainty about are you getting the
11 best price, given all of the discretion that we provide
12 to our brokers in executing orders.

13 So my thoughts are that all of these proposals,
14 while I think interesting and may provide better pricing
15 with respect to direct feeds, continue to have this
16 problem of having multiple NBBOs. And we're going to
17 have continued uncertainty and suspicion in the
18 marketplace. And I think if I was going to focus on
19 fixing the SIP, I would focus on the back end, which is
20 using the SIP as a way to evaluate compliance with best
21 ex.

22 And if -- in that regard, you know, if we could
23 just have what's the NBBO that was used for trade, that
24 would actually provide enormous transparency into how
25 that trade was actually handled and, in my opinion, would

1 actually address sort of some of the uncertainty and
2 suspicion that arises with having multiple NBBOs.

3 And so those are sort of my sort of reactions,
4 is that we're sort of suffering from the choice not to
5 have consolidated limit order books.

6 MR. REDFEARN: So I'm sure that this is popping
7 up on at least a few of the folks' minds up there.

8 Yesterday there was a conversation, when we
9 talked about it, where I think it was Redline who said
10 there is no NBBO, there already are -- one NBBO. There
11 already are multiple NBBOs because so many brokers are
12 independently aggregating that. And so we -- I think
13 there is some question about, you know, whether there is
14 one regulatory NBBO. The -- simply because so many
15 people are aggregating.

16 And I think the other point would be that, you
17 know, for best ex there was also some debate around, you
18 know, whether or not people thought the SIP was usable
19 for best ex, and a number of the panelists yesterday
20 suggested that when they think about best ex they really
21 do need a faster feed for best ex. Just reiterating
22 that.

23 But that being said, thank you for that, and --

24 MR. BARTLETT: By the way, I just want to
25 clarify. So I get that faster feed for routing and for

1 pricing -- I certainly understand that. But from my
2 perspective as a researcher and as someone who is trying
3 to evaluate whether or not people are actually getting
4 the best price, that's a separate use of the SIP, and
5 that's more of a -- you know, and in some sense we're
6 looking at the historical data. That would be useful.

7 And I want to say right now all we have is Rule
8 605, which is horribly antiquated. We still have a five-
9 minute definition of realized spread, which is just
10 absolutely unacceptable, I think, because, you know,
11 realized spreads decay within, you know, the first few
12 microseconds of a trade. So we have no way to evaluate
13 whether we're getting best pricing right now, which is
14 where I would start the conversation.

15 MR. REDFEARN: Great, thank you.

16 Isaac?

17 MR. CHANG: Thank you, and thanks for the
18 opportunity to participate on this panel.

19 I thought it might be helpful to explain my
20 perspective, just from -- with a few underlying sort of
21 principles before we get into the nitty gritty of the
22 details, because you can talk about the details of these
23 sorts of things forever.

24 And I would say, you know, we're coming at this
25 from the perspective, really, at the end of the day, of

1 being a fiduciary for our investors. And we have a
2 fairly diversified investor base. But public and private
3 pensions and, you know, mutual fund, '40 Act fund, and
4 investors are a significant fraction of our investor
5 base. And so we take very seriously our responsibility
6 to them, whether strictly speaking in regulation, or --
7 but -- or just in principle.

8 And I think one of the questions -- maybe a
9 variant on the question that Paul asked and Adam sort of
10 rephrased, which is what are we trying to solve, might be
11 who owns market data, right? And if you went down this
12 panel, I'm guessing that the representatives from the
13 exchanges say they own the market data. And if I were to
14 go to a broker, they'd say they own the market data. And
15 you know, you go from the perspective of market
16 participants, they would say, well, it's our orders that
17 are going in that are creating this market data. We own
18 the market data.

19 And so, I mean, at the end of the day, the fact
20 that we're even talking about the SIP and what its
21 purpose is, and why do we have it, and what problem we're
22 trying to solve, I think, illustrates a fundamental
23 underlying principle that in some way we're acknowledging
24 that market data is a public good of sorts. And I think
25 that's how we have to look at it. Otherwise, why not

1 just let sort of market principles rule, free-market
 2 principles rule, and why bother with rules around the
 3 whole thing to begin with?
 4 One thing I would underline is -- that
 5 Professor Bartlett brought up, that I think we have to
 6 keep in mind that -- and, you know, he wrote a very good
 7 paper on -- it was interestingly titled -- I think it was
 8 "Are Markets Rigged?" But -- and he -- his conclusion,
 9 actually, was not very much. But I think it illustrates
 10 the underlying point, that there is a fundamental concern
 11 and issue with investor confidence that we need to
 12 address. And at the end of the day, to me, that's what's
 13 really important here.
 14 We can get -- I very much agree with -- you
 15 know, it was just early this week that, you know, I spent
 16 over an hour with one of our underlying fund
 17 distributors, talking to them about the implications of
 18 the U.S. equity market structure currently, and, you
 19 know, the different nuances which we go through to make
 20 sure that we can participate in an effective way. But
 21 it's a question that's really on people's minds, and it's
 22 much more than just an argument between brokers and
 23 exchanges, which some have sort of framed this argument
 24 as.
 25 I very much agree with Paul, that whatever

1 the creation of an NBBO. We keep throwing around this
 2 concept of there are multiple NBBOs, and I don't
 3 understand that, as a technologist. You know, I kind of
 4 think of national as one nation under God, so we have one
 5 actual BBO for the entire nation that is the same for the
 6 entire nation.
 7 So really, much of what we're talking about
 8 here are solutions to a problem that has nothing to do
 9 with NBBOs, but rather has to do with regional BBOs, BBOs
 10 that exist, let's say, at some latitude, longitude, and
 11 altitude at a particular place on the sphere.
 12 And so, really, distributed SIPs or multi-
 13 consolidator SIPs, in terms of the solution space rather
 14 than the problem space, they don't create an NBBO. In
 15 fact, they kick the can down the line, right? So today
 16 we're talking about 300 microseconds of geographic
 17 latency; tomorrow we'll talk about 300 nanoseconds of
 18 geographic latency, right, if we just move them into the
 19 same data center. You know, a nanosecond is about this
 20 long, right? So if a computer is on the other side of
 21 this room, there are material latency deltas between
 22 where the consolidation occurs.
 23 And to that end, kind of geographic latencies
 24 are a bit of a red herring in terms of that environment,
 25 right? So if you have all of these different regional

1 underlying regulatory framework we get should not be
 2 tailored around the current state of technology.
 3 Because, just like when 2005 or 1970s or whenever various
 4 rules were written you couldn't have envisioned the state
 5 of technology today, you -- I would argue you probably
 6 can't envision what it will be in 2 years or 5 years or
 7 10 years, either, you know. We're talking about bouncing
 8 radio waves off the ionosphere, or maybe we're talking
 9 about Amazon putting an exchange in the cloud, in which
 10 case you actually don't know what your geographic
 11 latencies are.
 12 I mean there's all sorts of different potential
 13 worlds that we have to plan for, and I would want to make
 14 -- and that's why, to me, the idea of having a market be
 15 able to decide this, rather than being prescriptive from
 16 a regulatory perspective, sounds very appealing.
 17 Maybe with that I'll give someone else a
 18 chance. Thanks.
 19 MR. REDFEARN: Thank you very much.
 20 Dominick?
 21 MR. PANISCOTTI: Yeah, thank you. And to
 22 Paul's point earlier, I think, as an engineer, the first
 23 thing they teach us in engineering school is to figure
 24 out the problem before you start looking for a solution.
 25 And so I submit that the problem is actually

1 BBOs, people are already creating them, as you noted, and
 2 are already trading effectively, given those regional
 3 BBOs that they have created. Now, certainly, there are
 4 regulatory concerns that have to be addressed in that
 5 framework. But you see that it's already occurring in
 6 our industry.
 7 So if we really care, I think, about Main
 8 Street and a national best bid and offer, really, I think
 9 what we ought to think about is taking the SIPs out of
 10 Wall Street data centers. Why don't we move it to where
 11 the people actually are? That is, in the cloud,
 12 somewhere in the cloud, where I can access the BBO, the
 13 national BBO, or last sale, via my laptop or my
 14 smartphone in a highly effective manner through a set of
 15 software APIs, and things of that nature.
 16 And, in fact -- I think it was just noted -- I
 17 don't think we are too far away from exchanges moving
 18 themselves into the cloud, as well. And so some of the
 19 things we're talking about today are actually going to be
 20 amplified, over time.
 21 MR. REDFEARN: Was the cloud suggestion -- when
 22 you're talking about iPhones, were you thinking about
 23 eyeballs or trading systems?
 24 MR. PANISCOTTI: I think, ultimately, in the
 25 cloud you could do both. But certainly eyeballs are

1 really easy -- it's really easy to put eyeballs on
2 infrastructure that's running in the cloud, right? I can
3 reach the entire world very quickly via the open Internet
4 by putting infrastructure in the cloud.

5 MR. REDFEARN: And just o I understand, is that
6 -- so that is a -- is that, like, Paul's CMDA concept,
7 but as opposed to being in Secaucus and Carteret and
8 Mahwah to being in the cloud?

9 MR: PANISCOTTI: No, I think you'd probably
10 build, again, one system that was a consolidator. Now,
11 that -- certainly that system could be built in a
12 distributed manner, much like Amazon is one service that
13 you go to, but it's a distributed system behind the
14 scenes that you're not completely aware of, in terms of
15 what it does. But you access one single point of
16 reference, one single service level.

17 And so I think kind of pushing the technology
18 aside and how technologists might actually build that
19 system, I think you would see it as one access point to
20 that information for a national best bid and offer. You
21 know, much like when I was a kid you had a call to get
22 the time, to set the time on your watch. You used to
23 have to call, you know, a telephone number and it would
24 say the time at the tone is whatever. The reason that
25 exists is because the time needs to be distributed across

1 the entire nation the same time at the same reference
2 point, and everybody's is a different geography. And you
3 do the same kind of thing, possibly, in the cloud, using
4 technology.

5 MR. REDFEARN: Given the latency uncertainties,
6 would that be an effective substitute for the prop feeds
7 for algorithmic trading?

8 MR: PANISCOTTI: It's really -- it would really
9 depend on what you mean by algorithmic trader, right?
10 There are all sorts of algorithmic traders. I'm an
11 algorithmic trader when I take my smartphone out of my
12 pocket and place a trade. I'm using an algo, it's in my
13 head possibly, or I'm running it on my laptop.

14 And so I think the whole concept of algorithmic
15 trading and where servers are and what those algos are,
16 again, is much to do about nothing. It's a red herring.
17 Technologists solve these problems, they solve them very
18 effectively. They deal with the latencies, and
19 algorithms are built around that to deal with them.

20 MR. NUNES: So I guess if you take what Paul,
21 Isaac, and I said that was providing for a flexible, you
22 know, future infrastructure out of the infinite
23 possibilities for where technology goes, that's one of
24 them. It wouldn't preclude it from doing that.

25 I think we're in a world right now where the

1 notion of putting proprietary feeds on the cloud is kind
2 of laughable. So it seems like a weird way to, like,
3 let's go in a way that no one currently does it or plans
4 to do it, versus let's have a flexible thing where, if
5 the cloud gets there and that's how everyone wants to do
6 things, that's an alternative and that's what we'll do.

7 MR: PANISCOTTI: I would say that all new
8 technologies are laughable when they're first introduced,
9 and later on they're accepted as truth.

10 MR. NUNES: Oh, but my point is that is one of
11 the potential outcomes of the world, and we can have a
12 flexible one for structure that is open to that. Or we
13 can just choose that one, and then -- you know, and then
14 99 percent chance that that isn't a case, or probably
15 higher -- then we'll do something else, because that's
16 the better thing to do.

17 MR. REDFEARN: So it's interesting, you know,
18 the flexible approach. Then Dominick presumably does
19 provide for an opportunity to the extent that the market
20 evolves there does so. So I think it's an interesting
21 point that's been raised, that when we think about this,
22 right -- we had a -- you know, I mean, we're still
23 working off of what we came up with in 1974, right?

24 And, you know, bid ask, last sale, that's what
25 the SIP is, and the fact that we're here today, this much

1 time later, having a conversation about a decision that
2 was made that long ago is -- well, that one is an
3 interesting one. I won't use the same word.

4 But I will say that -- I'm sorry, Michael, did
5 you want to jump in?

6 Oh, Isaac. Just hit your -- if you hit your
7 light, I'll see the light on, and then that will indicate
8 who is --

9 MR. CHANG: Got it. Just one point I wanted to
10 mention, which was around this idea of not designing --
11 or a solution around just the current state of the world.
12 Maybe I'll just throw this out there -- it's probably
13 something that was discussed at length yesterday, but
14 I'll throw it out there -- is that in a world where you
15 have a public feed and you have proprietary feeds
16 produced by the same underlying exchanges, you have an
17 inherent conflict of interest that needs to be managed.

18 And that's not a statement on the current,
19 necessarily, even intention of the exchanges. For
20 example, I've known Michael for many years and, frankly,
21 personally, I trust him -- like him and trust him quite a
22 bit. But just because I trust him doesn't mean that our
23 regulations should allow for that conflict of interest to
24 exist.

25 Like, given that Michael's in the seat, I kind

1 of trust he's going to do his best and be a reasonable
2 human being, because that's always how he's acted when
3 I've talked with him. But he might not always be in that
4 seat. And why allow for a conflict to exist, and
5 perpetuate, and instead solve the problem of, oh, we'll
6 reduce the conflict -- we'll reduce the scope of the
7 conflict, rather than just removing the inherent conflict
8 in the regulation?

9 And, I mean, it's sort of like saying, look,
10 people don't really rob banks, so let's just take out the
11 law that you're not allowed to rob banks, because it's
12 not really a problem today. I feel like we need to get
13 to the underlying issue to restore confidence, rather
14 than just tactically look at the current state of the
15 world and try to incrementally improve it.

16 MR. REDFEARN: Okay. Jarrod, why don't we turn
17 it over to you and get your thoughts on all this?

18 MR. YUSTER: Terrific, thank you.

19 One way to reduce geographic latencies is to
20 force all the exchange matching engines in one data
21 center.

22 MR. REDFEARN: But, you know, so -- think about
23 that from a competitive implication and -- right? I mean
24 --

25 MR. YUSTER: I'm not proposing it. I'm just

1 and the regulations are really why people still have to
2 use it for routing.

3 And I think you also need to separate between
4 market data viewers and executing on market data. So --

5 MR. REDFEARN: Thank you.

6 MR. YUSTER: Maybe that opens up some of the --

7 MR. REDFEARN: Interesting. There is -- that's
8 helpful. And there are some aspects within Reg NMS, and
9 this discussion has been had where we had -- you know,
10 there was a discussion back then that was should we have
11 competing SIPs or should we have a central consolidator.
12 And, as I mentioned in my opening remarks yesterday, a
13 decision was made to have a -- you know, a consolidated
14 tape, or -- you know, a consolidated SIP.

15 And part of the reason for that was it was a
16 concern that if we went to a distributed SIP -- and I
17 think Paul made reference to this -- that there was -- it
18 would be question about what you would be able to do
19 about the pricing that would happen because everybody
20 would need to have it and, you know, and there would be
21 those challenges which I think the Commission at the time
22 decided was too challenging to fight off.

23 MR. YUSTER: If I could just make one more
24 comment with regards to the European model, the initial
25 feedback that I have received is -- there really are two

1 saying if you want to reduce the latencies, that is one
2 way to do it.

3 So -- but as a technology provider, my views
4 are based on our clients. And so I did some initial
5 preliminary discussions with our clients to get feedback.

6 And in discussing these three proposals, first and
7 foremost there has been critical negative feedback of
8 keeping a single SIP provider. So the distribution of a
9 single SIP provider we've not seen positive feedback,
10 initially, on that. Our clients do want to see more
11 exploration of the competitive SIP, or the European model
12 and removing it entirely.

13 Now, it's important to note that -- I think
14 Adam mentioned this -- over 85 percent of our clients use
15 an API or a feed normalizer. So the argument of keeping
16 the single plan for simplicity, people are already using
17 APIs and normalizers. And having them -- giving them the
18 capability and the option to register as SIP makes a lot
19 of sense. And it does create for competition for cost
20 competitiveness, as well.

21 You know, the other thing I think is important
22 to note is, looking at the SIP and making enhancements,
23 you really need to look at Reg NMS, which, to a certain
24 degree, is keeping the SIP afloat, right? So you can't
25 really look at the SIP in isolation of the technology,

1 camps. One camp is concern that if you remove the SIP
2 then the exchanges have more carte blanche to raise
3 prices. And the other camp feels that if you move the
4 SIP, regulators will come in and regulate pricing more so
5 and make it more palatable.

6 MR. REDFEARN: Okay. Michael, did you have
7 something?

8 MR. BLAUGRUND: I'm just going to comment on a
9 few of the points raised.

10 First, I think that, you know, the idea that
11 there is no NBBO, or there are multiple NBBOs, I think
12 everyone acknowledges that this is a simplifying
13 assumption, right, that, based on where you are, you are
14 going to receive information at slightly different times.
15 I would agree that, you know, it's simplifying, but
16 valuable. And I think, particularly for retail, it's
17 important to persist a consolidation. So I think the
18 European model would certainly be a step in the wrong
19 direction.

20 Moving everything into a single data center
21 would be interesting. You'd have significant geographic
22 DR concentration risk, and I don't think that's a likely
23 outcome of --

24 MR. REDFEARN: I'm guessing you would pick
25 Mahwah?

1 MR. BLAUGRUND: Mahwah would be my
2 recommendation.
3 (Laughter.)
4 MR. BLAUGRUND: But, you know, I think, you
5 know, Paul, Adam, and Isaac, you know, raise a
6 interesting idea. It certainly would be appealing -- and
7 I can understand why it's appealing -- to think, well, we
8 don't have to pick one specific implementation, like,
9 we'll just figure it out because market forces will lead
10 to better outcomes
11 I worry that, you know, the market may optimize
12 for simply speed, right, and forego resiliency. Or it
13 may -- you know, it may optimize in some other fashion.
14 We can't predict. That may be acceptable, but I think
15 that one of the benefits of the current processors is
16 that they are extraordinarily reliable, they are
17 extraordinarily resilient. And I would just caution that
18 we ought not cast that away.
19 Again, I don't know that our recommendation is
20 the best long-term solution. But it seems to me like
21 it's the most achievable approach. You know, a lot of
22 people seem interested in competing consolidators, in
23 part, because I think there's an implication there that
24 means they'll get to spend a lot less money. And I don't
25 know that that's really accurate, right?

1 I think there is -- you know, as Paul was
2 describing, you might have a pool that's apportioned to
3 processors based on their subscribership. But I think
4 they are independent questions, you know. The cost to
5 produce the data is not the cost of the consolidator. So
6 I think maybe people, when they realize that, they may
7 find the competing consolidator model to be a little less
8 attractive.
9 MR. YUSTER: Can I just make one comment on the
10 -- with regards to what Michael said, that retail needs
11 the SIP?
12 A few years ago NASDAQ came up with an
13 offering, NASDAQ Basic as an equivalent. Wildly
14 successful, where hundreds of thousands of users are
15 using -- it's just the inside quote for their market, but
16 clients -- and retail clients, particularly -- do not
17 want to pay \$12,000 a month for the SIP.
18 MR. REDFEARN: Paul, I know you wanted to
19 respond to the resiliency issue.
20 MR. O'DONNELL: That and a couple of others.
21 Firstly, the NBBO. You know, to Dominick's
22 point, NBBO is, I think, a defined term in Reg NMS, and
23 that means a certain thing, which is great if you're a
24 lawyer. But the reality is, as Michael pointed out,
25 depending on where you are, the laws of physics -- you're

1 going to perceive reality slightly differently. So if
2 you're in Secaucus, your reality is a little bit
3 different than if you're in Mahwah. We just -- we need
4 to acknowledge that.
5 I think it's up to each firm. And under any of
6 these models -- and even in reality today, it's up to us
7 as -- we're required to have procedures and policies that
8 -- by which we justify this is how I'm collecting market
9 data and how I'm determining what my view of the market
10 is. And that has to be a reasonable set of policies, and
11 that's not going to go away. And maybe we need to
12 redefine the word NBBO and call it just BBO. I don't
13 know. But I think getting too high up on the national
14 BBO as being this golden thing is probably not helpful.
15 Secondly, on resiliency, so I think it's a
16 couple of points there. One is having different versions
17 of this thing running on different tech stacks, it's
18 probably the best way to get resiliency. So it's
19 important to make sure that there are standards set, and
20 that everybody calculates their version of the BBO the
21 same way, and uses the same rules for odd lot
22 aggregations so that you know for any given exchange that
23 all those stocks do odd lot aggregation the same way, for
24 example, that you know how many shares are available at
25 the inside, all -- it's a myriad of details of how you

1 need to do this stuff.
2 So part of the job of the governing body for
3 this -- which may be a plan or maybe something else -- is
4 to set those rules. Once you set those rules, I'd much
5 rather have two completely different tech stacks
6 implementing it, in case someone has a bug and one of
7 them goes down. So I think resiliency is probably
8 enhanced by this model.
9 And I also challenge the notion -- carefully
10 challenge the notion -- that SIP is as reliable as
11 pointed out. It hasn't had a hard outage in a while, but
12 it's not as -- if you're one of those enterprising
13 advisory committee members who actually measure
14 timestamps, it's also not as robust as might be led -- as
15 everyone might be led to be believed (sic).
16 MR. NUNES: So I'll echo some of that. I
17 think, you know, years ago I was randomly in D.C., and it
18 seemed like the way most people here defined the SIP was
19 the thing that broke a couple weeks ago that should never
20 break. And I think we're now in a position where we have
21 all of our eggs in one basket, so it better be resilient.
22 And, you know, with a more open and competitive model we
23 wouldn't have that problem. So we -- you know, that
24 would solve one of the big issues we currently have.
25 I think, you know, similar to Paul's point, we

1 do have flexibility around what the NBBO is. It's kind
2 of built into NMS on routing. But there is an acceptance
3 that it's the firm's view of what the inside is. And, as
4 Paul said, you have procedures around how you do that.
5 You know, at my firm we have more than one view, based on
6 what data center we'd be trading from.

7 Also, on the cost assumption side, my
8 assumption is you would do something to the effect of
9 haircutting the current pool by about what it costs to do
10 the SIP consolidation. And the -- you know, the --
11 whatever -- the administrator would collect 95 percent --
12 I don't know what it is. But there's a version of the
13 world where if you want, like, the, you know, the
14 microwave processed by FPGA version of the SIP to power,
15 say, your pool because all you need is best bid best
16 offer, that probably costs more, right?

17 Like, you're leveraging a lot of technology.
18 You're paying for the data, that's part of it, and then
19 you're paying for the technology. That's another part of
20 it. If you want the best technology, maybe it costs more
21 than it does today. If you're happy because you have
22 something that's going to, you know, websites, and you're
23 less worried about it, then you probably just stay on the
24 NASDAQ and NYSE SIPs and, you know, get your data that
25 way.

1 MR. BLAUGRUND: I think you have a
2 sophisticated view of this. I think there are others --

3 MR. NUNES: Thank you.

4 MR. BLAUGRUND: -- including some of the
5 panelists yesterday who suggested, you know, I could run
6 the consolidator for less. Therefore, you know, if it
7 costs me 10 percent what it costs the existing processor,
8 then everyone is going to pay 10 percent what they pay
9 today.

10 MR. NUNES: Meaning the -- but that's, like,
11 based on the assumption that you have -- I'll use Paul's
12 number -- a \$400 million consolidator, which is,
13 obviously, absurd.

14 MR. O'DONNELL: Can I --

15 MR. NUNES: The technology doesn't cost that
16 much.

17 MR. O'DONNELL: Can I jump in on the cost thing
18 for a minute?

19 MR. REDFEARN: And then I want to get to
20 Dominick and then back to Professor Bartlett.

21 MR. O'DONNELL: I'll be brief. In the process
22 of prepping for this I had several people ask my why are
23 there three tapes and two plans. I think it's worth
24 pointing out that there is an awful lot of duplication in
25 the current model. There is two sets of administrators,

1 there's two separate tech stacks, there's two sets of
2 processes. That's a lot of duplication, already.

3 A very simple first step would -- just let UTP
4 handle type A and B stocks, and let CTA handle type C
5 stocks, and let them compete with each other. And the
6 marginal infrastructure cost of each of them having the
7 capacity to do that is probably pretty small.

8 So I think, if you re-imagine the way the plans
9 work, there is actually some money to be saved in the
10 current model that can be re-deployed to fund competing
11 consolidators.

12 MR. REDFEARN: Dominick?

13 MR. PANISCOTTI: I just want to make a point.
14 The NBBO is quite a simplifying proposition at some
15 level, right? It goes to one location, it's distributed
16 from there. Everybody sees the exact same thing.

17 So -- and this is going to speak to Paul's
18 earlier point -- as we move towards distributed models,
19 right -- in software engineering there is a law called
20 Metcalfe's Law. Every one of those additional
21 distributors that you're going to add is going to add
22 complexity to the order of -- in a quadratic-type order.

23 So every additional consolidator adds
24 additional complexity. All of those consolidators are
25 basically stochastic in some way. So there is randomness

1 in what they do because that's how computers work, right?

2 So you can imagine there is going to be tons of
3 questions about those prices, about the information that
4 they're producing, why they're not all the same, why
5 they're slightly different, why did one take a
6 millisecond longer than another one, why is the one
7 closer to me taking longer than the one farther away from
8 me. All of these questions are actually going to be
9 raised if you increase that distribution.

10 Now we can say we can simplify that assumption
11 because we only have four data centers. And don't hold
12 me to this number, but I think 15 years ago there were no
13 data centers, right? Like -- so who knows what we're
14 going to have in 15 years from now? We could have 500
15 data centers. And how are we solving that problem, then?

16 So I think if you come back to the point of a
17 national best bid and offer, it's extremely simplifying.

18 It's produced in one location, regardless of the
19 technology that uses it. And, by the way, national last
20 sale, as well. It's produced in one physical location,
21 it's one actual item, you know what the price of a given
22 security is at a given point in time. And that is the
23 information.

24 Now, high-speed traders, high-speed algorithmic
25 traders who need more rich information to do what they

1 need to do for competitive reasons, they have access to
 2 that information today. They can consolidate locally, if
 3 the regulations allow them to do so. And they can run
 4 their businesses as effectively as they need to.
 5 MR. REDFEARN: I think we have to go back to, I
 6 think, the sort of dichotomy that was presented at the
 7 beginning of this, which is, you know, is the SIP just
 8 for eyeballs or is the SIP for trading systems. And to
 9 the extent that the SIP is for trading systems, then
 10 we're asking this basic question about does it meet the
 11 needs of the core data infrastructure. And I think we've
 12 heard fairly clearly that it doesn't, that whether there
 13 is -- because of the latency differential and because of
 14 the content differentials, that something needs to give
 15 here.
 16 And so, you know, so I'm not sure if -- is that
 17 a suggestion, that you keep the SIP in one place, exactly
 18 like it is today, and then --
 19 MR. PANISCOTTI: I think the only point --
 20 sorry to interrupt, but the only point I'm trying to make
 21 is that the solutions that have been proposed only
 22 complicate the problem.
 23 So again, we should return to what is the
 24 problem, so that we can actually generate an appropriate
 25 solution. What we're trying to do right now is optimize

1 existing solutions that were built to problems from 15
 2 years ago. So we should walk away from, oh, you know,
 3 let's just build another SIP because we have a data
 4 center in Secaucus or Carteret or Mahwah, actually
 5 rethink what we need to do as an industry, and do that.
 6 I think, you know, the path we're currently on
 7 is just how do I optimize the existing system. And
 8 really, that optimization problem, at least in the
 9 proposals that have been put forth, create further
 10 complexity.
 11 MR. REDFEARN: Isaac?
 12 MR. CHANG: I actually really like the question
 13 that Dominick raised, which is we need to ask what
 14 problem -- essentially, what problem we're trying to
 15 solve for. And I would actually posit that someone from
 16 our perspective as an institutional investor, as a client
 17 of firms like Morgan Stanley and Paul and a participant
 18 in the marketplace, whether it's SIP or not -- and let's
 19 hold that aside, but maybe let's just talk about core
 20 data more broadly -- and I don't know that -- I'm not a
 21 lawyer, and I'll admit I started out in the market as a
 22 simple bond trader, so much of what I've learned about
 23 equities has actually come from a number of the folks
 24 sitting on the dais with me over time.
 25 But for me to be able to look my investors in

1 the eye and say I did a good job for them, I need more
 2 than the SIP. I need more than just top-of-book at a
 3 given point in time, at a given location. And I think
 4 Professor Bartlett brought it out to begin with, you
 5 know. For whatever historical reasons, that's just not
 6 the world we live in today, and the one we live in is
 7 pretty complicated.
 8 Now, if we're saying that core data shouldn't
 9 satisfy that, then we can have a SIP that is simpler,
 10 that does something else. But I think that's a
 11 fundamental underlying question that we need to answer.
 12 And, you know, our -- certainly our preference and our
 13 argument should be that core data should be as broadly
 14 applicable as possible.
 15 MR. REDFEARN: I mean the -- I guess a question
 16 is -- and tell me if you heard this, but it seems like
 17 it has been suggested that a majority of the volume in
 18 the market has said that they feel it is necessary to buy
 19 proprietary data with better connectivity, right? And
 20 whether that's X number of firms or X number not, it --
 21 did -- is that -- did we hear that?
 22 Because if that's what we're hearing, and if
 23 this is not serving -- because then you get to another
 24 challenge which is then you have to buy this. And then,
 25 if you have to buy that, then that raises another whole

1 set of questions that we have to explore, in terms of,
 2 okay, people -- it's mandatory to buy all of these things
 3 to participate in the marketplace in a core way, then
 4 that uncovers another set of issues that are equally
 5 challenging.
 6 MR. BLAUGRUND: I don't know that I would
 7 typify what we've heard that way, but nor would I
 8 describe it the way Dom has, either.
 9 I think what we're hearing is that -- at least
 10 what I choose to hear -- is that we would like to see the
 11 SIP improve such that it becomes a more viable substitute
 12 for a broader set of industry requirements. You know,
 13 and change the supply side, at least, of the economics of
 14 market data.
 15 And you know, whether it's distributed SIP or,
 16 you know, competing consolidators, or the rhyming
 17 alternative --
 18 (Laughter.)
 19 MR. BLAUGRUND: You know, all of those, I
 20 think, are trying to introduce --
 21 MR. NUNES: Isaac said you were reasonable.
 22 (Laughter.)
 23 MR. REDFEARN: It does sound good.
 24 MR. BLAUGRUND: All those are trying to shift
 25 the economics, and I think that's one of the important

1 goals. The second is the perception. And I think it's
2 really important for investor confidence to be confident
3 that what you see is the right price.

4 MR. REDFEARN: Right.

5 Professor Bartlett?

6 MR. BARTLETT: So first, I guess I feel
7 obligated -- so, as I said, I wrote a paper finding that
8 the markets weren't rigged. I just want to say there was
9 only one particular narrow question I was asking with
10 respect to that. So there's plenty of ways in which the
11 markets are problematic. I just would like to
12 acknowledge that.

13 So -- and I think it's worth, you know,
14 clarifying that, you know, right now there is a valid
15 question about what is the function of the SIP. And so,
16 when you look at how -- you know, the exchanges have
17 helpfully provided all disclosures in terms of how they
18 price and route orders. And you look at almost all the
19 exchanges, they all route and price primarily off of
20 direct feeds. And so, if you think about just that fact,
21 it's like, well, why aren't they using the SIP? I
22 thought that's what the SIP was for.

23 But there's no requirement, you know, that says
24 you have to price and route trades based on the SIP. So
25 there's widespread acknowledgment, as everyone has

1 So you know, for example, as a client of Paul
2 and other broker-dealers, we rely on their smart order
3 routers to access the marketplace. And we need to ask
4 the question why did you make the decision you did. And
5 top-of-book price is one thing, but there are many other
6 implications, as well. Frankly, you know, I mean, people
7 have sort of said, you know, depth of book is one thing,
8 but it even goes beyond that, right?

9 I mean you want to -- there -- you know, micro-
10 structure research has shown, like, order information
11 beyond just aggregated depths of -- has -- can have
12 meaningful value. Correlating markets can have
13 meaningful value. All of those things come into that
14 interplay. And when we sit down with our brokers and
15 talk to them about this, it goes far beyond just what is
16 even the information content provided, you know, at the
17 top of book and last trade.

18 MR. REDFEARN: So let me just state what I have
19 heard before, Professor Bartlett, about the sort of CMDA
20 proposal was the idea that there might not be a single
21 NBBO, but there might be a gold standard in Secaucus, and
22 a gold standard in Mahwah, and a gold standard in
23 Carteret, and somewhere else, so that while Secaucus
24 might not be the same as Mahwah, Secaucus might be -- in
25 that particular ecosystem, you might actually be able to

1 acknowledged that you have to buy direct feeds if you
2 want to actually give best execution and route
3 appropriately and avoid trade-throughs. So if you look
4 at the market in that regard, it seems like people are
5 trying really hard to get to the best price.

6 But Dominick raises a totally valid point,
7 which is that there is no best price. There's lots of
8 best prices. And that's the problem that's going to get
9 more and more pronounced, which leads me back to sort of
10 my original point, which is that when I think about the
11 SIP I think about maybe what the SIP should be focused on
12 is helping to make sure that people can demonstrate that
13 they are working as hard as they can.

14 And as Isaac was saying, you know, you're
15 working very hard to get the best possible price. But
16 yet uncertainty remains, suspicion remains. And so, can
17 -- is it possible that, as part of core data, maybe what,
18 you know, you have to do is just disclose this is the
19 price I observed when I executed the trade, and then just
20 let market forces then evaluate who exactly -- who is
21 actually performing -- go ahead.

22 MR. CHANG: Oh, sorry, I didn't mean to cut you
23 off. But I would just say in reality the problem is
24 actually a lot more complex than what the price was or
25 top of book was at any point in time.

1 create what there ultimately serves as, effectively, sort
2 of the gold standard for that market, which will
3 inevitably -- because of, you know, the space-time
4 continuum -- will be different than what you have in
5 Mahwah.

6 MR. BARTLETT: And my concern with that model
7 would be imagine you're in a -- you basically, then, have
8 access to say, you know, five different prices that may
9 be prevailing at that nanosecond in time, which means
10 that you have a choice about which price you fill at,
11 which then leads to uncertainty about whether or not
12 you're actually using the fill that serves your
13 customer's interests the best, or the interest that
14 serves your own interests.

15 And again, part of the reason I think we're in
16 this position of having suspicion without sort of more
17 transparency is that these are all for-profit entities.
18 And so it's perfectly rational -- maybe even obligated on
19 the part, you know, to maximize your bottom line at the
20 expense of others, if it's permissible. So if there is
21 discretion in choosing the NBBO, then you're going to
22 continue to have this uncertainty, and we'll have more of
23 these roundtables about what we can do, and the like.

24 MR. DONOHUE: Could I jump in for a second?
25 Are you suggesting that trade reporting be altered to

1 include the NBBO that the trader traded at?

2 MR. BARTLETT: Yes, the price that they
3 observed in the marketplace at the time.

4 And I fully acknowledge Isaac's point, I
5 totally do. But we already have this idea that we should
6 be able to benchmark trade execution off of some price,
7 right? And the problem is that that system is just
8 horribly outdated and antiquated and, frankly, useless.
9 So right now we have no way to evaluate how a trade is
10 executed.

11 And as a researcher, I'll just tell you, when
12 I'm trying to evaluate trade pricing, I have to use an
13 algorithm that basically says, well, this is the midpoint
14 at the time, and so I'm going to -- I guess this was a
15 buy order, I guess this was a sell order. We just don't
16 have the granularity at the data to figure out what was
17 actually happening in the marketplace at the time the
18 trade occurred.

19 So I just feel it could improve a lot more of
20 the information that happened when the trade --

21 MR. REDFEARN: It's interesting. Yesterday
22 Simon Emrich from Norges Bank investment management said
23 that they actually need to buy prop data now at the data
24 center where the people are trading, so that they can do
25 accurate post-trade analysis. So he sort of said they

1 can't use the SIP for their post-trade analysis, because
2 they actually want to see the quotes in the location that
3 they're doing it. So it was just an interesting sort of
4 evolution of that.

5 I do want to -- I do want very quickly --
6 sorry, we -- I sort of deviated from some of what we
7 initially had here to allow this discussion to run a
8 little bit. But one of the things that we did want to do
9 was sort of pick off some specific topics that have
10 already come up in the -- you know, what needs to be
11 included in core data, what needs to be -- you know, so
12 when we think about this model, right, we -- just a
13 couple quick things.

14 So, yesterday one of the things that was
15 suggested in terms of sort of core -- we think of within
16 the scope of, you know -- within the scope of the
17 whatever model it is, right, whether it's CMDA, one
18 speed/one feed, you know, do we need to include -- so
19 yesterday it seemed like we had some support for, in some
20 cases, auctions, odd lots, you know, some said depth.
21 That wasn't universal.

22 And I just wanted to ask the panelists very
23 closely, when we think about core data infrastructure,
24 you know, what would you list as what should be included
25 in that? Is it auctions and balance information? Does

1 it include odd lots? Does it include depth? What do you
2 think should be in the scope of that?

3 And maybe I'll start back at your end, Jarrod.
4 Do you have a thought on that?

5 MR. YUSTER: Again, it goes back to who the
6 executors are. And you know, broker-dealers should have
7 all the information that's available, whether it's
8 auction information, imbalance information -- full depth,
9 as well.

10 I mean -- and I'm going to go back a little bit
11 towards looking at, again, Reg NMS. You know, we talked
12 about -- someone mentioned about having data for
13 measuring ISOs that are market sweep orders with Reg NMS
14 do require capturing the NBBO alongside of it. And you
15 have to show within a second that you've actually used
16 the NBBO. That's quite a long time, versus, you know,
17 the nanoseconds that we're talking towards.

18 So I went a little bit off topic, but I wanted
19 to bring that --

20 MR. REDFEARN: Again, let's not go down the ISO
21 path just yet.

22 MR. YUSTER: Okay.

23 (Laughter.)

24 MR. YUSTER: So -- but anyway --

25 MR. REDFEARN: I think that it has been looked

1 at in periods of time significantly smaller than a
2 second, though. But anyway --

3 MR. YUSTER: So we typically see clients who
4 are not broker-dealers will take the SIP plus at least
5 one, if not more, direct feeds currently. The broker-
6 dealers who are -- need to have best execution are taking
7 all the feeds, plus the SIP.

8 MR. REDFEARN: Got it.
9 Dominick?

10 MR. PANISCOTTI: I think there were some
11 proposals made yesterday -- and as a technologist, I
12 don't think I'll speak to which ones in particular that
13 we should add or not add, but I will say one thing.

14 I think that, you know -- and I think it was
15 brought up yesterday -- that there are always new
16 innovations with respect to market data that exchanges
17 and the like are going to create. So I think the
18 conversation just will continue to come back to, oh, I
19 need that new innovation in order to run my business.
20 And so, whatever you -- we decide as an industry to set
21 as core data today is likely to change 10 minutes after
22 you set it.

23 And so I think, really, we're in a position
24 right now where individuals can get access to this data,
25 can get access to these innovations. It's highly

1 competitive. Nobody is having any problems actually
 2 figuring out what the price of a security is to trade it.
 3 And so I think maybe it's time to think slightly
 4 different about whether or not it all needs to go into
 5 one feed.
 6 Maybe it shouldn't go into one feed. Maybe
 7 certain will be deprecated -- certain items will be
 8 deprecated over time, and some others will actually come
 9 into existence over time. And if we try to get ourselves
 10 into this how do I solve this problem with one kind of,
 11 you know, socialistic, if you will, feed, then I think
 12 we're going to not serve the marketplace effectively over
 13 time.
 14 MR. REDFEARN: Paul?
 15 MR. O'DONNELL: A few thoughts. One, I think
 16 the odd lot one has been done to death. We all know
 17 that, for high-price stocks, there is a market inside the
 18 NBBO. We need to deal with that. I mean I like
 19 Michael's solution yesterday of just putting all the
 20 stocks -- changing lot size works, putting odd lots on
 21 the SIP works. They're all viable solutions. But it's -
 22 - seems to be agreement on that.
 23 Secondly --
 24 MR. REDFEARN: Although that's kind of hard to
 25 make happen, right? Getting all the stocks to split?

1 MR. O'DONNELL: That's probably harder to make
 2 happen than changing the lot size. I don't know --
 3 MR. REDFEARN: I don't know if that's an --
 4 MR. O'DONNELL: I don't --
 5 MR. REDFEARN: I don't know if that's a policy
 6 option that we have. So I'm not sure --
 7 MR. BLAUGRUND: I think listed companies make
 8 that selection --
 9 MR. REDFEARN: I think they do make that
 10 decision.
 11 MR. O'DONNELL: Lot size, as well?
 12 MR. REDFEARN: Well, no. I mean I think -- so
 13 the decision about splitting a stock is not a policy
 14 decision, an exchange decision, or a broker decision.
 15 That's an issuer decision on making that. And there
 16 seems -- it seems to be popular to keep prices higher.
 17 So, notwithstanding that, what is your thought
 18 on odd lots?
 19 MR. O'DONNELL: Well, I think they should be in
 20 the SIP, as is. But, you know, a very simple first step
 21 -- and I actually don't know who has the authority to do
 22 this, whether it's the listing market -- or just have a
 23 rule that says -- I think you suggested it yesterday. If
 24 your stock is over \$100 have a lot size of 10, and if
 25 it's over \$1,000 have a lot size of 1. That feels like

1 an incremental step that's not even hard to accomplish.
 2 But I don't know who gets to do that. Is it
 3 the listing market, Michael?
 4 MR. BLAUGRUND: I think we have a role in that.
 5 MR. O'DONNELL: All right, there you go.
 6 MR. BLAUGRUND: Well, you know, in
 7 collaboration and communication with the various
 8 participants and investors, but --
 9 MR. O'DONNELL: Sorry, I lost my train of
 10 thought.
 11 Secondly, auction imbalance information is a
 12 good one. Auctions are becoming more important in the
 13 market. We have -- there's a lot of studies around there
 14 around how much volume is shifting into the auction.
 15 Where -- the number of Mr. and Mrs. Main Street
 16 directly that are going to be trading the auction less on
 17 an imbalance is probably small, but the number of
 18 institutions who care about that information as they're
 19 trading into -- I think is high. So that -- I would
 20 consider that core data.
 21 And then lastly, let's talk about depth. And
 22 there's a few angles of depth. You could talk about how
 23 many levels of depth. We don't really even have one
 24 level of depth now. I don't know if people realize, but
 25 the size that's available on the NBBO is not the

1 aggregate amount available at all of the markets. It's
 2 one of the markets, and we're having a little debate
 3 before. None of us could even put our finger on the
 4 algorithm around which market it is, but it's not a
 5 particularly useful number.
 6 And I think there's an angle of that that
 7 didn't get discussed, and it's probably a rabbit hole we
 8 don't want to go too far down. But the regulatory
 9 requirement for not having excessive market impact is
 10 shifting from exchanges to brokers. We're seeing that,
 11 and that's happening slowly over years. Very difficult
 12 to know that an order you're sending to the market is not
 13 going to have excessive impact without knowing what the
 14 depth is at the inside, let alone two or three levels
 15 deep.
 16 So I think it's not a stretch to say that in
 17 order to fulfill a lot of brokerage functions, you
 18 actually need to know a little bit more about how deep
 19 the market is that you're trading in.
 20 MR. NUNES: So I think Isaac framed this
 21 question most appropriately. You know, we've basically
 22 taken the action years ago that, you know, some data is a
 23 public good, and we're going to treat it specially. And
 24 I think that, as we look at that, we should think in
 25 terms of, like, which data deserves that treatment and

1 which data doesn't.
2 So, you know, I think, certainly in the current
3 state of affairs, odd lots fits into that. As a retail
4 investor, you want to know, you know, if you're buying 1
5 or 10 shares of the high-priced stock, what the price is
6 for 10 shares, what the price is for 100 shares.

7 I don't really have a great answer on auctions.

8 That, to me, is probably a little bit more borderline.

9 I think on depth, you know, putting and trying
10 to force every market's depth into a single feed strikes
11 me as we get kind of the worst of all worlds in that. So
12 I think there is a room -- there is room for a line
13 between this data is special, it's what the public needs
14 to make decisions, and it informs the public about
15 prices, and this data is for professionals and
16 professionals, you know, can consume that data and make,
17 you know, make intelligent choices about it.

18 MR. REDFEARN: Isaac?

19 MR. CHANG: As I'm listening to everybody, I
20 think there's a lot of very sensible suggestions. I
21 guess I have to admit, though, I'm struggling with the
22 idea that either the SEC or a committee is actually in
23 the business of trying to exactly draw the line of what
24 is core and what is not. It seems like that's going to
25 be a revolving thing.

1 I'm somewhat sympathetic to what Dominick said,
2 which is the second you set it, some exchange -- maybe
3 one of -- probably one of these guys -- will come out
4 with a new feature that everyone is going to want, and
5 we're going to be sort of chasing our tail, so to speak.

6 Of course, then -- and this is certainly
7 something that probably wouldn't be very popular among
8 certain parties -- but why isn't all market data public
9 good? Why isn't everything included in core data? Why
10 exclude anything? Everything is useful.

11 I mean the distinction between professional and
12 non -- and retail, I think -- in the world today, given
13 the fact that retail and individuals, frankly -- like,
14 again, like, people think of AQR as a professional
15 investor. I'd like to think I'm a professional market
16 participant. But I'm acting as a fiduciary on behalf of
17 individuals: public and private pensioners, mutual fund
18 investors. Why should -- because they're investing money
19 with me, why should their interests be treated any
20 differently than if they were trading directly?

21 MR. REDFEARN: I guess just a couple of quick
22 thoughts, if you don't mind.

23 One is that I think Dominick did raise a very
24 good point. Simply because we have an opportunity to
25 potentially update the definition now for the first time

1 in 40 years or 50 years or whatever it is, is -- might be
2 worth doing, regardless if it changes next week. It
3 certainly brings us a little bit closer.

4 But you know -- and then to -- back to
5 Dominick's point, I guess the question that I have is he
6 raised the point about innovative data products, and
7 certainly we -- I don't think we'd want to do anything
8 that would stifle innovation, right?

9 And so -- but it may very well be that -- I
10 mean we're not talking about a number of the information
11 services products that are sort of outside of what market
12 participants need that sort of fall into that innovative
13 area. So it may be that there is some way of -- but --
14 and -- anyway, but a number of good points raised there,
15 Isaac, thank you.

16 Michael?

17 MR. BLAUGRUND: We would recommend including
18 odd lots in the core data that the SIP carries. We would
19 recommend including auction imbalance information. And
20 while I agree on some philosophical level that, you know,
21 we may never catch up with the perfect definition of what
22 is core, that strikes me as a really sensible and
23 achievable next step.

24 MR. REDFEARN: Thank you.

25 Professor Bartlett?

1 MR. BARTLETT: Yeah, I would say that, you
2 know, just in keeping with what I said earlier, it
3 depends on how we view the SIP, going forward.

4 Certainly, including odd lots in the trade
5 data, I think, has been incredibly useful over the years,
6 and including it in the quote data, I think, would be
7 also helpful in sort of core data. But the -- if we view
8 sort of the SIP as increasing playing a role as trying to
9 evaluate, you know, what the market was perceived at at
10 the time a trade was executed, and then it's basically --
11 its price, its depth -- and, ideally, it would be
12 multiple levels of depth, as well.

13 MR. DONOHUE: Can I ask a question about the
14 auction imbalance information? We've got the opening and
15 closing, but we also have intraday LULD halts and
16 reopening auctions. And on August 24th that was -- you
17 know, didn't go as well as it could have.

18 If we include reopening -- or imbalance
19 information in the SIP, will it encourage more
20 participants in the reopening auctions, or is that not
21 likely the result?

22 MR. BLAUGRUND: I think it's unlikely to
23 discourage participation. And I think, if it allows for
24 eyeball users to examine dislocation and choose to
25 participate, then that would be worth the additional

1 effort.

2 If I could just respond briefly to the -- some
3 of the comments on adding depth to the core data regime,
4 I think, as Adam said, like -- right now we're talking
5 about, you know, trying to improve latencies, trying to
6 improve performance. Adding a tremendous amount of new
7 processing and data into the SIP, you know, that would be
8 a new type of challenge, technologically.

9 I think when people say they're interested in
10 expanding, you know, depth information into the SIP, what
11 they're really saying is we would like the prices of
12 depth data to come down. I don't know that anyone is
13 really eager to see the SIP take on a broader obligation,
14 in terms of processes.

15 MR. BARTLETT: Quick -- Michael, just a quick
16 question. So in your direct feeds you provide multiple
17 levels of depth. Is that -- does that meaningfully
18 affect the latency of transmitting the direct feeds, or
19 is it a cost question?

20 MR. BLAUGRUND: I think that there are
21 different ways that you could do it.

22 I mean I think what we've proposed is that the
23 SIP in its new incarnation would take order-by-order
24 feeds and would provide, you know, processing to
25 establish the BBO.

1 As Yue mentioned at the beginning, you know,
2 there is microwave connectivity between the market and
3 the data center, there is, you know -- should it be, you
4 know, a 10 gigabyte or a 20 gigabyte, you know,
5 connection.

6 I guess maybe, since this discussion has
7 evolved, perhaps the question is, you know, what -- is
8 there something there that we should be thinking about as
9 sort of core technology?

10 Or, Paul, would you argue that the competitive
11 market would solve that, and therefore people might be
12 able to buy different things, depending on what their
13 needs are?

14 How do we think about the technology stack
15 outside of the actual content of the data, vis-a-vis what
16 is sort of in -- within the scope of core data
17 infrastructure?

18 MR. O'DONNELL: I think Michael's idea of using
19 the direct feeds to feed the SIP solves a lot of that,
20 because you just pick it up at the point of the exchange,
21 and they've got a compelling reason to make that fast.
22 And then it becomes a competitive issue to distribute
23 that and aggregate that.

24 I do want to sort of allay one slight
25 misconception that's been mentioned a couple of times in

1 There are also products that do that on the
2 exchange side, produce ABBO. And there are products that
3 produce by level. It does take time.

4 MR. REDFEARN: I guess the -- it's an
5 interesting question and point, because today there are
6 private, competitive, software/technology providers who
7 are doing exactly that, right? They're doing an
8 aggregation of the top-of-book feed, and they're selling
9 that at a very different price point than the SIP, and
10 they're also aggregating depth of book. So it may very
11 well be that, to the extent there was a competing model,
12 there -- you know, the question would be is there some
13 way of bringing those participants within the scope of
14 what we're thinking about.

15 But I hear what you're saying. I mean when we
16 think about the SIP today, and you think about bringing
17 in depth of book, it does seem like it could be a big
18 challenge.

19 I have one more question. And we are going to
20 try to land pretty close to 10:30 here. We're almost out
21 of time. So, so far I've really appreciated the
22 discussion. The -- in terms of the technology, moving
23 away from the content side but to the connectivity and
24 the sort of other infrastructure questions, right, we had
25 another list of questions.

1 the last couple of days about wireless and reliability
2 and cost, et cetera.

3 So maybe not everyone realizes it, but there's
4 already a couple of people shipping all of this wireless
5 data for most of the exchanges around these three data
6 centers anyway. It's commercially available. It's not
7 that expensive. It is a little less reliable when it
8 rains. But the -- arbitrating that feed versus a fiber
9 feed is a soft technology problem. I think we do it, I'm
10 sure Adam does it. This is not a hard problem.

11 So I don't want people to go away with the
12 notion, oh, we can't use wireless because it's not
13 reliable. There are ways -- you know, it's an
14 engineering problem to fix that, and it's essentially a
15 solved engineering problem. So let's, you know, remember
16 that as we're thinking about these technologies.

17 But it does a little bit go to Michael's point
18 we need to make sure that whatever we end up with is
19 reliable. But I'm more confident in the competitive
20 market producing a reliable solution than we have today.

21 MR. NUNES: Yeah, I guess I would add -- you
22 know, I'd echo what Paul said. I think that there -- you
23 know, during the transition point where early adapters
24 are using things that I think is where, you know, people
25 tend to be most agitated about them. But eventually --

1 and pretty quickly -- the competitive market solves that
 2 problem and we get commercially-available solutions.
 3 I think the second part that I would say is if
 4 we start including fiber and microwaves between data
 5 centers as being core to what we do, then we should just
 6 move everything into one data center. Because at that
 7 point you've effectively kind of put under government
 8 control or supervision those connections. And we could
 9 do it much more reliably by just having it be equal fiber
 10 lengths than kind of arguing which microwaves, you know,
 11 are okay, and -- kind of mixed standard son that.
 12 MR: PANISCOTTI: I think the good news is that
 13 the technology stack is innovating at a rate that you'd
 14 expect it to innovate at. And due to a lot of the
 15 innovative companies that list on NASDAQ, you know,
 16 certainly we love pulling in all of their technology into
 17 everything we do. Every day we're basically adding new
 18 technology to the stack. And I think you'll find that
 19 true in pretty much all the firms on Wall Street who are
 20 saying that they need to have data instantaneously. And
 21 so they will bring to bear what they need.
 22 Again, today we'll talk about -- we may talk
 23 about wireless today, and it's 2018. If somebody cracks
 24 some quantum mechanics problem, we'll be talking about
 25 latencies that are truly instantaneous, or somebody

1 figures out how to move neutrinos through the earth, and
 2 moves some information. Like, we should stop concerning
 3 ourselves, I think, generally speaking, as an industry,
 4 with what today's technology is and what's being used,
 5 and simply allow industry to competitively make use of
 6 what's available to them to actually get the best result
 7 that they need, or the best result for them.
 8 MR. BLAUGRUND: I don't want to ever be on a
 9 panel again without Dom.
 10 (Laughter.)
 11 MR. REDFEARN: I'd like to address neutrinos.
 12 (Laughter.)
 13 MR. O'DONNELL: I think Adam's already solved
 14 that.
 15 MR. REDFEARN: Are there any quantum physicists
 16 who can -- no? That being said, so we have --
 17 MR: PANISCOTTI: Well, there are certainly
 18 quantum physicists at a lot of these firms, I could tell
 19 you that.
 20 MR. REDFEARN: I'm sure there are. Okay. We
 21 have about one minute left.
 22 Michael?
 23 MR. BLAUGRUND: I would just briefly add that I
 24 think there is a range of different connectivity options
 25 that are available today. We've discussed it sort of ad

1 nauseam yesterday.
 2 I think that the SIPs currently do produce
 3 guidance, in terms of what the direct connectivity
 4 recommendation is, in terms of how much bandwidth you
 5 should expect if you're a direct subscriber. It seems
 6 sensible to me.
 7 MR. REDFEARN: Very good. Well, we have pretty
 8 much exhausted our time. So before we say thank you to
 9 everybody, I wanted to just quickly state to the next
 10 panel if you could try to meet over in the green room,
 11 which is right where John Ramsay is going right now --
 12 (Laughter.)
 13 MR. REDFEARN: And with that, let me thank you
 14 all very much. This has been very helpful. Appreciate
 15 it.
 16 (Applause.)
 17 (A brief recess was taken.)
 18 MR. SHILLMAN: Well, welcome back. We'll get
 19 started with the second panel of the day. And this
 20 panel, as you know, is going to be focused on potential
 21 steps that can be taken to improve the governance of the
 22 core market data infrastructure. And it's also, you
 23 know, the second letter in the TGIF acronym.
 24 So I think what I want to do, just as with the
 25 past panel, on this one, since there is a lot of history

1 on NMS plan governance -- and probably best to take that
 2 methodically, separately -- why don't we just start as in
 3 the last panel, with having each of the panelists, just
 4 in a minute or less, briefly introduce themselves.
 5 So, Kevin, why don't we start with you?
 6 MR. CRONIN: Thanks. Thanks for inviting me
 7 here to this important proceeding here today. I'm Kevin
 8 Cronin. I'm global head of equity -- or global head of
 9 all trading for Invesco. Invesco is a global diversified
 10 asset manager with right at \$1 trillion under management.
 11 I look forward to the conversation.
 12 MR. DE JESUS: So thank you for the opportunity
 13 to come and talk about this exciting topic. My name is
 14 Hubert de Jesus, and I am global head of market structure
 15 and electronic trading for Blackrock. In my capacity I
 16 also serve as an advisor to three different NMS plans,
 17 including the ones being discussed today. So hopefully I
 18 have some experience with advisory committees and NMS
 19 plans.
 20 MR. HARKINS: Good morning. Bryan Harkins. I
 21 co-run the markets division at Cboe Global Markets. I
 22 oversee our equities options, futures, and foreign
 23 exchange business strategy. I can say that our foreign
 24 exchange market definitely does not have a SIP. So no
 25 perspectives there.

1 MS. KASPAROV: Good morning. I'm Emily
2 Kasparov. Thank you for hosting this market roundtable.
3 I'm currently the chair of the SIP operating committees,
4 and have been since 2015, when I was initially elected.
5 I'm also currently associate general counsel of the
6 Chicago Stock Exchange, which is a division now of ICE,
7 as it was recently acquired. Thank you. It's good to be
8 here.

9 MR. KETCHUM: Good morning. I'm Rick Ketchum.
10 Dave, as you say, with history, by definition, since I
11 start off with former FINRA CEO, I do history well.

12 But I'm very pleased to be here. I would note
13 that I continue to have a variety of affiliations, from
14 the standpoint of being a board member and doing some
15 advisory work. But my thoughts today are strictly my
16 own.

17 MR. MASONE: Good morning. Mike Masone from
18 Citi. Fourteen years with Citi, the first twelve were in
19 Citi's general counsel office. Rick was the head of that
20 for a while. The last two in the equity business, which
21 is the business I covered during the duration of my
22 career there. In addition, I also have the privilege of
23 serving as chair of the SIFMA equity markets and trading
24 committee, which I've done for the past two years. Been
25 involved with SIFMA for about a decade, and serving as

1 chair or vice chair for the previous four years.

2 MR. RAMSAY: Hi. My name is John Ramsay. I'm
3 currently chief market policy officer at IEX. Before
4 that it's all a blur. There's a lot of things I've done,
5 but I was privileged to have been in this organization,
6 as well. And as people are probably aware, IEX has a
7 different point of view about a lot of market structure
8 topics, but that certainly includes the topics that we're
9 going to talk about today. So we hope to provide a
10 different kind of exchange perspective on these
11 questions. Thanks.

12 MR. SHILLMAN: Okay. Well, great. So, just to
13 kind of set us up, I thought I would begin by briefly
14 describing the origins of the governance structure for
15 core market data, which, as has been previously
16 discussed, occurs today through national market system
17 plans jointly managed by the SROs, and how issues began
18 to be identified with that structure as the markets
19 evolved.

20 Following the Securities Act amendment of 1975,
21 which directed the Commission to facilitate a national
22 market system, the Commission approved three NMS plans
23 filed by the SROs to manage the processing and
24 distribution of core market data. These NMS plans were
25 governed by an operating committee with one

1 representative from each SRO, and each SRO having one
2 vote. A unanimous vote was required for plan amendments
3 and other significant actions.

4 In the late 1990s and early 2000s, as the
5 markets evolved to become more electronic and competitive
6 and exchanges began to de-mutualize, some expressed
7 concerns with the governance of NMS plans, suggesting
8 that the management of core data be expanded to include
9 other constituencies, and that market data governance be
10 made more efficient and transparent.

11 In 1999, the Commission issued a concept
12 release on market data, which specifically requested
13 comment on whether non-SRO market participants should be
14 voting members of the operating committee or otherwise
15 participate in NMS plan governance. Shortly thereafter,
16 the Commission established advisory committee and market
17 information that, in 2001, recommended the participation
18 in NMS plan governance be broadened to include other
19 constituencies, such as broker-dealers, vendors, and
20 investors through the creation of non-voting advisory
21 committees.

22 And in 2005 the Commission adopted Regulation
23 NMS, which, among other things, amended the NMS plans to
24 establish non-voting advisory committees with at least
25 one representative from a retail broker, an institutional

1 broker, an ATS vendor, and an investor. It also allowed
2 for individual exchanges to appoint nominees so that that
3 advisory committee has now expanded to include, you know,
4 buy side and others.

5 The NMS plan advisory committees have the right
6 to submit their views on plan actions to the operating
7 committee, and to participate in all operating committee
8 meetings, and receive any information distributed in
9 connection with those meetings. However, the advisory
10 committees are permitted to be excluded from executive
11 sessions which are held when a majority of the operating
12 committee determines a matter requires confidential
13 treatment.

14 Since the adoption of Regulation NMS, the
15 markets have continued to evolve, with advances in
16 technology and communications fueling the development of
17 low-latency trading strategies, the emergence of the wide
18 range of proprietary exchange market data products and
19 access services discussed earlier, and the formation of
20 several large exchange groups of multiple SROs.

21 And the debate around NMS planned governance
22 has continued with some expressing concerns about the
23 effectiveness of the advisory committees, suggesting that
24 their role be strengthened through formal voting rights
25 or other means, and that the use of executive sessions be

1 further restricted.

2 Questions continue to be raised about the

3 efficiency of the plan's unanimous approval requirements,

4 and the appropriateness of the one-vote-per-SRO

5 governance structure. New issues also have been

6 identified, including whether potential conflicts of

7 interest faced by operating committee and advisory

8 committee members have been appropriately addressed, and

9 whether NMS plan confidentiality policies are interfering

10 with the ability of advisory committee members to

11 effectively communicate with their constituencies.

12 That's kind of the broad history of where we've

13 gotten to relatively recently. I think within the last

14 year or two the Commission's equity market structure

15 advisory committee, the MSAC, had a subcommittee which

16 looked at some of the issues. Rick happened to be the

17 chairman of that subcommittee.

18 And to kind of bring us into focusing on what

19 are the current issues of the day, maybe, Rick, you could

20 summarize some of the recommendations of your

21 subcommittee.

22 MR. KETCHUM: Sure, I'll try to give a brief

23 summary of them, recognizing that these were made two

24 years ago and there has been shifts and developments from

25 the standpoint of the operation of many of the plans

1 since then.

2 Fundamentally, the recommendations focused on

3 two things. One was generally focusing on the governance

4 structure in a world in which there had been substantial

5 consolidation of SROs participating in the plans. And

6 secondly, focusing -- recognizing the important

7 stakeholder role of the plan advisory committees,

8 focusing on ways to expand, formalize, and make more

9 uniform the operations there. And that basically came

10 down to a few recommendations.

11 First, to clarify the process for selecting

12 advisory committee representatives, particularly -- not

13 only to make it more transparent, but particularly to

14 provide that once an advisory committee was set up, that

15 the advisory committee should nominate its own

16 replacement candidates as time went on.

17 Secondly, to expand and formalize the role of

18 the advisory committee, giving it a clear right to a

19 formal vote before any matter in which the operating

20 committee votes.

21 And in the event that the matter is subject to

22 a rule filing, that the -- providing that the operating

23 committee should also summarize and explain the results

24 of the advisory committee vote and rationale related to

25 it.

1 And finally, that the advisory committee should

2 be permitted to initiate its own recommendations to the

3 operating committee, and the operating committee would

4 have the obligation to formally respond to them.

5 Third, as you mentioned, David, a proposal to

6 significantly narrow the use of executive sessions by NMS

7 plans to -- specifically to only matters that present a

8 clear conflict for advisory committee members, such as

9 matters relating to regulatory compliance or matters

10 subject to potential or ongoing litigation between the

11 advisory committees and plan participants.

12 And also, while still acknowledging the value

13 of working groups, recognizing the risks from a

14 transparency standpoint of those, and ensure that there

15 was both greater transparency and that regular updates --

16 and that all action of the working groups had to be

17 formally handled by the operating committee at the end.

18 Fourth, that the planned limits substantially

19 the plan provisions requiring a unanimous vote to -- both

20 in some issues to two-thirds super-majority and some a

21 simple majority vote for administrative or technical

22 matters.

23 And, perhaps significant with respect to that,

24 to make that meaningful, revisit the allocation of voting

25 rights among SROs, given the consolidation and the number

1 of exchange registrations that many of the SROs had,

2 providing generally a rule of one vote per exchange

3 registration -- moving from a one vote per exchange

4 registration model to generally one vote per exchange

5 family, but with provisions that exchanges with

6 substantial market share would receive a second vote.

7 And I think that's probably a good place to

8 stop.

9 I will, as I said, note that a number of the

10 plans have responded to these recommendations informally,

11 and I've seen a number of changes to how that's worked

12 that I think are encouraging. Thank you.

13 MR. SHILLMAN: Okay, great. Thanks, Rick.

14 So today we have, I think, a healthy tension

15 between the plan advisory committees and the plan

16 operating committee on governance issues. And it might

17 be helpful to hear from Hubert, as member of the advisory

18 committee, and then Emily as chair of the operating

19 committee, just to talk about what issues -- what are --

20 if you think there's any progress recently in addressing

21 improving governance, and what issues do you think remain

22 to be addressed.

23 MR. DE JESUS: So, as a disclaimer, while I'm

24 representing some of the advisory committee issues, I do

25 want to note that these views are strictly my own.

1 I think it's really important to start by
2 highlighting the importance of governance, overall. On
3 the last panel we heard a lot about various solutions
4 that we might see, in terms of technology, to solve
5 issues around the SIP. But at the same time, these are
6 very much point-in-time solutions addressing today's
7 technology, addressing today's business models and
8 conflicts of interest. Without appropriate governance, I
9 think we're going to be here 5 or 10 years from now
10 having this very same discussion.

11 To start, I'd like to also acknowledge that
12 there has been a lot of -- or some progress that's been
13 made. In my tenure as an NMS plan advisor, the advisors
14 and the participants have worked together to produce
15 transparency around some of the market data revenue
16 allocation, and we've also started to work on policies
17 around such things such as limiting the use of executive
18 sessions.

19 These are all positive steps towards
20 transparency and being more inclusive in the governance
21 of our NMS plans. But at the same time there is a lot of
22 room for improvement, and there are some very concrete
23 steps that we should take.

24 I think the underlying thing about NMS plan
25 governance is that there are inherent conflicts of

1 that in 2015 the CEO of BATS, or the then-CEO of BATS was
2 also quoted as saying that "having a broker and a buy-
3 side representative sitting at the table voting on plan
4 amendments, I think that's the appropriate structure."
5 So this is something that we have a lot of consensus on,
6 and I feel we should definitely act upon as the next
7 step.

8 In SIP operating committee meetings we have
9 also been discussing adoption of a conflict of interest
10 policy. The proposed policy, however, only addresses the
11 conflicts which may arise from potential SIP business
12 partners or vendors. So if any one of us has an economic
13 stake or a potential ownership interest in an advisor
14 that the SIP would contract with, that's where those
15 policies are being focused on.

16 While these are valid concerns, the policy does
17 nothing to address the core conflict between SIP and
18 proprietary data feed interests. At a minimum,
19 procedures to manage these conflicts among
20 representatives are warranted, but actually go one step
21 further. I'd actually ask that we should consider
22 whether the provision of direct data feed alongside a
23 public data infrastructure is consistent with promoting
24 fair and orderly markets.

25 These private market data products did not

1 interest which need to be managed. Exchanges, as self-
2 regulatory organizations, have a disproportionate
3 influence in both the design and the operation of our NMS
4 plans. This authority originates from the 1975
5 amendments, and the whole concept of cooperative
6 regulation, where the government and industry work
7 together to regulate the various issues.

8 But exchanges don't represent the securities
9 industry, as a whole. And that's a very important thing
10 to understand. And, as for-profit entities, they make
11 these potential conflicts between their economic interest
12 in the management of their regulatory responsibilities.

13 NMS plans would be much better informed and
14 more impartially operated if governance was brought in to
15 include a diverse range of market participants, such as
16 broker-dealers, investors, issuers, vendors. Equitable
17 voting representation should be given to such advisors so
18 that they're adequately empowered to make decisions about
19 the NMS plans.

20 At a high level, I think this is a
21 recommendation that various groups have endorsed. We've
22 seen ICI and SIFMA put out recommendations to this
23 effect. U.S. Department of Treasury issued a notice of
24 this effect, as well. And in a recent white paper NASDAQ
25 also agreed that advisors should get a vote. And I note

1 exist when the market data plans were originally
2 established. And today they directly compete with the
3 SIP data feed. Public concerns about speed disparities
4 and latencies due to SIP infrastructure and the public
5 confidence in the two-tiered playing field for market
6 data all arise from the fact that these two feeds co-
7 exist with each other.

8 Now, this is not a simple problem, as prop
9 feeds carry information such as depth of book and auction
10 imbalance feeds, as we've heard. But what we heard
11 yesterday, as well, was that these feeds are so important
12 to the operation of -- and investment operations that we
13 should ask ourselves the critical question of why these
14 aren't part of our public market data infrastructure.

15 Should we eliminate proprietary data feeds, and
16 instead offer a core data product over the SIP and a
17 depth of book data product over the SIP? And would that
18 potentially eliminate conflicts of interest and bring the
19 direct data feed models into the SIP governance, or into
20 NMS planning governance? That's a question I think we
21 should definitely be asking ourselves, or we would be
22 missing an opportunity at this critical discussion.

23 Lastly, I would like to highlight two other
24 concerns that have been brought by the advisory
25 committees. One is the -- and they both affect the

1 efficacy of advisors in essentially providing advice.
2 First is the use of executive sessions, and advisors are
3 concerned that these sessions are not limited to those
4 issues requiring confidential treatment and, as a
5 principle, would, you know, prevent us from participating
6 in discussions and in sessions that really have to do
7 with valid and regular SIP activity.

8 And the other issue is the scope of
9 confidentiality agreements. At current there are no
10 confidentiality policies in place, but the discussions
11 around the confidentiality agreements seem to potentially
12 limit an advisor's ability to both confer with their
13 constituencies -- so buy sides talking to other buy sides
14 -- or potentially prevent them from talking to
15 representatives within their own firms.

16 So those are potential concerns there. And I
17 think that's probably a good place to stop.

18 MR. SHILLMAN: Great. Thanks, Hubert.
19 Emily?

20 MS. KASPAROV: Thank you. I am very proud of
21 the accomplishments which have occurred during my time as
22 chair of the SIPs. The SIPs, as you've heard, were
23 created by a limited delegation of authority by the SEC
24 to the National Securities Exchanges and FINRA to
25 consolidate and disseminate specified market data

1 pursuant to a Commission-approved plan.

2 What the plan requires, in effect, is that plan
3 participants, who operate competing markets, come
4 together to operate and maintain the market data
5 infrastructure under a framework chosen by you, the SEC.
6

7 It is important to remember that this structure
8 brings considerable expertise to this critical process
9 that the SEC would otherwise be forced to commit to this
10 effort. This expertise among the group of, in my
11 opinion, some of the brightest, most knowledgeable
12 individuals in the industry, has led to, among other
13 things, an accomplishment of 100 percent up-time of the
14 processors of market data on both the UTP and CTA sides
15 this year.

16 My goal upon becoming chair four years ago was
17 to look for ways to improve operating committee processes
18 so that competitors could effectively and efficiently
19 perform their duties under a plan and, where possible, to
20 improve transparency and public confidence around these
21 processes.

22 During the last few years the operating
23 committee has made significant enhancements to
24 governance. Among the important steps we have taken are
25 decreasing the length of the executive session, as has

1 been mentioned previously. We've moved the vast majority
2 of agenda items from the executive session to the general
3 session, where advisors can participate and provide
4 feedback. For example, the last executive session, which
5 took place in September, lasted only 10 minutes.

6 The only exception relates to matters requiring
7 confidentiality that would not be appropriate for broader
8 disclosure.

9 And Hubert, you mentioned that you are
10 concerned that those executive sessions are not limited
11 to confidential matters. And I would submit that we do
12 vote on the matters that do come into executive session.

13 We justify that vote with a discussion about why they
14 might require confidentiality. And even at the last
15 September meeting, I don't think you all were able to
16 attend, due to another conflict. But at the end of the
17 general session we discuss what would be addressed in
18 executive session during the general session and held our
19 vote there.

20 In response to industry requests in 2016 for
21 additional transparency of meetings, we summarized our
22 general session meetings on the plan websites for public
23 to view for the first time in the existence of the plans
24 for the last 40 years. Along with the general session
25 summaries we've provided increased transparency of even

1 executive sessions by publishing the agendas of the
2 executive session meetings to the public. These are on
3 the plan websites.

4 The participants recognize the increasing value
5 of industry input, and have taken unprecedented steps to
6 increase advisor representation. This was accomplished
7 beginning in 2015 by selecting additional advisors to
8 serve on the committee above and beyond the plan
9 prescribed advisor representatives. Initially, the
10 committee grew from five to seven members. Now, with the
11 addition of more retail representatives, there are 11
12 members on the advisory committee.

13 In accordance with the plans, all operating
14 committee actions are reviewed by the advisors prior to
15 those actions being taken.

16 One of the topics our advisors have championed
17 was increased transparency in the inner workings of the
18 revenue allocation formula. In response, and with the
19 assistance and input from our advisors, we drafted and
20 published a plain-language version of the revenue
21 allocation formula, which is publicly available on the
22 plan websites.

23 We have heard from our advisors that the SIPs
24 were viewed as inaccessible. So we hired a
25 communications firm to better communicate with the

1 industry and enhance public confidence. In the same
2 vein, we also began to publish revenues for the first
3 time ever.

4 As you can see, my goal of providing enhanced
5 transparency is clearly making significant progress, but
6 we're not there yet. With all this progress, I
7 personally believe that more can be done. For example,
8 one of the participants, NYSE and my current employer,
9 has now even -- suggesting webcasting the general
10 sessions to provide live transparency of the inner
11 workings of the operating committee. I fully support
12 this initiative.

13 To foster better relationships with the
14 advisors and communication between the operating
15 committee members, we created new subcommittee
16 structures. The result has been a surprisingly
17 cooperative group of the best and brightest individuals
18 with expertise in each segment of the industry coming
19 together to discuss and resolve issues. An example of
20 that is the distributed SIP subcommittee, which you just
21 heard about in panel four.

22 Technical improvements have been numerous, and
23 they've been discussed throughout this time. So I will
24 not go into those.

25 But finally, we have held our first-ever, in-

1 I'd like to start with the one that kind of relates to
2 some of the discussions we had the other -- yesterday
3 about the rise in the offering of competing top-of-book
4 market data products by the three big exchange groups,
5 which I think has raised some concerns that if you have
6 members of the operating committee selling products that
7 compete directly with the SIP, that that could create
8 incentives not to keep the SIP as current as it should be
9 with technological advances, with, you know, pricing
10 adjustments, and otherwise.

11 So I would be interested to hear -- and we can
12 just go down the line -- of panelists' views on whether
13 they think that conflict is a real one. And I guess,
14 regardless of that, should there be procedures that
15 address those conflicts, either prohibiting them or
16 requiring disclosure, or otherwise? So why don't we
17 start with Kevin?

18 MR. CRONIN: Thanks, Dave. So maybe an
19 observation. I think we've heard a number of times over
20 various panels that the objective here is to really have
21 a market data fee regime which is fair, reasonable, and
22 not unnecessarily discriminatory. It sure strikes me
23 that in order to achieve such an objective you would need
24 to have a governance structure which was equally fair,
25 reasonable, and not unnecessarily discriminatory. That's

1 person visit with the SEC staff. And subsequent visits
2 have continued in an effort to bolster communications and
3 the relationship between the SIP operating committee and
4 the SEC, which I fully support and encourage to continue.

5 All these governance changes have been
6 accomplished in the past few years under the current
7 constraints of the plans. While the plan structure
8 presents challenges at times, it is important to remember
9 that we are doing something very hard pretty well. UTP
10 and CTA, as I said earlier, have reported 100 percent up-
11 time for this year. We can always do better, and always
12 be ready to do so. But as we consider changes, first and
13 foremost we should do no harm.

14 I look forward to any questions you may have.

15 MR. SHILLMAN: Thanks, Emily. So it sounds
16 like a fair amount of meaningful progress has been made
17 in recent years in improving SIP governance. Yet a
18 number of issues remain. Some of those are -- strike me
19 as more -- easier to resolve than others.

20 And so why don't we try to go through them
21 methodically, and see, you know, how much progress we can
22 make on them, at least on -- in this environment.

23 So maybe starting with one that might be on the
24 easier side of the spectrum, and that's the idea of the
25 potential conflicts of interest. And one thing -- and

1 not where we are. Let's be very clear.

2 With respect to the conflicts of interest, I
3 think it is very clear that there are conflicts that this
4 private versus public data provision regime produced. I
5 would start perhaps with a step backwards and say why do
6 we allow certain market participants to buy an advantage,
7 relative to others?

8 You know, in the prior regime of exchanges, and
9 despite my young appearance -- I'll go back a couple of
10 years -- you know, at the New York Stock Exchange, for
11 example, we used to complain that the specialists had an
12 unfair advantage. And yet -- and we could debate the
13 point -- they had an obligation, right? So they saw
14 things that not the rest of the world got to see, but
15 they also had some level of obligations that they had to
16 fulfill.

17 There is no obligation for the people who buy
18 an advantage from an exchange, right? And so I think
19 there's been a lot of talk about how you could bifurcate
20 some of these conversations. The fact of the matter is
21 this, it's the inflated balloon theorem.

22 If you push the balloon on this side -- so
23 let's say that we expand the SIP and we allow it to have
24 more data fields, don't you know that the exchanges are
25 going to come out with enhanced data fields that will

1 probably further anger people like me, and certainly --
2 and maybe Hubert -- because it is giving advantage away
3 to opportunistic traders who have no obligation in the
4 marketplace. So I think I start with the fundamental
5 consideration, which is why did we allow that to begin
6 with?

7 That said, if it's the general agreement of the
8 industry that that's an okay thing, then I think it needs
9 to be governed a lot better than it is today. The
10 conflicts of a structure where you have exchanges,
11 incumbent exchanges offering a competing data product
12 with the public data product is fraught with conflict.
13 And while I submit to you that our industry is not
14 unprone to having conflicts of interest, my best
15 observation of how to manage that conflict is to bring
16 transparency. Not transparency to a bank process, but
17 transparency to a process that actually is more inclusive
18 of the kinds of participants in the marketplace whose
19 voices are important.

20 So I'll give you an example. There has been
21 some conversation in the various panels about who owns
22 the market data. I submit to you we all own it, and we
23 all have very important interests and objectives that we
24 get out of it. And so, as we think about its public
25 utility and the value of it, it certainly would seem to

1 be a reasonable step forward to say we will govern it in
2 much more accordance with the people who are -- or
3 participants who are important components of this
4 ecosystem.

5 So a lot of things said there. I think the
6 conflicts are real. I might take a step back, Dave, and
7 just say, you know, maybe it's a more fundamental
8 consideration. Why are we giving an advantage to some
9 who are willing to pay for it?

10 MR. SHILLMAN: Hubert, I think you flagged this
11 as an issue, but feel free to elaborate, if you'd like.

12 MR. DE JESUS: Well, obviously, I agree it's an
13 issue. I think, when you kind of think about some of the
14 things that participants have recommended, they -- we've
15 all been talking about trying to improve the
16 infrastructure of the SIP, and trying to make it faster
17 and less -- introduce less latency, so that there is no
18 difference in speed differentials. And we can do that,
19 and we can try to make sure that there is appropriate
20 metrics available so that we can compare the speed of the
21 SIP versus the speed of proprietary data feeds.

22 But at the end of the day there is an inherent
23 conflict that if you have two different products, and
24 those two different products are produced using different
25 technology, being distributed using, you know, faster

1 mechanisms or faster protocols, there is always
2 potentially going to be a difference between the two
3 different products.

4 And is that a fair and appropriate thing for
5 our markets? I think we should really consider whether
6 those two -- these two feeds should somehow be, you know,
7 put under the same governance framework, or at least
8 merged into the same product.

9 MR. SHILLMAN: I think both you and Kevin were
10 suggesting that maybe the right approach is to, you know,
11 think expansively about core market data so there isn't
12 this discrepancy, which, of course, would solve the
13 conflicts problem.

14 But barring that kind of more dramatic move,
15 how would you -- and let's assume for the moment there
16 are proprietary products that remain in the new SIP
17 product. Did you believe -- how would you -- how do you
18 believe that remaining conflict should be addressed?

19 MR. DE JESUS: Well, as far as NMS plans go, I
20 think, obviously, our perspective there is making sure
21 the voting representation is equally distributed to all
22 market participants.

23 I don't know if you have any other thoughts.

24 MR. CRONIN: I think it gets to governance and
25 transparency of that governance, right? So my suggestion

1 would be that we reconsider the constituency of these
2 committees and make sure that important components of the
3 marketplace have real representation, not advisory
4 representation.

5 MR. SHILLMAN: Bryan?

6 MR. HARKINS: Yes. So before going into the
7 conflicts of interest question at hand, I just wanted to
8 kind of follow up on my industry colleague, Emily, here
9 and just -- really, stating Cboe's views at a high level
10 as it pertains to this panel.

11 So with respect to governance, my -- our -- one
12 of my predecessors, BATS, as you mentioned, Hubert, we
13 were always really pushing the envelope, advocating for
14 more governance. So, without a doubt -- and I think, you
15 know, just over the last few years, some of those
16 governance -- you know, championing for greater
17 governance has resulted in a lot of the improvements that
18 Emily highlighted.

19 Whether it's technology improvements,
20 resiliency, increased transparency, I do think we're
21 going to talk a lot about executive session today.
22 Really, from my standpoint, it really has been limited.
23 Even things like discussing fees are discussed out in the
24 open.

25 With respect to, really, just executive

1 session, I was thinking a lot about what's a healthy
2 amount of transparency and disclosure. Because, you
3 know, you've really got to keep things moving, and there
4 is a lot of different perspectives in any given room.
5 Just even looking at SIFMA's comment letter around ETSN,
6 you know, they -- on one hand, they embrace transparency,
7 but they kind of a little bit warn about some of the
8 pitfalls. And I'll just quote one part of their comment
9 letter, which -- "Increased transparency would require a
10 near continuous disclosure regime, or are so broad in
11 scope or particular in detail as to be impractical or
12 unhelpful."

13 So look, there's a lot of complicated stuff
14 that's discussed. And really, how much -- I think it's
15 amazing that, you know, really broadcasting it over the
16 web to -- really, just -- there is nothing to hide. But
17 at some point there has to be -- you have to move the
18 ball forward, so to speak, given that there are so many
19 different opinions in the room.

20 Before I get to conflicts of interest, I just
21 want to kind of address some of the higher-level -- how
22 we view the -- you know, our business, our prior data
23 business, also as the SIP.

24 As some of the -- of my Cboe colleagues have
25 mentioned, we make a lot more money on the SIP than we do

1 -- have any sort of underwriting relationship, things of
2 that nature.

3 Yeah, I do think that conflicts of interest are
4 going to exist. They're going to exist at the exchange
5 level. The operating committee representatives of the
6 exchanges, they speak for the exchange. They don't speak
7 for -- and they don't make any decisions in isolation.
8 They come back to the executive team at Cboe on big
9 policy issues. We talk about them. But, obviously, any
10 type of operating committee representative at an exchange
11 has a unique perspective. They are experts in market
12 data. So I think their perspectives are important.

13 Conversely, conflicts of interest on the
14 advisor side, let's face it, they exist, as well. How
15 should the advisors be -- what should they be expected to
16 disclose? So the particular advisors, what business does
17 he or she oversee? What are the expenses driving those
18 businesses? Because again, we're all conflicted at the
19 end of the day. So, in short, Cboe does favor disclosure
20 around conflicts.

21 MR. SHILLMAN: Thanks. And let me just follow
22 up on a couple of things. I think you indicated that --
23 open to conflict of interest policies that require
24 disclosure of conflicts.

25 But let's say there was the example where the

1 for proprietary data feeds. So, for example, in the
2 second quarter of this year we made \$9 million for our
3 proprietary equities market data, and we made over \$25
4 million for SIP revenue. Okay? So what that means to us
5 is that the SIP, and having a strong SIP, is -- that is
6 core to our business. We operate an exchange, we want
7 healthy markets, we want a strong public quote. So just,
8 really, commercially, we're incentivized to make the SIP
9 -- and we can debate, you know, what is the best ways to
10 make the SIP as strong as possible.

11 And then, really, just to kind of address
12 something that, Kevin, you mentioned about, really, kind
13 of buying an advantage. It really comes down to what our
14 customers are doing. So we have about 200 members. It
15 may not sound like a lot for a large exchange, but, you
16 know, the industry is fairly concentrated. And only less
17 than half of them take our depth-of-book product. So I
18 don't know what they're doing, but, you know, clearly
19 half of our customers can do business on our platform by
20 using this SIP. So the facts are the facts.

21 Now, getting to conflicts of interest, look,
22 it's -- we're -- I think one of the best ways to solve it
23 is just disclosure. You know, the simplest thing is when
24 you see an analyst, you know, information about whether
25 that analyst is -- you know, that -- his or her firm is

1 exchange rep actually was involved in the business of
2 selling the competing top-of-book product, or somehow
3 financially tied to that. Do you think disclosure would
4 be enough? Or would you support walling off or
5 prohibition of the exchange reps on the advisory
6 committee having an economic or other interest in the
7 success of the competing top-of-book products?

8 MR. HARKINS: I mean I think it -- it's a tough
9 question to answer. But I would say, you know, we're --
10 as a whole, even though -- you know, it's kind of related
11 a little bit to giving advisors votes, which we -- you
12 know, we think is a step in the right direction. But it
13 really does come down to, you know, okay, what is the
14 motivating interest.

15 And, you know, so I don't think we're in favor
16 of limiting our -- you know, our abilities under the
17 plan. So kind of -- you know, whether that's making sure
18 that we can't vote a particular way -- but, I mean, I --
19 it's hard to solve that because, you know, yeah, we run a
20 proprietary market data business. Whether that person
21 is, you know, recused from that particular vote, it's not
22 going to -- you know, again the exchange operator, as a
23 whole, is going to make the decision, not that particular
24 person.

25 But with respect to things like access to data,

1 I mean, that's a no-brainer. We shouldn't be combing
2 through data to help, you know, glean information that we
3 can use to sell our proprietary data products. That's
4 definitely a no-brainer.

5 MR. RAMSAY: Could I just clarify something?
6 Because I took your question, Dave, to be should the --
7 not a question about whether exchanges can have
8 representatives that can vote on a particular matter or
9 not, but should the designated representatives by the
10 exchanges on the SIP committee, the individuals who have
11 responsibility, align responsibility or benefit in a
12 direct commercial way from these proprietary data
13 products. Was that --

14 MR. SHILLMAN: Yeah, that's right. It was the
15 personal conflict.

16 MR. RAMSAY: Thank you.

17 MR. SHILLMAN: And I don't know whether your
18 views change in that --

19 MR. HARKINS: No, I just think that -- I mean
20 I'm not trying to skirt the question. It's more of we
21 make more money on SIP. That's why I led with those
22 opening remarks. The -- we -- whether it's me or
23 somebody who is -- you know, works for me, we're going to
24 have the same view as how we want to run our exchange.
25 So the person is not going to matter.

1 So even if that person is not in the committee
2 -- and, by the way, I said they -- you know, market data
3 professionals add a lot of value, just given their
4 subject matter expertise, but it's not going to change
5 the exchange's view, because we make a decision for
6 what's really best for the industry and for our exchange,
7 as a whole.

8 MR. SHILLMAN: Kind of following up, another
9 thing you mentioned is, you know, your representatives on
10 the operating committees, you know, represent the
11 exchange appointed them. That's their duty.

12 And I guess another question for you and others
13 as we go down the line is should it be that way. Should
14 we look for a way -- you know, given how critical core
15 market data is for the investing public -- and I think
16 there is a lot of talk about being a public good --
17 should there be some -- we look for some way to try to
18 create an obligation for those who are on the operating
19 committee to act in the best interests of the plan and --
20 rather to try to address the concerns, real or perceived,
21 that conflicts among the exchanges are undermining the
22 quality of the, you know, critical core market data?

23 MR. HARKINS: I mean I think I answered in the
24 sense that, you know, we're -- we have a vested interest
25 in making sure that the SIP is as fast as possible,

1 resilient. I don't know how -- I guess I don't
2 understand your question, Dave, in that --

3 MR. SHILLMAN: You're also selling a product
4 that competes directly with it, and it's priced less
5 expensively, and has less administrative burden, and is
6 growing, and you're seeking regulatory relief to expand
7 that. So some would view that as a conflict with the
8 success of the SIP product.

9 MS. KASPAROV: I would then ask how has that
10 practically impacted the committee to date. We have made
11 significant enhancements to technology. The SIP is
12 better now than ever. We produce more data. Our
13 capacity is higher than ever. And we work well together,
14 right?

15 I, personally, have not experienced a conflict
16 of interest in representing the two different
17 participants that I have been involved with since my time
18 at the plan. And personally, you know, like you've said,
19 we all have these tensions that are inherent in the Reg
20 NMS plans, correct?

21 But at the same time, we've got the best and
22 brightest in the room. We've got Paul O'Donnell from
23 Morgan Stanley, who is clearly conflicted in his
24 viewpoints. We've got Jeff Kimsey from NASDAQ. We've
25 got Michael Blaugrund. But these are also great minds

1 that all come together to make the SIP better. And you
2 can see from our historical advancements that we've done
3 that.

4 You know, talking specifically about conflicts
5 of interest, we have considered policies, right? We've
6 talked about them a lot. John Ramsay has been a big
7 proponent of that.

8 MR. RAMSAY: You didn't include me on your list
9 of great minds on the SIP committee.

10 (Laughter.)

11 MS. KASPAROV: But John, you said your history
12 was a blur. How am I supposed to know what you've done?

13 You know, the plan is silent, though. When we
14 have an issue that comes before us, we looked at the plan
15 for guidance. That's something you learn in law school;
16 you go into the statute to find out what your obligations
17 are. We go to the plan. The plan is silent. It
18 provides that participants are permitted to select a
19 representative. That is the participant's choice under
20 our current structure.

21 And I would submit that we do have checks and
22 balances because we don't always agree, right? We have
23 competing viewpoints, but at the end of the day it's a
24 good thing, right? We have a unanimity requirement for
25 voting. Some say that that's a frustrating requirement.

1 Some say it makes governance inaccessible, governance is
2 broken, you can't agree. But I would disagree with that
3 because it is important that when we make a change to the
4 plan, that -- in my opinion -- we all agree.

5 That's one of the most important things that we
6 do. And if we can come to agreement on how the plan
7 should function, then that's how it should function. So
8 these tensions, though sometimes they're frustrating, to
9 me are beneficiary under the current structure.

10 MR. SHILLMAN: Okay. And just one more
11 question before we move on. I said initially, you know,
12 these -- the impact of these, you know, perceived -- it
13 could be perceived or real. But let's assume that it
14 really has had a material impact on, you know, the
15 operation of the SIP. Is there any downside to dealing
16 with the perception by addressing some sort of meaningful
17 conflict management procedures at the plan level?

18 MS. KASPAROV: Well, we've considered that,
19 right? We've considered varying degrees of what
20 conflicts really are. Is this really a big deal, right?

21 We've operated for 40 years -- more than 40 years --
22 without a conflict of interest policy. They were
23 considered in the 2004 Reg NMS adoptions.

24 It's difficult to pin down the choice that the
25 operating committee should make in that instance. But

1 committee about -- you know, about other -- you know,
2 expanding and voting at some point, so that's
3 appreciated.

4 I guess the conflicts question -- you know, the
5 questions that we get when people come in to see us, some
6 people have said things like the discussion we're having
7 now about a distributed SIP, or why aren't these things
8 going directly to the data center, the private market
9 figured that out, you know, 10-plus years ago. And the
10 SIPs haven't really paid attention to that until --
11 there's been a lot of sort of increasing pressure on
12 that: Why didn't that happen?

13 There's questions about -- and I know yesterday
14 there was a comment made about a separate competing
15 product that saved investors \$200 million or something
16 like that over the past 3 years in conjunction with
17 another statement that revenues have remained flat,
18 right? And so the perception by some might be that the
19 SIP lost a lot of customers, and revenues stayed the same
20 way, they were just shifted to other parts there. And so
21 there's a question, then, about that, like, to what
22 extent does that potentially reflect -- if you lose
23 customers, why are revenues staying flat or shifting to
24 other parts? And so what is the thinking that's going on
25 there?

1 that said, this is where, you know, we operate under
2 regulatory oversight. To the extent that the Commission
3 feels that that's important, we welcome your input and in
4 the rule-making realm, as well.

5 MR. HARKINS: Dave, one more thing. I just
6 wanted to -- just to be more clear that, yes, we do sell
7 proprietary data products, but it doesn't change the fact
8 that Cboe and, prior to Cboe, BATS, we were always an
9 advocate for stronger governance and even -- I see Paul
10 O'Donnell sitting there. You know, his name keeps coming
11 up. I mean -- you ask him, like, how -- who has really
12 tried to push the envelope.

13 And we're very proud of our history in
14 performance, resiliency, pushing -- we don't operate the
15 SIP, you know, we're a plan participant. And our
16 competitors operate the SIP. But we thought it was
17 important. And I think, honestly, through, you know, the
18 appointment of advisors, you know, former BATS at the
19 time, you know, whether it's voting rights, things that
20 we still embrace, it doesn't really matter that we
21 operate proprietary data feeds, because our track record
22 is still there.

23 MR. REDFEARN: Just a quick -- so I would
24 concur in some respect with what Bryan said, because it
25 is known that you did bring these issues before the

1 So that's part of the -- you know, the view of
2 this is, you know, are there people -- are all the people
3 there people who are really focused on how do we make
4 this a really good kind of competitive product?

5 But I don't think that it's a -- you know, we
6 don't want to just put all of the onus on Bryan and Emily
7 here, so why don't we kind of move down and let Rick,
8 Mike, and --

9 MR. KETCHUM: Sure. Look, I think two things.
10 Well, maybe three.

11 First, Emily and Bryan should feel very proud
12 of how the SIP has evolved in the last -- certainly the
13 last three years and, I think, dramatically improved.

14 Obviously, governance, with respect to a plan
15 to raise a wide range of different plans and different
16 states of maturity, I -- and there are a lot of
17 conflicts. The proprietary products is certainly one.
18 Other exchanges are substantially controlled by other
19 members of the -- by the broker-dealer side of the
20 community, and that's a different conflict from the
21 standpoint of things. It should be recognized, as well.
22 Industry members obviously have conflicts in a variety
23 of ways.

24 But I think I'd say a couple of things. One,
25 disclosure should be simple, from the standpoint of

1 making it clear. My preference would be -- and I think
2 this could be managed from the standpoint of how the
3 exchanges compensate their employees -- that at least
4 there should be balanced compensation from anybody who's
5 on the operating committee so that the performance of the
6 SIP is at least as important as operating products from a
7 profitability standpoint.

8 The third thing, David, I would hit to your
9 point, which I think -- forgive me, I think I'm still a
10 lawyer, so I'll try to take a run at this. But I do
11 think that the responsibility of the members of the plan
12 is important for -- and could use additional Commission
13 articulation.

14 One of the reasons we actually did not
15 recommend a vote -- through I'm open to it -- a variety
16 of good reasons -- a vote from the standpoint of the
17 advisory committee, was the fact that, at least
18 indirectly, the Commission can hold responsible SRO
19 participants in the plan from an oversight and legal
20 standpoint.

21 I think it would be good to make that clearer,
22 as you suggested. And I think the -- Bryan reflected --
23 and has done a magnificent job here, but he reflected I
24 think the way exchanges and FINRA have viewed plans
25 forever, which is that we reflect -- we're voting and

1 we're reflecting the positions of our marketplace, or our
2 SRO. We do -- we've dealt with this conflict for years
3 in SROs, with respect to industry participants in the
4 board, and spent a lot of time lecturing that when they
5 walk into FINRA's boardroom or New York Stock Exchange's
6 boardroom, or NASDAQ's -- it's the three entities I've
7 participated in -- they take on discreet fiduciary
8 responsibilities from that standpoint.

9 And I'm not naive enough to believe that they
10 lost their self-interest from the standpoint of being a
11 broker-dealer. But I think, legally, having that
12 fiduciary responsibility is important. And I think it
13 would be good for the Commission to consider that, both
14 with respect to the possibility of adding additional
15 persons -- please, if you're going to add industry
16 people, add a public representative, as well.

17 And also, from the standpoint of articulating
18 that the members have that responsibility as plan
19 participants -- and I think most of them think they do
20 already -- but I think it would be great to articulate.
21 And none of this is to in any way be derogatory on the
22 terrific work that many industry people have done and
23 many exchange people have done with respect to the plans.

24 MS. KASPAROV: If I could just interject really
25 quick, that is true. There is no current fiduciary

1 responsibility of the participants or the advisors to the
2 plans.

3 Secondly, if you're talking about compensation,
4 are you considering compensation to the chair? Because I
5 would be open to that.

6 (Laughter.)

7 MR. KETCHUM: I think that would be great,
8 Emily.

9 MS. KASPAROV: That would be -- that would --
10 you know, we can talk about this.

11 MR. KETCHUM: Anything I can do to help.

12 MR. MASONE: Well, let me just reiterate Rick's
13 thoughts. And I agree with you, Emily. I think you
14 should be proud of the work that the operating committee
15 has done, especially in the past few years. I think
16 you're doing -- and the others on this committee are
17 doing -- the very best that you can within the construct
18 of a flawed system. And so I think that's the point of
19 kind of addressing this, you know, here.

20 It's difficult for me to say, with all the
21 great minds to my right --

22 (Laughter.)

23 MR. MASONE: -- who have been looking at this
24 for so many years, it's really difficult to really add
25 too much more than the work that's been done in this

1 particular area for the course of a couple of decades
2 now.

3 But let me just state the obvious: this
4 construct that was established 43 years ago was at a time
5 where exchanges were member-owned. We didn't have to
6 worry about these conflicts quite as much as we do now,
7 when in the past 13 years or so -- since Reg NMS --
8 exchanges have become for-profit entities that answer,
9 rightfully, to their shareholders, not to the broader
10 market. That makes perfect sense, that exchanges should
11 act -- and they are acting -- in very rational ways to
12 maximize profit for shareholders. But that system
13 itself, this sort of quasi-regulatory, fully commercial
14 nature of exchanges is really what's at issue here.

15 And so, what we're trying to do is modernize a
16 structure that seems to many of us to be antiquated, for
17 either real or perceived reasons.

18 I thought Isaac Chang did an excellent job of
19 framing this on the last panel, when he pointed to
20 Michael Blaugrund on his right. All of us are in
21 agreement that the people in these seats mean the best,
22 that they mean well, they're doing the best that they
23 can. It's just that they're in an awkward position, and
24 it's awkward not only for them, but for the entire
25 industry.

1 So what can we do to resolve that? I think
2 this, of all the panels that we're discussing at this
3 two-day roundtable, it's probably the lowest-hanging
4 fruit. You know, I think there has been a litany of
5 support for some reform, modernization of the governance
6 structure. Hubert ticked them off. I would just add a
7 couple.

8 You know, I think there is obviously the MSAC
9 recommendations that Rick's subcommittee made, there is
10 U.S. Treasury and their capital markets report. There is
11 the advisory committee and their recent recommendations.
12 Certainly SIFMA and Citi have made recommendations to
13 this end, as well, for many years now. There's Hal
14 Scott's committee on capital markets. Even NASDAQ has
15 made, you know, some tip of the hat, a nod to the fact
16 that there needs to be some reform to the process.
17 Though not everybody has gone as far as SIFMA and Citi,
18 but I want to make it unequivocally clear that, short of
19 actual voting representation on the operating committee,
20 we don't think we are addressing this issue.

21 And it is not, well, you're chair of the
22 operating committee, because I'm wholly confident that
23 you're doing the best job that you can. What I worry
24 about is the future, and the future that, you know, our
25 kids, the markets that our kids inherit.

1 And it exists in this NMS plan, and it
2 certainly exists in other NMS plans. Look no further
3 than the consolidated audit trail which, six years post
4 its adoption by the SEC, has still not implemented for
5 many of the same types of reasons. I think the --

6 PARTICIPANT: Just off limits for --

7 PARTICIPANT: Yeah, please, please.

8 MR. MASONE: So there are a number of things
9 that I think we could probably do in short order that
10 would at least get this house in order. Because,
11 otherwise, I don't believe it could stand.

12 MR. RAMSAY: So I would echo that last point,
13 the point about the folks on the committee. I mean I
14 count Emily as a friend, other good people.

15 I think there are conflicts of interest that
16 can overwhelm the best interests of -- best intentions
17 and efforts of good people to deal with them. And I
18 think we have that situation.

19 I -- from being on the committee for two years
20 now, I have seen tangible cases where conflicts of
21 interest have impacted the work of the committee, I
22 think, in ways that undermine the public good that Isaac
23 was talking about, and that we think that the plans are -
24 - that should be the objectives of the plan. So those
25 play out in a whole host of ways.

1 Dave, you mentioned the competing prop feeds.
2 That certainly is one of them. I think there is a
3 category of issues around how useful can the SIP feeds be
4 for trading purposes, or particularly in -- where you
5 have questions of competition with directly competing
6 feeds.

7 Another question is auction data. For over a
8 year I've been pushing to try to get auction data added
9 to the SIP that would make it somewhat more useful as --
10 you know, and I was glad to see Michael on the last panel
11 say that they favored this now. But I would note that
12 the New York Stock Exchange already provides some
13 imbalance feed on its own on CTA. It has for many years.
14 And the trouble that I have is I haven't been able to
15 get the committee even to squarely ask the Commission for
16 an interpretation that would say, yes, you can do this,
17 even if you've got a majority vote. So it's kind of easy
18 for him to offer it, knowing that, you know, there is at
19 least one or more exchanges that will say, well, it
20 requires unanimity, and therefore it's not going to
21 happen. So that's one case.

22 The -- another involves just the ability of
23 anybody else to compete for the role of the processor.
24 It is -- you know, it makes no sense in either a utility
25 or a commercial setting to have a situation where, you

1 know, the listing markets control the processor and
2 nobody else can really intervene.

3 In fact -- a lot of people may not realize it -
4 - on the CTA side there is not even a provision for
5 somebody else to potentially bid to become a convening
6 processor. I mean I've heard of a situation not that
7 long ago where another company made an inquiry about, you
8 know, sort of how do we -- if we were interested in
9 making a bid to become a processor, how would we go about
10 that. And the awkward answer was, "Well, there really is
11 no process for doing that." That just -- that doesn't
12 make any sense.

13 I think, in terms of the committee process, I
14 have pushed as well for two years to try to have some
15 kind of basic conflicts of interest policy. I would
16 certainly argue at the outset that it should not be a
17 stretch to say that exchanges should not appoint people
18 to this particular committee who have direct-line
19 responsibility for proprietary data. But, you know,
20 short of that, I've just been pushing for some policy
21 that would say this is how we should try to manage these
22 conflicts of interest.

23 Now, the latest answer that I've heard is that
24 people are taking the position that the plan doesn't
25 provide authority for such a policy, again, without a

1 unanimous vote and a change to the plan. That's a
2 position that seems to me more a sort of question of
3 convenience than it is a matter of legal principle. But
4 I think that's another case where there is a real -- and
5 then fourth, just transparency in terms of various
6 things.

7 I mean, so NYSE is proposing that the SIP
8 committee meetings all be televised, which I have no
9 problem with. I think it would be the duller viewing
10 experience in the history of broadcast media, but, you
11 know -- but I don't -- but in terms of really meaningful
12 things, we don't have transparency still about how much
13 fee income is actually collected from the public to the
14 plans.

15 And I think the reason that we don't have that
16 is if people knew that information, they would know how
17 much is actually being reinvested directly in the
18 processor in the SIP versus how much is distributed out
19 to other folks. I think there are -- you know, there are
20 other issues around transparency that we ought to -- I
21 think we ought to consider.

22 So I really do think that these issues sort of
23 permeate all aspects of the plan governance. And without
24 some basic, fundamental change in terms of the
25 composition of the committee, the voting committee, and

1 the constituencies that are represented on it, I think,
2 again, they will continue to defeat the best efforts of
3 good people to sort of deal with these questions.

4 MR. SHILLMAN: Okay. Well, thanks, John. So
5 we spent a little over a half-hour on what I thought
6 would be one of the easier issues. So let's try a tough
7 one, and that is, you know, should advisory committee
8 members be given an actual vote on the operating
9 committee.

10 And what might be a good way to tee it up --
11 maybe for those of you who favor giving advisory
12 committee members an actual vote, just hearing why you
13 think it's important to do that, what you think it would
14 add, and why that's something that could not be
15 accomplished through other improvements to SIP
16 governance, and then how you think that should be
17 implemented.

18 And maybe we start at John's end of the table
19 this way, and --

20 MR. RAMSAY: Thank you.

21 MR. SHILLMAN: I'm assuming you'll be one of
22 those advocates.

23 MR. RAMSAY: I am one of those advocates. I
24 don't -- I mean I think there is a lot of different ways
25 that you could slice it. I think that the -- I should

1 say -- I think a vote to the advisory committee -- I
2 think that -- I mean I would create a balanced board sort
3 of structure of the type that is already in place for the
4 exchanges themselves and for FINRA for a long time, in
5 order to deal with similar kinds of conflicts of
6 interest.

7 Now, I think that the advisory committee itself
8 could serve as a useful pool of people from which to draw
9 representatives of different constituencies. You have
10 the practical problem, you have to figure out how do you
11 constitute the advisory committee in the first place.
12 But I think once it's appropriately constituted, you
13 know, some means by which advisors can self-select among
14 themselves both their successors and people that would
15 have that kind of voting responsibility or voting seat
16 would make some sense.

17 So I would -- you know, rather than say just --
18 you ought to have one sell side, one buy side person, I
19 would say you ought to have the vendor community
20 represented, you ought to have -- make sure that the
21 retail community is represented, and individual investor,
22 at a minimum, represented. I think all of that ought to
23 be on the table.

24 MR. SHILLMAN: Mike?

25 MR. MASONE: So we're certainly in that camp,

1 speaking on behalf of both Citi and SIFMA in this
2 thinking that, you know, opening the operating committee
3 to voting representation is key to this whole discussion.

4 You start with the problem. I mean, as I
5 mentioned, there is, you know, this inherent conflict.
6 As currently constructed, the SIP operating committees
7 have 14 SROs, 14 votes, 13 equity exchanges in FINRA. Of
8 those 13 exchanges you've got 12 that are controlled by
9 the three major exchange groups. And of those, 8 of
10 those 12 votes belong to the 2 families that operate, the
11 two major SIPs.

12 So right away, you've got a majority of members
13 belonging to the two, you know, SIP operators. So,
14 without belaboring the point that that, in and of itself,
15 creates conflict, how do you resolve that?

16 And so our recommendations to date have been to
17 allow for one asset manager, one broker-dealer to be
18 represented on the operating committee, with full voting
19 rights. As John mentions, there are other
20 constituencies, other types of market participants that
21 could belong. We would have no objection to opening it
22 up to broader representation. I think our starting
23 point, at a minimum, was just, you know, instead of 14
24 votes, let's have 16, and just involve some of the other
25 members of the community.

1 Part of that, as all -- you've probably heard
 2 the word "transparency" as much as you've heard the word
 3 "governance" during this panel, and the two are
 4 inextricably linked. Without stealing the thunder of the
 5 last panel here, you know, part of the reason why we're
 6 looking for voting rights and seats on this operating
 7 committee is so that we have a view into what actually
 8 goes on and it's not subject to executive -- use of
 9 executive session or other means by which, you know, the
 10 committee can sort of operate in the dark. And so that's
 11 why we've suggested a minimum of two seats. We'd
 12 certainly be open to more.

13 Some of the criticisms that we've heard --
 14 because we've certainly brought this to the Commission in
 15 the past -- we've heard a few things. One is, you know,
 16 a concern or a fear by exchanges that, you know, the
 17 brokers are just looking to kind of gum up the works.
 18 And nothing would really get done. I mean that is far
 19 from the truth.

20 And I think, to the same extent that we trust
 21 the people in the chairs now, and the integrity of those
 22 people -- would appreciate the same in term. You know,
 23 that's not the goal here. The goal is not to just
 24 obstruct progress, or obstruct the ability for the
 25 operating committee to get anything done. The goal is

1 really to add a level of transparency and inclusion to
 2 the process itself.

3 You can address ways to prevent, you know,
 4 stagnation, and you can do that through the voting
 5 structure. And so I think that is easily dealt with.
 6 Similarly, we have heard concerns about, you know, how
 7 are we actually going to choose the members? Who are the
 8 right members to be reflected on the committee? That, to
 9 me, seems to be the easiest one to address, and one where
 10 we don't have true religion.

11 You know, whether -- there's a number of
 12 different solutions to that that I don't think
 13 conceptually should stop this from moving forward as an
 14 idea.

15 MR. SHILLMAN: Just one follow-up. Assuming,
 16 for sake of argument, the executive sessions could be
 17 limited to very narrow circumstances, and the
 18 informational issue was solved, would you still need the
 19 vote?

20 MR. MASONE: You know, I think -- the short
 21 answer is yes. And I think until you have that vote, I'd
 22 feel that we -- you just don't -- you're not on par. And
 23 there is probably valid reasons, from an exchange
 24 perspective, why you wouldn't need to be on par. You
 25 don't have the same regulatory responsibilities.

1 I think Rick's subcommittee and their
 2 recommendations gave a nod to the fact that, you know,
 3 they're aware of the potential statutory and regulatory
 4 limits on permissible NMS plan participants. You know,
 5 there are legitimate reasons that we'd need to address.
 6 But we are the ones who are paying for this, and we're
 7 paying for it on behalf of -- I think, to the chair's
 8 point and to all the commissioners' point -- say on
 9 behalf of the end investor, and that's really who needs
 10 to be represented in this construct.

11 MR. SHILLMAN: Rick, I suspect you're somewhere
 12 in the middle, but do you want to --

13 MR. KETCHUM: Like Billy Martin, I feel very
 14 strongly both ways.

15 Yeah, I think I probably am. I would say first
 16 make the changes that the equity advisory committee
 17 recommended. You will create a much less loaded and
 18 controlled voting situation than you have now. You'll
 19 address the unanimity. Collegiality is a wonderful thing
 20 with respect to every board, should always be sought.
 21 But boards work well because they seek collegiality, but
 22 they can vote if they disagree, and then not block from a
 23 unanimity standpoint.

24 So I think all those things should happen, and
 25 I think with the constriction of the executive committee,

1 that it would, without more, work quite well.

2 I don't -- well, I don't personally have any
 3 objection at all to the addition of the -- of providing
 4 someone from the advisory committee with a vote in the
 5 plans, as long as that was balanced by adding someone
 6 representing the public having a vote. But I do think
 7 that anyone who participates in that, one way or another,
 8 has to have accountability that the Commission can hold
 9 them to, from the standpoint of their responsibility with
 10 respect to the plan. So I think the Commission would
 11 have to work through that with respect to non-SRO
 12 representatives. And as I said before, I think it would
 13 be better for it to be a little clearer from the SRO
 14 representative standpoint.

15 But I think that would happen first. But I
 16 would not object to that.

17 MR. SHILLMAN: Well, why don't we keep doing
 18 down in order? I recognize you're going to have
 19 different views, but let's just --

20 MS. KASPAROV: Who says I'm going to have
 21 different views? Actually, it's not that different. I
 22 think that the current structure has been sufficient to
 23 where we are today.

24 Adding a vote of the advisors, we can discuss
 25 that, we're open to do that. I think it is a falsity

1 that the advisors have no say. We run everything past
2 the advisors. We talk with them. They are part of
3 bringing the ideas to us, in many cases. They are part
4 of the subcommittees where we address them. We have
5 spirited conversations about how to move forward in the
6 best way possible. We don't do anything before we run it
7 through the advisors.

8 One example of that is actually the conflict of
9 interest policy. And over the past year that we have
10 really focused on this issue, we have come to the
11 committee with various different proposals. And I say
12 "we" -- different organizations have brought different
13 ideas to the table. There hasn't been agreement. The
14 past conflict of interest policy that we just recently
15 considered wasn't agreed to by the advisors. It was up
16 for a vote that day. We didn't vote. The advisors
17 didn't like it. We were not in agreement amongst the
18 whole committee.

19 So you know, I think they really do have an
20 impact, I think they do have a say, and we really value
21 their say. Giving them a vote? We can talk about that.
22 It sounds like some of the participants are now
23 supportive of that today, you know, and we can talk about
24 that going forward.

25 But again, going back to my initial statement,

1 we should be careful to do no harm, right? The advisors
2 don't necessarily have the same constraints that a self-
3 regulatory organization has. Like the joyful Chris said
4 yesterday, Chris Isaacson, you know, he mentioned that we
5 are on the hook, as SROs, to administer the plan by the
6 plan's language. We get in trouble if we don't do it
7 right. So if you give advisors a vote, you also have to
8 consider what are their obligations, as well.

9 I wanted to just make a couple of remarks on
10 something that John said. Regarding the auction data, we
11 did consider that and we have gone to the SEC for advice
12 on our next standpoint. And I know that you've also
13 provided a comment letter, as well.

14 The competing role for the processor, that's
15 not something that's really been brought, as a formal
16 matter, to the operating committee. I think that's a
17 good idea. We can consider that, if someone formally
18 brings it to the operating committee. But I wouldn't say
19 that it's a conflict of interest that's been holding it
20 back. And if you look at, for example, SAIC's numbers,
21 they've been doing a really good job for a long time.

22 That's all for now.

23 MR. SHILLMAN: Bryan, what would angry Chris
24 say?

25 MR. HARKINS: Yeah, I'll just -- I'll be brief.

1 I will be brief --

2 MS. KASPAROV: Sorry.

3 MR. HARKINS: -- in that, you know, like, our
4 position hasn't changed. We were always advocates for
5 votes and advisors.

6 But I'm -- there's one thing that's missing.
7 Emily talks about the obligations that the exchanges
8 have. We're not an operator of the SIP. But everything
9 that we do as an exchange, the byproduct, the downstream
10 byproduct, is spitting out our data that the public and
11 the investment community relies on. And, yeah, we --
12 it's -- the stakes are high when we have a failure.

13 So I guess I flip it back to Michael. We want
14 the same things, which is to improve the markets. But
15 I'm not hearing what the obligations are that the
16 advisors would have with that vote.

17 MR. DE JESUS: So why do we need a vote, right?

18 Well, we need a vote because advisors don't have enough
19 of a voice in the governance of the NMS plans. We can
20 raise issues, as has been properly kind of highlighted.
21 But the exchanges can actually table those discussions
22 for future meetings, or they can choose to address those
23 issues in a slightly different way. The conflicts of
24 interest policy that was discussed, for instance, doesn't
25 go far enough, from the perspective of advisors, right?

1 And so, you know, you ask for a policy, or you
2 ask for a particular enhancement, and it comes back to
3 you in a slightly different form, which isn't exactly
4 what we wanted or asked for in the first place. And that
5 ultimately means that the plans are not operating in the
6 way that the advisors are asking the participants to
7 operate the plans.

8 I think voting rights should probably be
9 balanced. So I hear a lot about one vote for the
10 advisory committee. I think it actually should be bigger
11 than that. It should be probably more of a 50-50
12 balanced voting representation. An advisor should
13 probably be selected in an independent fashion. There is
14 a risk that if advisors are selected by participants,
15 that participants could potentially choose not to renew
16 an advisor, or kick an advisor out if they're not going
17 according to the exchange kind of interests.

18 And as far as accountability, what are our
19 obligations? Well, basically, we fund the SIP, right?
20 It is our market data costs and our market data revenues
21 that basically pay for this whole infrastructure. So if
22 we're going to talk about liability, how about we take
23 some of those revenues and basically portion them off to
24 pay for any kind of liability or insurance that we may
25 have in not being responsible in operating the SIP?

1 MR. CRONIN: I largely agree with that. I
2 think maybe I would add -- first of all, I wanted to
3 answer your question. Yes, it's a conflict of interest.
4 And yes, it should be addressed. See, that wasn't that
5 hard, was it?

6 (Laughter.)

7 MR. CRONIN: So I think, when you look at this
8 issue, at least I'm struck by the fact that, you know,
9 there's a lot of obfuscation that goes on. And I just
10 don't understand why you couldn't submit that the
11 industry voice is really important to try to get this
12 right. Not just for today, but as we've heard, over the
13 next 5, 10, 15 years, whatever that ends up being.

14 And to suggest that there shouldn't be some
15 role for all elements of this in this conversation is
16 just ridiculous to me.

17 Now, the question is how do you really
18 facilitate something like that. And maybe there is some
19 way to negotiate this. There is the how versus the what.

20 And I think, from at least the general public's
21 perspective, understanding the what is really, really
22 important.

23 So, for example, what should be part of core
24 market data, right? So we've heard a lot of conversation
25 around that. I think there should be a group of people

1 as has been discussed, the advisory committee has full
2 rights to access and participate in operating committee
3 meeting, except when a majority calls an executive
4 session for matters that they deem require confidential
5 treatment. And that's kind of a broad term.

6 Certainly we have heard expressed concerns that
7 executive sessions are being over-used. And certainly I
8 take your point. I think we have observed that the use
9 of executive sessions has narrowed. And Rick's
10 subcommittee made specific recommendations along these
11 lines.

12 I guess my question to the panelists is, in
13 practice is there more than needs to be done in limiting
14 executive sessions from -- given the narrowing that's
15 occurred to date, is there more that still needs to be
16 done?

17 And then, secondly, from a -- just reducing
18 that to writing, should a policy be developed that
19 actually sets forth those, you know, narrower
20 circumstances under which executive sessions are
21 appropriate?

22 MR. RAMSAY: I had my light on first.

23 MR. SHILLMAN: Or we can start in the middle.
24 Let's start with Emily and we'll go left and then --

25 MR. RAMSAY: Okay.

1 who are responsible for saying -- maybe it's the SEC --
2 this is core data. These are the things that investors
3 need today and most certainly in the future.

4 If anyone thinks that people want the same
5 amount of information or less, going forward, to be an
6 investment manager, to be an effective retail investor,
7 you're kidding yourselves. Data is everything now. So
8 we need to be facilitating everything we can right now to
9 being able to pull more data to the point of sale to
10 clients. That's one issue.

11 The other would be, okay, so if you're going to
12 operate separate fees, private and public, who sets the
13 standard of what the VIG is and delay one to the other,
14 right? What is an acceptable amount of latency? Who
15 sets that? Who holds the standard? So I think there
16 could be some level of the conversations and ultimately
17 maybe the policies where you would have higher
18 representation from the industry.

19 And then perhaps in the sausage making you
20 don't need so much of that, but I do think there's a lot
21 of importance and a lot of value in having much more
22 interaction and participation from voices that are just
23 not part of the conversation today.

24 MR. SHILLMAN: Okay, thanks, Kevin. So why
25 don't we shift to executive sessions, which is, you know,

1 MS. KASPAROV: I'm going to hear about this
2 later.

3 To the industry guys, we have heard you, right?
4 We have really looked at how we use our executive
5 sessions. And yeah, they were probably at a time being
6 overused, right? So we've really limited it. We've
7 brought a lot of transparency around it.

8 We still need it, though, right? We've got
9 audit findings that we discuss in executive sessions from
10 our vendors. That would not be appropriate for another
11 industry member who might be in competition about that,
12 who might be part of those findings. That would not be
13 appropriate for them to be part of that discussion.

14 We also need a place to talk about any
15 litigation matters that would come before the plan and
16 would need maybe a vote of the operating committee
17 participants itself. So we do, in those examples of
18 circumstances, need an executive session.

19 That said, we do have a policy that has been
20 passed around, and I actually -- pending any changes that
21 any participant might decide to make -- I actually think
22 it's pretty close to being passed before the committee.
23 That greatly narrows and describes in what circumstances
24 we would use executive sessions. And I think that would
25 be helpful.

1 In practice, I think we do a pretty good job.
 2 But as Mike said earlier, right, that's during this time
 3 of the reign of the chair, which is up for vote in
 4 February. I don't know. So who knows how long that's
 5 going to be?
 6 MR. MASONE: Emily, if you gave brokers a vote,
 7 I would vote for you.
 8 (Laughter.)
 9 MS. KASPAROV: All right.
 10 MR. RAMSAY: Two.
 11 MS. KASPAROV: All right. Now I've lost my
 12 train of thought. But like I said, you know, I think
 13 they are needed, but this is kind of what Mike said.
 14 This is low-hanging fruit. This is something that we can
 15 kind of, hopefully, put down to writing about the limits
 16 that we can put on these executive sessions.
 17 MR. SHILLMAN: Just to be clear, the policies
 18 that you're talking about, does that limit executive
 19 sessions to audit findings and litigation, or is it
 20 broader than that?
 21 MS. KASPAROV: Gosh, I didn't bring it with me,
 22 but it was pretty descriptive of the uses that the plan
 23 participants have, and I believe the SEC has those
 24 policies, those draft policies, as well.
 25 MR. RAMSAY: I think I have an answer to the

1 question.
 2 MS. KASPAROV: Okay, great, please. They're
 3 probably not good enough --
 4 MR. RAMSAY: I haven't committed it to mind,
 5 but I think the problem is that the policies that have
 6 been talked about always leave the big carve-out at the
 7 end, right? You know, executive session will be limited
 8 to audit findings, regulatory matters where there is
 9 actual ongoing litigation, where you need a confidential
 10 discussion, or other matters that the committee
 11 determines require confidential treatment. And at least
 12 in the past -- and I will give the committee credit in
 13 recent months for limiting the ways in which that happens
 14 -- but the committee has not obligated themselves to
 15 continue limiting it in that way, going forward.
 16 And I think there -- I have witnessed cases
 17 where matters end up in executive session because they're
 18 sensitive, in the sense that the committee members might
 19 come under criticism from folks in the industry, rather
 20 than it's really so much a direct conflict of the type
 21 that really should require executive session. That's my
 22 perspective.
 23 MS. KASPAROV: Maybe we're not quite as close
 24 as I thought.
 25 MR. SHILLMAN: Bryan, do you have any views?

1 MR. HARKINS: No, I just -- I think it's just
 2 important to -- you know, one of the themes here was what
 3 are issues of today versus issues from a few years ago.
 4 And yeah, I mean, Cboe, we support limiting executive
 5 session, especially in the instances Emily -- those are
 6 all definitely no-brainers to improve trust,
 7 transparency. Again, unless there are more specific
 8 things that I'm failing to think about, I think we've
 9 really greatly improved.
 10 MR. SHILLMAN: So, Hubert, you've seen it from
 11 the inside. You've seen the procedures and the
 12 consideration views on what you're talking about right
 13 now.
 14 MR. DE JESUS: I mean I think there's been more
 15 progress to date on executive sessions and their -- than
 16 maybe the way it was used in the past. So I would agree
 17 with Bryan and Emily that it's gotten better.
 18 You know, the carve-outs are, obviously,
 19 concerning. So it -- to the extent that we know more
 20 about what's going on in executive session, or that the -
 21 - as the participants start to provide that visibility or
 22 transparency to us, that would help a lot in
 23 understanding what's actually happening there. And I
 24 know recently you've started to do that, as well.
 25 I do think, going back to the last topic, a

1 vote would fix this problem. So we would be in the
 2 executive session. So --
 3 MR. CRONIN: Yeah, I think I agree with that.
 4 And again, we're back to our friend, transparency,
 5 although I am struck by, again, this notion of
 6 transparency of a broken process. I don't know it really
 7 gives people a whole lot.
 8 I would suggest that the governance structure,
 9 again, would try to better incorporate people who have
 10 important opinions and views in the marketplace, and you
 11 know, frankly, I recognize there's a need for executive
 12 sessions at some level, but I do think that there should
 13 be some litmus test from those people on the governance
 14 committee around whether or not it would warrant that
 15 kind of consideration.
 16 MR. REDFEARN: Just a quick question. I know
 17 at one point they had executive committee meetings where
 18 they were outside of the operating committees. Just
 19 executive committees would meet, all of the members of
 20 the plan, not including the advisors. Are there still
 21 executive committee meetings? Do they still exist?
 22 MS. KASPAROV: There haven't been to date. I -
 23 - in my memory, I think that there were some executive
 24 committee meetings surrounding the selection of NASDAQ as
 25 the processor, and that had to do with contract

1 negotiations, which were -- you know, there was a meeting
2 schedule set out in the actual contract and the process
3 that we ran during that time, whereby the executive
4 committee met. But since then, I'm not aware of a
5 meeting that has occurred without the advisors being
6 aware of it.

7 MR. SHILLMAN: Mike, did you want to add
8 anything to that?

9 MR. MASONE: I would -- I mean, as I listen to
10 this, just think to myself that, as regards voting, I'm
11 having a hard time trying to think back through history
12 of a time where expanding the vote and enfranchising
13 other groups was ever a bad thing. I just can't really
14 think of an example, especially among reasonable market
15 participants in an industry that is supposed to be self-
16 regulatory.

17 I just feel like we're on the wrong side of
18 history here, and it's a pretty simple -- you know, it's
19 a pretty -- it's an overly simplistic view of it, but
20 when you think about the standard to which our regulators
21 need to hold this segment of the market, fair and
22 reasonable, not unreasonably discriminatory, you know, it
23 comes back to transparency. It comes -- and the ability
24 to determine whether something is fair and reasonable or
25 not unreasonably discriminatory is dependent upon

1 actually having the full panoply of facts in front of
2 you. And unless you're really part of a decision-making
3 process, you don't.

4 MR. SHILLMAN: Thanks. I think, for what will
5 likely be out last topic, assuming -- you know, putting
6 aside should advisory committee members be given a vote,
7 is the current voting structure we have for the
8 participants the right one?

9 You know, as was discussed, that was done in a
10 very different age with, you know, mutual member-owned
11 exchanges, dominant markets, not the same level of
12 competition, no prop data feeds. Now we have a world
13 where we have three large exchange groups with multiple
14 votes, depending on the number of exchange licenses they
15 hold. Should exchange licenses really be the way that
16 voting power is divided up among the SROs that have the
17 regulatory responsibility?

18 And again, Rick's subcommittee had some
19 specific recommendations on this, but it would be
20 interesting to hear other views. I know -- Kevin, do you
21 want to start on your end?

22 MR. CRONIN: So I think, if you're going to add
23 additional members, it's sort of -- and I heard this
24 suggestion maybe two, an asset manager and a broker-
25 dealer -- if I understood the math right, with -- was it

1 14 current votes? Adding to any issues that don't
2 require unanimity, you know, sort of -- what do you
3 really gain?

4 So I'm not sure that you could get enough
5 voting blocks. So I guess the long-winded point is it
6 should be by exchange operator, not the number of
7 exchanges that they had within. And I think that would
8 make the calculus much more palatable to actually making
9 sure that any issues that truly weren't in the best
10 interests of the industry and were more self-motivated by
11 the exchanges, any of that activity could be halted or
12 overturned.

13 I would also agree that it probably makes sense
14 to look at it by exchange group. Otherwise, it feels
15 like a game of Monopoly, where you just keep buying
16 properties on the board and put a hotel on it eventually.
17 So this is -- yeah, this is something that probably
18 deserves a further look.

19 MR. HARKINS: Yeah. I mean I'll by -- like
20 with the -- being in favor of the vote for advisors.
21 However, we are not in favor of, you know, rules or
22 proposals that would limit what we can do, given the
23 obligations that we have. I mean not everybody is going
24 to like it, but the exchanges have a higher obligation,
25 so they have higher voting power. So that's our view.

1 MS. KASPAROV: I think the current construct
2 works. I think it's important, if we do change it, you
3 know, if the Commission determines to do that, we're
4 happy to have that discussion.

5 But I think that it's important to remember
6 when we do consider changing the allocation of votes,
7 that we do protect minority rights, right? I've been a
8 member participant at CHX, which had one vote. That vote
9 was important to us. It made a big deal, you know. And
10 it made a difference in the plans in some circumstances
11 where unanimity was required. And we were able to make
12 some good changes and good strides to come to agreement
13 with our vote. So I think that's important.

14 I would like to correct. I believe it is 16
15 votes, actually, that the participants have of the plans.

16 MR. SHILLMAN: And Emily, you raise an
17 interesting point, because we've heard on the unanimity -
18 - we heard criticism of unanimity as being -- creating
19 inefficiencies. But it does protect -- particularly when
20 you look at the three exchange groups, if we started
21 going more to majority, super-majority, you could
22 essentially disenfranchise IEX or FINRA or some of the
23 entities with just one vote.

24 MS. KASPAROV: Correct.

25 MR. SHILLMAN: So it's a balance on that.

1 MS. KASPAROV: And, you know, this is my
2 opinion as a chair. I think it's important to protect
3 those minority views, because they are important.

4 And as I said earlier, if you're doing a plan
5 amendment, this is the plan that we all operate under.
6 It is important that we agree to the extent that we make
7 those changes ourselves.

8 MR. SHILLMAN: Okay. Rick, is there anything
9 you want to add?

10 MR. DE JESUS: Wait, can I step in there?

11 MR. SHILLMAN: Yeah, sure.

12 MR. DE JESUS: In terms of minority views, if
13 you just held votes by exchange group, you would actually
14 increase the voting representation of minority exchanges.

15 So if that's what we're looking to try to solve for, I
16 think that might be a better solution.

17 MR. KETCHUM: I stick generally with the equity
18 -- the recommendation of the advisory committee, I think,
19 one vote per group makes general sense. There should be
20 some reflection of market share size that I think is only
21 fair.

22 I would say that a part of this, and a
23 protection from the standpoint of different views is
24 whatever decision is made on a vote from the standpoint
25 of the industry side shouldn't eliminate the advisory

1 committee, both from an expertise standpoint and also the
2 key arbiter here is a clear articulation of different
3 views to the Commission, where before there wasn't as
4 clear an articulation of the Commission. And I think
5 advisory committee is an important part of that.

6 MR. MASONE: Let's start with something that I
7 think is pretty universally agreed, I hope. If we could
8 agree upon anything, I think there is -- I hear most, if
9 not all, market participants say that the equity markets
10 are overly fragmented, that if we started with a white
11 board and we were to craft the ideal equity market
12 structure, it wouldn't be this, where there is 40
13 different venues to execute a share of IBM.

14 So if you start there, then how can we kind of,
15 through regulation, systemically disincentivize excessive
16 fragmentation? Well, one of the ways is to potentially
17 eliminate this notion of having another vote for every
18 exchange medallion that you either light up or buy.

19 When I hear, you know, leadership at some
20 exchange groups talk about, well, in response to X, Y, Z
21 regulatory initiative we're just going to light up
22 another two exchange medallions, that, to me, just reeks
23 of -- it just doesn't seem optimal. That doesn't seem
24 like the right way to think about the way to run
25 businesses. And that's not a slight to any one

1 particular exchange.

2 I think, again, rational actors operating under
3 a construct that rewards that, it rewards it in the form
4 of another vote on these operating committees, it rewards
5 in the form of another share of market data revenue.
6 Let's -- one way to address that is by consolidating the
7 votes among exchange families with a nod to, you know, a
8 view that, if someone controls a significant portion of
9 market share, then they probably ought to have more than
10 just one vote.

11 MR. RAMSAY: Not surprisingly, I agree with
12 that point of view. And I think Mike hit it on the head.

13 I think the question is what kind of incentives you put
14 into the structure for fragmentation versus not.

15 Now, I mean, we've been -- I think this is a
16 last -- probably a factor that matters less in that
17 regard than some of the other things that have been
18 discussed during this roundtable, in terms of the
19 incentives exchanges have to create multiple, you know,
20 reasons to connect, multiple different data feeds that
21 have to be subscribed to, all those kinds of things.
22 Those certainly drive fragmentation.

23 But there is no sensible reason why having
24 multiple -- you know, people should collect kind of
25 dormant exchanges as chits to increase their voting

1 representation on the SIP committee. It just makes no
2 sense. So, yeah, so I would favor that.

3 MR. SHILLMAN: Well, great. I think we've
4 exhausted our time. I want to thank the panel. I think
5 it's been a very interesting panel. I think we've made
6 some progress moving towards the center on a few issues.
7 So I want to thank all of you.

8 And then, just to remind people that we will
9 congregate again at 1:15, this is an hour for lunch. And
10 in the interim, if the panelists on the next panel could
11 go to the green room now, we'd appreciate that.

12 So again, thank you for the --

13 (Applause.)

14 (A brief recess was taken.)

15 MR. GRAY: Good afternoon, everyone. Welcome
16 back from lunch and to the stretch run of our roundtable
17 on market data and market access. Just like horse races,
18 the stretch run is always the most exciting. So I know
19 the last two panels are going to deliver.

20 The topic for the sixth panel is funding of the
21 core data infrastructure, and we're particularly going to
22 focus on potential steps to assure that a modernized core
23 data infrastructure is appropriately funded, and that the
24 associated fees satisfy regulatory standards.

25 We're fortunate to have a great group of

1 extremely knowledgeable panelists, and we want to get to
2 their discussion of funding as quickly as possible. But
3 first, as we did with our earlier panels today, if each
4 of you would just take a minute and quickly introduce
5 yourself, that would be great.

6 Greg, do you want to get us started?

7 MR. BABYAK: Certainly. I'm Greg Babyak.
8 Thank you very much for having me here, and thank you for
9 having the roundtable. I'm global head of regulatory
10 affairs at Bloomberg LP. I've been in that position
11 since 2015. Prior to that I was head of government
12 affairs at Bloomberg from 2001 to 2015. Before that I
13 was in private practice with my own firm, Royer and
14 Babyak, representing financial services clients for a 15-
15 year period. Prior to that I was chief of staff to the
16 vice chairman of the House Energy and Commerce Committee.
17 I have, since 2006, had the privilege of co-chairing
18 SIFMA's market data subcommittee. But I'm here today
19 speaking on my own behalf, and not SIFMA.

20 MR. FACINI: Adrian Facini, head of product at
21 IEX. I joined prior to the launch of the ATS through the
22 launch of the exchange, and now eventually as a listing
23 market. Prior to that I was at Bank of America, head of
24 product and electronic trading. And then, prior to that,
25 a developer at Citigroup.

1 MR. JONAS: I'm Brad Jonas, I'm the chief
2 business development officer at Quantlab Financial. We
3 are based out of Houston, Texas, and a global leader in
4 automated proprietary trading, operating in multiple
5 asset classes around the world in 50-plus markets. And
6 we also have a fully-fledged broker-dealer in the U.S.,
7 here. Been there since 2010, and prior to that was a CTO
8 for a brokerage firm on the NYSE.

9 MS. PIKE: Good afternoon. I'm Marcy Pike. I
10 am a -- I'll put it out there -- I'm a 30-year veteran of
11 the market data industry. I feel a little bit old about
12 that, but there are people in the audience today that
13 were there when I started on day one, so I know I'm not
14 the only one. I've worked in market data vendor
15 organizations, I've worked on the consumer side of market
16 data, as well, managing pricing operations and
17 institutional custody and accounting firms. I've managed
18 data for an endowment operation, an institutional buy
19 side firm. And for the last 10 years, I've managed
20 market data for Fidelity Investments.

21 MR. SCHELL: Good afternoon. I'm Brian Schell.
22 I'm 30 years old. No, I'm kidding.
23 (Laughter.)

24 MR. SCHELL: I'm CFO of Cboe Global Markets.
25 And prior to that I was CFO of BATS Global Markets. And

1 prior to the exchange encompasses a tiny, tiny eight
2 years -- given this room -- I was with H.R. Block, FDIC,
3 KPMG, and JP Morgan.

4 MR. TABB: Larry Tabb, founder and research
5 chairman of Tabb Group. We're a financial markets
6 research and consulting firm. Started 2003. Before
7 that, started Tower Group Securities and Investments
8 Research. And before that, ran business analysis for
9 Lehman Brothers and did back office. And before that,
10 when they were carving trades in stone, I managed back-
11 office operations for Citigroup in the fixed income
12 space.

13 MR. YETTER: Good afternoon. I'm John Yetter.
14 I'm deputy general counsel at NASDAQ. And before my
15 time at NASDAQ, which stretches back more years than I
16 care to remember, I was at the -- in the general
17 counsel's office at the U.S. Treasury Department. Before
18 that, in private practice. Thank you.

19 MR. GRAY: Okay, thank you, panelists. I'm
20 going to kick us off by just quickly highlighting the few
21 points on the regulatory requirements that govern the
22 fees for data products and access services, and hopefully
23 it will help set up the panel's discussion of funding.

24 SEC rules require that an exclusive processor
25 of market data -- a term which covers both the SIPs and

1 the exchanges for the proprietary data -- must distribute
2 data on terms that are fair, reasonable, and not
3 unreasonably discriminatory. Given the different
4 contexts of SIP data and exchange proprietary data,
5 however, the Commission in the past has taken different
6 approaches to reviewing the fees of SIPs and exchanges.

7 For SIP data, which can only be obtained from a
8 single monopoly provider, the Commission has recognized
9 that there is no room for competitive forces to affect
10 the level of fees. In its Bloomberg order from July of
11 this year, the Commission repeated its longstanding
12 position that SIP data feeds, therefore, need to be tied
13 to some type of cost-based standard in order to assess
14 their fairness and reasonableness.

15 The Commission has not, however, ever adopted a
16 specific approach to applying a cost-based standard to
17 SIP fees. In the Bloomberg order the Commission also
18 noted that it had previously expressed a preference for
19 market participants to reach a consensus on SIP fees, if
20 possibly, which obviously had not been reached in that
21 case.

22 Turning to exchanged proprietary fees, although
23 they are subject to the same regulatory standards to be
24 fair, reasonable, and not unreasonably discriminatory,
25 the Commission historically has taken a different

1 approach to reviewing proprietary fees. In particular,
2 it has allowed exchanges to use a market-based approach
3 under which an exchange bears the burden of proving that
4 it was subject to significant competitive forces in
5 setting the fees. In its SIFMA decision from just last
6 week, the Commission held that exchanges had not met this
7 burden in supporting two proprietary data fees, and set
8 those fees aside.

9 In a separate decision last week, the
10 Commission remanded challenges to over 400 other rule
11 changes to the exchanges and the SIPs for further
12 proceedings, consistent with the Commission's decision in
13 the SIFMA and Bloomberg cases.

14 So, given this somewhat unsettled state of
15 affairs in the regulatory review of fees, it seemed like
16 it may be a good place to start -- was to have each of
17 our panelists take a few minutes to just give their most
18 important points they would like to make today for how
19 they think the Commission should go about this task of
20 assessing whether fees are fair, reasonable, and not
21 unreasonably discriminatory.

22 Greg, will you start us off again?

23 MR. BABYAK: Happy to. First of all, the -- as
24 you have articulated, there is -- we're not operating off
25 a blank slate here. We have a statute, a statute that is

1 competitive forces governing the proprietary feeds.

2 So, I would say, based on what we have seen
3 come out of now about 12 years of litigation, coupled
4 with the consensus certainly of market participants that
5 has arisen in the past day-and-a-half, you'd say this
6 data is, for some market participants, essential and it's
7 monopoly data. And hence, I would argue that the cost
8 basis or -- and again, not a direct -- not a perfect
9 relationship to cost, that's not the standard, but some
10 relationship to cost, which obviously can only -- the
11 first step in that process has to be an assessment of
12 what the actual costs are of assembling, aggregating, and
13 disseminating that data.

14 MR. GRAY: Thanks, Greg.

15 Adrian?

16 MR. FACINI: I'll echo many of the same
17 sentiments that Greg just shared. As Brad said
18 yesterday, there is no replacement for NYSE data and
19 NYSE's data center. It is -- they have an advantage
20 there. They have a latency advantage. They can provide
21 that data faster than anyone else in that data center to
22 the customers who are there, and no one else can truly
23 compete for that. It truly is a monopoly. I think Ronan
24 brought that up, as well, yesterday.

25 So that being said, it is a monopoly product.

1 intended to promote greater transparency and access to
2 this data. And we have both the Commission and the
3 courts having rendered interpretations on that statute.

4 Clearly, the -- as the order of last week --
5 well, clearly, it has been -- and as was re-articulated
6 in the Bloomberg instance, you've always had core data
7 conceded to be monopoly product. It's designed to be a
8 monopoly product. And it needs to bear some relationship
9 to cost.

10 I would say that, coming out of the net
11 coalition holding and the order of last week, that you're
12 in a not dissimilar situation with proprietary feeds.
13 Then that coalition holding basically said you need to
14 have either indices -- indicia of competition, or you
15 default back to trying to look at cost data to ensure
16 that monopoly rents aren't being extracted.

17 We've been through a lengthy court challenge
18 over many years at which many trees were slain to produce
19 a docket where exactly these issues were examined. And
20 the court, as the Commission did last week, found that
21 the exchanges had not carried their burden of proof of
22 showing that there were substitutable products or some
23 other alternative theory, a platform competition or order
24 flow competition sufficient to allow the court and,
25 subsequently, the Commission to conclude that there were

1 The proprietary feeds that the exchanges disseminate is a
2 monopoly product.

3 On the SIP side, there should be transparency
4 around the cost to produce the market data that it
5 provides. And through that transparency, I think we can
6 make a better decision about what is truly fair and
7 reasonable, and not unfairly discriminatory.

8 Since the prop feeds could be considered a
9 monopoly as well, I think the same kind of construct
10 should be put in place, where we would look at the cost
11 to produce such market data, and use that information to
12 make a determination about whether or not the fees were
13 fair and not unreasonably discriminatory.

14 MR. GRAY: Thanks. Brad?

15 MR. JONAS: Thank you. So I'd also agree that
16 transparency is paramount here, both for the SIP and the
17 prop products.

18 You know, I've been chuckling the last two
19 days, and heard it again this morning, with CNBC as I was
20 getting ready to come over here, that, oh, these brokers
21 make so much money, this is such an inconsequential
22 portion of their revenues. But yet, as a publicly-traded
23 company, I would imagine that NASDAQ or any other
24 exchange -- if they felt like a vendor was over-charging
25 them, they would damn well do something about it to

1 protect their shareholders. We don't have that option.
 2 So having that transparency is definitely key.
 3 I think there is also merit in leveling the playing
 4 field, so controlling the types of products that come
 5 out. You know, we've heard several times over the last
 6 two days that these issues don't really impact Mr. and
 7 Mrs. 401(k), but yet we have feeds that are faster,
 8 providing some of the same data as the SIP, but yet
 9 they're out of reach, due to cost reasons, to Mr. and
 10 Mrs. 401(k), but yet they're at a disadvantage. And we
 11 can argue whether they care about three to four
 12 microseconds or what not.

13 But leveling the playing field and just having
 14 one -- as Adam said earlier -- one feed, one speed, I
 15 think would be a good step forward, as well.

16 MR. GRAY: Thank you, Brad.

17 Marcy?

18 MS. PIKE: Similar to the other panelists, we
 19 also believe that transparency is key. And we actually
 20 believe that the exchanges are allocating costs for their
 21 products, based on the perceived value of the data, not
 22 the actual cost to produce the data. Again, because we
 23 don't have much transparency, we have, you know, no way
 24 to validate that.

25 But you know, we do believe the should be

1 You know, exchanges, at our most basic level,
 2 is we're matching the buyers and sellers and we're
 3 providing price discovery by the aggregate and
 4 dissemination of the quote and the trade data. Again,
 5 contributing to a healthy and high-quality market.

6 You know, the matching of the transaction
 7 process and the dissemination of that data are so related
 8 -- joint products, some may call it. They're
 9 inextricably linked. And, you know, as a highly
 10 regulated exchange, you know, the financial and
 11 regulatory burden of both the transaction process itself
 12 and the collecting and producing of the market data is
 13 borne by the individual markets, not just the SIP. I
 14 personally would not know how to accurately or fairly
 15 disaggregate those costs related only to market data
 16 versus those only related to the transaction processing
 17 side.

18 An inventory of some of those costs to consider
 19 -- and Marcy actually identified those -- all of the
 20 technology-related costs for the matching engine, the
 21 software development, the improvements, the hardware
 22 costs, the continued work on the efficiency, and the
 23 innovations. The data center costs, both primary and
 24 secondary. The occupant, the personnel, the regulatory
 25 surveillance, rule enforcement, compliance requirements,

1 taking into consideration the cost of their, you know,
 2 data center space, cost to support personnel to monitor,
 3 manage, and deliver the content. It should all go into
 4 the bottom line of creating what the cost of their
 5 products are.

6 We think trading fees should be aligned with
 7 trading execution costs and data fees should align with
 8 the production and dissemination of trading data.

9 We also believe that there is a ton of
 10 inefficiency in the exchanges today, particularly with
 11 respect to the administrative burdens that the entire
 12 industry needs to go through in order to adhere to the
 13 policies and procedures of the exchanges around the use
 14 of the data, and that likely is a huge opportunity area
 15 that the industry could be considering. If we were able
 16 to relieve the administrative burden, that could be an
 17 opportunity to drive down the overall cost of being able
 18 to produce these products and disseminate them to the
 19 marketplace.

20 MR. GRAY: Brian?

21 MR. SCHELL: So I may have a slightly different
 22 point of view. You know, I think we all agree that the
 23 information distributed to the SIP and otherwise is both,
 24 you know, costly to produce and highly useful and
 25 invaluable to our U.S. equity markets.

1 examinations and filings. And the required redundancy.
 2 And let's not forget customer support. All, again, to
 3 support and promote the integrity of the exchange and,
 4 therefore, the U.S. equity markets.

5 On a related note, transparency has been a key
 6 theme not -- obviously, introduced already today -- but
 7 also throughout all of the panels.

8 And actually, all of the exchange-related costs
 9 are actually filed annually through audited financial
 10 statements to the SEC. So those are exchange-specific,
 11 and they're filed every year.

12 At Cboe, our historical financial reporting
 13 also reflects the joint nature of my previous point. In
 14 our 10K and our 10Q filings with the SEC we require,
 15 among other things, provide financial information as to
 16 how our decision-makers manage the business through
 17 segment reporting. We report on asset classes, U.S.
 18 equities, U.S. options, European equities, futures, and
 19 global effects. We don't report by products. And
 20 therefore, we have not tried to segregate the cost by
 21 product, because that's not the way we manage the
 22 business. We do report, obviously, transactional
 23 revenue, and we obviously also report market data
 24 revenue, among other items.

25 And if we looked at the other regulated

1 industries, I suggest -- as an alternative -- is that we
2 know that there is some evidence that say public utility
3 commissions have all but abandoned attempts to try and
4 allocate some of these costs of related products.

5 With respect to a prescriptive approach, which
6 we can talk about more fully in the panel versus making
7 all the points now, we think that's going to have its
8 challenges. And we know that SIFMA, for example, in one
9 of its comment letters -- and one my colleagues raised
10 earlier in one of its comments letters back in 2016 is
11 that there is definitely some issues with some of the
12 disclosures and the changes that would be required in
13 that process.

14 With respect to the proprietary data -- and
15 this is where I know has drawn a lot of attention and a
16 lot of discussion, also -- I would challenge the notion -
17 - this, I guess, all depends on how you define monopoly.
18 I would say that's essentially didn't exist -- which is
19 obviously -- predecessor, as we were acquired by Cboe --
20 didn't exist 15 years ago. Someone would have thought
21 that we had two monopolies going on.

22 So I will challenge you that market forces do
23 continue to exist in today's world. It was a different
24 approach, different business model to generate the market
25 share.

1 So I would challenge the notion of monopolies.
2 And I think you've heard that on various interviews that
3 have happened from various exchange leaders, that we
4 fight for market share every day, and there are
5 competitive choices.

6 A lot of the proprietary products that we see
7 exist have been driven by commercial choices firms make,
8 and we've provided those choices to continue to innovate.

9 And yes, there is a financial incentive. We are a
10 public company and we do have a shareholder base, as
11 well. But I will argue that disenfranchising our
12 customers is not in the best interest of our long-term
13 interest of our shareholders.

14 And I will say we also have data that suggests,
15 as we're examining now, is that as our market share
16 declines in our U.S. equities markets, we've seen a fall-
17 off of sales of our market data. Any time we've raised
18 access fees on various items that we have, we've seen
19 declines in usage. So I will tell you that if one of
20 your definitions of monopoly means that you do not see a
21 fall-off, or you see perfect price elasticity, it doesn't
22 exist. We see price elasticity on our products and/or
23 call it a market share decline.

24 With that, I'll turn it over.

25 MR. TABB: Thanks, Dan. Thanks, you know,

1 Director Redfean.

2 I'm kind of in the fortunate or unfortunate
3 seat of not actually buying market data or not producing
4 market data. So it's hard for me to kind of opine where
5 the baby should be split. And I think, you know, I would
6 actually say to you that seems to be what this panel is
7 about, trying to figure out how to split the market data
8 baby, and how to allocate things.

9 So what I did do is I went through the 10Ks and
10 Qs and tried to, you know, line up market data spending
11 and different line item spending that the exchanges
12 produce and I submitted that to the panel.

13 Looking at it overall, it seems like the growth
14 of market data can be broken out in two spots. One from
15 the SIP, the SIP revenues seem to be pretty consistent,
16 around 480 million, plus or minus, since 2010. Those
17 prices have not gone up much. You can argue about the
18 utility of the SIP or not. That's a different story.
19 But it doesn't seem like the pricing issue is around SIP
20 data, it seems like the pricing issues are more around
21 proprietary data, connectivity, access, and things like
22 that.

23 That seemed to be going up about 8 percent a
24 year since 2010. And really, I think the big battle
25 around this is that I'm not sure that the investment

1 managers, you know -- if you look at brokerage
2 commissions, you look at investment manager fees, you
3 look at proprietary trading firms, you know, profits --
4 I'm sure they would, you know -- they would love to have
5 seen eight percent growth over the last eight years. And
6 I think that's really this battle.

7 So I think the battle is really about machines
8 that trade and machines that match, and how to allocate
9 that revenue. So, you know, if you -- my takeaway from
10 this is that I think this is more about, as I said,
11 machines. The issue, I think, is really that there's a
12 fight between, you know, who keeps that profitability.
13 Is it exchanges or brokers or investment managers or the
14 community?

15 From a technology standpoint, it seems like,
16 you know, if you look at most other technologies over
17 time, performance increases, costs decrease. That's not
18 happened in this space. I can't say that from, you know,
19 from an economist. But I think that needs to be looked
20 at.

21 People have talked about getting rid of OPR,
22 you know, the order protection rule, to say, okay, well,
23 you know, if we don't have order protection, we may not
24 necessarily decide to trade on Cboe any more, we can go
25 trade elsewhere. I'm not sure that's really the case for

1 agency traders or agency brokers or folks that have
 2 fiduciary obligation for best execution. I think whether
 3 you keep OPR or get rid of OPR, I don't think that
 4 changes.
 5 So what do you guys do? I think -- you know, I
 6 think, like Brian -- you know, you got to better measure
 7 this stuff. You know, you got to measure -- better
 8 measure and get better understanding, whether you decide
 9 to make that data public or not. Certainly, if we're
 10 going to make a decision on how you're allocating market
 11 data fees and costs, you need a better set of data than
 12 you can get over the 10Ks and 10Qs, because it's really
 13 difficult to look at how that gets parsed out.
 14 Licensing practices I tried to mention before.
 15 You know, some of the licensing practices at the
 16 exchanges are forcing folks to buy the same data two,
 17 three, four, five times. You know, if you have -- some
 18 firms are charging -- if I have a -- you know, a market
 19 maker, they buy the data. An agency side, they buy the
 20 data. And ATS has to buy the same data. If I want to
 21 store it and use it for analytics, I got to buy the data
 22 again. And then you're -- you know, and I think, to a
 23 large extent, maybe that's where a lot of this comes. So
 24 look over the licensing models. I think that would be a
 25 very beneficial thing.

1 The other issue is you've got to be really
 2 careful, you know. Our markets are, again, the world.
 3 We do a really good job in terms of price discovery. You
 4 know, we really -- you know, I wrote a piece a couple of
 5 years ago called the "Market Data Death Match," and I
 6 kind of ended saying, look, you know, this has to be
 7 resolved equitably because you don't want to mess up
 8 price discovery because that's not -- just -- it doesn't
 9 just impact the people in this table and the people in
 10 this room, it impacts virtually every public company and
 11 every investor, you know, not just in the U.S., but
 12 probably around the world. So you don't want to screw it
 13 up.
 14 That said, I don't envy you guys. You got to
 15 figure out how to cut up the baby, and I don't want to
 16 wield that sword at all.
 17 MR. REDFEARN: Larry, just one point of
 18 clarification. I don't think the intent here is to split
 19 up a baby or to figure out who gets what. I think what
 20 we've stated many times over the course of this event is
 21 that we have a statutory obligation to review these fees
 22 and make sure that they're fair, reasonable, and not
 23 unreasonably discriminatory. And so we're trying to
 24 figure out how to do that, not to allocate between
 25 different parties.

1 I'm trying -- so that's one of the reasons why
 2 we're here, because we have had, you know, a fair number
 3 of participants come to us and make these various noises
 4 and claims.
 5 So that's what we're trying to figure out, not
 6 to --
 7 MR. TABB: No, no, I --
 8 MR. REDFEARN: -- divvy up the baby.
 9 MR. TABB: I don't disagree with that. But
 10 it's a difficult job. And I nod to your difficulty in
 11 trying to figure that out.
 12 MR. GRAY: Thanks, Larry.
 13 John?
 14 MR. YETTER: Thank you, and thank you for the
 15 invitation to appear today.
 16 In the decision last week, you know, the
 17 Commission pointedly did not find that the markets were
 18 not competitive, and they pointedly did not find that the
 19 fees were not fair and reasonable. So, in some respects,
 20 they didn't find very much, which I think is consistent
 21 with a long trend of not really defining these terms.
 22 And, you know, in part because it's a slippery
 23 slope towards the Commission trying to set itself up as a
 24 rate-making agency, which we don't think it has the
 25 statutory authority to do, and would be unwise, in any

1 event, for all the reasons that I think have been
 2 recognized over the years with different agencies like
 3 the Interstate Commerce Commission and the FERC and the
 4 Civil Aeronautics Board trying to engage in this, you
 5 know, exercise of determining what costs are in the rate
 6 base and what costs are not in the rate base, and what
 7 the permissible rate of return, and having litigation
 8 over each and every filed tariff that comes before the
 9 agency. And, you know, that -- if there has been
 10 litigation to date, that's not necessarily the cure to
 11 it.
 12 I think the Commission has, over the years,
 13 done a good job with the SIP about -- and in -- you know,
 14 you've more recently done an even better job about trying
 15 to guide improvements, trying to keep cost consistency.
 16 You know, the data that's been disclosed by the SIPs
 17 shows that the fees paid by non-professionals, paid by
 18 the Main Street investors, have been falling in both
 19 absolute and real terms over a long period. And the fees
 20 paid by professionals, including the much-disputed non-
 21 display fees, have also been consistent and, therefore,
 22 falling in real terms over a long period.
 23 So to some extent, like the other panel, you
 24 know, we kind of wonder what is the problem.
 25 Specifically, this is SIP fees, you know. They're not

1 skyrocketing, they're steady and, therefore, falling.
 2 But, you know, people talk about disclosing the
 3 costs of the SIP, and you know, there has been
 4 resistance. And I think the resistance is because of a
 5 fear that it is a slippery slope and that people will
 6 then say, "Aha, therefore that is the rate base," and
 7 these SIPs don't serve any other purposes. But I think
 8 over the years they've been recognized to serve many
 9 purposes through their revenue structure, you know, going
 10 back many years. And, obviously, the Commission has
 11 recognized that they help defray the regulatory costs of
 12 exchanges, as well as all the other many, many, many
 13 costs that Brian listed in his presentation just now.
 14 And, you know, the exchanges do regulate. We
 15 often hear that it's all been outsourced to FINRA, and
 16 the exchanges don't do anything, and FINRA does it all,
 17 and that is simply not true, you know. We've got an
 18 extensive regulatory staff for real-time regulation, and
 19 regulation of our listed companies, and we're actually in
 20 the process of taking more and more back, because we feel
 21 we can do it better than FINRA. And so we're bulking out
 22 our regulatory staff.
 23 You know, in addition, the SIP fees have also
 24 been recognized at the Commission to serve the function
 25 of promoting quotes. That's the whole point of the

1 revenue allocation formula. If you just cut the revenues
 2 back to the bottom of the rate base, whatever that may
 3 be, then it would no longer serve that purpose. You're
 4 not encouraging -- and you know, one of our proposals in
 5 all of this has been to try to enhance that, not by, you
 6 know, increasing the quoting share, but by increasing the
 7 link between quotes that lead to actual executions and
 8 the revenue associated with them. So not just putting up
 9 a quote and having it fade, but having it be real,
 10 getting more of an allocation.
 11 And then finally, I think it should be
 12 recognized that these revenues serve a pro-competitive
 13 purpose. But, you know, there is always this tension
 14 between how much exchange competition is enough, you
 15 know. Do we have too much fragmentation? Do we not have
 16 enough competition? And just -- the pendulum always
 17 seems to swing back and forth. But because of the SIP,
 18 an exchange like BATS, like IEX, can set up shop, and
 19 very quickly it's getting revenue. And that is a pro-
 20 competitive purpose of the SIP, we would submit.
 21 You know, with regard to prop data, I do have
 22 some remarks I want to deliver about economic theory in
 23 that regard, and two-sided markets, and platform theory.
 24 And I'm going to reserve that, because I think I'm going
 25 to get more time to do that later.

1 So I would just suffice it to say for now that,
 2 you know, some of the commissioners did have questions
 3 about that, and what they said in connection with that
 4 decision, and we think that is certainly worth the
 5 Commission's consideration, going forward.
 6 MR. GRAY: Thank you, John. And thank you, all
 7 the panelists. I mean there was some -- I think some
 8 really, really interesting points among all of you. So I
 9 think we have a lot of room for discussion as we start to
 10 drill down on the different areas that you all raised.
 11 I think the first thing that we would like to
 12 drill down on is on the SIP side of the equation, where
 13 we have at least some established basic view from the
 14 Commission that there should be a reasonable relation to
 15 cost. And I think, Greg, you said some, not perfect, and
 16 then we have some reference to splitting the baby. So I
 17 think one of the issues we'd sort of like to explore a
 18 little bit is where there is room for agreement or ways
 19 to think about how you can achieve that objective, which
 20 the Commission has stated on many occasions, and
 21 particularly in the context of a monopoly product, you
 22 know, how you decide what's too low or too high.
 23 And in that regard, I thought it might be
 24 helpful, since it's been mentioned a few times in
 25 previous panels, this mysterious \$400 million figure, to

1 just say I think what everyone has been referring to is
 2 the fact that -- which you can see now, based on the fact
 3 that the SIPs are disclosing their annual revenue that's
 4 actually distributed to market participants, you can see
 5 what the SIP -- those revenues are, and they were 392
 6 million in 2010, across all 3 networks, tape A, B, and C.
 7 They dropped to 342 million in 2014, but they've come
 8 back up to 387 million in 2017. So, essentially, as
 9 Larry said, they've been pretty flat over recent years.
 10 And I think people round it to 400 million and
 11 say it's the 400 million. So that's what the -- that's
 12 sort of the size of the SIP pie. That is the pie that's
 13 actually distributed to market participants, or to the
 14 SROs -- participants in the plan.
 15 What isn't disclosed right now in the SIP
 16 disclosures is the expenses of the SIP, which would
 17 include the processor expenses and the administrative
 18 expenses. But the Commission has disclosed that
 19 periodically in its releases over the years. The last
 20 time was a number of years ago, but was -- it was in a
 21 2010 concept release on market structure. And it found
 22 at that point the expenses at the SIP level were less
 23 than five percent of the revenue that was distributed to
 24 the SRO participants.
 25 So I think what we wanted to start off with was

1 maybe dig a little further into an issue that a number of
2 you raised about how we should think about both the costs
3 that are relevant in determining whether the 400 million,
4 give or take, is too high or too low, and, you know, are
5 there ways to think about allocating them that doesn't
6 require splitting the baby or the full-fledged rate-
7 making approach.

8 So maybe start off with Brian on that issue.
9 Sort of beyond these direct SIP expenses that are
10 deducted, how should we think about what costs are
11 relevant and what -- how we might approach that
12 allocation issue?

13 MR. SCHELL: So in my kind of introductory
14 remarks I think it's a great question, and it is a
15 challenge. I would echo the challenge of what the
16 statutory obligation that -- you know, that -- when we
17 first started talking about it, what you were trying to
18 accomplish. And it is a challenge because you actually
19 have a group of exchanges who -- and it could be not just
20 exchange operators, but by exchange, particularly, that
21 may have a very different business model as to how
22 they're trying to grow.

23 So -- and I could look over the life cycle of
24 BATS, or I can look at maybe where IEX is right now -- is
25 that you may choose a very different approach for a

1 I'm going to do -- and not charge any market data or any
2 other access fees or any other fixed fees, or I can do
3 just the opposite to try and cover those costs in that
4 model.

5 And as I said, as I -- as reflected in our
6 statements that, as a CFO, I have to personally sign off
7 on, the way we manage the business, we don't manage the
8 business from a cost allocation business of -- approach.

9
10 Now, again, I know that your requirement is
11 more cost-related versus cost-plus, which I think is the
12 worst of all, because I think that's a disincentive to be
13 efficient, because if it's just cost-plus, there is no
14 incentive to be efficient in that process, and I don't
15 think anybody wants to end up in that model, honestly.

16 But how you extract the enhancements we're
17 making around the matching engine to improve our market
18 share, to improve the client experience, to improve
19 market quality, and then the resulting output of data
20 because of what we're able to do on that side, is that a
21 -- we've not made a determination that was 50/50. We may
22 be pricing that data lower, say at only -- maybe
23 capturing 10 percent of that, versus 90 percent of it.
24 Or maybe it's 90 percent of the transaction side and 10
25 percent of the market.

1 commercial reason with a higher-level goal of making
2 markets better or providing an alternative of what's
3 existing with, let's say, with more established
4 exchanges. If we review the history of the BATS model,
5 it was we're going to try to grow share, become critical
6 against two very large, dominant players through great
7 technology and very low cost to try and incent. And we
8 had a consortium that was, you know, helping support
9 that, but they still had a best ex requirement, so that's
10 not a -- they were just throwing us flow because they
11 were owners. I mean they -- it was legitimate.

12 So -- but we did, through pricing, through
13 attracting that liquidity. And at one point we went
14 inverted on transaction pricing. And we didn't charge
15 for market data. And that was -- again, was a commercial
16 decision we made with a long-term perspective of how are
17 we going to make this market better, and how are we going
18 to -- at least in our view -- and how do we make a return
19 for our investors who had faith and confidence in -- to
20 do that with us.

21 So the -- what I'm kind of winding up to is
22 that we chose, from a revenue standpoint -- and, like I
23 said, enterprises can choose this -- I'm going to choose
24 either a really high transaction fee and be way priced
25 higher than anybody else on a per-transaction basis, or

1 So it's -- at any one point in time the
2 challenge that the Commission would have on that is -- or
3 anybody would have on that is that then do you make it
4 unique to the business model that any exchange may be
5 implementing at any one point in time? And I don't know
6 how you do that. And all of those systems is, well, I
7 had a Reg SEI just on that exchange. Oh, they were also
8 worried about my dissemination to the SIP. And those
9 costs were maybe different, and how that network was
10 built out.

11 So they are so tied, and one is the result of
12 the other and built up over time that I, frankly, don't
13 have a recommendation, unless it's an arbitrary
14 percentage. Because the costs are there. We know what
15 the costs are, and we can tell you what they are within
16 each exchange. But again, I -- because I don't think the
17 business is designed to do it by product, that's the
18 challenge.

19 MR. GRAY: Thanks, Brian.

20 John, you want to pitch in with another
21 exchange perspective before we get to the rest of the
22 panel on that question?

23 MR. YETTER: Sure. And to be clear, we're
24 focusing still on the SIP, right?

25 MR. GRAY: Yes, yes, the SIP.

1 MR. YETTER: All right. I mean -- yeah. I
2 mean I think I'd just reiterate what I said earlier about
3 I think the Commission has actually done a good job here,
4 and I don't think there's a huge problem to solve. I
5 think, you know, the costs have been stable.

6 If the SIP committees came to you with a
7 proposal for a massive price hike, I think you'd react to
8 that in a certain way, you know?

9 You certainly, you know -- there are filings
10 that have been, you know, looked at one way or another
11 recently, and I think around the level of justification
12 that's been provided, but I think those were -- you know,
13 one of them, frankly, we're still waiting for comments
14 on. It's back with you for a draft as to whether we've,
15 you know, adequately provided the justification.

16 But, by and large, these filings are about
17 moving things around the margin, they're not about large-
18 scale changes. And given the stability of revenues over
19 the time, unless there is an agenda to, you know, slash
20 costs to the bone and change the purpose that has been
21 traditionally served by SIP revenues, unless that is the
22 goal, I'm not sure there is a great need for change in
23 the way things have been addressed to date.

24 MR. FACINI: I'd just be curious. What has
25 been the use of the SIP revenues at NASDAQ or BATS?

1 MR. YETTER: Well, what I was referring to was
2 what I said in my opening remarks, that I think,
3 traditionally, they serve several purposes. One is to
4 defray costs of operation that actually generate the data
5 at the exchange that regulate the markets to make sure
6 that that data is, you know, of high quality.

7 Another is to encourage new entrants and
8 competition in the exchange space, because people can
9 actually -- you know, if it was just cost-plus, the path
10 to profitability for a new entrant such as IEX would be
11 much, much, more difficult.

12 And, you know, the third is encourage quotes
13 and price discovery in the market. And that would also
14 go away if you slash things down to, you know, the bare
15 costs of what the processor and the administrator are --

16 MS. PIKE: Yeah, I guess --

17 MR. GRAY: Marcy?

18 MS. PIKE: -- I guess why we should be
19 complacent at just keeping costs stable. It just -- it
20 doesn't feel right. Everything -- with the expanded use
21 of technology, costs are driving down in so many
22 different sectors. So that just -- it doesn't sit well
23 with me to say that we're happy to keep things the way
24 they are, we're happy to keep things stable.

25 And so I'm just curious to -- if any of you

1 guys have comments on that, and why keeping things stable
2 is the way to go.

3 MR. GRAY: Larry, your light's on.

4 MR. TABB: Yeah, I was just going to say, you
5 know, yes, that the SIP revenue has been stable. But the
6 fit for purposeness of trading against that data has
7 declined over the last decade. You heard yesterday that
8 virtually nobody -- you know, none of the institutions
9 leverage the SIP to trade unless they actually -- a
10 broker came in to say, "Hey, I'm just trading off of SIP
11 data." They'd be shut down.

12 So if you talk with Greg about, you know, the
13 value of different types of data, I'm sure he would tell
14 you that people pay more for the data that they actually
15 use to trade off of, not the ones that they just -- you
16 know, they're just getting indicative quotes from. I
17 don't know.

18 MR. GRAY: Greg?

19 MR. BABYAK: There's a lot here. First of all,
20 I'd say I feel Brian's pain in that you're obligated to
21 maximize shareholder value. And you have, within your
22 entity, monopoly functions and very competitive
23 functions.

24 So when you say, well, we have to determine --
25 we could either raise the cost of execution, but we're

1 competing there, so instead it's easier to raise the
2 monopoly costs, perfectly rational approach but it's bad
3 policy. And it certainly is inconsistent with the goal
4 of the '75 Act, which was to increase transparency,
5 create a public good, allow people to have it, not
6 creating a monopoly revenue stream that could subsidize
7 other exchange activities.

8 And I would say amen to Marcy's point, where
9 when you say that, gee, if prices stayed the same they're
10 really going down, in a world in which the price -- the
11 cost here is computer processing, which is plummeting, I
12 don't think anybody sitting here, if they had an iPhone
13 from 10 years ago that had -- was at the same cost as it
14 was 10 years ago would say this is great. They'd say,
15 "Boy, we're not taking advantage of the savings and
16 innovation that can flow from technology."

17 MR. GRAY: Brian?

18 MR. SCHELL: So I think that -- I think we may
19 be underestimating the cost of technology and everything
20 that goes around that. Has anyone looked at the data
21 center costs and what they've done over the same
22 timeframe?

23 If you look at the actual enhancements that
24 they actually -- SIP has actually done, that does take
25 money, as well, to do. And that also involves some of

1 the infrastructure of the exchanges, providing that data,
2 also. So there are more than just raw computer chip
3 prices that may be falling.

4 But like many of those organizations, they're -
5 - also have new innovations, which are not the same price
6 as what they were the year before. So the fact that
7 technology costs are falling -- I think the productivity
8 is increasing, but I'm not sure that I would argue,
9 looking at our own numbers -- and I would argue that we
10 are one of the more efficient organizations -- that it
11 actually is falling.

12 And so I think we have seen improvements, and
13 I'm not sure I would agree that it's -- that -- I agree
14 that it is a worthy goal to continue to try and improve,
15 absolutely. We do that within our own business, and it
16 shouldn't just be for that one core product up here that
17 we would ignore.

18 So I think poor market data and too high prices
19 are bad for everyone. I would absolutely agree, whatever
20 side of the fence you're sitting on, because that's for -
21 - the long-term goal is to have very, very healthy and
22 robust U.S. equity markets. We all win.

23 MR. GRAY: So I thought I'd maybe follow up on
24 sort of your perspective from inside an exchange. It
25 sounds like you have a -- from your view, a pretty big

1 and evolved. And if we look at the legacy BATS model of
2 where we were and where that pricing was, and what that
3 looks like, and where we're going to invest in the
4 technology, it was all about growing relevance and
5 growing critical mass. And pricing was made a little bit
6 less relevant, as far as what we were doing, as far as
7 looking at that approach.

8 And the same thing with -- and we're at that
9 phase, I'll call it, with market data of we think we have
10 a much more opportunity to grow subscribers versus
11 looking to try and -- you know, try and extract price
12 from an existing base.

13 Now, honestly, the price extraction has -- is a
14 bigger lever, just economically. But we think, longer
15 term, we want to see the number of growth than anything
16 else. So it is a -- it changes annually, based on where
17 we find ourselves, we find our market position, and where
18 we see ourselves.

19 MR. GRAY: Okay, maybe we'll switch the
20 perspective a little bit. And I know a number of the
21 panelists were highlighting the importance of
22 transparency in their opening remarks.

23 And for the non-exchange panelists, you know,
24 what would you like to see, in terms of transparency of
25 exchange costs or their operations that you think would

1 ball of fixed cost, and you have a number of ways to try
2 and recoup the cost, or to maximize your margin. How do
3 you think about those issues in terms of transaction fees
4 versus, you know, SIP data revenues or prop data
5 revenues, in terms of, you know, where to raise, where to
6 lower, all those sorts of issues?

7 MR. SCHELL: Honestly, it's a -- it's both a
8 long-term perspective, as well as -- I'll call it -- and
9 you go to -- all have a quarterly cycle as well as an
10 annual cycle, right?

11 Everybody -- most organizations go through an
12 annual budgeting cycle of what do we want to accomplish.
13 And obviously, in the context, hopefully, of a strategic
14 plan, of longer term -- here is what we want to achieve
15 and here is what our -- some of our high-level targets of
16 what we want to get to. And how do we envision ourselves
17 getting there?

18 And, gosh, if I didn't have competition, it
19 would be a whole lot easier to get there. But
20 unfortunately, someone will do something that we weren't
21 expecting here or there, and that's the wonderful thing
22 about an incredibly competitive market, is hopefully the
23 users of those markets are benefitting from that.

24 But I'll be honest. It varies. So if we're
25 focused on just the U.S. equities markets, it has changed

1 be helpful, at least to you, and might be helpful to the
2 Commission in making this judgement of whether the SIP
3 fees are reasonably related to cost? Anybody want to --

4 MR. JONAS: Well, I think we spoke earlier
5 about the possibility of, you know, bringing in
6 commercial providers to compete. Let's put it out to
7 bid, and just see what the market comes back with to -- I
8 mean I think, you know, the technology that NASDAQ put in
9 place for the SIP has done wonders for it. But maybe
10 there is some hardware vendor out there that can do it
11 better, cheaper, faster. And we won't know that until we
12 put it out to bid.

13 MR. YETTER: Well, to be clear, we got the
14 contract recently because it was put out for bid, and
15 there were private bidders for that. You know, non-
16 exchange bidders for that business. And we were awarded
17 the contract, and you've seen the results, in terms of
18 the performance enhancements.

19 MR. GRAY: And I think we've -- as I mentioned
20 earlier, the actual processing or administrative costs,
21 at least historically, have been five percent or less of
22 the total revenue pie. And I think, in terms of whether
23 that 400 million is reasonable or not reasonable is sort
24 of the -- it moves from expenses at the SIP level to the
25 expenses or the cost of -- from the exchanges, when they

1 provide their data to the SIP.
 2 I was thinking in terms of just from a
 3 transparency perspective, not an allocation perspective,
 4 but, you know, what information do you think it would be
 5 helpful -- or do you think there is any information that
 6 would be helpful to be made public or to the Commission
 7 that would help, you know, shed some light on whether the
 8 SIP revenues, the 400 million, is reasonably related to
 9 the cost of the exchanges in generating that data that
 10 they're sending to the SIP.

11 MR. BABYAK: Well, you need cost data on the
 12 assembling and dissemination of market data, full stop.
 13 Not the rest of the enterprise. And indeed, that's what,
 14 in the coalition holding, the court seems to be asking
 15 for.

16 I'd add that I would suspect, again -- and I'm
 17 now -- nobody has deputized me to speak for the world,
 18 so I'm giving you just my two cents, which would be I
 19 don't -- I think that what people are looking for is not
 20 as one would experience in a traditional rate-making,
 21 where you're working out to a decimal point. It's
 22 understood that that's not where this is headed, and it's
 23 understood that your standard, which is some relationship
 24 to cost, doesn't get you there in any event.

25 What you would -- the -- what we're trying to

1 do is get to a world in which you're not getting 100
 2 percent increase in the fee, or a 50 percent increase in
 3 the fee. I don't think anybody is fighting over the
 4 margins, and I think that leaves you in a situation
 5 where, rolling back to your earlier raising of the rate-
 6 making issue, that these sorts of things would not
 7 require rate-making. It could be done in the context of
 8 an Administrative Procedure Act review in which, once you
 9 organize the template, which is what I would hope is sort
 10 of the goal flowing from last week's order, you could --
 11 it would be able to be judged based on the justifications
 12 provided by the exchanges, you know, once you have that
 13 baseline of costs.

14 So I think that, you know, I don't imagine how
 15 this could end up as a rate-making process.

16 MR. REDFEARN: Just a quick question. And,
 17 Brian, I appreciate the competitive dynamics among
 18 markets today. We see it and you see it in market share.

19
 20 And I guess the question I'm wondering about is
 21 in transactions, right, you see -- been relatively flat,
 22 right? Transaction revenue growth has been relatively
 23 flat. The margins, however, for market data and
 24 connectivity have been growing pretty consistently over
 25 the last several years, and you see it in a lot of the

1 earnings calls. And even the growth rates continue to be
 2 forecasted in that area as going up.

3 So if the competition is fierce, and the
 4 revenue for transactions is flat, why do you -- how do
 5 you explain the continued increased growth in the margins
 6 for market data and connectivity?

7 MR. SCHELL: And margins, you mean just
 8 revenues? Because we don't really disclose margins on a
 9 particular product.

10 MR. REDFEARN: It would be growth, the growth
 11 that we've seen --

12 MR. SCHELL: In the revenue line item.

13 MR. REDFEARN: Yeah.

14 MR. SCHELL: So one, we would attribute to
 15 actually subscriber growth as -- and whether that's a --
 16 the outcome of kind of being the last mover, or most
 17 recent mover for market data, you know, coming behind,
 18 you know, obviously, the group -- behind NASDAQ, and
 19 starting to have our own offering, we're having a benefit
 20 of a low base, just pure math, simply, there. So we're
 21 definitely generating subscriber growth there.

22 And honestly, we are leveraging our
 23 international operations, as well. So we're actually
 24 going to new markets as part of that growth. So our
 25 biggest subscriber growth has actually been Asia and

1 Europe for the U.S. market data. So that's part of the
 2 growth that you see in that top line growing.

3 And if you're looking at just equity segment --
 4 because if you look at just our 10Q or 10K, depending on
 5 which line item you pulled, obviously there are other
 6 asset classes outside the U.S. equities markets that
 7 contribute to that, like RFX, which was -- which is a
 8 relatively new business that's continuing to grow, as
 9 well as our European equities business.

10 MR. SHILLMAN: So revenues per existing
 11 subscriber for market data and access has been relatively
 12 flat?

13 MR. SCHELL: No, there have been -- definitely
 14 been some increases there, as well. But as far as
 15 ascribing some of the growth, it hasn't been pure I'm
 16 going to triple our fees. It's not been that way. It's
 17 been -- a lot of the growth has been from new subscriber
 18 growth.

19 MR. REDFEARN: So one thing that I think would
 20 be helpful is, you know, we're sifting through already
 21 common letters that are starting to come in and
 22 information that's being posted on the website. Some of
 23 what we're seeing are showing what looks like fairly
 24 significant increases in different product lines, right?
 25 So you hear one -- you know, one was a 50 percent

1 increase in January of this year, another one was a 100
2 percent increase here. Another one talks about thousands
3 of percent of increase, or whatever, over periods of
4 time. We're trying to sort through all that.

5 And so I think one area of transparency that
6 will be very helpful for us -- and this is obviously not
7 just for Cboe, but for all markets -- is helping us to
8 sift through this. When we look at the filings, filings
9 are kind of hard sometimes to kind of -- you look at it
10 and you try to figure out exactly what it's going to mean
11 to the bottom line because of the way that they come in
12 different shapes and sizes.

13 So it will be helpful, I think, for us, for
14 different folks, to look at some of those things, help us
15 look at some of what appear to be significant increases,
16 and help us to determine how -- you know, how that's
17 happening in the sort of competitive context we're in.

18 MR. YETTER: Yeah, I wanted to echo some of
19 what you just said, and also respond to that a little
20 bit. I'm not going to sit here and read off statistics,
21 but I think what is relevant to look at is not just one
22 price change in isolation, but rather stability over a
23 period of time and, when that price changes, has come
24 after many, many years of stability

25 And, you know, what has happened in the

1 MR. GRAY: So there were a couple of points
2 made in the opening statements with respect to SIPs that
3 I wanted to get back to. One of them that you made,
4 Marcy, which related to, I think, some of the compliance
5 costs or administrative costs that can go into SIP data -
6 - one of the -- sort of the way that the rule is phrased
7 is that data is supposed to be made available on terms
8 and conditions that are fair and reasonable.

9 And I think what you might be raising is are
10 there some terms and conditions that go along with a fee,
11 that it's not so much the fee itself is the issue, but
12 the terms and conditions can impose a lot of costs on the
13 back end. So if you wanted to sort of expand on what you
14 were talking about, I think that would be really helpful.

15 MS. PIKE: Yeah. For folks that aren't
16 familiar with the way it works, there is a whole cottage
17 industry that's been set up around being able to navigate
18 and interpret exchange policies and regulations for how
19 you use the data.

20 Most large brokerage firms or asset managers
21 that are consuming this data have significant staffs that
22 are counting and reporting the usage of this data. Even
23 the way we report it back to the exchanges is under
24 antiquated processes. You know, we can either go direct
25 to an exchange, or we can use a consolidator to report

1 interim, in terms of investments that have been made in
2 the product, investments that have been made in the
3 market infrastructure, and then, if you look at the
4 compounded annual growth rate over that period of time,
5 you're going to see a very different number than if you
6 just look at, oh, one year, and it went up, you know, 40
7 percent, or something. Because if you look at it over
8 the time since the last price increase, it might be an
9 annual growth rate of something more like one or two
10 percent.

11 The other thing I wanted to note was -- and
12 this is following up on something that was discussed
13 yesterday a little bit -- you know, some of the products
14 that compete with the SIP, there is a lot of growth there
15 in terms of selling those in Asia, which is obviously not
16 necessarily directly competitive to the SIP. It's new
17 customers.

18 There are also use cases for those products
19 that wouldn't actually be permissible under the SIP, like
20 streaming them live on a website. The SIP doesn't allow
21 that.

22 And then, you know, finally, people upgrading
23 from delayed use. So it's not a one-for-one substitution
24 that, you know, everything that goes from NASDAQ Basic is
25 a diminution of SIP revenue.

1 that stuff back, and then we get stuck in the trap of,
2 you know, did the data make it to them okay, and was it
3 accurate, and do they believe it was accurate. There is
4 a whole group of folks that have entered into the
5 industry to help facilitate audits for the exchanges,
6 third parties that they will, in some cases, hire to help
7 them with the auditing process.

8 I think it would be very fascinating to just
9 try to do a little bit of analysis on what the overall
10 administration is costing the industry, because my guess
11 is it's pretty substantial. It's something that, you
12 know, as industry groups like FISD -- as we met in
13 conference, we -- as consumer firms, we're really
14 employing the industry to rethink how we do this, because
15 it's incredibly wasteful.

16 And if the end game here is to get data out to
17 Mr. and Mrs. 401(k), to the individual investor, I really
18 think we should be rethinking, the whole administration,
19 on what it takes for firms to be able to deliver that
20 data. Fidelity delivers data to our retail customers.
21 We give it to customers and we pay for that data, whether
22 they're professional, their deemed professional users --
23 somebody touched upon that in an early panel.

24 The rules under which you are able to classify
25 somebody as a non-professional versus a professional are

1 changing and can be quite opaque and are not, you know,
2 transparent to an end customer when they're trying to
3 declare themselves. And Fidelity feels so strongly that
4 it's important for our retail customers to have access to
5 that data, that whether they declare themselves as a
6 professional and it's costing us, you know, \$50 a month,
7 or they declare themselves as a non-professional and it's
8 costing \$1 a month, we still pay for that data, because
9 we think it's so important for the retail investor to
10 have in their hands.

11 But that cost of administrating that for us is
12 a significant burden. It's a significant burden on the
13 industry. And it's definitely something we should look
14 at changing.

15 MR. JONAS: So I definitely agree with that. I
16 mean I can't even imagine. I mean, thankfully, we don't
17 really have that many eyeballs, so I don't have to worry
18 about that. It's more, you know, non-display use. But I
19 have someone working on it full-time. I know that some
20 of my peers I've spoken to have multiple people just
21 sitting there all day long, making sure the reporting is
22 right, but, more importantly, making sure that they
23 understand the rules. Because we need, like, a common
24 dictionary across SIP products, prop, different -- you
25 know, the different exchange families, and just a common

1 set of, like, what does non-display mean, what does
2 delayed mean, derived.

3 All the policies are different, and it's just
4 an absolute administrative nightmare. And we were --
5 Marcy and I were talking earlier that TMX in Canada has
6 made a great step with its zero admin policy, where
7 they're basically just trying to lighten the
8 administrative load, which, I guess, you said --

9 MS. PIKE: Yeah.

10 MR. JONAS: -- you kind of brought that on.
11 And we definitely encourage something like that.

12 MR. GRAY: Do you have any thoughts on what the
13 right procedural vehicle would be to have that discussion
14 and to maybe lead to changes in the policies and
15 procedures? Or does this relate back to the topic of the
16 last panel, which was governance of the SIPs?

17 MS. PIKE: It probably does go back around the
18 governance, right, because these are the -- these are the
19 commercial policies, right, of the exchanges, right? So
20 we sign contracts that tell us that we agree that we will
21 adhere to these policies.

22 And, by the way, the policies can change at any
23 moment in time, and we're responsible for checking the
24 websites of the exchanges to stay up to date on what
25 policies may have changed. So I think it does go back to

1 governance. And it's another place where I think if
2 there were more representation by the consumers that are
3 using and managing to these policies, we might have, you
4 know, a bit of a chance to change the dynamic here, and
5 change the landscape.

6 MR. FACINI: Just one thing I'll add there.
7 The CTA and the UTP, both of their policies differ from
8 each other. So even in understanding within the SIPs,
9 you have to read both of them fairly carefully to
10 understand the definitions, the policies that apply, et
11 cetera, so that you're not violating them.

12 One of the other things I was just thinking
13 about as people were talking here, think more of the SIP
14 as a utility. And in that way, like, the fee should be
15 reasonably linked to what the costs are to produce the
16 data. And it sounds like we're wrapping in not only the
17 fees, or not only the costs to produce market data from a
18 SIP perspective, but also back even to the exchange side,
19 as well, as Brian was saying.

20 So I think it's -- it can be split up. I do
21 think that an exchange and a SIP operator can actually
22 delineate what the costs are to operate whatever entity
23 it is, whether it's an exchange or the SIP itself. You
24 could look at what it costs to actually offer physical
25 connectivity within your system or within the SIP itself,

1 or logical connectivity, you know, like how many
2 different servers you need to offer that, the people that
3 are associated with that, the servers, switches. Like,
4 there's a whole host of different things that went to
5 those costs. But I do believe you can allocate the cost
6 to each one of those different areas.

7 We've looked at it internally, ourselves, at
8 IEX. Like, we've looked at physical connectivity,
9 logical connectivity, what it takes to actually effect a
10 matching in our system, what it takes to produce market
11 data and disseminate market data, and what it takes to
12 actually route to other exchanges. All these fees and
13 all the -- sorry, all these costs, they can be aggregated
14 within one of -- within each one of those silos, and we
15 can get a number at the end of that. And you can
16 actually figure out how to allocate that appropriately.

17 I do think it's an achievable task, and I do
18 think that it is a commercial decision by the exchanges
19 on how they want to recoup those costs. We personally --
20 we do not recruit the physical connectivity, logical
21 connectivity on market data, but we get that back through
22 what we charge on transaction fees. And the other
23 exchanges have chosen to make the transaction fees more
24 competitive to attract order flow, so that the other fees
25 can be increased over time, as people basically become

1 captive to their market.

2 So I do think that this can -- there can be
3 transparency around this. It can be data that's given to
4 the market about how these different fees are -- or how
5 these different costs are actually calculated within the
6 exchanges themselves.

7 MR. GRAY: To follow up on that point, has IEX
8 -- does it have -- could you maybe shed maybe a little
9 more detail on what that -- how you at least think about
10 doing that allocation in what would be considered a
11 reasonable way?

12 I mean the way I understand you actually
13 recover your cost, you've made a choice to get them
14 through transaction fees. But you've also said you have
15 -- you've thought about this issue of how you would
16 reasonably allocate costs from the different services.

17 So you want to --

18 MR. FACINI: Definitely.

19 MR. GRAY: -- that a little bit?

20 MR. FACINI: Yeah, sure. So from a physical
21 connectivity perspective, we looked at the switches, the
22 infrastructure that basically resides within -- that
23 everyone connects to. They use that for sending in order
24 flow or for receiving market data from us. So we said
25 those network switches, the patch panels, all of that,

1 sequencing them, matching them, and all the other
2 features that we had within the matching system. They
3 all basically aggregate to produce that cost, as well.

4 And, you know, there is also all the personnel
5 that goes on top of that. The legal, regulatory
6 operations, product, all of that basically goes into this
7 -- oh, there is some -- I'm skipping right now, but if
8 you put that together you basically get what that cost is
9 for that particular area, and you can just -- you could
10 divide it by some number that really represents your
11 capacity within that space.

12 So that's where I think that the fees don't
13 necessarily go back to what the costs are. Like, I don't
14 understand what the fee or what the additional cost is to
15 the exchange for another person on a Bloomberg terminal
16 to look at market data. There really isn't any. But
17 there's still a fee that goes back from Bloomberg to a
18 SIP operator, an exchange, because they look at that. Or
19 if Quantlab has another server that is consuming market
20 data, there is really not an additional load on the
21 exchange itself. From a transmission perspective, yes,
22 but not from the perspective where they're just consuming
23 market data. Why add additional fees on the NASDAQ side
24 per machine that's connected? So in those areas I don't
25 think the fees necessarily relate back to the cost.

1 the net -- the data center space, the operators of that -
2 - so the personnel who are associated with actually
3 maintaining that, installing it, that's all in physical
4 connectivity.

5 On the logical connectivity side, there is
6 servers that run our client gateways, there is switching
7 infrastructure that basically hooks that all together
8 with the rest of the trading system.

9 And back to the physical connectivity portion
10 of the system, we set limits -- so in terms of, like, the
11 cost allocation itself, once you figured out how much it
12 costs to run the physical connectivity, or the logical
13 connectivity, there is a maximum number that you can
14 support within whatever you've set up. And you can
15 distribute the cost amongst the -- what you physically
16 have there. So there's a per-port cost you can figure
17 out for the physical connectivity.

18 On the logical connectivities, again, they're
19 logical ports, but they're still ports. We still have a
20 maximum number that we choose to support, you know, from
21 a resiliency perspective within each one of the client
22 gateways that we operate. So we have a maximum number,
23 based on the servers that we have in our data center.
24 And from a matching perspective, there is the whole rest
25 of the system that basically takes care of taking orders,

1 MS. PIKE: I would agree with that, and that's
2 what I meant in the opening comments, when I said it
3 feels like the fees that are getting charged are tied
4 more to the exchange's perceived value of the data, and
5 how we're using it, as opposed to the cost of actually
6 producing the data.

7 And I'd also argue that if we were able to look
8 at the cost in light of the way Adrian was expressing,
9 then there would be a vested interest, I would think, as
10 well, to try to drive down the cost, right? So some of
11 the earlier panels were talking about technology, and we
12 don't know where it's going to go, and it's advancing at
13 such a rapid pace, right? So if you're really looking at
14 the discreet costs associated with the dissemination of
15 that data, you'll have a vested interest to try to
16 improve the technology and use lower-cost technologies
17 over time to drive down the cost of being able to produce
18 that product.

19 MR. FACINI: But we still have Reg SEI
20 responsibilities, so we'll make sure that it's a
21 resilient --

22 MS. PIKE: Yes, yes, and we want you to do
23 that, yes.

24 MR. YETTER: Yeah, I just want to jump in here
25 and note that all the costs that people are describing

1 are fixed costs, or fixed costs with slight variation,
2 that they're not marginal costs.
3 And, of course, in our industry pricing at
4 marginal cost means bankruptcy. You can't do that, you
5 have to cover your fixed costs, and the fixed costs are
6 huge. And, you know, the -- they have to be spread over
7 all the fees that we charge. And if you're doing to
8 spread them over through -- you know, spread them across
9 through some sort of allocation method that's run by the
10 government, that's what you call rate-making. So --

11 MR. BABYAK: It'd hard --

12 MR. YETTER: We're still left with the
13 fundamental question of whether we are, in fact,
14 competitors. And I think we are. I think the
15 competition for order flow is linked to all of this and,
16 ultimately, informs all the competition.

17 MR. BABYAK: I'd make a couple points quickly,
18 if I could.

19 One, again, we don't know -- it's hard for us
20 to comment on the fixed cost, because none of us know
21 what the fixed costs are.

22 MR. YETTER: We don't know what your fixed
23 costs are, either, and I think you probably charge a
24 pretty substantial markup, but --

25 MR. BABYAK: Do you --

1 addressed -- and some of the points here are spot on, but
2 had a different point of view -- this was about the
3 enhancing transparency of operations of ATSS, about
4 granular disclosures. It would be difficult to keep up
5 to date and give the way products and services may evolve
6 and the way the internal operations, reporting lines,
7 organizational changes, and staffing may change. Public
8 disclosure, proprietary, confidential information could
9 pose unintended consequences. So broadened scope or
10 detail -- it has to be impractical or unhelpful.

11 The point is that it is not going to be the
12 same across. You know, he has a view of -- specifically,
13 of how he's looking at those expenses. They may be
14 completely different and very commercially -- reasons why
15 other exchange groups may look at them completely
16 differently. And it could convey some cost negotiation
17 or contracts that we've been able to negotiate. Maybe
18 they're lower, maybe they're higher than others.

19 So there may be some unintended consequences,
20 like I said. And that language that I just read was
21 actually from a SIFMA letter back to the SEC. So this is
22 not new information.

23 MR. REDFEARN: So let me just try to simplify
24 this a little bit. I think one of the things that we've
25 heard in the course of today and yesterday is a number of

1 MR. YETTER: -- you're regulated differently
2 than we are, so --

3 MR. BABYAK: Well, why would that be, that we
4 would be regulated differently, since we're a private
5 company and you're an exchange?

6 MR. YETTER: I understand. But --

7 MR. BABYAK: Well, but no, you -- this has been
8 a theme throughout, where -- look, you -- exchanges have
9 special -- they receive special protections, special --
10 in this case -- monopolies, special abilities in
11 exchange for discharging special obligations. And to
12 look and say, well, that widget manufacturer or you don't
13 -- aren't discharging the special obligations of an
14 exchange is a total non sequitur. I mean it's just not a
15 serious argument.

16 MR. YETTER: It's just at many points we come
17 into direct competition, as you know.

18 MR. SCHELL: And it's not like so much is
19 granted, the -- and I don't like even using the word --
20 the special monopolies that was there -- I mean, to some
21 extent, that was earned some commercial way. So
22 obviously, somebody was getting some benefit for what was
23 being done, so it wasn't just bestowed on a group.

24 And even their own -- if you look -- again, I
25 pull back the SIFMA comment letter that was -- that

1 market participants who say, you know, if I want to
2 participate in U.S. equity markets, I need to buy this
3 data, and I need to connect to this market. And just
4 hands down, I can't -- if I'm not connected to these
5 markets and I'm not buying this market data, I can't
6 participate in the marketplace.

7 So we have that, which we're trying to
8 reconcile in a context where we do see fee filings that
9 come in that are, you know, in some cases, a 50 percent
10 increase from what they just were. And so we're just
11 trying to -- we -- again, we need to figure this out.
12 There has to be some basis of determining fair,
13 reasonable, and not discriminatory in this context
14 because it is different about -- it's not necessarily a
15 product you can say, oh, I want to participate in.

16 But people couldn't not buy, you know, the Cboe
17 markets data, or the Cboe -- or connect -- maybe they
18 could change the number of ports or the level of ports,
19 but they still need to connect. And probably the virtues
20 in the top 50 firms or whatever it is need to buy, you
21 know, the fast stuff.

22 So that's -- again, it's that context, where
23 we're seeing that, and we hear, you know, from earnings
24 calls, some of the growth that we're seeing. We just
25 need to figure out how to reconcile that again.

1 There are reasonable and not unreasonable
2 discriminatory -- we need just as -- I know it's tough.
3 We have a tough challenge ahead of us, as well, that we
4 need to figure out without, you know, going down -- we
5 don't want to get into, you know, splitting babies or
6 rate-making, or all those sorts of things. Those are
7 very undesirable things. But we do have a predicament
8 that we're trying to solve.

9 MR. SCHELL: So just one minor point that John
10 made earlier that I want to emphasize again is just that
11 I think if you take a longer-term perspective of those
12 changes over time, I think it will be a much better
13 picture versus any one point in time of a change to it.

14 And I understand, Brett, your request and the
15 challenge ahead, because you've told us now three times,
16 and I think we're getting it. But so I get it. And --
17 but I do think that longer-term perspective, which I
18 think maybe came out more subtly, but taking a -- looking
19 over longer term will, I think, help create that
20 perspective, as well, again, because of commercial
21 changes in decisions and where that goes. So --

22 MR. GRAY: Larry?

23 MR. TABB: I think we're locked into this
24 battle. I think that we're trying to, you know, look
25 into an opaque ball and try and discern different costs

1 SIP products are core products, but to think in terms of
2 where we are today, or other core, you know, types of
3 products that people really need that are not the SIP.

4 So we also wanted to talk in this panel about
5 the funding of the proprietary data and connectivity
6 services, and the fees for those services. So maybe I'll
7 open up the question. I think it's been touched on, but
8 just as a general question for the panel, do you think
9 competitive forces in the proprietary space are helping
10 to discipline the fees for these services?

11 Marcy --

12 MS. PIKE: I'm sorry, I kind of jumped in
13 there. I do -- I have -- seen some conditions where
14 competitive forces, I think, have helped with the fees
15 for proprietary -- and I'll talk about proprietary data
16 products.

17 All of the exchanges talked about their
18 alternative fee products, you know, whether it's Cboe 1
19 or NASDAQ Basic -- NYSE has their version of it. And
20 when we saw those products first come into the
21 marketplace, they were priced a certain way by some of
22 the early entrants. The products were missing some
23 things that we needed. So an example of one of the
24 things that they needed when they were first launched by
25 some of the exchanges was consolidated volume. The

1 and things. And, you know, it seems to me, from a simple
2 standpoint, or -- simple standpoint, you either need to
3 make it competitive, where there are -- other people can
4 compete for the same service, which is very challenging
5 in this space, or you really need a really good
6 understanding of cost structures.

7 One that these guys may not want to make
8 public, but maybe make it, you know, privately available
9 to you guys so that they can be aggregated and then
10 somebody needs to make a determination as to is this fair
11 or reasonable or not unreasonably discriminatory.
12 Otherwise, I think we're just in a -- you know, we're
13 just yelling at each other.

14 MR. REDFEARN: There's no yelling, Larry.
15 There's no yelling. So splitting babies; no yelling.

16 MR. YETTER: That was angry Chris who was
17 yelling. This is happy Brett.

18 MR. SCHELL: I've heard Chris yell. He wasn't
19 yelling yesterday.

20 MR. GRAY: So I think Brett's comments might
21 provide a good segue to -- we've been primarily talking
22 about the SIP, but some -- we started to move, I think,
23 into the proprietary data fees and access services. And
24 one of the things we've been talking about today is not
25 just to -- at all the panels is not just to assume that

1 exchanges, I think, worked to lobby to get consolidated
2 volume added to those products, because it would make
3 those products more marketable for them.

4 So, when it was in their, you know, interest to
5 be able to sell these new products, they were right at
6 the table to help with improving the data that was
7 available for those products. And then we watched over
8 time as there was competition amongst the three
9 exchanges, and the key word there being competition. The
10 price points for those products started to drive down
11 over time, as well. So that's why we would be a believer
12 that competition is our friend in this landscape, and
13 it's worked to our advantage.

14 In the opposite end of the spectrum, we've seen
15 where there is data products that are produced by the
16 exchanges that they would call their proprietary products
17 that -- they have pretty much a monopoly on that data.
18 Corporate actions data that's distributed by NYSE would
19 be an example of that. We saw over a 300 percent
20 increase in pricing for that product, with absolutely no
21 material change. They pretty much own the marketplace
22 for delivering that data and all the third-party vendors
23 out there that sell corporate actions data use that NYSE
24 data as one of their bases for their products.

25 So where there is no competition in the

1 marketplace, we have also seen a ridiculous increase in
2 price for those products, as well.

3 MR. BABYAK: I'd jump in and say again this is
4 not a case of first impression. The impression before
5 the court in their coalition was -- or is the
6 competition, as it related to, at that point, the NYSE
7 and the NASDAQ direct level 2.

8 And there are actual tests that one uses to add
9 -- to ascertain whether products are substitutable and,
10 hence, whether they're competitive forces at play. And
11 the court came back, as the Commission had subsequently,
12 and said no, there were not, both as to the lack of
13 substitutable products, and also as to the lack of the
14 undisputed competition in the order flow space having any
15 capacity to constrain costs in the market data space.

16 So again, this is not being raised here as an
17 initial matter, this has been something that has been the
18 subject of litigation going back to 2008.

19 MR. JONAS: So yes, for the prop kind of, you
20 know, top fees, absolutely, competition has really made a
21 big difference, I think.

22 When it comes to the depth feeds, you know, as
23 Greg said, absolutely, clear as day, no competition,
24 whatsoever. And it's not just fees that increase, it's
25 new products that are aimed at very specific target

1 markets that the exchanges seem to know won't be able to
2 say no, because once one participant takes them, everyone
3 is kind of forced to for -- you know, as we talked about
4 yesterday, best ex purposes, as well as just staying
5 competitive.

6 One of the things that I struggle with is --
7 you know, yesterday Chairman Clayton told us about how
8 the rest of the world is following our every move, and
9 we're the envy of the global markets. Yet I just cannot
10 get my head around the fact that someone like the London
11 Stock Exchange -- I'm sure you compete with them, but
12 they're presumably a monopoly, as well -- I pay one tenth
13 of the market data cost that I pay in NASDAQ. Sure,
14 smaller volume market. If you look at somewhere like
15 Toronto, a much smaller market, of course, but it's 16
16 percent. Also somewhat of a monopoly. It just -- I --
17 it doesn't make sense to me.

18 MR. BABYAK: I can help you. In Europe the
19 competition authorities aren't precluded from reviewing
20 these products. Here in the States there's a doctrine
21 where if an -- if regulatory agency, the expert agency,
22 occupies the field, that generally keeps the competition
23 authorities -- I wouldn't be surprised if that has
24 something to do with that.

25 MR. JONAS: And, I mean, you know, I'm sitting

1 here, looking at the spreadsheet, going over new products
2 and increases. And, for the most part, some of these new
3 products -- and don't get me wrong, they're very
4 innovative and exchanges have invested a lot of money in
5 them, and they should be compensated for that -- but I
6 don't necessarily know if they had asked all of the
7 industry, that they would have even wanted them in the
8 first place.

9 And so, obviously, exchange is in it to make
10 money. But I was laughing, I was at dinner at STA a
11 couple weeks ago, and I was sitting across from my NASDAQ
12 rep, and he was explaining how his wife had just upgraded
13 her iPhone, and that, you know, how she just had to pay
14 for it for two years, and then she owned it, she was
15 done. And I said, "Well, why doesn't it work that way
16 with my FPGA feed?"

17 (Laughter.)

18 MR. JONAS: You know, I've more than paid it
19 off at this point. And it's not just the FPGA, it's Dom
20 time and his team's time, and they've done a great job.
21 But at some point it just feels ridiculous.

22 MR. GRAY: Okay, we're starting to run short of
23 time. And one thing we definitely wanted to pick up on --
24 I think, John, you raised it specifically in your
25 opening remarks -- is platform theory. So I want to --

1 time for you to talk about that, and also to see whether
2 some of the other panelists have a response.

3 MR. YETTER: Okay, good, thank you. Yeah. I
4 mean we don't believe you can actually divide the
5 exchange up into little pieces and allocate costs and
6 assess, you know, the fairness of fees in that way,
7 because exchanges are, in fact, two-sided platform
8 markets, and there is trading on one side and data on the
9 other side. And the value of one side of the platform
10 depends on the number of participants on the other side.

11 So data becomes more invaluable, the higher
12 your trading volume. If your trading volume falls off
13 because you're not competitive in that respect, you know,
14 at some point people start to say, "Maybe I don't need
15 that." And, you know, even those who do need it, they
16 don't need quite as much. They -- you know, there are
17 variations that people can make about how much they buy
18 of a product, even if they feel it is very important to
19 their business model.

20 And the U.S. Supreme Court recently, you know,
21 recognized this economic theory in a case American
22 Express v Ohio. And I just wanted to sort of read a few
23 quotes from that case, which -- because I think they're
24 illuminating.

1 They said that the fact the two-sided platforms
2 charge one side a price that is below or above cost
3 reflects differences, and the two sides demand
4 elasticity, not market power or anti-competitive pricing.

5 Accordingly, evaluating both sides of a two-
6 sided transaction platform is necessary to accurately
7 assess competition. Competition cannot be accurately
8 assessed by looking at only one side of the platform in
9 isolation. And evidence of a price increase on one side
10 of a two-sided transaction platform cannot by itself
11 demonstrate an anti-competitive exercise of market power.

12 To the contrary, to demonstrate pricing above
13 competitive levels, it is necessary to evaluate the
14 platform's pricing on both sides of the transaction
15 platform.

16 So, you know, we've got a world where there is
17 this fierce competition for order flow. And you know, we
18 can't exist without it. The people who provide it to us
19 call us all the time to give feedback about things we've
20 said. Somebody, you know, misspoke on this panel, you'll
21 probably get a phone call. And there may be shifts in
22 order flow. And we have to be responsive to that.

23 And -- but you also have to look at the market
24 as a whole, and whether, you know, actually competitive
25 value is being delivered to customers, broadly speaking,

1 And just, you know, to speak to this platform
2 model, I totally agree. And actually, when I first
3 started looking at it years ago, I would say to my NASDAQ
4 rep, "Why can't you guys just look at our overall cost
5 holistically?" Because I pay for a cross connect that's
6 high in cost, or in price. I pay for access fees,
7 session fees, dedicated gateways, ports, transaction
8 fees, then the market data fee, and then you're getting
9 the SIP revenue back on it.

10 It's just -- it's like I'm getting hit every
11 step of the way. And there's got to be some kind of
12 happy medium. But obviously, what I was told was the
13 Commission doesn't allow looking at pricing in a holistic
14 manner like that.

15 MR. YETTER: Well, and what I'm saying, though,
16 is that you have to look at the cost to execute trades,
17 because that's part of the picture, too. And that's
18 extremely low, right? And in some cases, negative --
19 many cases, negative.

20 You have to look at, you know, how much SIP
21 revenues flowing back to people through their reporting
22 of trades to dark pools, which is another form of
23 competition against exchanges. Nevertheless, we, you
24 know, effectively encourage that by -- because the
25 demands from the industry are that we share that revenue.

1 not just, you know, looking at one thing and saying,
2 "Well, the cost is -- this, you know, box of cable is
3 \$89, and they charge something else, and so that can't be
4 fair." You have to look at the whole package.

5 MR. REDFEARN: So Brad or Marcy -- I don't know
6 who would be best to answer this -- I guess the sort of -
7 - tell me if I'm simplifying this properly, but it would
8 -- the notion is that if a market data fee increased that
9 you didn't like, then you would -- could conceivably --
10 could or would trade less with that particular venue.
11 Think about that, in terms of both principal flow and
12 customer flow.

13 MS. PIKE: I've just -- I've never seen that
14 practice in any of the firms I've worked at, including my
15 current firm. So that statement is just really foreign
16 to me, to think that those things are so inexplicably
17 linked together like that, that the behavior on one side
18 of the house is affecting the behavior on the other side
19 of the house. I don't see that happening. I don't know
20 about you, Brad.

21 MR. JONAS: Yeah, when I think -- if a change
22 in the data feed is not really going to -- you know, we
23 don't have a knob where we just say, oh, let's punish
24 NASDAQ. It's based on what's happening in the market.
25 The more market activity we see, the more we trade.

1 So you kind of have to look at it all together
2 and not just say, well, this cost seems high; what about
3 the costs that are extremely low or negative?

4 MR. FACINI: Isn't that a commercial choice
5 that the exchanges make to be competitive in that space?
6 And now you've basically pushed that decision back on
7 your customers to continually increase the cost of the
8 other products that they do need to stay competitive?

9 MR. YETTER: No. I mean we have to cover our
10 fixed costs. And if we were charging marginal costs or
11 negative pricing for everything, we would not be in
12 business.

13 MR. FACINI: Definitely not for everything.

14 MR. YETTER: So there is --

15 MR. FACINI: You could recoup them somehow.

16 MR. YETTER: You -- yes.

17 MR. FACINI: But more reasonably.

18 MR. YETTER: You charge an --

19 MR. FACINI: Fairly and reasonably, actually.

20 MR. YETTER: You charge an extremely high
21 transaction cost, so you have a different business model.

22 MR. FACINI: Sure.

23 MR. YETTER: And that's competition.

24 MR. FACINI: I think Brad pays more in his
25 transaction fee costs on a single transaction on your

1 exchange and not ours. I don't think ours is extremely
2 expensive.

3 MR. GRAY: So we're almost out of time. So
4 maybe for just one last question that's probably pretty
5 related to the platform theory -- was just to ask
6 specifically with respect to at least some of the
7 proprietary data products and services.

8 Do you have an alternative if, you know, you
9 thought that the price was too high for these products?
10 Is there, in effect, an alternative that you could move
11 to and provide some price discipline?

12 MR. JONAS: Looking at just the market data,
13 potentially, but looking at the platform, overall, I --
14 and this is probably not even allowed and also way too
15 burdensome, but it almost comes down to each individual
16 participant.

17 And, you know, I think yesterday someone
18 mentioned that one of the -- you know, most of their
19 participants were getting everything paid for in rebates,
20 anyway, that they weren't paying anything to the
21 exchange. Not in my case.

22 So I don't know that there is a one-size-fits-
23 all model there. I think that, for the exchange's sake,
24 as well as ours, if you do a proper business case before
25 releasing some product -- meaning check with the market,

1 make sure they actually want it, instead of just forcing
2 it on us, because you released it and the first person
3 has to take it, so then everyone else does. That's a
4 good step in the right direction. And, you know, there's
5 no point in spending a bunch of money in R&D and rolling
6 out a new product.

7 And the other thing, too, is just simplifying
8 the products, too. I think, you know, you maintain two
9 or three different types of cross-connects, two or three
10 different types of feeds. Bring it down to one. You can
11 reduce your overhead there, presumably. Make it a fair
12 and level playing field for all of us, for all of the,
13 you know, end investors, and simplify your work flow and
14 lower your costs. You know?

15 MR. GRAY: Thank you, Brad. And I want to --
16 we're at the end, so I want to thank all of the panelists
17 for what I think is a very illuminating discussion of
18 some of the issues that come up.

19 I think maybe to pick up on some of the way
20 Brett has expressed the issue for the staff and the
21 Commission sort of -- to paraphrase maybe John F.
22 Kennedy, we're not asking these questions because they're
23 easy, but because they're hard. And I think maybe some
24 of the debate has illuminated that. But that's been
25 really helpful, and we appreciate you all taking the time

1 to be here.

2 (Applause.)

3 MR. GRAY: So we're going to take a 15-minute
4 break, and we will start again at 3:00 for our last
5 panel.

6 (A brief recess was taken.)

7 MR. GRAY: It's just amazing how quickly that
8 works here. Say, "Take your seats," and everybody gets
9 quiet very quickly. I was saying a lot of industry
10 events that usually takes a little bit longer.

11 So should we start early? Then maybe we can
12 end early.

13 (Laughter.)

14 PARTICIPANT: It's Friday, Brett, that's how
15 that works.

16 MR. GRAY: Is that a good idea?

17 (Applause.)

18 MR. GRAY: Let me just say, first of all,
19 because I know people may start running out of here at
20 some point, thank you all so much for joining us, thank
21 you to all of our panelists from throughout the course of
22 the two days. It's been really helpful discussions,
23 really great participation. And I know I'm front-running
24 that a little bit on this particular panel, so -- but
25 I'll just say in advance, that's -- it's been really

1 helpful, and we appreciated all of you all being here.
2 And again, we're very enthusiastic about having continued
3 engagement. Also, as follow-up on the common file and
4 elsewhere, because these things obviously don't get
5 figured out in a day or two days.

6 So, with that, let me turn it over to Mark
7 Donohue, who is going to lead us through the last panel.

8 MR. DONOHUE: So welcome back. I'm -- trust
9 you all are here. And thanks to you guys for coming up
10 here. We've saved the best for last, of course. This
11 final panel is about transparency.

12 Obviously, market data and transparency go hand
13 in hand. So let's begin to be transparent about our
14 panelists. So can each of you please introduce
15 yourselves?

16 MR. CARRAI: Good afternoon. My name is Kevin
17 Carrai. I'm the vice president and global head for
18 market data and access services at Cboe Global Markets,
19 overseeing the development strategy, pricing, and policy
20 related to market data and access services. Prior to
21 Cboe I held roles at BATS, Direct Edge, and also NASDAQ.

22 I would like to thank the Commission for
23 inviting me to participate on today's panel, and I look
24 forward to the discussion.

25 MR. DONOHUE: Bill?

1 MR. CONTI: Bill Conti. I have been working at
2 Goldman Sachs for the last 14 years managing market data.
3 I've been managing market data for over 30 years.
4 That's all I've done. And for the last two years plus
5 I've been an advisor on the CTA-UTP operating committee
6 as an institutional representative. And also I'd like to
7 thank Brett and the Commission and everyone, panelists
8 and everybody, for this roundtable.

9 MR. DAVIS: Hi. Jeff Davis. I am vice
10 president and chief counsel, North America, for NASDAQ,
11 Inc. I have been at NASDAQ since 2000 and, before that,
12 at the NASD, doing enforcement and disciplinary work.
13 Currently I oversee our regulatory work for equities,
14 options, fixed income, and commodities here in the U.S.
15 Very happy to be back here at the SEC.

16 I will say I -- when I started at NASDAQ I
17 served as our rep to the UTP operating committee. It's
18 been a while since I've been there, but there are a lot
19 of familiar faces here. So thank you very much for the
20 opportunity.

21 MR. GELLASCH: Hello. I'm Tyler Gellasch, the
22 executive director of Healthy Markets Association. And
23 prior to launching that with a couple of colleagues in
24 2015 I served here as counsel for a commissioner. I was
25 also in the United States Senate staff. And I'm thrilled

1 of Succession Systems. Succession is a technology firm
2 that offers market access compliance technology. Our
3 solutions currently include pre-trade risk, real-time
4 portfolio management, surveillance, and post-trade
5 compliance reporting. We operate in the U.S., Canada,
6 and Europe, across multiple asset classes. Our customers
7 include large banks, buy-side firms, small broker-
8 dealers, and clearing firms.

9 MR. STEINER: Good afternoon. I'm Rich
10 Steiner. I'm responsible for electronic trading strategy
11 at RBC Capital Markets, where I've worked for the past
12 nine years. At RBC one of the areas we focus on is
13 improving trading outcomes for institutional investors,
14 which gives us a good perspective to opine on these
15 topics. We are also active participants in Washington,
16 meeting with policy makers and regulators to advocate for
17 more efficient, more transparent, less conflicted
18 markets.

19 And today I'd like to thank the chairman, the
20 commissioners, and the division of trading and markets
21 for having us here today. We look forward to our
22 conversation.

23 MR. DONOHUE: Thank you, panelists. Earlier
24 this year in a speech announcing our roundtable, Chairman
25 Clayton laid out a principled approach to equity market

1 to be here today and thank you for hosting the event.

2 But contrary to what some of -- we heard
3 yesterday about there being an absence of non-profits, we
4 actually are a non-profit and are investors. And
5 frankly, we might not be here if there were more non-
6 profits in the world.

7 But I want to begin by thanking you very much
8 and I look forward to the remarks.

9 MS. HINMON: Hello. I would like to thank the
10 Commission for the opportunity to speak this afternoon on
11 transparency. My name is Melissa Hinmon. I'm currently
12 director of equity trading at Glenmede Investment
13 Management. Glenmede runs a variety of liquid alts,
14 fixed income, and equity strategies primarily for
15 institutional investors. I have 32 years of business in
16 the industry on various capacities, both the buy and the
17 sell side. In addition to other industry
18 responsibilities I do serve as NYSE ARCA's participant
19 selection for the UTP CTA advisory committee.

20 The opinions I share today are mine alone, and
21 they are not that of Glenmede Investment Management, nor
22 are they that of the advisory committee.

23 MR. MASSO: Good afternoon. Thank you. I'd
24 like to thank the Commission for inviting me today. My
25 name is Anthony Masso. I'm the co-founder and president

1 structure. One of the guiding principles is facilitating
2 transparency. He said, "Regulations that promote public
3 access to material information can empower investors and
4 also can energize the competitive forces that benefit
5 investors. In this way, transparency can substantially
6 reduce the need for overly specific and prescriptive
7 restrictions on conduct that can impede competitive
8 forces and in an evolving complex system, can become
9 outdated, ineffective, and counter-productive."

10 Over the years, the SIPs have made significant
11 progress to improving transparency. Their websites
12 contain metrics regarding latency, capacity, volume, and
13 subscribers. They recently added disclosures for
14 revenues and distributions and a plain English
15 description of the revenue allocation formula. They also
16 publish summaries of the quarterly operating committee
17 meetings.

18 Our rule filing process also provides
19 transparency into market data, both for the SIP data,
20 proprietary market data, and access fees. But concerns
21 have been raised that the existing disclosures are
22 inadequate and do not provide enough information for the
23 market participants to make informed comments and for
24 Commission to make findings.

25 As we're nearing the end of the day, let's jump

1 right in. To organize our discussion, let's begin with
2 transparency related to SIP process, and then move on to
3 rule filings. And then, if there's time left over, we
4 can discuss our weekend plans.

5 (Laughter.)

6 MR. DONOHUE: So, Bill and Melissa, you're both
7 on the advisory committee. Can you talk to us about
8 issues related to the transparency of the SIP process to
9 begin the panel?

10 MR. CONTI: Sure. So first, as I said before,
11 I've been in market data, as a lot of folks here have,
12 for a few decades. You know, back in the '80s and '90s
13 we saw technology evolve at a slower pace, right? Green
14 screens, video switches -- remember video switches? You
15 know, LANS. I think we're at a point now where
16 technology is moving at a pace almost faster than time
17 itself, it feels like sometimes. It's hard to keep up
18 with. And that's for everybody, I think, making policies
19 in a time when things are moving so rapidly. It's
20 difficult. It's difficult to keep up with making those
21 policies to address today's technology, no less looking
22 forward to the technologies in the future.

23 You know, we've heard a lot of talk here about
24 the overall cost to trade, the transaction side versus
25 the market data side, you know, and it's real apparent

1 What we would like to see, though, is
2 transparency, full transparency. And I know you're
3 talking about the SIP, but I think we need transparency
4 on both sides, the SIP and the prop side.

5 We applaud that the SIP has started to make
6 revenues public, some revenue data. We think it's a big
7 step. We think that there are steps that have been
8 progress. But we started from a black hole, right? So
9 we started from not knowing anything.

10 Some of the data that's been -- revenue
11 information that's been released, while applauded, does
12 not show the whole picture. And I think that we need
13 full transparency. We're advocating for full
14 transparency 100 percent, not just from the SIPs, but
15 from the proprietary sides, as well. Again, Cboe has
16 said that their SIP revenue is, you know, two or three
17 times more than what their proprietary revenues are for
18 market data. I don't think NASDAQ and NYSE will have the
19 same view on that. I think that their -- we perceive
20 that their revenues on the prop side are pretty deep and
21 pretty wide.

22 To get to what we'd like to see, a cost base
23 model, which we do think it should be, we need that full
24 transparency of all revenues from SIP and from the prop
25 side. And we're talking, yeah, by product line, too,

1 that -- and actually, it was just said on the last panel,
2 which I find surprising, that to be competitive in the
3 transaction space, exchanges are willing to take losses
4 on that side of the margin. So where are they making up
5 those revenues? They're making up the revenues on the
6 market data side. I think that's what everybody here has
7 been saying and been pointing to.

8 So again, somebody mentioned the balloon
9 effect, as you're squeezing the transaction revenues.
10 They're looking to get it somewhere else where there is
11 not -- where there is a monopoly, okay? So it's
12 competitive on the transaction side. That's why fees
13 have come down. It is not competitive on the --
14 especially on the proprietary data side, where we have
15 not seen fees come down. We have really only seen them -
16 - we've only seen them go up.

17 You know, we realize, again, on the consumer
18 side, how much cost and manpower it takes to collect,
19 process, disseminate -- you know, a lot of talk about
20 cross-connects, connectivity fees. Again, the exchanges
21 are dealing also with third parties. I think people here
22 on the East Coast are familiar with Local 3, the
23 International Brotherhood of Electrician Workers. No,
24 cross-connects, unfortunately, are kind of expensive down
25 that road.

1 right? Pro, non-pro, level one, open book, ARC book,
2 total view, connectivity fees, access fees, internal
3 distributor fees, external distribution fees, per query.

4 We should -- and look, if some of this is confidential
5 and shouldn't be released to the public, it should at
6 least be given to the Commission. One hundred percent
7 disclosure is how we feel we can get there.

8 We've heard a real lot of stats and numbers go
9 back and forth: 3,000 percent increase, 1,110 percent.
10 We've heard, you know, the revenues are flat. We've
11 heard the fees have stayed flat. We heard somebody in
12 the last panel say that non-display fees have come down.
13 I haven't seen them come down.

14 I think the only way we're going to get to the
15 end game and real transparency is 100 percent disclosure
16 by the exchanges, SIP and prop side. And that is, again,
17 granular on the revenue side, granular on the expense
18 side. The expense side for all those things I just
19 listed: direct expenses, indirect expenses, shared
20 expenses between the SIP and the prop side. I don't
21 think the Commission can really make a rational,
22 justified decision on the reasonableness and fairness of
23 fees unless they have all of the information. And
24 probably not all of the information, just current.
25 Probably an analysis over the last 5 or 10 years or so.

1 Again, we hear that certain fees, you know --
2 maybe be open book or total view fee hasn't changed in
3 five years. But the -- you know, the access fees went
4 up, or the non-display fees went up, or one of the other.
5 And it's a cute game, you'll alternate them every year
6 so that a fee hasn't gone up in five years. But every
7 year there are new fees or increased fees that are being
8 introduced.

9 You know, since Reg NMS and since the exchanges
10 have become for profit, they have a -- you know, a
11 consolidated, acquired other exchanges, right? NYSE was
12 four exchanges, Cboe four exchange. NASDAQ has swallowed
13 up a few things. They used to be different data centers,
14 different -- completely different operating units.

15 There are synergies that the exchanges have
16 been able to take -- and again, for profit, you want to
17 do the right thing for your shareholders, I can
18 appreciate that, and you want to show the bottom line.
19 You're going to acquire assets, you're going to build
20 your revenues. You are, however, also streamlining your
21 functions. There's overlapping functions, there was
22 overlapping people. Systems converged. There were a lot
23 of efficiencies and savings, I'm sure, that the larger
24 parent group enjoyed, and none of those savings or even
25 fees staying flat were passed down to the customer. So

1 categories. NASDAQ, for depth of book, they are counting
2 servers, and they put them in tiers, and you pay for a
3 tier. For BX and PSX you're counting servers. They're
4 charged as a users. For NASDAQ for the OMEX stuff, I
5 think, there's a different policy. Very difficult to
6 administrate, very difficult to have all of these rules
7 in our systems. An auditor's dream, right? Because
8 there's so many different rules.

9 Are we enforcing them correctly? And when
10 we're not, they jump all over that. And with regards to
11 transparency, we think audit -- the audit numbers should
12 be included in that transparency of the revenues, because
13 that is a business line now. It shouldn't be, but that
14 has become a business line, auditing. And it's quite
15 burdensome to us to put all that information together.

16 So again, we feel -- and there's been a lot of
17 numbers and a lot of distractions thrown around. And
18 Brad from -- said the other day, we just want to see that
19 full transparency, at least to the Commission. As much
20 as can be made transparent to the public should be put
21 out there. But there should at least be 100 percent full
22 transparency on all revenues and all expenses to the
23 Commission, so that they can make rational, justified
24 determinations on the reasonableness and fairness of the
25 data.

1 we recognize that, as well.

2 To the point of -- somebody had spoke about
3 administrative burden. Another thing we would advocate
4 for and like to see is on the administrative side we
5 would like to see the policies standardized, harmonized.

6 You know, just to go back to transparency,
7 though, we would also like to see transparency delivered
8 in a standardized and consistent way, full transparency.

9 This way we can compare apples to apples, where we want
10 oranges to oranges, where we want -- we'd like to see
11 that across all of the exchanges, the same granular --
12 and it can be done. The auditors certainly know. I mean
13 they know all the details. They come in and they audit
14 us. They know exactly how many users of every one of
15 these servers and what the revenue coming in is.

16 Back to the administrative burden of
17 administering all of this, if you look at the fee
18 policies for the exchanges here, all the exchanges, and
19 even globally, every fee schedule, it's just the fee
20 schedules. They're 20, 30 pages long, dozens of
21 footnotes. They're very complicated. They are not even
22 consistent within an exchange, a lot of these policies.
23 It gets very, very difficult to administrate.

24 You know, even within NASDAQ, for an example,
25 non-display, the SIP is a separate UTP. They have

1 The -- and Cboe does a little bit better of a
2 job of reporting on that stuff in the quarterly reports.

3 We'd like to see more. We'd certainly like to see a lot
4 more from the other exchanges that's public. If it can't
5 all be made public, it should 100 percent be made
6 available to the Commission.

7 The reluctance of exchanges to do that 100
8 percent can -- it perpetuates our suspicion that the
9 market data fees are just egregious and too high. Maybe
10 they're not. They might not be. They might be
11 justified, they might be fair and reasonable. We won't
12 know until we have all the information to make -- or at
13 least the Commission won't know until they have all of
14 that information to make those determinations.

15 I think maybe I'll stop right there for now.
16 MR. DONOHUE: Thanks, Bill.
17 (Laughter.)

18 MR. DONOHUE: Did he leave anything for you,
19 Melissa?
20 (Laughter.)

21 MR. CONTI: I have more. I'll give you some of
22 my notes.

23 MS. HINMON: All right. I'll just turn back to
24 you, then.

25 All right. I -- as a institutional equity

1 trader, I believe exchanges do offer significant value
2 proposition, play a very important role in integrity of
3 our markets. But because they are so important, full
4 disclosure allows us to be better consumers of data. It
5 might help dispel any misunderstandings, especially how
6 committed the exchanges are to allocating resources to
7 enhance the competitiveness of the SIP versus how
8 resources are being allocated to enhance their
9 proprietary products.

10 A few discreet examples of how transparency
11 could be further improved include fees, infrastructure,
12 and basic -- more specifically. Disclosure of SIP direct
13 admin costs and framework around how fee-setting is tied
14 to those costs and/or market share. Details around the
15 accountability for performance, for performance
16 monitoring, public disclosure of outages and latency.
17 And I think it would be good to know about any potential
18 conflicts of interest and how these are mitigated or
19 dealt with, including -- though not limited -- of the
20 executive sessions and, of course, voting rights, to name
21 a few.

22 MR. DONOHUE: Thanks, Melissa.

23 Rich, your firm, RBC, was one of the many
24 capital market participants which signed the petition for
25 rule-making concerning market data fees. Can you walk

1 through some of that that's relevant here, and give us
2 your thoughts on SIP process transparency?

3 MR. STEINER: Sure. Thank you, Mark. So the
4 petition you're speaking of was submitted to the SEC last
5 December, last year. It was signed by 24 firms. In
6 addition to our firm, RBC Capital Markets, Citadel signed
7 it, Bloomberg, Morgan Stanley, UBS, eTrade, and on the
8 buy side we had Fidelity, T. Rowe Price, MFS, and
9 Vanguard, to name a few.

10 So regarding the actual proposals, there were a
11 few asks. We proposed a rule requiring disclosure of
12 certain information on equity market data fees.

13 We proposed the SEC remove section 608(b)(3)(1)
14 from section -- from SEC rule 608. And this is around
15 immediate effectiveness. So the rule amendment would
16 preclude SIPs market data fee filings from becoming
17 immediately effective. And we would require a public
18 notice and comment period prior to the SEC's approval or
19 disapproval of any fee changes, thereby allowing
20 transparency and stakeholder input.

21 And third, we proposed the SEC study equity
22 market data fees. So we suggest the SEC review --
23 consider the development of a more robust and transparent
24 framework for assessing market data fee filings. In
25 particular, the SEC may want to enhance its economic

1 analysis or require the SROs to provide a more enhanced
2 analysis that includes not simply the direct impact of a
3 fee increase, but also the indirect impacts on
4 distribution and usage channels, including whether the
5 data contribute or detract from market efficiency and
6 competition.

7 So, you know, ultimately, this comes down to
8 transparency and disclosure. And granted, after Bill and
9 Melissa's 15 minutes or so touching on those, I think
10 they hit on quite a few. But what you're seeing here is
11 the fact that it's challenging for market participants to
12 have an idea of what -- of if what we're paying is
13 reasonable, because we have nothing to compare it
14 against, right?

15 For starters, it's been made quite clear over
16 the last two days it's -- there is no competition. It's
17 not little competition. There is actually no
18 competition, right? We have to provide -- we have to go
19 -- you know, take in proprietary market data feeds from
20 the exchanges.

21 We've heard folks up here -- again, over the
22 last couple days -- say, you know, some will debate it's
23 commercial enterprise, or a commercial decision, that
24 they need to take in proprietary data feeds, perform at
25 electronic trading platform. Our firm does, we need to,

1 but I would posit that that is not a commercial decision.

2 That is a decision that we look at providing best ex and
3 our best ex obligations. And so there is -- while
4 technically the SIP provides for best ex from a
5 regulatory perspective, there is a better best ex in
6 getting faster feeds and faster connectivity. And so our
7 clients demand that of us. They look at that as part of
8 their best ex obligation and their fiduciary obligation,
9 as do we.

10 So, to have no competition in that environment,
11 a pay for play kind of mentality, is troubling. And
12 again, that's one of the key things that I think this
13 proposal speaks to.

14 MR. DONOHUE: Thanks, Rich.

15 Anthony, you come from a reg tech vendor. You
16 have a different perspective. Can you tell us what
17 concerns or -- you have about transparency, or whether
18 you feel like we're in the right balance right now?

19 MR. MASSO: Sure. I can speak on behalf of the
20 clients that I deal with. I mean in my business,
21 basically, we deal with a lot of these costs. We help
22 them through the costs that they have to subscribe to
23 market data. And I can tell you that many of them are
24 just -- I think the confusion comes from there's not
25 enough transparency around, like, the entitlements. How

1 do they determine, you know, some of these definitions?
 2 People feel like they're paying for things two
 3 and three times, that they're very arbitrary. And I
 4 think that's a big frustration. And it starts to feel
 5 like, you know, you're being ripped off, even if you're
 6 not, because you just -- you don't understand the whole
 7 process.

8 And I think also they kind of live in fear, as
 9 a result of that. Because on the other side of that is,
 10 you know, the exchange that -- you know, we've heard from
 11 the other panelists on the prior panel that, you know,
 12 they've kind of built -- these firms have built, like, a
 13 whole division around just keeping track of entitlements,
 14 keeping track of the number of users, the number of
 15 servers. You know, non-display fees are particularly
 16 troubling for people to wrap their heads around for some
 17 reason. And maybe it just needs, you know, more hand-
 18 holding by the exchanges.

19 Maybe they can, you know, kind of come in
 20 earlier in the process when someone is subscribing to
 21 data and sort of explain it to them. Right now it's --
 22 the process is not -- isn't managed very well, I think.
 23 You know, you subscribe to a data center, let's say, to -
 24 - or a company to pull the data. And right away, if
 25 they're distributing that data to you, they point you in

1 the direction of the number of exchanges that you need to
 2 subscribe -- you know, that you're going to take the data
 3 to fill out these entitlement forms.

4 But there is not much help around there,
 5 there's not much conversation. You go to a website, you
 6 fill out a form, you describe how you're going to be
 7 doing it. And you just don't get any feedback. And I
 8 think that's part of the problem for a lot of firms.

9 MR. DONOHUE: Thanks, Anthony.

10 Tyler, you've had some comments in our common -
 11 - which we appreciate, and we encourage everybody --
 12 (Laughter.)

13 MR. DONOHUE: So perhaps you'd just jump right
 14 in.

15 MR. GELLASCH: Yeah.

16 MR. DONOHUE: And tell us what you think about
 17 SIP transparency and processes.

18 MR. GELLASCH: So I'm going to try to be brief
 19 with my comments, but you all know I struggle with that.
 20 So I generally think it's usually the 168th footnote
 21 that is the one that's really going to persuade people.

22 But, you know, as we start the discussion,
 23 we've heard a lot of discussion, particularly yesterday
 24 and today, about how much the exchanges make on market
 25 data. And we've also seen a lot of interplay of -- are

1 you paying for trading by subsidizing with market data
 2 was just heard earlier.

3 Frankly, I'll start with something that might
 4 be shocking. I don't care how much the exchanges make on
 5 market data. I just don't. The Exchange Act doesn't
 6 care on how much the exchanges make on market data.
 7 Although I do appreciate how much the CTA and the UTP and
 8 the distributed revenues and the enhanced transparency
 9 there.

10 The Exchange Act, actually, the law, cares
 11 about how the exchanges make their money. And when the
 12 SEC adopted Reg ATS and expressly authorized the
 13 demutualization of exchanges, it dedicated about one
 14 paragraph to the whole discussion of what that might mean
 15 to the regulatory framework. There wasn't a whole lot of
 16 discussion at the time, and it makes sense because people
 17 wouldn't think how is this going to impact the markets in
 18 ways that people couldn't imagine.

19 We're going to see -- thank you -- but we --
 20 you couldn't imagine there would suddenly be dozens of
 21 complex order types. You couldn't imagine that there
 22 would be hundreds and hundreds of pricing tiers. And you
 23 couldn't possibly imagine that there would be all these
 24 new market data offerings. And I'll use as an example
 25 one.

1 You know, 2012 connectivity, just for an
 2 example, at one particular exchange was \$2,500 for a 10
 3 gig connection. Then it goes to 4,000, then to 6,000,
 4 then to 7,000, then to 7,500 this summer. At what point
 5 have we boiled the frog? Each of these things is about
 6 how the exchanges make their money, and that's how I
 7 worry about it.

8 So I worry about how can a small firm compete
 9 when it costs \$50,000 per month to get NYSE integrated
 10 and NYSE American and NYSE Arca, connect them all, and
 11 that's before sending a trade. That's before connecting
 12 to the other exchanges. I worry about how a buy-side
 13 firm is going to be measuring its best execution quality
 14 -- and apparently we've had some discussions about that
 15 over the last couple of days -- when they're comparing
 16 their executions to stale prices.

17 So I think we are talking about transparency,
 18 but I do think we have two different buckets. First,
 19 what should we get from the SIP? And, obviously, the SIP
 20 isn't enough information, we've heard that a lot. And it
 21 isn't fast enough. We've heard that a lot.

22 So we'll start with the conclusion. I don't
 23 understand why it can't be at the same speed as the SIPs
 24 -- the SIP can't be at the same speed as the prop feeds.
 25 I also don't understand why it can't include depth of

1 book information, auctions, and odd lots.
2 As for the costs, we need to know them, for the
3 reasons articulated many, many, many times. Distributed
4 revenues are nice, but we need to know the costs. And
5 it's a public utility, it should be regulated like one.
6 That's not me saying that, that's the government saying
7 that. Congress said that in 1975.

8 And by the way, you know, as we look forward,
9 we have to think, you know, what did we see yesterday? I
10 was stunned yesterday when we saw a regulator ask a
11 regulated entity on stage, "Could you provide us with
12 some information about things?" And the regulated entity
13 said, "Nah, this isn't an earnings call. Sorry, we're
14 not going to do that." We have a lot of regulated
15 entities here in the room. I don't know many who would
16 get that by their general counsels, right, who would say,
17 "Yeah, no, we think in a public forum it's a good idea to
18 do that to your regulator."

19 And by the way, with respect to Bill here, and
20 I appreciate his thoughts about maybe just give it to the
21 SEC, I would argue not good enough. Because I don't have
22 confidence that the SEC has the resources dedicated to
23 understanding these things. I don't think that they have
24 the economists. They have some economists, but frankly,
25 not enough dedicated to this.

1 So the second set of questions I want to talk
2 about also addresses the first, which is what should
3 exchanges and the SIPs plans be filing? What should the
4 contents be? We've heard a lot of talk about
5 reasonability of fees. I think that that's a little bit
6 of a sideshow, as well, and I think it does run the risk
7 of getting into rate setting and cost setting
8 conversations. I agree that we need to know that
9 information, but I'd also say the Exchange Act is really
10 clear, what the expectations are. It has to be a
11 reasonable fee. It has to be equitably allocated. We
12 don't seem to see a lot of discussion about that.

13 You know, it's gone as premise today that some
14 firms are paying a whole lot more for trading and data
15 than others. That's been a discussion that we've all
16 talked about. Well, why is that? And who are those
17 firms? So is that really equitable?

18 Same thing with discriminatory. These filings
19 have to be non-discriminatory. And one of the things I
20 find really interesting about the filing is, well, if I
21 were to think about how do I determine if something is
22 discriminatory, it's hard to know that, unless you know
23 who gets it, who doesn't, and what it is. And if you
24 read any of these filings, you don't know that. You
25 don't know who is actually buying the thing, who is not

1 buying it, and what the impact of them is.
2 And then, on competition, what's the
3 competitive value of the service they're offering? Is it
4 really something that's going to make them materially
5 more competitive? We heard it over and over and over
6 again over the last several panels, that you need to buy
7 the fastest information and the most comprehensive data
8 feeds.

9 So as I sit here and think about it, how do we
10 know if it's going to be affecting a competitive burden
11 if we don't know who gets it and what it is. And the
12 only people with that information are the exchanges
13 themselves and they have not provided that in nearly any
14 of their filings.

15 So I want to say -- I want to thank the
16 Commission, frankly, for, over the last year and a half,
17 really starting to dig in. And we've seen it in a number
18 of filings, and we saw it last week, and trying to
19 enforce compliance with the Exchange Act.

20 But there's a lot more to this than just the
21 reasonability of fees. And frankly, that's what I am
22 concerned about, is that the discussion will be what's
23 the profit margin, what should be the profit margin on
24 SIP? Is it 10 percent? Is it 90 percent? The last time
25 it was disclosed it was 89 percent. That was two decades

1 ago. So the question is what should it be?

2 I think that that's only part of the
3 discussion. I think when it's 95 percent, that's a big
4 problem. But I also think we ought to be thinking about
5 what the effect is on competition. Thank you.

6 MR. DONOHUE: Thanks, Tyler.
7 Kevin and Jeff, I appreciate your patience.
8 But now is your time.

9 Jeff, can we start with you?
10 MR. CARRAI: Unless you're good already.
11 (Laughter.)

12 MR. DAVIS: I agree with everybody on
13 everything. Well, and we do agree on a lot of things.

14 I think, you know, our starting point is that,
15 you know, transparency is really the core of NASDAQ's
16 history, its culture, and its values. NASDAQ markets are
17 transparent. We provide, you know, public prices for
18 investors, issuers, and members. The SIP creates
19 transparency by offering prices for Main Street and,
20 frankly, the world. As self-regulators we have
21 transparent rules and transparent fees. As a regulated
22 entity, we have complete transparency to the regulators,
23 to Bill's point. And as a publicly operating company, we
24 are transparent to our investors. We understand
25 transparency. And we agree with Chairman

1 Clayton, when he said that the process of becoming and
 2 operating as a publicly operating company tends to make
 3 companies healthier. And that is definitely true of
 4 NASDAQ.

5 I also want to start by saying, you know, we
 6 have heard what the industry has been saying for the last
 7 two days. We have heard, you know, sensible and
 8 immediate ways for NASDAQ to improve the firm's
 9 experience with market data. We hear it right now. The
 10 contract administration, the billing administration, I --
 11 you know, we can commit to improving on those things.
 12 Frankly, any publicly operated company should make it a
 13 priority to make it easier for their customers to use
 14 their services. And I unhesitatingly commit that we will
 15 work to improve those things, and we have heard those
 16 loud and clear.

17 Now, with respect to non-core data, for us it
 18 is a question about the role of government. We are hard
 19 pressed to find a public policy rationale for more
 20 intrusive government regulation here. The Commission has
 21 often said that producing and purchasing proprietary data
 22 is voluntary. And the pricing can be set by market
 23 forces, provided that the market is competitive, and we
 24 believe it is.

25 I will tell you that at NASDAQ we do not feel

1 like we are a monopoly. We have, you know, roughly 19
 2 percent market share. I don't think there's a major
 3 operating exchange that has more than 25 percent market
 4 share. And the last time I looked, 19 percent market
 5 share does not make you a monopoly.

6 The SIP, on the other hand, is -- I think we
 7 can all agree is a public good, and we share the
 8 industry's view on that, that transparency and SEC
 9 oversight should be extensive and, you know, we think
 10 they are now. I don't think I can say any better than
 11 Emily did on panel five all the steps that have been
 12 taken to improve transparency at the SIPs. So I won't
 13 repeat that. But I will say that we support building on
 14 the improvements that have been made over the past three,
 15 four, five years.

16 So in our written comments you will see that
 17 NASDAQ has committed to support adding an advisor vote on
 18 the operating committee. This has been the subject of a
 19 lot of debate. We sense, like Bill was saying, that it
 20 is really borne out of mistrust. And we think that
 21 having an advisor vote on the operating committee and,
 22 frankly, go to the executive sessions -- I mean provided
 23 all the privilege and other, you know, conflict
 24 information can be worked out, which I'm sure it can --
 25 we think it'll go a long way to dispelling that trust

1 (sic).

2 And, you know, we also support the live
 3 streaming and recording of the operating committee
 4 meetings, which, thankfully, I don't go to any more.

5 (Laughter.)

6 MR. DAVIS: But, you know, I -- like John
 7 Ramsay. I think people will be thoroughly disappointed
 8 and bored when they get to see what happens at the
 9 operating committee meetings. So, you know, I -- right?

10 You know, as far as regulating cost
 11 disclosures, I mean, we start with the fact as -- you
 12 know, it'll be no secret to anybody that the SIP revenues
 13 have been, you know, stable to declining by any measure,
 14 that the SIP revenue -- the SIP data is made available to
 15 retail investors at, you know, little to no direct cost
 16 to them. And, you know, the hesitancy we have around,
 17 you know, deeper discussions into cost disclosures is the
 18 fact that the technology and administrative costs of the
 19 SIP are really just a fraction of the true economic cost
 20 of generating the data.

21 And I will say, I mean, I listened to Dan say
 22 it earlier. The Commission looked at this in 2010 and
 23 said, you know, "This is what the revenue is, and these
 24 are what the costs are," and they looked at it in 1999
 25 and said, "This is what the revenue and this is what the

1 costs are." And the difference was really clear, all the
 2 way back there.

3 The problem is you have to look at what the
 4 purpose of the SIP is, and what the purpose of the SIP
 5 revenue is. And it has been acknowledged all throughout
 6 that time that part of the purpose of the SIP and part of
 7 the purpose of the SIP revenue is to help pay for the
 8 cost of generating the quotes that go into making up the
 9 SIP data. You have to -- the exchanges have to generate
 10 a quote that contributes to the SIP data that is
 11 reliable, that is the product of a well-regulated
 12 process. And it has always been acknowledged that some
 13 portion of the SIP revenue is dedicated to helping to
 14 support that other economic cost of running the SIP.

15 You know, we -- you know, Bill, we agree with
 16 you 100 percent. We should have complete transparency to
 17 the regulator, and we do. We do have complete
 18 transparency to the regulator. We are examined regularly
 19 and routinely and often. We have complete transparency
 20 to the regulator. We give them lots of information. We
 21 will give them all the information that they ask for. We
 22 don't think it should be public, but I -- you know, and I
 23 know that, you know, when you don't see it, it breeds
 24 mistrust, but, you know, we have complete transparency to
 25 the regulator. We answer all of their questions as, you

1 know, fully as we possibly can or, you know, frankly, we
2 are at risk of enforcement actions. So, you know, I
3 don't know, you know -- I don't know that people were
4 aware of that or not.

5 Just to a couple of points, and then I'll wrap
6 up that, you know, people were talking about earlier.
7 The statute. The Exchange Act. I mean, you know, sorry,
8 I'm a lawyer. What happens at the Commission and what
9 happens at the markets and what happens for all of us who
10 are a part of this ecosystem starts with the Exchange Act
11 of 1934.

12 The Exchange Act of 1934 says that exchange
13 filings in certain categories are immediately effective,
14 right? That includes fee filings. It's right there in
15 the statute. The statute was amended in 2010. The
16 category of fee filings was explicitly changed to include
17 market data fee filings because Congress, not the
18 Commission -- Congress decided that they were of such a
19 character that they should be immediately effective.
20 Now, they are also subject to notice and comment rule-
21 making. But, you know, if you want to talk about
22 immediately effective filings, it is a big, big issue.

23 To the -- again, to the statute, the idea about
24 non-discriminatory, that is not quite what the statute
25 says. And it's not quite what the rule says. The rule

1 says not unfairly discriminatory. And there is a lot of
2 history around what that means. And, you know, we were
3 happy to talk about the details. Not unfairly
4 discriminatory has generally been interpreted to mean
5 differentiation is allowed if it is justified.

6 And so we have a lot of differentiation in the
7 rules that has been there for a long, long time. We
8 differentiate between professionals and non-
9 professionals, between display and non-display, between
10 distribution and usage. We differentiate based on
11 volume. You know, you give your highest volume users the
12 biggest discounts. Standard practices in every industry
13 out there and 100 percent consistent with the Exchange
14 Act.

15 I mean we're happy to talk about, you know,
16 what should be in the rule filings. Frankly, we think we
17 do put a lot in the rule filings to explain why we're
18 differentiating and what the basis is. We don't think
19 anybody wants us to say -- and I don't think you meant --
20 you were saying this, Tyler -- we don't think anybody
21 wants us to say who is exactly buying those products, you
22 know, we don't think the firms would appreciate it very
23 much. We would -- you know, we're happy to do that, if
24 people want. But --

25 MR. GELLASCH: I'd like to point out, by the

1 way, I was --

2 MR. DAVIS: Yeah, I was just about finished.
3 I'm sorry, Tyler.

4 If I could, so, you know, I think -- you know,
5 just to wrap up, I mean, we get the points about, you
6 know, best execution and there needing to be some
7 clarity. We get the points about Reg ATS and, you know,
8 and promoting competition. We're happy to talk about
9 those. But I think we -- you know, we have to go back to
10 the starting point, which is what is the public policy
11 rationale for further government intrusion?

12 MR. DONOHUE: Tyler, before you go, I want to
13 give Kevin an opportunity.

14 MR. CARRAI: Please, just for a few minutes,
15 and I promise I'll be short.

16 Look, I think it's important, again, to note
17 that, you know, the exchanges are, by far, the most
18 transparent part of the life of an order in today's
19 equities market. Virtually everything we do as an
20 exchange is outlined in our rule book and readily
21 available for anyone online. The manner in which we
22 book, display, and execute orders is an -- entirely
23 transparent. And then, like most of these, our fees must
24 be submitted to the SEC staff for review, and they are
25 published in the Federal Register for public comment.

1 From the products we offer to the fees we
2 charge, all the information is publicly available,
3 scrutinized by the Commission, and implemented with their
4 review or approval.

5 As we know, there has been an argument,
6 clearly, for greater exchange transparency, and we
7 welcome that opportunity. There is more work to be done
8 in transparency.

9 But I also -- and Mark, you alluded to that at
10 the start of our meeting -- there has been a lot of work
11 that we've done already. We've increased the number of
12 advisors. We have built, I think, excellent
13 relationships with our advisors, and we've made
14 meaningful changes through collaboration with our
15 advisors and our participants on some changes that
16 definitely have moved the ball forward. And I think that
17 we can do more.

18 Look, we've talked about executive session
19 policies, which we believe that we can add to. We've
20 talked about conflict of interest policies, which I think
21 are possible, potentially, through an amendment to the
22 plan, that if we work together -- if we work together and
23 again, collaborate and come together from our corners, we
24 can create something that's a good starting point for us.
25 And we can build upon that. So I do think that there is

1 work that can be done there.
 2 And once we implement those conflict of
 3 interest policies, then you have the confidentiality
 4 policies. So I think the confidentiality policies is
 5 also really, really important to make it free and open
 6 among the advisors and the participants to be able to
 7 speak without having a fear that the next day, you know,
 8 a -- just a, you know, a completely thought-out item or
 9 proposal will be in the paper next day for you to have to
 10 address.

11 So I think that we can get there. I think it's
 12 going to take some time. I think it requires
 13 collaboration, it requires compromise. But I definitely
 14 believe that it's possible.

15 One of the things that I want to mention here
 16 is, you know, we talked a little bit about -- Bill has
 17 talked a little bit about the way in which the policy
 18 aspect and the reporting aspect works with regard to
 19 market data. What the operating committee has done to
 20 try to help that along in terms of what we call audits,
 21 or market data audits, is to develop a system -- CTA has
 22 developed it, it's called UCert, where you can provide
 23 information on your customers and get a report back that
 24 shows you whether or not that individual could be a
 25 professional. And that's very helpful, because, you

1 know, we are certainly not interested in the gotchas.
 2 We're not -- you know, everyone might talk about, oh,
 3 wow, look how much they made in revenue recoveries.

4 But the fact is, if we had no recoveries, it
 5 would be great, because that means that people -- the --
 6 those are taking our data and reporting the usage, or
 7 reporting the most accurate usage possible. They
 8 themselves want to make sure that they've got the
 9 appropriate categories. Because again, you know, if it's
 10 the case that they're charging their customers for
 11 professional use, they don't have an opportunity to go
 12 back and say, oh, by the way, you know what? I should
 13 have charged you for a year's worth of your usage, right?

14 Here's the thing. We only have one firm that's
 15 using it. Only one. So why is that? Why is it that we
 16 only have one firm? We've got a system available to help
 17 them manage their usage, but yet we have one firm that's
 18 taking advantage of it. We need more to do that.

19 And I don't know if it's that it's a trust
 20 factor, you know, it's sort of like, oh, geez, I give you
 21 my data and all the sudden you're going to then hit me up
 22 with an audit, or something. We got to get past that,
 23 because I know that we can help our customers do a better
 24 job in making sure they're doing the reporting and paying
 25 their fees accordingly.

1 MR. DONOHUE: Sorry, I appreciate that. I'd
 2 like to flip the question. So instead of what should be
 3 transparent, what should not be transparent? What
 4 confidentiality -- what information must remain
 5 confidential? And let's think about it from the SIP
 6 perspective, especially as we consider doing a WebEx of
 7 the operating committee meeting.

8 But so, if I could go back to Kevin and Jeff
 9 and think about what issues are just critical that they
 10 are -- they remain non-public --

11 MS. HINMON: Mark, can I jump in real quick?

12 MR. DONOHUE: You can.

13 MS. HINMON: I just wanted to jump in front of
 14 Tyler first. But more than anything, going back to the
 15 WebEx -- and I really appreciate that NYSE has said,
 16 "Hey, let's put everything out in WebEx," and that you're
 17 holding hands with NYSE on that one, but I think that if
 18 we do go to -- besides beyond mind-numbingly bored during
 19 the time that the WebEx is cast, I think that if we do go
 20 to WebExing the sessions, I really believe that it will
 21 stem a lot of productivity in the meetings. I think
 22 people will be less incentivized to speak, I think,
 23 public forums -- maybe including yourselves.

24 And I think that's very important, that maybe
 25 an alternative to WebEx would be a release of the

1 minutes, rather than the current watered-down version and
 2 the summary that's there. Just a thought.

3 MR. CARRAI: I tend to agree with you. I
 4 think, again, sort of my thoughts on making sure that
 5 there is free and open discussion, that it's confidential
 6 among the entire community, including the advisors, will
 7 give everyone a feeling of comfort that they can speak
 8 openly and freely and, again, collaborate on what's best,
 9 what's best for the SIP.

10 MR. DONOHUE: So why don't we continue on this
 11 thread, just for a minute, and we'll go back to my
 12 earlier question.

13 So WebEx -- so in helping transparency, WebEx
 14 versus increased detail in minutes, as opposed to
 15 summaries, what's the panel's thoughts?

16 MR. DAVIS: You know, from my perspective, I
 17 think that the number of items that are in the executive
 18 sessions where, you know, a lot of this mistrust has been
 19 born, has been limited to legal actions, and has been
 20 limited to, you know, collection actions or disputes that
 21 involve specific firms.

22 And, you know, so at least as far as the
 23 executive sessions go, I think if we can work out a way
 24 to keep those kinds of discussions confidential,
 25 everything else has been in the general sessions.

1 And I think we're agnostic between detailed
2 minutes and the recordings. You know, I agree with
3 Kevin, whatever promotes the most, you know, free
4 discussion and will make the advisors and the industry
5 trust what is happening there a little bit more.

6 MR. DONOHUE: Tyler?

7 MR. GELLASCH: I don't think any of it matters.
8 Frankly, I think it's a better view at a train wreck
9 that's already happened. I don't really care about the
10 outcome. So whether or not I get to read about it or
11 whether or not I get to watch it in a slightly more --
12 I'll call it held-back version of folks who may feel less
13 comfortable opening up on a WebEx, or they may be more
14 comfortable with a -- being typed up and polished
15 minutes, I think the discussion of more thorough and
16 thoughtful minutes is always a useful one. Just having
17 been a lawyer long enough, I've seen that minutes that
18 maybe start very good have a tendency to get diluted over
19 time, anyways.

20 But again, I think until you focus on the
21 fundamental structure of who has rights to vote, what
22 those rights are, I don't necessarily think transparency
23 into it.

24 And go to the point of having a single advisor,
25 or having a single vote here, I think the point was

1 raised several times earlier. Just being outvoted and
2 losing doesn't really change the outcomes.

3 So, you know, I would just offer as one of the
4 very few people who would probably watch the WebEx and
5 read the minutes, if there is both, I'd love to. I would
6 just say I don't think that actually fundamentally
7 changes any of the issues we're talking about.

8 MR. DONOHUE: So let's go back to my prior
9 question. And maybe, Jeff, you may have already answered
10 it. But what information about SIP processing, about SIP
11 systems, all this stuff, what must remain confidential?

12 MR. DAVIS: I think I did, you know, answer
13 that. I think it is very, very limited to, you know,
14 what is necessary to protect the legal privileges, what
15 is necessary to protect some of the firms', you know,
16 individual rights, you know, proprietary rights or
17 privacy rights, however you think about them.

18 You know, if I could just, you know, revisit
19 the earlier point about full transparency to the
20 regulators, I -- you know, I think we would invite, you
21 know, some inquiry, you know, by the regulators into, you
22 know, costs that you are interested in knowing. We are
23 very, very open to that. You know, I think it is just a
24 really, really complicated thing, when you go down the
25 path towards rate-making.

1 And I'm sorry, you know, you can't have
2 government-set cost formulas without, you know,
3 government intrusion and rate-making. You can't have,
4 you know, a cost-based system without rate-making. And
5 rate-making involves really serious -- I think Tyler said
6 it best, you know. You need the economists, you need all
7 sorts of expertise to do that. And I think it is, you
8 know, a complex process.

9 And I think at the end of the day we would all
10 be better off just having some guidance about what -- you
11 know, what is the real purpose of the SIP? What is the
12 purpose of the revenue from the SIP? You know, what are
13 the logical and proper uses for the revenue for the SIP?
14 And then we can talk about whether, you know, the
15 revenues are, you know, reasonably tied to that or being
16 used properly for that. And that would be, you know, a
17 path to moving the conversation forward.

18 MR. GELLASCH: I actually want to touch on
19 something you mentioned earlier about the uses of SIP
20 revenues. I will encourage you to -- our comment letter,
21 it's 208 pages. And I believe it is attachment 1, which
22 begins on page 43. And it is the -- it was the filing we
23 submitted for this roundtable. And it is the original
24 CTA plan.

25 And one of the things you will find in that --

1 and, by the way, it's not -- it wasn't available online
2 anywhere, we had to go through offsite storage to dig it
3 out -- but it's actually not true that the SIP was
4 originally envisioned as a way to compensate for
5 regulatory purposes or for trading purposes at all. It
6 was never mentioned in the creation of the SIP, never
7 mentioned in any of the several speeches in 1972, when
8 the SIP idea was originally thought of. It was not
9 mentioned in 1974, when it was originally constructed,
10 much less 1975, in the Act. In fact, if you read the
11 original plan, it -- the whole purpose was, in fact, to
12 provide real-time essential data.

13 So I just want to go back and say you talked
14 about the purpose of the SIP being to use those revenues
15 for other purposes. No, no, no, no, no, not originally.

16 And there has subsequently been a discussion by some
17 staff to say, hey, we'll -- those extra profits -- there
18 was a concern in 1999, and I'm sure that's what you were
19 referencing, that said, hey, in 1999 there was a concern
20 that if you run the SIPs at cost, the exchange, who are
21 now going to be for-profit, will all of the sudden have
22 concerns with how are they going to fund their regulatory
23 oversight functions. That's one paragraph, and I do
24 appreciate that paragraph, and good of you to find it,
25 but that was in 1999, not 1972, '74, or '75.

1 I'll also point out that doesn't mean that we
2 can't agree that that may be something that's worthwhile
3 to have. I think that that's also a separate discussion
4 that this Commission would be worthy of engaging in, is
5 what's the appropriate regulatory function.

6 I also want to point out to something you
7 mentioned a little bit ago, which was the SEC and the
8 immediately effective rule filing. So in 2010 I actually
9 had the unlucky misfortunate of working in the Senate
10 staff and working on the Dodd Frank Act, and, frankly,
11 being involved in this provision.

12 And one of the things I would say is it
13 deliberately did not -- and, in fact, was contemplated to
14 but did not relieve the Commission of the burden to
15 review and pass judgement on regulatory filings. The
16 concept of immediately effective did not say that the
17 Commission is now relieved and, in fact, expressly does
18 not relieve the Commission of the burden of finding that
19 these things are compliant with the Exchange Act,
20 including the discriminatory and undue burden on
21 competition.

22 So I just want to clarify a couple of things
23 you mentioned earlier. I appreciate that. I'll let it
24 go.

25 Oh, one last part, sorry. Justification. We

1 individual markets, not by the networks. If, for
2 example, an SRO system breaks down on a high-volume
3 trading day, and it can no longer provide its data to the
4 networks, investors would suffer the consequences of a
5 defective data stream, regardless of whether the networks
6 were able to continue operating."

7 Also, it said, "We must maintain high standards
8 of SRO performance. Without the data they produce, it
9 would be worth very little."

10 So this is coming from Reg NMS, so that means
11 our costs are used to create a quality data stream that
12 goes to the SIP in order for our investors to have the
13 best prices and best quotes possible.

14 So let me then go -- let me talk, then, for a
15 second about fee filings, right? So let's talk about a
16 connectivity fee, physical port fee. So right now we
17 charge \$2,500 for a 1 gig physical port connection,
18 \$7,500 for a 10 gig. That gives you the ability to
19 access seven of our exchanges, okay? That's seven
20 exchanges with one port. So obviously, there is a lot of
21 value there for you to be able to gain by using that one
22 port to access seven exchanges.

23 I don't want to use that port. What am I going
24 to do? Well, you have an extranet provider. Oh, well,
25 that provider is very slow. But you know what? The

1 mentioned that things have to be justified, and I agree
2 that the filings do have to be justified. I'll ask you a
3 question, because it isn't your exchange. So bear with
4 me for a moment, and I'll ask Kevin, as well.

5 Outside of the SIP, if we were talking about
6 exchange filings, and we were talking about the
7 reasonability -- and let's talk about the prop side for a
8 minute, and maybe some connectivity filings -- what would
9 be the rational justification, a pro-market
10 justification, or a pro-competitive justification, a non-
11 discriminatory justification for a fee for connectivity
12 for the exact same connectivity offering to go from 2,500
13 to 4, to 6, to 7, to 7,500?

14 And if so, what would you want to know? What
15 would be the information you think the Commission should
16 have to evaluate that as being a competitive -- what
17 would be the information you think the Commission should
18 have at its disposal to understand that that's compliant
19 with the Exchange Act?

20 MR. CARRAI: So let me first go back to your
21 comments about filing the -- by the SEC. But so the SEC
22 did, in its Reg NMS ruling, make a statement that I think
23 is pretty important, and I'm going to mention it and sort
24 of paraphrase: "Yet the entire financial burden of
25 collecting and producing market data is born by the

1 extranet providers have gotten a lot faster because they
2 realize that they've had to compete.

3 Number two, you can use what we call a managed
4 service provider. This is an organization -- and Jarrod
5 knows, because he's one of them, Jarrod Yuster -- this is
6 an organization that supports customers in the facility,
7 just a cross-connect, and they can access the market.
8 They can -- yes, they have to pay the 2,500 or 7,500, but
9 they can support multiple customers over that same
10 circuit.

11 Smart order router. I don't even have to use
12 that. I can get a very fast smart order router and route
13 my orders through the exchange.

14 So you know what? There are multiple
15 alternatives to this physical connection. And to say
16 that they have to buy it is absolutely wrong.

17 MR. CONTI: That's still, though, a value-based
18 model and not a cost-based model. What does it cost you
19 to maintain that one port, because you're selling that
20 port to multitudes of people? So we're just looking for
21 some transparency to get closer to a cost-based model.

22 The reason we want to do that is it will --
23 that, plus full transparency to the SEC, once we get to a
24 baseline of rationalized, justified fees, that's when we
25 could move forward. And they should be cost-based for

1 the dissemination of the market data.
 2 MR. CARRAI: As the happy Chris and the angry
 3 Chris both said, you know, the -- look, the cost of a
 4 port is not really just the cost of a port, right?
 5 You're talking about the entire infrastructure and the
 6 entire capacity --
 7 MR. CONTI: So show all of it. So let's see
 8 that whole stream.
 9 MR. CARRAI: Okay, all right. So the one thing
 10 I would say is that, as everyone knows, we're operating
 11 in a highly competitive marketplace, multiple exchanges
 12 competing together. And that means that we've got
 13 infrastructure that's proprietary and confidential, and
 14 then certainly certain public disclosures, I would think,
 15 would cause a concern from a security perspective, just
 16 because we want to make sure that we are operating within
 17 the national market system appropriately, and not
 18 potentially or negatively affecting our customers.
 19 We would be open to looking at providing
 20 confidential information to the SEC, based on the
 21 request, but we are not open to publicly disclosing, you
 22 know, our proprietary information, everything about --
 23 everything that's -- what we consider to be confidential
 24 about our infrastructure.
 25 MR. GELLASCH: Then how can we evaluate it and

1 determine it and make comments?
 2 MR. CARRAI: It is the SEC's obligation to be
 3 able to take in that data and evaluate it to determine
 4 whether or not they believe that it's appropriate. So
 5 it's the SEC's obligation.
 6 MR. GELLASCH: So --
 7 MR. DONOHUE: Let me give Rich an opportunity -
 8 -
 9 MR. STEINER: Can I --
 10 MR. DONOHUE: He's been down in the corner --
 11 MR. STEINER: I can appreciate that it's
 12 complicated. I think everybody in here can. We can also
 13 appreciate the legalese and the technical nomenclature.
 14 But in laymen's terms, if anybody is still actually
 15 watching us at 4:00 p.m. on a Friday, maybe someone can
 16 touch on some of these things.
 17 As far as market data being competitive, your
 18 clients have been here for two days, traveled from where
 19 they do their business down to Washington to talk about
 20 that. And it seems to me that we feel, collectively,
 21 that market data isn't competitive. No one here, though,
 22 is suggesting government rate-making. Rather, we want to
 23 better understand how the fees being charged are
 24 reasonable and non-discriminatory.
 25 Our clients demand an exceptional amount of

1 detail and transparency about our trading platform and
 2 how it operates. But when we go downstream, it is quite
 3 challenging, indeed.
 4 So if we maintain the status quo, how do you
 5 propose member firms like ours, operating on behalf of
 6 institutional and Main Street investors, get a better
 7 understanding of how market data products are being
 8 developed, and how the fees are justified?
 9 MR. DONOHUE: I don't think that was a question
 10 for me.
 11 (Laughter.)
 12 MR. STEINER: It wasn't.
 13 MR. DONOHUE: Do either -- anybody want to
 14 respond on the panel?
 15 (No response.)
 16 MR. DONOHUE: So let me take this and ask a
 17 different question, slightly different question.
 18 MR. REDFEARN: I want to see if we can get an
 19 answer to that one. I mean does anybody have -- because
 20 we actually have a similar challenge, and I'm hearing a
 21 little bit about the -- you know, the -- more information
 22 could potentially be provided to us, which I think would
 23 be helpful. But I am wondering if you have an answer to
 24 that.
 25 MR. STEINER: Thanks, Brett. Real quick, I

1 mean, that's kind of what I'm getting at.
 2 I'm sensitive -- and Mark, you asked the
 3 question before I did, but I had that down here -- I'm
 4 trying to understand what could be so sensitive regarding
 5 how the market data is developed and processed that could
 6 be so incredibly important and proprietary, no less in a
 7 system that has, effectively, no competition, like the
 8 SIPs, that the regulators can see it, but folks like us
 9 can't. And I don't know how, if -- in the absence of
 10 that, we can say this is reasonable and justified.
 11 And at the end of the day you run into a couple
 12 of problems. One, our platform, when we spend the
 13 millions of dollars we do on market data, has less to
 14 invest in other things that could actually help our
 15 clients. And two, as Joe Wald said and many other firms
 16 who are not here -- feel that it's an incredibly high
 17 barrier to entry. And so you get less competitive, to
 18 which Melissa and I were discussing.
 19 I don't know if, Melissa, you want to touch on
 20 that a little bit, but how that affects, potentially, the
 21 wider ecosystem.
 22 MS. HINMON: Oh, are you referring to small or
 23 mid-tier brokers and the ability for them not to compete
 24 in the marketplace with the bigger people? Yeah, that
 25 came up a couple times. I think Matt maybe brought it up

1 and Simon and a couple other people and Joe Wald. His
2 product's been pretty good for that group of brokers.

3 But one thing that has to be -- if the cost of
4 data is so expensive, and as you slide down the scale in
5 the size of a broker-dealer, often times smaller brokers,
6 mid-tier brokers, they have a special sweet spot in small
7 cap and micro-cap stocks through various relationships
8 with them.

9 For active managers who are in the space of
10 micro-cap and small cap stocks, they are a really good
11 source of liquidity, amongst other things. And I fear
12 that if it becomes too expensive for these smaller
13 brokers to participate on a level footing in the
14 marketplace, that we're going to lose that ability for
15 capital formation for smaller companies. And investors,
16 the asset managers, the asset owners themselves won't
17 have an opportunity to invest in those companies.

18 MR. DAVIS: If I could --

19 MR. DONOHUE: I'm not sure exactly where we are
20 in the conversation between SIP and prop, but we have
21 blown through.

22 MR. DAVIS: Yes. Yes, we have. So if I could
23 just make one more point to follow up on Kevin's about
24 the SIP, and then maybe take a shot at some of these
25 questions about prop data, we mentioned earlier on one of

1 many have actually done that? Four: IEX, ARCA, BATS,
2 and Direct Edge. Four out of over a hundred.

3 And why is that? I mean if it is so easy to be
4 an exchange, and it is so lucrative to be an exchange,
5 why is it that only four have become exchanges, when they
6 have all had the opportunity to? The reason is it's hard
7 work and it is expensive work. And the SIP revenue, as
8 I've said, is, at least in part, designed to help
9 compensate exchanges for doing that work, in addition to
10 all the other regulatory work that they do.

11 Secondly -- and you'll see this in our written
12 comments -- the purpose of the SIP revenue, in our view,
13 is to incentivize certain good behaviors for the market.
14 And this, again, comes from Reg NMS, where, you know,
15 for a long time the revenue was allocated according to --
16 100 percent according to trades, where they occurred.
17 And then the Commission decided that it wanted to
18 incentivize conduct that created better quotes, better
19 price discovery, and they shifted the formula to 50/50
20 quotes and trades.

21 And, you know, so some of that money is used
22 directly that way, to promote quotes that, you know, help
23 form a better BBO and help Main Street investors. But
24 there's other uses for that money, too. You know, and
25 Tom Wittman from NASDAQ mentioned it yesterday, it's in

1 the panels that we feel like there is a pro-competitive
2 use of the SIP revenues, right, in addition to paying for
3 the administration and the technology and supporting the
4 regulatory function needed to generate, you know, high-
5 quality quotes that make up the SIP feeds.

6 There is also a pro-competitive use of the
7 funds. And there is actually a couple of them, right?
8 One is it promotes entry by new and competing exchanges.

9 I think the number came out before that in their first
10 year of operation IEX gathered \$9 million of SIP revenue.

11 And you know, we compete hard against them, and the
12 reason that they are -- you know, one of the reasons
13 they're an effective competitor is because they had ready
14 access to the SIP revenue. And that -- there is a long
15 history of that.

16 I mean, as Tyler said, you know, the -- since
17 Reg ATS was adopted in 1998, there has been sort of a
18 shift, you know, in the competitive environment. And
19 basically, what Reg ATS said was, you know, all ATSs are
20 essentially, effectively, exchanges, but they're exempt
21 from some of the requirements, like registration. But
22 they can choose to operate as, you know, ATSs with
23 broker-dealers, or as exchanges, right?

24 So in the 20 years since Reg ATS was adopted --
25 and there have been, you know, 100 or more ATSs -- how

1 our written statement. NASDAQ takes 83 percent of the
2 money from its TRF revenue -- and the TRF gets revenue
3 from trades that are reported to the SIP -- we take 83
4 percent of that revenue and we share it back to the firms
5 that report those trades.

6 Our fee schedule is fully transparent, it's up
7 on the website. At the highest tier -- and again, we
8 differentiate according to volume -- 98 percent of the
9 revenue attributable to trades that go to the SIP are
10 shared back to the firms.

11 And, you know, we thought, again, you know,
12 that there is some misperception out there that, you
13 know, we're just raking in all this money. But, you
14 know, over the last five years we did receive \$272
15 million from SIP revenue attributable to the TRF, but we
16 shared \$232 million of that back to the firms. So NASDAQ
17 kept 40 and the firms got 232.

18 And you know, I think we wonder that when, you
19 know, firms are talking to their institutions, and
20 they're talking about TCA analysis, are they sharing the
21 fact that this revenue goes back to them, or are they
22 just sharing the fact they pay X amount for prop data,
23 they pay X amount for -- or X amount for SIP data? Do
24 they also mention that they're getting, you know, \$232
25 million back from the trades that they report?

1 MR. DONOHUE: So I want to give Anthony a
2 chance to speak, but I want to follow up on that one
3 point, because that's additional transparency that we
4 didn't have before yesterday. And I think it's very
5 helpful, as we think through our market structure and how
6 things work.

7 How do we figure out that that TRF money that
8 you're earning is a fair and reasonable amount of money
9 for the fee? If you're changing the fee, how do you
10 figure that out? What do we need in the -- what
11 transparency do we need in a fee filing? What
12 transparency must be public? And, now that we've teed
13 this up, what transparency should we have so that we can
14 evaluate that issue?

15 MR. DAVIS: Yeah, and I think you have --

16 MR. REDFEARN: Were we turning it over to
17 Anthony on that --

18 MR. DONOHUE: I was going to get right --

19 MR. DAVIS: Sorry.

20 MR. MASSO: No worries, no worries. So I just
21 wanted to quickly follow up on Melissa's point about the
22 medium and small-sized brokers. I think the same can be
23 said for technology companies, as well. As market data
24 has increased, you know, looking over the past five
25 years, I just see many, many problems that these firms

1 have.

2 You know, there are solutions, I think, to
3 those problems. But you know, these reg tech companies
4 are not trading with that data. They're using it for
5 other purposes. And no one is asking the questions. You
6 know, the exchanges are not asking us the questions,
7 okay, what are you using this data for. Arguably, you
8 know, compliance systems are -- you know, we should want
9 to promote that policy, we should want many firms to be
10 able to use it, small and large. And, you know, the
11 increase in market data has, you know, really increased
12 the costs associated with compliance.

13 And, you know, if your model of -- you know, is
14 really heavy into analyzing data, if that's what your
15 compliance system is doing, the cost to -- you know, it's
16 such a bar to -- a barrier to basically get into that,
17 because there's no way to ease into it. The minute you
18 start taking that data, they're charging you 100 percent.

19 You know, maybe there is some things we can do.
20 Like, we talked -- like Jeff was talking about
21 differentiation. Maybe we can look at those. Like, you
22 know, why are these companies using the data? If it's
23 compliance-related or if it's -- you know, maybe
24 development is going on. Maybe there is something that
25 the exchanges can do. Because I feel like, you know,

1 it's only in the exchange's interest to, you know, kind
2 of give a little bit of an on-ramp to a company that will
3 ultimately end up being their customer.

4 So I think that's a reasonable solution to a
5 problem of increasing data. But, you know, you have to
6 look at why the companies are using --

7 MR. DAVIS: That makes a lot of sense to me,
8 Anthony, I have to say, a pro-regulatory policy like
9 that.

10 MR. GELLASCH: Yeah -- no, that's all right.
11 The same point on small brokers. One of the things I
12 want to weave together, two points that were just made
13 about something that Jeff had mentioned as well as
14 Melissa, and now Anthony has sort of launched into is the
15 competitiveness of smaller brokers. And, you know, we
16 clearly need the diversity of that, and the buy side is
17 very committed to that.

18 But when we think about market data, market
19 data is a cost that essentially is a tax of having to do
20 business. And we're now hearing that there is a
21 competitive aspect to that. So the tax revenues that are
22 collected from market data may be redistributed
23 elsewhere.

24 Okay. Well, if you're a small broker, you're
25 going to be paying that tax. So that's a competitive

1 burden on you that may be disproportionately falling on
2 you, as opposed to a larger firm. Now you go to trade.
3 Well, the revenues from the market data may be
4 subsidizing the trading. Well, if you're a smaller
5 broker, you probably don't have nearly as good a pricing
6 tier.

7 So now you're getting hit twice. You're having
8 a disproportionately harder -- higher tax on you, on a --
9 per basis for -- on the market data. At the same time,
10 the revenues that are promoting trading are more likely
11 to be going to your larger competitors with significantly
12 larger volumes. So you have two interconnected things.
13 One, the market data, but, two, the pricing tier on the
14 other end, both of which are hurting the smaller broker.

15 MR. CARRAI: I just want to mention one thing.

16 So for Cboe, you know, we had, just as other exchanges
17 have, non-display fees. When we introduced our non-
18 display fees, the one thing that we were very concerned
19 about was the small broker-dealer, particularly those who
20 are managed through managed service providers. So we
21 specifically exempted those broker-dealers from receiving
22 a non-display fee. Again, because we knew that they --
23 that would prevent them from getting our data and,
24 frankly, they would choose not to get our data.

25 So we specifically exempted them because we

1 knew that it would be too much for them to spend. So we
2 -- you know, we do take a look at who it is that would be
3 getting -- taking our data, and whether or not it -- the
4 -- we believe the price would be too high for them to
5 accept, and therefore not take it all.

6 MR. DONOHUE: So let me go back to the question
7 I just asked, and I'll re-frame it slightly.

8 The next SIP fee filing. So it could go up, it
9 could go down. The same evaluation from our side has got
10 to happen. What do we need in that fee filing? And what
11 do you need in that fee filing in order to be able to
12 effectively comment on it?

13 MR. DAVIS: There's been a theme throughout the
14 last couple days that I think this sort of touches on.

15 As a regulated entity, we would love more clarity around
16 that, right? I hate to flip it back, but I will say --

17 PARTICIPANT: Well done, well done.

18 MR. DAVIS: On best execution --

19 (Laughter.)

20 MR. DAVIS: -- on what is required for costs
21 and filings, we would love to know that, right? I think
22 it would help a lot of people in this room.

23 PARTICIPANT: I have suggestions.

24 MR. DAVIS: If the Commission --

25 PARTICIPANT: Absolutely, and part of it is --

1 MR. REDFEARN: There is -- something probably
2 needs to have some explanatory power to it. Let's start
3 with that.

4 MR. GELLASCH: So we offered the -- an
5 objection to that abrogated filing. And so I feel
6 somewhat comfortable in having gone through this process.
7 And essentially, what we did, and what I think the
8 Commission would be wise to do, and what I hope we could
9 work together on ahead is looking at the Exchange Act and
10 saying, "Here is each of these elements," as an economist
11 would do, and say, "Look, what are the -- what's the type
12 of information that we would need to know whether or not
13 this filing is discriminatory?"

14 Again, I go back to I don't see how you do that
15 without identifying the types of firms that get it, the
16 types of firms that don't, and what it is. I -- so for
17 every single thing, for competition, I don't understand
18 how you could effectively evaluate or the Commission
19 could effectively evaluate whether or not something is an
20 undue burden on competition without seeing who gets it,
21 who doesn't, and what the value of it is, vis-a-vis
22 themselves, separately from vis-a-vis SIP versus the prop
23 feeds of any individual exchange or exchange family.

24 MR. STEINER: I would just say that if we had
25 our way, we would -- you know, we would like to see a

1 MR. DAVIS: Sorry, can I --

2 PARTICIPANT: Sure, sorry.

3 MR. DAVIS: It would help a lot of people in
4 this room -- exchanges, institutions, brokers, non-
5 profits -- for the Commission to give us clear guidance
6 on what best execution means to them. Plain and simple.
7 Prop feeds, SIP feeds, something else? We think there
8 is a lot of uncertainty and a lot of misinformation out
9 there. We would all benefit from more clarity.

10 On the SIP filing from not too long ago that
11 was abrogated, my understanding is we asked for some
12 clear and written guidance on what is required for SIP
13 filings, and we really -- I think we really mean it. If
14 you tell us what is required or, you know, what you would
15 like, we will put it in there, whether it's public or
16 confidential. You know, whether it's for you or for the
17 whole industry. You know, we can talk about it.

18 But in a lot of ways, as a regulated entity, we
19 can relate to what a lot of people have been saying the
20 last two days, that more clarity would definitely help.

21 MR. DONOHUE: So I'll just return it right back
22 to you. What do you think we should have, though? I
23 think we can come back to you at some point, but I think
24 that's the real question.

25 MR. GELLASCH: So --

1 disclosure of all revenues and costs, itemized by product
2 and service, associated with the collection and
3 dissemination of market data, as well as the number of
4 clients that use these products. That would be helpful
5 to us, and our clients.

6 MR. CONTI: Yeah, a granular -- a more granular
7 view. I appreciate you -- that -- you being transparent,
8 but I think it's not transparent at the granular level
9 that is now needed to make the right decisions.

10 MR. CARRAI: This is -- and here is the
11 problem. The problem is that then you get down to the
12 level of identifying which firms have how many users, and
13 that's not something that, you know, I don't think that
14 we would feel is something that we should disseminate
15 publicly.

16 MR. STEINER: Can't we obfuscate that? I mean
17 we have --

18 MR. CARRAI: You know what? I don't --

19 MR. GELLASCH: To be clear, if there is
20 something that's only used by one firm, I actually think
21 that is relevant for the discussion of whether or not
22 it's a fair or non-discriminatory or anti-competitive.

23 MR. CONTI: And again, that's something that
24 could be just given to the SEC, and not made public. But
25 giving granular transparency by product --

1 MR. CARRAI: I don't have a problem with
 2 private disclosure to the SEC. I do have a problem with
 3 it being public disclosure that everyone then sees and,
 4 you know, could create some unintended consequences.
 5 Because at the end of the day -- so we -- we've
 6 all talked about the individual investor in both of these
 7 days. You know, we want to create a price that promotes
 8 the most use from the individual investor, the retail
 9 investor. And that should be our objective, you know?
 10 And so our pricing should reflect that. And it -- in
 11 some -- you know, if the cap -- if that's what we need in
 12 order to be able to do that, then we should be able to do
 13 that.
 14 Again, I don't have a problem with providing
 15 confidential information, but as long as we all
 16 understand that's what the objective is.
 17 MR. GELLASCH: How many economists is the SEC
 18 going to hire in order to evaluate the confidential
 19 information? Because the entire rest of the world would
 20 be unable to view that information.
 21 MR. REDFEARN: We have a lot of economists
 22 here. There's quite a few. I mean they're working on a
 23 lot of different things.
 24 MR. GELLASCH: I appreciate, Edwin, you and a
 25 few others, but I would encourage -- I would question

1 whether or not the staff is appropriately equipped to --
 2 MR. REDFEARN: I mean I think that -- I feel
 3 like this is a productive discussion, and I like the
 4 direction it's moving in, because we are talking about
 5 bringing more information to the table. And it could be
 6 on a specific thing, and it could be in a big-picture
 7 way. But more information and more detail certainly
 8 helps us to do what we need to do. I think that we might
 9 have less detail than, you know, some might imagine in
 10 certain circumstances. And so more would be helpful.
 11 I think we have -- you know, we have bigger-
 12 picture things we need to look at in terms of the sort of
 13 the pool, and how it's evolved over time, because there's
 14 a lot of misunderstanding about, you know, was it for --
 15 I mean I remember when there was -- it's paying for
 16 regulation, that's what it's for. Is it paying for other
 17 things? I didn't realize that in, you know, in 1934 or
 18 whatever -- I didn't do -- maybe haven't read your page --
 19 - what was that, again, in your --
 20 MR. GELLASCH: Page 43, 1974, first version --
 21 MR. REDFEARN: I got to, like, 41, I think.
 22 (Laughter.)
 23 MR. REDFEARN: But, you know, I think that that
 24 would be probably worth knowing. We have -- you know, I
 25 think when non-display fee filings initially came in,

1 there was an articulation that it would be revenue-
 2 neutral, right? And I think, you know, it's probably
 3 worth drilling down on that and how that has worked a
 4 little bit, historically.
 5 I think there is a question about if competing
 6 products were created that actually took users away from
 7 the SIP, so it didn't compete and it lost users, there is
 8 a question of, if you lose users, do you lose revenue or
 9 do you find other ways of allocating it to other people?
 10 I think that's probably a relevant question that we
 11 should ask, as well, when we think about, you know, how
 12 things have evolved a little bit.
 13 So I think there is a lot of things that we
 14 need to look at, but the more information that we have,
 15 and as we're -- obviously, we're very serious about sort
 16 of drilling down into these questions. You know, we look
 17 forward to working with all of you to sort of try to
 18 figure that out better.
 19 MR. DONOHUE: If I could just ask Kevin a
 20 follow-up question on the -- the information that you
 21 think is appropriate for the Commission only versus the
 22 public, is that really limited just to firm-identifying
 23 information?
 24 MR. CARRAI: Yeah, it would be firm-identifying
 25 information and the quantities, because --

1 MR. DONOHUE: But as --
 2 MR. CARRAI: -- obviously, then that relates to
 3 how much they pay into the SIP on -- and again, on a per-
 4 user basis.
 5 And, you know, so the thing that you want to
 6 make sure -- this is where it becomes very difficult,
 7 right? You could say, you know, this is a utility, there
 8 shouldn't be -- no cap, right? But if you have a small
 9 number of firms that represent hundreds of thousands of
 10 individual investors, do you want to go ahead and create
 11 an incentive for them to not give them the consolidated
 12 data? I don't think we want to.
 13 So, you know, having that information will help
 14 you better understand sort of the rationale behind the
 15 pricing, and it does have to be confidential, I think.
 16 MR. SHILLMAN: But the more granular
 17 information by product, both cost and revenues, as long
 18 as it doesn't identify the customer, you're good with
 19 that being in the filings?
 20 MR. CARRAI: I think so, yes.
 21 MR. SHILLMAN: Okay.
 22 MR. CARRAI: Yeah.
 23 MR. DONOHUE: So we're almost done here. And I
 24 promised myself I would end early. But I was hoping,
 25 quite frankly, to have something for the SIP operating

1 committee to do on Monday. We've got plenty to do on
2 Monday, but some directions or suggestions for them to
3 consider. And let's focus on the transparency issue,
4 because that's what the panel is about.

5 So there is a discussion of full transparency,
6 and there is a discussion of what should remain
7 confidential. Where is the middle ground that the
8 operating committee should start considering on Monday?

9 MR. CONTI: So I think that's something we need
10 to discuss and get to.

11 You know, just to echo some -- and to tie that
12 into some sentiments that were echoed by Kevin before,
13 and Emily, you know, within the CTA UTP operating
14 committee, we have carved out in the last year and a half
15 or so some subcommittees, the distributed SIP
16 subcommittee. Kevin and I are on the market data
17 administration subcommittee. I think that's something we
18 would take back to a subcommittee and discuss, because
19 these subcommittees actually have been very informal,
20 very collaborative, very open, very productive.

21 As Kevin said before, I think we're actually
22 very proud of it. I think this construct of the
23 subcommittees and talking these things through and having
24 them ready for the quarterly meetings for a vote, and
25 having it all discussed through, hashed out, and ready to

1 mistrust that has existed and maybe grown.

2 We are holding hands with the NYSE, and
3 suggesting that we WebEx or maybe just cut back to
4 minutes. Again --

5 PARTICIPANT: CSPAN.

6 MR. DAVIS: Put it on CSPAN?

7 So I -- we do -- you know, we do support the
8 subcommittee structure. There's a lot of good work
9 getting done.

10 But if I could just take a step back, I mean,
11 you know, we have participated actively in the
12 discussions for the last two days. And you know, I think
13 this panel sort of highlights it. There is a lot of
14 consensus that exists in the industry. It is not all
15 just contention.

16 I think, you know, there is a
17 consensus, you know, as the Chairman said, that we are
18 here to protect Main Street investors, and that, you
19 know, by and large, we're doing that very well.

20 You know, we've heard a lot of evidence that
21 Main Street investors get the data that they need, that
22 they get it at a low cost, that it is very reliable. And
23 you know, we don't think that there has been any evidence
24 that these issues about transparency or any of the rest
25 has done any harm to Main Street investors. So I think

1 bring to the committee is a good construct. And I think
2 it works.

3 And, you know, I want everybody to know that,
4 you know, there seems to be a lot of contention and a lot
5 of combativeness, but there really is a lot of working
6 together with the exchanges and the advisors. The
7 advisors, we are plugged into the consumer constituency
8 groups, very much so. So we're acting with a lot of
9 input from them.

10 And I think the way forward, even on something
11 like that, would be us -- without revealing the
12 confidential information -- discussing what should be
13 public, what shouldn't be public. I think it could be
14 handled in those forums.

15 MR. DONOHUE: A transparency subcommittee?

16 MR. CONTI: Yeah, possibly we could call it
17 that, or --

18 MR. DONOHUE: Got to come up with a name, if
19 it's going to stick.

20 MR. CONTI: They got to --

21 MR. DONOHUE: Other thoughts?

22 MR. DAVIS: Mine are not as directly tied to
23 transparency. I think we have made a few suggestions for
24 moving things forward, you know, in terms of adding a
25 vote for the advisory committee to dispel some of the

1 we are very encouraged by that.

2 I think -- you know, we have heard, you know, a
3 general consensus that the SIP has, you know, certain
4 value in creating that data. It may not be equal value
5 for everybody.

6 Some people may need more. But there --
7 you know, there is some value in terms of having a
8 nationwide standard for what is the price of a stock, and
9 you know, where does that fit into best ex. Maybe people
10 differ a little bit, but really not very much.

11 We even heard from, you know, Simon at Norges
12 Bank that it is, you know, a standard that is recognized
13 worldwide, recognized and admired. And we have also
14 heard consensus that nobody wants to turn the Commission
15 into a writ-making agency. You know, I think,
16 unfortunately, we think some of the proposals push down
17 the path to that, and, you know, we feel compelled to
18 push back, that that is a failed public policy. It is a
19 really bad idea. It does more harm to consumers than
20 good.

21 And so, you know, we are reluctant about that.

22 But, you know, we do want to work with the Commission,
23 and we want to work with the committees to do what we can
24 to dispel this mistrust and get some of the information
25 out there that people feel like they need.

1 So we look forward to being a part of that
 2 conversation. We really appreciate the last two days of
 3 discussions.
 4 MR. GELLASCH: I echo the appreciation. The
 5 only thing I would say is, I think for us going forward,
 6 is it would be really helpful for us -- and to echo
 7 Jeff's remarks -- for the Commission and perhaps in
 8 consultation with many of the folks that have been up
 9 here on panels over the last two days, and many in the
 10 audience, to try to develop and articulate standards for
 11 reviewing the filings.
 12 At the end of the day, these things come into
 13 the Commission in 1,500 filings a year. And articulating
 14 a standard -- and I don't think the Commission has
 15 necessarily always clearly held all of the filings up to
 16 the standard of the Exchange Act -- I think it would be
 17 really, really valuable to articulate a standard, here is
 18 what the Exchange Act requires for each of these
 19 elements, and then taking that and applying it so that
 20 they know what to do when they're making our filing, we'd
 21 have the information we need to comment on it, and you
 22 have the information you need to decide it.
 23 MR. REDFEARN: I think that is an apropos way
 24 to wrap up. I want to just echo a few of the sentiments
 25 that have been made here. And I'm trying to move the mic

1 around so I can finally look back a little bit at all of
 2 you who have taken so much time and committed to being
 3 here and sharing your ideas and participating in this
 4 discussion with us.
 5 This is an extremely important issue
 6 for us. It's something we take very seriously. We
 7 dedicated two days to it, as all of you have, and I won't
 8 say it could have gone longer, but I feel like we've made
 9 a lot of progress, and we intend to really think about
 10 these things and to follow up.
 11 I think our theme, again, for today, when we
 12 think about policy-making -- not just because it's
 13 Friday, but it is TGIF. So we are looking at the area of
 14 transparency, governance, infrastructure, and financing.
 15 And I think that, you know, as Tyler suggested and
 16 others have here, we do intend to take very seriously, as
 17 we have in the past, the -- this issue of, you know,
 18 fair, reasonable, non-discriminatory, and all of the
 19 other things that we have to do under the Act. And so
 20 these kind of conversations help us do that, and help us
 21 to move the ball forward.
 22 So I just want to thank, again, this panel for
 23 a great discussion. Thank you for your openness, for
 24 being here, for participating, and also thank all the
 25 audience for being here and participating in this event.

1 So thank you all very much.
 2 (Applause.)
 3 MR. REDFEARN: And I want to say one last
 4 thing, sorry.
 5 Commissioner Roisman did make a comment
 6 yesterday related to fixed-income markets. Fixed income
 7 is an area that we are taking very seriously, as well.
 8 We have a FIMSAC committee. For those of you who haven't
 9 had enough of us, on Monday we have our fourth FIMSAC
 10 meeting from 9:30 to 4:15. And anybody who wants to stay
 11 the weekend here in Washington and come to that on
 12 Monday, you're welcome to join us for that, as well. So
 13 thank you.
 14 (Whereupon, at 4:31 p.m., the roundtable was
 15 adjourned.)
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 2
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 5 File Number: OS-1026
 6 Date: Friday, October 26, 2018
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A	
a.m 1:13	54:1 60:3 61:8
abandoned 166:3	65:24,25 85:19
ABBO 75:2	109:25 140:2
abilities 109:16	153:17 156:22
207:10	159:1 167:18
ability 86:10	168:21 180:2
94:12 124:22	193:11 198:4
130:24 146:23	211:23 220:6
268:18 273:23	225:18,20
274:14	228:2 229:3,20
able 35:15 44:18	233:2 234:3
55:25 60:25	268:19,22
62:6 76:12	269:7 275:14
96:15 124:14	297:4
139:9 149:11	accomplish 68:1
163:15,17	178:18 187:12
180:20 191:11	accomplished
196:17 197:19	97:6 99:6
197:24 205:7	127:15
205:17 208:17	accomplishme...
213:5 215:1	95:13
234:16 258:6	accomplishme...
268:6,21 271:3	94:21
279:10 282:11	accountability
286:12,12	133:8 137:18
abrogated	238:15
283:11 284:5	accounting
absence 227:3	155:17
273:9	accurate 46:25
absolute 173:19	62:25 197:3,3
199:4	259:7 297:11
absolutely 32:10	298:4
186:15,19	accurately
213:20 214:20	164:14 218:6,7
214:23 269:16	achievable
282:25	46:21 72:23
absurd 51:13	201:17
accept 282:5	achieve 27:9
acceptable	100:23 176:19
46:14 139:14	187:14
acceptance 50:2	acknowledge
accepted 40:9	48:4 58:12
access 1:6 6:4	62:4 90:11
7:17 8:8,22 9:8	acknowledged
9:11 12:1	59:1 253:5,12
15:17 28:6	acknowledges
37:12 38:15,19	45:12
	acknowledging
	33:23 88:12
	acknowledgm...
	58:25
	acquire 234:19
	acquired 82:7
	166:19 234:11
	acronym 7:12
	80:23
	act 33:3 83:20
	92:6 111:19
	121:11 185:4
	191:8 244:5,10
	247:9 248:19
	254:7,10,12
	255:14 265:10
	266:10,19
	267:19 284:9
	294:16,18
	295:19
	acted 42:2
	acting 71:16
	121:11 291:8
	action 69:22
	88:16
	actions 84:3
	85:6 97:14,15
	213:18,23
	254:2 261:19
	261:20
	active 228:15
	274:9
	actively 292:11
	activities 185:7
	activity 94:7
	148:11 219:25
	actors 152:2
	actual 36:5
	53:21 76:15
	122:19 127:8
	127:12 143:9
	146:2 160:12
	162:22 175:7
	185:23 189:20
	214:8 239:10
	ad 79:25
	Adam 2:21 10:4
	16:14 23:2
	26:17,24 33:9
	43:14 46:5
	74:4 77:10
	162:14
	Adam's 79:13
	adapters 77:23
	add 52:21,21
	65:13,13 77:21
	79:23 111:3
	119:15,16
	120:24 122:6
	127:14 131:1
	138:2 146:7
	147:22 150:9
	190:16 200:6
	204:23 214:8
	257:19
	added 124:8
	213:2 229:13
	adding 74:3,6
	78:17 119:14
	133:5,24 148:1
	251:17 291:24
	addition 82:22
	97:11 133:3
	174:23 227:17
	239:6 275:2
	276:9
	additional 7:21
	52:20,23,24
	73:25 96:21
	97:7 118:12
	119:14 147:23
	204:14,20,23
	278:3
	address 21:15
	31:1 34:12
	79:11 92:17
	100:15 106:21
	107:11 111:20
	131:3,9 132:5
	132:19 134:4
	136:22 152:6
	230:21 258:10
	addressed 37:4
	86:8 89:22
	96:17 104:18
	138:4 182:23
	208:1
	addresses 92:10
	247:2
	addressing 8:3
	89:20 90:6,7
	114:16 120:19
	122:20
	adds 52:23
	adequate 15:22
	20:24
	adequately
	91:18 182:15
	adhere 163:12
	199:21
	adjourned
	296:15
	adjustments
	100:10
	admin 24:21
	199:6 238:13
	administer
	135:5
	administering
	19:20 235:17
	administrate
	235:23 236:6
	administrating
	198:11
	administration
	197:10,18
	250:10,10
	275:3 290:17
	administrative
	15:9 88:21
	112:5 163:11
	163:16 177:17
	189:20 191:8
	196:5 199:4,8
	235:3,4,16
	252:18
	administrator
	28:5 50:11
	183:15
	administrators
	51:25
	admired 293:13
	admit 55:21
	70:21
	adopted 84:22
	157:15 244:12
	275:17,24
	adoption 85:14
	92:9 123:4

adoptions 114:23	85:3,5,9,23 86:7,10,15	aggregate 69:1 76:23 164:3 204:3	agreement 66:22 102:7 114:6 121:21 134:13,17 149:12 176:18	185:5 195:20 220:13
Adrian 3:14 154:20 160:15 205:8	87:7,12,14,15 87:18,24 88:1 88:8,11 89:15 89:17,24 93:24 97:12 105:3 109:5 118:17 122:11 127:7 127:11 128:1,7 128:11 132:16 133:4 137:10 140:1 147:6 150:18,25 151:5 227:19 227:22 230:7 291:25	aggregated 25:16 60:11 201:13 211:9	agreements 94:9 94:11	allowed 42:11 85:1 158:2 222:14 255:5
advance 224:25		aggregating 31:12,15 75:10 160:12	agreed 94:9	allowing 239:19
advancements 113:2		aggregation 48:23 75:8	agreed 94:9	allows 73:23 238:4
advances 85:15 100:9		aggregations 48:22	Aha 174:6	alluded 257:9
advancing 205:12		aggregator 16:13	ahead 59:21 210:3,15 284:9 289:10	alongside 6:8 64:14 92:22
advantage 101:6 101:12,18 102:2 103:8 107:13 160:19 160:20 185:15 213:13 259:18		agitated 77:25	aimed 214:25	altered 61:25
advice 94:1 135:11		agnostic 262:1	albeit 20:2	alternate 234:5
advisor 6:12 81:16 90:13 92:13 97:6,9 108:14 137:12 137:16,16 226:5 251:17 251:21 262:24	advocate 115:9 228:16 235:3	ago 17:2 41:2 47:12 49:17,19 53:12 55:2 69:22 86:24 95:16 116:9 121:4 125:7 144:3 166:20 171:5 177:20 185:13,14 216:11 220:3 249:1 266:7 283:10	algo 39:12	alternative 13:24 19:1 40:6 57:17 159:23 166:1 179:2 212:18 222:8,10 260:25
advisor's 94:12	advocates 127:22,23 136:4	agree 20:19 21:17 27:18 34:14,25 45:15 72:20 103:12 113:22 114:2,4 120:13 138:1 144:16 145:3 148:13 150:6 151:8 152:11 161:15 163:22 186:13,13,19 198:15 199:20 205:1 220:2 247:8 249:12 249:13,25 251:7 253:15 261:3 262:2 266:2 267:1	algorithm 62:13 69:4	alternatives 10:3 16:4 269:15
advisors 17:7 90:13 91:17,25 94:1,2 96:3 97:7,14,16,19 97:23 98:14 108:15,16 109:11 115:18 120:1 128:13 133:24 134:1,2 134:7,15,16 135:1,7 136:5 136:16,18,25 137:6,14 145:20 146:5 148:20 257:12 257:13,15 258:6 261:6 262:4 291:6,7	advocating 105:13 232:13	agreed 91:25 134:15 151:7	algorithms 39:19	altitude 36:11
advisory 49:13 81:18 82:15 84:16,20,24	Aeronautics 173:4		algos 39:15	alts 227:13
	affairs 70:3 154:10,12 158:15		align 110:11 163:7	amazing 106:15 224:7
	affect 74:18 93:25 157:9		aligned 163:6	Amazon 35:9 38:12
	affiliate 10:13		allay 76:24	ambiguous 19:21
	affiliations 82:13		allocate 166:4 168:8 169:8 171:24 201:5 201:16 202:16 217:5	amen 185:8
	afloat 43:24		allocating 162:20 170:10 178:5 238:6 288:9	amended 84:23 254:15
	afternoon 153:15 155:9 155:21 156:13 225:16 227:10 227:23 228:9		allocation 88:24 90:16 97:18,21 149:6 175:1,10 178:12 180:8 190:3 202:10 203:11 206:9 229:15	amendment 83:20 150:5 239:15 257:21
	age 147:10		allow 41:23 42:4 54:3 63:7 79:5 101:6,23 102:5 129:17 159:24	amendments 84:2 91:5 92:4
	agencies 173:2			America 154:23 226:10
	agency 170:1,1 170:19 172:24 173:9 215:21 215:21 293:15			American 217:22 245:10
	agenda 96:2 182:19			amount 14:5 30:9 69:1 74:6 99:16 106:2 139:5,14 271:25 277:22 277:23,23
	agendas 97:1			

278:8	62:8 121:16	153:11 191:17	arbiter 151:2	ascertain 214:9
amplified 37:20	196:24	223:25 234:18	arbitrary	ascribing 193:15
analysis 6:14	anybody 118:4	243:11 244:7	181:13 242:3	Asia 192:25
17:13 20:6	124:23 179:25	246:20 249:7	arbitrating 77:8	195:15
62:25 63:1	180:15 181:3	255:22 260:1	ARC 233:1	aside 38:18
156:8 197:9	185:12 189:3	260:15 265:24	Arca 245:10	55:19 147:6
233:25 240:1,2	191:3 252:12	266:23 271:11	276:1	158:8
277:20	255:19,20	271:13 285:7	ARCA's 227:18	asked 33:9
analyst 107:24	271:14 272:13	286:24 294:2	architectural	137:4 216:6
107:25	272:19 296:10	appreciated	18:23	273:2 282:7
analytics 6:13	anyway 27:6	75:21 116:3	architecture	283:11
170:21	64:24 65:2	225:1	10:19 21:18	asking 54:10
analyzing	72:14 77:6	appreciation	architectures	58:9 93:21
279:14	222:20	294:4	20:7	137:6 190:14
and/or 167:22	anyways 262:19	approach 17:16	area 10:11 72:13	223:22 279:5,6
238:14	API 43:15	24:15 40:18	121:1 163:14	asks 239:11
anger 102:1	APIs 37:15	46:21 104:10	192:2 194:5	aspect 12:7 13:8
angle 69:6	43:17	157:16 158:1,2	204:9 295:13	13:25 22:12,14
angles 68:22	apparent 230:25	166:5,24 178:7	296:7	258:18,18
angry 10:15	apparently	178:11,25	areas 7:13 15:7	280:21
135:23 211:16	24:18 245:14	180:8 185:2	176:10 201:6	aspects 44:8
270:2	appealing 35:16	188:7 228:25	204:24 228:12	126:23
announcing	46:6,7	approaches	Arguably 20:1	assembling
228:24	appear 172:15	157:6	279:7	160:12 190:12
annual 177:3	194:15	appropriate	argue 35:5	assess 157:13
187:10,12	appearance	54:24 90:8	76:10 125:16	217:6 218:7
195:4,9	101:9	92:4 96:7	160:7 162:11	assessed 218:8
annually 165:9	applaud 232:5	103:19 104:4	167:11 168:17	assessing 158:20
188:16	applauded	140:21 141:10	186:8,9 205:7	239:24
answer 20:18	232:11	141:13 259:9	246:21	assessment 9:2
21:12 24:2	Applause 80:16	266:5 271:4	arguing 78:10	160:11
25:2 56:11	153:13 224:2	288:21	argument 28:25	asset 10:1 81:10
70:7 109:9	224:17 296:2	appropriately	34:22,23 43:15	129:17 147:24
121:8 125:10	apples 235:9,9	8:25 59:3	56:13 131:16	155:5 165:17
125:23 131:21	applicable 9:2	69:21 86:8	207:15 257:5	193:6 196:20
138:3 142:25	56:14	128:12 153:23	arisen 160:5	228:6 274:16
219:6 253:25	apply 200:10	201:16 270:17	arises 31:2	274:16
263:12 272:19	applying 157:16	287:1	arm 10:13	assets 234:19
272:23	294:19	appropriateness	array 12:5	assistance 97:19
answered	appoint 85:2	86:4	articulate	associate 6:9
111:23 263:9	125:17	approval 29:2	119:20 294:10	82:5
Anthony 4:9	appointed 25:11	86:3 239:18	294:17	associated 1:6
227:25 241:15	111:11	257:4	articulated	9:1,3 13:9 14:1
243:9 278:1,17	appointment	approved 83:22	158:24 246:3	153:24 175:8
280:8,14	115:18	approximately	articulating	201:3 203:2
anti-competiti...	apportioned	12:20	119:17 294:13	205:14 279:12
218:4,11	47:2	apropos 294:23	articulation	285:2
285:22	appreciate	AQR 9:25,25	118:13 151:2,4	Association
antiquated 32:8	80:14 130:22	71:14	288:1	226:22

276:23	192:19 207:22	170:8,11	billion 10:2	151:11 173:4
BBOs 36:9,9	229:4 283:9	173:14 174:21	Billy 132:13	boardroom
37:1,3	benefits 20:6,8	179:2,17	bit 10:22 16:12	119:5,6
bear 78:21	46:15	189:11 210:12	23:15 36:24	boards 132:21
159:8 267:3	benefitting	237:1 238:4	41:22 48:2	body 25:15 49:2
bears 158:3	187:23	241:5 251:10	63:8 64:10,18	boiled 245:5
becoming 68:12	Berkeley 9:20	259:23 262:8	69:18 70:8	bolster 99:2
95:16 239:16	best 14:17,25	264:10 271:23	72:3 77:17	bond 55:22
250:1	15:1 19:1 30:6	272:6 276:18	106:7 109:11	bone 182:20
began 83:17	30:7,11,20	276:18,23	155:11 176:18	book 14:21 30:3
84:6 98:2	31:17,19,20,21	288:18 289:14	188:5,20	59:25 60:7,17
beginning 54:7	32:4,13 37:8	beyond 8:11	194:20 195:13	75:10,17 93:9
76:1 97:7	38:20 42:1	60:8,11,15	197:9 200:4	93:17 233:1,1
begins 264:22	46:20 48:18	97:8 178:9	202:19 208:24	234:2 236:1
behalf 71:16	50:15,15,20	260:18	224:10,24	246:1 256:20
129:1 132:7,9	53:17 59:2,5,7	bid 14:17 37:8	237:1 247:5	256:22
154:19 241:19	59:8,15 61:13	38:20 40:24	258:16,17	books 31:5
272:5	65:6 79:6,7	50:15 53:17	262:5 266:7	borderline 70:8
behavior 19:17	81:1 98:17	125:5,9 189:7	272:21 273:20	bored 252:8
219:17,18	102:14 107:9	189:12,14	280:2 288:4,12	260:18
behaviors	107:22 111:6	bidder 14:25	293:10 295:1	born 261:19
276:13	111:19 112:21	15:1	black 232:8	267:25
belaboring	120:17 121:21	bidders 189:15	Blackrock 81:15	borne 164:13
129:14	121:22 122:23	189:16	blanche 45:2	251:20
believe 16:25	123:16,16	bidding 25:6	blank 158:25	bother 34:2
98:7 104:17,18	127:2 134:6	bids 30:7	Blaugrund 2:19	bottom 61:19
119:9 123:11	148:9 167:12	bifurcate 101:19	9:22,23 16:8	163:4 175:2
142:23 149:14	170:2 179:9	big 49:24 75:17	16:21,22 17:10	194:11 234:18
162:19,20,25	215:4 219:6	100:4 108:8	22:8 45:8 46:1	bouncing 35:7
163:9 197:3	225:10 241:2,3	113:6 114:20	46:4 51:1,4	box 219:2
201:5 217:4	241:4,5,8	143:6 149:9	57:6,19,24	Boy 185:15
238:1 250:24	245:13 256:6	168:24 186:25	67:7 68:4,6	Boyce 297:9
257:19 258:14	261:8,9 264:6	214:21 232:6	72:17 73:22	Brad 155:1
260:20 264:21	268:13,13	242:4 249:3	74:20 79:8,23	160:17 161:14
271:4 282:4	282:18 283:6	254:22,22	112:25 121:20	162:16 219:5
believed 49:15	293:9	big-picture	block 132:22	219:20 221:24
believer 213:11	bestowed 207:23	287:6	156:2	223:15 236:18
belong 129:10	better 15:1	bigger 137:10	blocks 148:5	Bradley 3:15
129:21	21:10 23:14	188:14 273:24	Bloomberg	break 49:20
belonging	26:12 27:14,16	bigger- 287:11	154:10,12	224:4
129:13	30:14 40:16	biggest 28:11	157:10,17	breaks 268:2
benchmark	46:10 49:21	192:25 255:12	158:13 159:6	breeds 253:23
23:10 62:6	56:19 91:13	Bill 4:5 225:25	204:15,17	Brett 2:11 6:4
beneficial	97:25 98:13	226:1 230:6	239:7	11:1,21,23
170:25	99:11 102:9	237:16 240:8	blown 274:21	16:1 25:20
beneficiary	112:12 113:1	246:19 251:19	blur 83:4 113:12	210:14 211:17
114:9	133:13 144:17	253:15 258:16	board 82:14	223:20 224:14
benefit 17:13	145:9 150:16	Bill's 249:23	119:4 128:2	226:7 272:25
18:19 110:11	161:6 170:6,7	billing 250:10	132:20 148:16	Brett's 211:20

Brian 3:17 155:21 163:20 170:6 174:13 178:8 181:19 185:17 191:17 200:19	184:10 280:24 281:5,14 broker- 11:6 65:5 147:24 228:7 broker-dealer 117:19 119:11 129:17 155:6 274:5 281:19 broker-dealers 60:2 64:6 65:4 84:19 91:16 275:23 281:21 brokerage 21:7 69:17 155:8 169:1 196:20 brokers 30:12 31:11 34:22 60:14 69:10 130:17 142:6 161:20 169:13 170:1 273:23 274:2,5,6,13 278:22 280:11 280:15 283:4 Brotherhood 231:23 Brothers 156:9 brought 34:5 56:4 65:15 91:14 93:24 130:14 134:12 135:15 141:7 160:24 199:10 273:25 Bryan 3:6 81:20 105:5 115:24 117:6,11 118:22 135:23 143:25 144:17 buckets 245:18 budgeting 187:12 bug 49:6 build 16:17 38:10,18 55:3 234:19 257:25 building 251:13 built 38:11	39:19 50:2 55:1 181:10,12 242:12,12 257:12 bulking 174:21 bunch 28:14 223:5 burden 112:5 158:3,7 159:21 163:16 164:11 198:12,12 235:3,16 248:10 266:14 266:18,20 267:24 281:1 284:20 burdens 163:11 burdensome 222:15 236:15 business 10:4 23:2,16 26:4 65:19 70:23 81:23 82:20,21 90:7 92:11 106:22,23 107:6,19 108:16 109:1 109:20 155:2 156:8 165:16 165:22 166:24 178:21 180:7,8 180:8 181:4,17 186:15 189:16 193:8,9 217:20 221:12,21 222:24 227:15 236:13,14 241:20 271:19 280:20 businesses 54:4 108:18 151:25 buy 24:15 26:10 56:18,24,25 57:2 59:1 62:15,23 76:12 85:4 94:13,13 101:6,17 128:18 151:18 155:18 170:16	170:19,19,20 170:21 209:2 209:16,20 217:18 227:16 239:8 248:6 269:16 280:16 buy- 92:2 buy-side 228:7 245:12 buyers 164:2 buying 70:4 107:13 148:15 168:3 209:5 247:25 248:1 255:21 BX 236:3 byproduct 136:9 136:10 BZX 18:21 BZX-listed 18:21	<hr/> C <hr/> C 5:1 6:1 13:2 17:25 19:8 52:4 177:6 cable 12:21 22:1 219:2 calculated 18:11 202:5 calculates 48:20 calculation 12:24 calculus 148:8 call 25:6 26:2 27:25 28:5 38:21,23 48:12 164:8 167:23 187:8 188:9 206:10 213:16 218:19,21 246:13 258:20 262:12 269:3 291:16 called 52:19 171:5 258:22 calling 28:4 calls 140:3 192:1 209:24	camp 45:1,3 128:25 camps 45:1 Canada 199:5 228:5 candidates 87:16 cap 274:7,10 286:11 289:8 capability 43:18 capacities 227:16 capacity 52:7 81:15 112:13 204:11 214:15 229:12 270:6 capital 9:21,25 122:10,14 228:11 238:24 239:6 274:15 captive 202:1 capturing 64:14 180:23 card 26:10 care 37:7 68:18 156:16 162:11 203:25 244:4,6 262:9 career 82:22 careful 135:1 171:2 carefully 49:9 200:9 cares 244:10 Carr 298:3,15 Carrai 4:4 225:16,17 249:10 256:14 261:3 267:20 270:2,9 271:2 281:15 285:10 285:18 286:1 288:24 289:2 289:20,22 carried 159:21 carries 72:18 carry 93:9 carte 45:2 Carteret 12:15
---	---	---	---	--	---

12:17,19 17:21	281:16	140:6,7 152:22	40:14 200:4	236:4 259:13
19:8 23:13	Cboe's 105:9	154:7 160:4	278:2	271:23
38:7 55:4	center 12:17	170:9 176:4	Chang 2:20 9:24	charging 170:18
60:23	18:4,12,18	182:9 185:3	9:24 32:17	221:10 259:10
Carteret- 12:19	23:22 26:7	235:12 237:3	41:9 55:12	279:18
carve 25:3	36:19 42:21	259:1 270:14	59:22 70:19	chasing 71:5
carve-out 143:6	45:20 50:6	287:7	121:18	cheaper 189:11
carve-outs	55:4 62:24	CERTIFICA...	change 17:10	check 222:25
144:18	76:3 78:6	297:1 298:1	20:3,4 57:13	checking 199:23
carved 290:14	116:8 153:6	certify 297:9,10	65:21 110:18	checks 113:21
carving 156:10	160:19,21	298:3,9	111:4 114:3	Chicago 17:22
case 21:6 24:3	163:2 164:23	cetera 24:21,22	115:7 126:1,24	23:24 24:1
35:10 40:14	185:21 203:1	25:17,17 77:2	149:2 182:20	82:6
49:6 124:21	203:23 242:23	200:11	182:22 194:22	chief 83:3
126:4 157:21	centers 10:24	CFO 155:24,25	199:22 200:4,5	154:15 155:1
169:25 207:10	12:13 13:15	180:6	208:7 209:18	226:10
214:4 217:22	17:18,21 19:15	chair 2:4 16:23	210:13 213:21	chip 23:11 186:2
217:24 222:21	23:8 37:10	82:3,23 83:1,1	219:21 263:2	chits 152:25
222:24 259:10	53:11,13,15	89:18 94:22	changed 136:4	choice 21:3,13
cases 19:12	77:6 78:5	95:16 120:4	187:25 199:25	23:3 31:4
63:20 123:20	234:13	122:21 142:3	234:2 254:16	61:10 113:19
134:3 143:16	central 44:11	150:2	changes 18:16	114:24 202:13
158:13 195:18	cents 190:18	chair's 132:7	18:23 19:4,13	221:4
197:6 209:9	CEO 11:3 82:11	chairman 6:22	72:2 89:11	choices 70:17
220:18,19	92:1	86:17 154:16	99:5,12 132:16	167:5,7,8
cast 46:18	certain 14:15,19	156:5 215:7	141:20 149:12	choose 18:17
260:19	23:24 43:23	228:19,24	150:7 158:11	40:13 57:10
catch 72:21	47:23 66:7,7	249:25 292:17	166:12 170:4	73:24 131:7
catchiest 26:25	71:8 101:6	chairs 130:21	182:18 188:16	136:22 137:15
catching 6:18	182:8 212:21	challenge 49:9	194:23 199:14	178:25 179:23
categorically	234:1 239:12	49:10 56:24	208:7 210:12	179:23 203:20
28:23	254:13 270:14	74:8 75:18	210:21 239:19	275:22 281:24
categories 236:1	276:13 287:10	159:17 166:16	257:14,15	choosing 61:21
254:13 259:9	293:3	166:22 167:1	263:7	chose 19:5,11
categorize 7:13	certainly 6:18	178:15,15,18	changing 66:20	179:22
category 124:3	22:22 23:3	181:2,18 210:3	67:2 149:6	chosen 95:5
254:16	26:15,24 32:1	210:15 272:20	198:1,14 278:9	201:23
cause 270:15	37:3,25 38:11	challenges 7:9	channels 240:4	Chris 135:3,4,23
caution 46:17	45:18 46:6	44:21 99:8	character	211:16,18
Cboe 81:21	56:12 70:2	158:10 166:8	254:19	270:2,3
106:24 108:8	71:6 72:3,7	challenging	characteristics	Christine 297:9
108:19 115:8,8	73:4 78:16	44:22 57:5	22:17	chuckling
144:4 155:24	79:17 83:8	211:4 240:11	charge 179:14	161:18
165:12 166:19	102:1,25	272:3	180:1 201:22	CHX 149:8
169:24 194:7	117:12,17	championed	206:7,23 218:2	circuit 269:10
209:16,17	122:12 123:2	97:16	219:3 221:18	circumstances
212:18 225:18	124:2 125:16	championing	221:20 257:2	131:17 140:20
225:21 232:15	128:25 130:12	105:16	268:17	141:18,23
234:12 237:1	130:14 139:3	chance 35:18	charged 205:3	149:10 287:10

Citadel 239:6	139:10 154:14	164:12 267:25	284:6	151:3,4 157:5
Citi 82:18,18	241:7,20	collection	coming 27:12	157:8,11,15,17
122:12,17	271:18,25	261:20 285:2	32:24 98:18	157:25 158:6
129:1	273:15 285:4,5	collectively	115:10 159:10	158:10,19
Citi's 82:19	close 75:20	271:20	192:17 225:9	159:2,20,25
Citigroup	141:22 143:23	collegiality	235:15 268:10	172:17,23
154:25 156:11	closely 63:23	132:19,21	comment 44:24	173:3,12
Civil 173:4	closer 53:7 72:3	combateness	45:8 47:9	174:10,24
claims 172:4	269:21	291:5	84:13 106:5,8	176:14,20
clarification	closing 5:18	combination	116:14 135:13	177:18 181:2
171:18	73:15	13:23	166:9 206:20	182:3 189:2
clarify 31:25	cloud 35:9 37:11	combing 110:1	207:25 239:18	190:6 214:11
87:11 110:5	37:12,18,21,25	come 25:2 26:15	254:20 256:25	220:13 223:21
266:22	38:2,4,8 39:3	26:16,18 45:4	264:20 282:12	225:22 226:7
clarifying 58:14	40:1,5	53:16 55:23	294:21 296:5	227:10,24
clarity 256:7	CMDA 22:11	60:13 63:10	commentary	229:24 233:6
282:15 283:9	24:15 25:2	65:18 66:8	16:18 29:17	233:21 236:19
283:20	38:6 60:19	71:3 74:12	comments 74:3	236:23 237:6
classes 155:5	63:17	81:13 95:3	166:10 182:13	237:13 248:16
165:17 193:6	CMDAs 24:6	96:12 101:25	184:1 205:2	250:20 252:22
228:6	CNBC 161:19	108:8 109:13	211:20 229:23	254:8,18 257:3
classify 197:24	co- 93:6	113:1 114:6	243:10,19	266:4,14,17,18
Clayton 2:4	co-chairing	116:5 134:10	251:16 267:21	267:15,17
215:7 228:25	154:17	141:15 143:19	271:1 276:12	276:17 282:24
250:1	co-founder	149:12 160:3	Commerce	283:5 284:8,18
clear 19:19 24:1	227:25	161:20 162:4	154:16 173:3	288:21 293:14
87:18 88:8	co-head 9:25	172:3 177:7	commercial	293:22 294:7
101:1,3 115:6	co-run 81:21	193:21 194:11	22:21 110:12	294:13,14
118:1 122:18	coalition 159:11	194:23 207:16	121:13 124:25	Commission's
142:17 151:2,4	159:13 190:14	209:9 212:20	167:7 179:1,15	86:14 158:12
181:23 189:13	214:5	223:18 231:13	189:6 199:19	176:5
214:23 240:15	Coast 231:22	231:15 233:12	201:18 207:21	Commission-a...
247:10 250:16	code 19:13	233:13 235:13	210:20 221:4	95:1
253:1 283:5,12	collaborate	241:15 242:19	240:23,23	commissioner
285:19	257:23 261:8	257:23 283:23	241:1	226:24 296:5
clearer 118:21	collaboration	291:18 294:12	commercially	commissioners
133:13	68:7 257:14	296:11	77:6 107:8	6:16,23 176:2
clearing 228:8	258:13	comes 23:10,14	208:14	228:20
clearly 54:12	collaborative	25:5 27:9	commercially-...	commissioners'
98:5 107:18	290:20	107:13 113:14	78:2	132:8
112:23 159:4,5	colleague 105:8	137:2 146:23	Commission 1:1	commissions
257:6 280:16	colleagues 6:7	146:23 170:23	1:22 2:4 6:3,22	166:3 169:2
294:15	10:14 106:24	173:8 189:7	20:5 23:16	commit 95:9
client 55:16 60:1	166:9 226:23	214:22 222:15	44:21 83:21,22	250:11,14
180:18 203:6	collect 50:11	240:7 241:24	84:11,16,22	committed
203:21	152:24 231:18	276:14	115:2 118:12	143:4 238:6
clients 11:6,6,8	collected 126:13	comfort 261:7	118:18 119:13	251:17 280:17
43:4,5,10,14	280:22	comfortable	124:15 130:14	295:2
47:16,16 65:3	collecting 48:8	262:13,14	133:8,10 149:3	committee 10:15

16:25 17:4	290:14 291:1	293:17	266:21 273:7	229:8 244:21
25:1 26:21	291:25 296:8	compelling	284:17,20	264:8
49:13 70:22	committee's	21:18 22:20	competitive 9:3	complexity 18:9
82:24 83:25	19:19	23:1 76:21	23:8 42:23	52:22,24 55:10
84:14,16 85:3	committees	compensate	43:11 49:22	compliance
85:7,7,12 86:7	81:18 82:3	118:3 265:4	54:1 66:1 75:6	30:20 88:9
86:8,10,15	84:21,24 85:5	276:9	76:10,22 77:19	164:25 196:4
87:12,14,15,18	85:10,23 87:7	compensated	78:1 84:5	228:2,5 248:19
87:20,23,24	88:11 89:15	216:5	117:4 157:9	279:8,12,15
88:1,3,3,8,17	93:25 105:2	compensation	158:4 160:1	compliance-re...
89:16,18,19,24	111:10 129:6	118:4 120:3,4	167:5 172:18	279:23
92:8 95:17,23	145:18,19	compete 52:5	175:20 184:22	compliant
97:8,10,12,14	152:4 182:6	93:2 100:7	187:22 191:17	266:19 267:18
98:11,15 99:3	293:23	124:23 160:23	194:17 195:16	complicate
100:6 108:5,10	commodities	189:6 195:14	201:24 211:3	54:22
109:6 110:10	226:14	211:4 215:11	212:9,14	complicated
111:1,19	common 193:21	245:8 269:2	214:10 215:5	56:7 106:13
112:10 113:9	198:23,25	273:23 275:11	217:14 218:13	235:21 263:24
114:25 116:1	225:3 243:10	288:7	218:24 221:5,8	271:12
118:5,17	communicate	competes 112:4	229:4,7 231:2	components
120:14,16	86:11 97:25	competing 16:13	231:12,13	103:3 105:2
122:11,14,19	communication	19:22 25:11	248:3,5,10	composition
122:22 123:13	68:7 98:14	26:4 44:11	250:23 267:16	126:25
123:19,21	communicatio...	46:22 47:7	270:11 271:17	compounded
124:15 125:13	85:16 97:25	52:10 57:16	271:21 273:17	195:4
125:18 126:8	99:2	75:11 95:3	275:18 280:21	comprehensive
126:25,25	community	100:3 102:11	280:25	248:7
127:7,9,12	117:20 128:19	109:2,7 113:23	competitively	compromise
128:1,7,11	128:21 129:25	116:14 124:1,5	79:5	258:13
129:2,18 130:7	136:11 169:14	135:14 185:1	competitiveness	computer 36:20
130:10,25	261:6	270:12 275:8	43:20 238:7	185:11 186:2
131:8 132:16	companies 67:7	288:5	280:15	computers 53:1
132:25 133:4	78:15 174:19	competition	competitor	conceded 159:7
134:11,18	250:3 274:15	28:17 43:19	275:13	conceivably
135:16,18	274:17 278:23	124:5 141:11	competitors	219:9
137:10 140:1,2	279:3,22 280:6	147:12 159:14	95:18 115:16	concentrated
141:16,22	company 125:7	159:23,24	206:14 281:11	107:16
143:10,12,14	161:23 167:10	175:14,16	complacent	concentration
143:18 145:14	171:10 207:5	183:8 187:18	183:19	45:22
145:17,21,24	242:24 249:23	192:3 206:15	complain 101:11	concept 16:9
146:4 147:6	250:2,12 280:2	206:16 207:17	complete 249:22	36:2 38:6
150:18 151:1,5	compare 103:20	213:8,9,12,25	253:16,17,19	39:14 84:11
153:1 154:16	235:9 240:13	214:6,14,20,23	253:24 297:11	91:5 177:21
226:5,17	compared 28:19	215:19,22	298:4	266:16
227:19,22	comparing	218:7,7,17	completely	conceptually
229:16 230:7	245:15	220:23 221:23	38:14 49:5	131:13
251:18,21	compatible	240:6,16,17,18	208:14,15	concern 34:10
252:3,9 258:19	28:14	241:10 248:2	234:14 258:8	44:16 45:1
260:7 290:1,8	compelled	249:5 256:8	complex 59:24	61:6 130:16

265:18,19 270:15 concerned 94:3 96:10 248:22 281:18 concerning 79:2 144:19 238:25 concerns 19:6,9 37:4 84:7 85:22 92:16 93:3,24 94:16 100:5 111:20 131:6 140:6 229:20 241:17 265:22 conclude 159:25 conclusion 34:8 245:22 concrete 90:22 concur 115:24 conditions 13:19 196:8,10,12 212:13 conduct 229:7 276:18 confer 94:12 conference 197:13 confidence 34:11 42:13 58:2 93:5 95:20 98:1 179:19 246:22 confident 58:2 77:19 122:22 confidential 85:12 94:4 96:11 140:4 143:9,11 208:8 233:4 260:5 261:5,24 263:11 270:13 270:20,23 283:16 286:15 286:18 289:15 290:7 291:12 confidentiality 8:4 86:9 94:9 94:10,11 96:7	96:14 258:3,4 260:4 conflict 41:17,23 42:4,6,7,7 88:8 92:9,17 96:16 100:13 102:12 102:15 103:23 104:18 108:23 110:15 112:7 112:15 114:17 114:22 117:20 119:2 129:5,15 134:8,14 135:19 138:3 143:20 251:23 257:20 258:2 conflicted 108:18 112:23 228:17 conflicts 8:4 86:6 90:8,25 91:11 92:11,19 93:18 99:25 100:15 101:2,3 102:10,14 103:6 104:13 105:7 106:20 107:21 108:3 108:13,20,24 111:21 113:4 114:20 116:4 117:17,22 121:6 123:15 123:20 125:15 125:22 128:5 136:23 238:18 confusion 241:24 congregate 153:9 Congress 246:7 254:17,18 conjunction 116:16 connect 152:20 209:3,17,19 220:5 245:10 connected 204:24 209:4	connecting 245:11 connection 14:3 14:9,10 29:22 76:5 85:9 176:3 245:3 268:17 269:15 connections 13:16,17 14:12 78:8 connectivities 203:18 connectivity 11:5 13:10,11 13:15,21,22,23 14:2 15:15 56:19 75:23 76:2 79:24 80:3 168:21 191:24 192:6 200:25 201:1,8 201:9,20,21 202:21 203:4,5 203:9,12,13,17 212:5 231:20 233:2 241:6 245:1 267:8,11 267:12 268:16 connects 202:23 consensus 92:5 157:19 160:4 292:14,17 293:3,14 consequences 208:9,19 268:4 286:4 consider 18:24 68:20 92:21 99:12 104:5 119:13 126:21 135:8,11,17 149:6 164:18 239:23 260:6 270:23 290:3 considerable 95:8 consideration 102:5 103:8 144:12 145:15	163:1 176:5 considered 10:3 113:5 114:18 114:19,23 134:15 161:8 202:10 considering 120:4 163:15 290:8 consistency 173:15 consistent 19:17 92:23 158:12 168:15 172:20 173:21 235:8 235:22 255:13 consistently 191:24 consolidate 24:12 29:4 54:2 94:25 consolidated 12:23 17:17,24 18:17 19:25 30:2 31:5 44:13,14 123:3 212:25 213:1 234:11 289:11 consolidating 18:7 152:6 consolidation 21:24 28:7 36:22 45:17 50:10 87:5 88:25 consolidator 22:4 29:3 36:13 38:10 44:11 47:5,7 51:6,12 52:23 196:25 consolidators 22:7 24:11 25:12 46:22 52:11,24 57:16 consortium 179:8 constituencies 84:9,19 86:11	94:13 127:1 128:9 129:20 constituency 105:1 291:7 constitute 8:17 128:11 constituted 128:12 constrain 214:15 constraints 99:7 135:2 constriction 132:25 construct 120:17 121:4 132:10 149:1 152:3 161:9 290:22 291:1 constructed 129:6 265:9 constructive 7:5 consultation 294:8 consulting 156:6 consume 17:24 18:17 19:7 70:16 consumer 155:15 197:13 231:17 291:7 consumers 200:2 238:4 293:19 consumes 14:5 consuming 11:9 18:5 29:7 196:21 204:19 204:22 consumption 19:10 contain 229:12 contained 297:12 contemplated 24:8 266:13 contemplating 11:18 content 8:14
---	---	---	--	---

11:17 12:5	240:5	80:22 83:15,24	265:20 269:18	252:24 253:1
15:5,22 20:23	contributes	84:8 92:17	270:3,4 274:3	263:22 268:11
20:24 21:20,22	253:10	93:16 104:11	279:15 280:19	279:12 282:20
54:14 60:16	contributing	107:6 111:14	289:17 292:22	285:1
75:23 76:15	164:5	111:22 138:23	cost-based	cottage 196:16
163:3	control 24:14	139:2 153:21	157:13,16	counsel 11:14
contention	78:8 125:1	153:22 159:6	264:4 269:18	82:5,19 156:14
291:4 292:15	controlled	186:16 212:1,2	269:21,25	226:10,24
contents 247:4	117:18 129:8	249:15	cost-plus 180:11	counsel's 156:17
context 176:21	132:18	corner 271:10	180:13 183:9	counsels 6:11
187:13 191:7	controlling	corners 257:23	cost-related	246:16
194:17 209:8	162:4	corporate	180:11	count 123:14
209:13,22	controls 152:8	213:18,23	costing 197:10	counter-prod...
contexts 157:4	convenience	correct 112:20	198:6,8	229:9
Conti 4:5 226:1	126:3	149:14,24	costly 17:16	counting 196:22
226:1 230:10	convening 125:5	correctly 236:9	163:24	236:1,3
237:21 269:17	converged	Correlating	costs 17:12	couple 22:24
270:7 285:6,23	234:22	60:12	20:10 50:9,16	23:9 24:16
290:9 291:16	conversation	cost 17:12 20:6	50:20 51:7,7	47:20 48:16
291:20	31:8 32:14	43:19 47:4,5	137:20 160:12	49:19 63:13
continually	41:1 65:18	50:7 51:15,17	162:20 163:7	71:21 76:25
221:7	81:11 102:21	52:6 74:19	164:15,18,20	77:1,4 101:9
continue 7:18	138:15,24	77:2 159:9,15	164:22,23	108:22 117:24
18:15 19:7	139:23 228:22	160:7,9,10	165:8 166:4	121:1 122:7
30:15 61:22	243:5 264:17	161:4,10 162:9	169:17 170:11	135:9 171:4
65:18 82:13	274:20 294:2	162:22 163:1,2	173:5,6 174:3	196:1 206:17
86:2 99:4	conversations	163:4,17	174:11,13	216:11 226:23
127:2 143:15	101:20 134:5	165:20 173:15	178:2,10 180:3	240:22 245:15
166:23 167:8	139:16 247:8	176:15 179:7	181:9,14,15	254:5 266:22
186:14 192:1	295:20	180:8 184:25	182:5,20 183:4	273:11,25
261:10 268:6	Conversely	185:11,13,19	183:15,19,21	274:1 275:7
continued 30:17	108:13	187:1,2 189:3	185:2,21 186:7	282:14
85:15,22 99:2	convey 208:16	189:25 190:9	188:25 189:20	coupled 160:3
164:22 192:5	cooperative 91:5	190:11,24	191:13 196:5,5	course 71:6
225:2	98:17	198:11 201:5	196:12 200:15	104:12 121:1
continuing	coordinate 28:5	202:13 203:11	200:17,22,24	171:20 206:3
193:8	core 5:8,11,14	203:15,16	201:5,13,19	208:25 215:15
continuous	7:6 8:1,3,7,17	204:3,8,14,25	202:5,16	224:21 225:10
106:10	8:18,25 9:10	205:5,8,10,17	203:12 204:13	238:20
continuum 61:4	9:11 11:22,24	206:4,20	205:14,25	court 159:17,20
contract 92:14	15:14,22,25,25	208:16 211:6	206:1,1,2,5,5	159:24 190:14
145:25 146:2	54:11 55:19	215:13 218:2	206:21,23	214:5,11
189:14,17	56:8,13 57:3	219:2 220:4,6	210:25 214:15	217:21
250:10	59:17 63:11,15	220:16 221:2,7	217:5 221:3,10	courts 159:3
contracts 199:20	63:23 65:21	221:21 230:24	221:10,25	cover 180:3
208:17	68:20 70:24	231:18 232:22	223:14 238:13	206:5 221:9
contrary 218:12	71:9 72:18,22	247:7 252:10	238:14 241:21	covered 7:3
227:2	73:7 74:3 76:9	252:15,17,19	241:22 245:9	82:21
contribute 193:7	76:16 78:5	253:8,14 264:2	246:2,4 252:18	covering 7:14

covers 156:25	290:13	cute 234:5	56:13,19 57:14	164:4,7,12,15
cracks 78:23	CTA-UTP 226:5	cycle 178:23	59:17 62:16,23	164:23 165:23
craft 151:11	CTO 155:7	187:9,10,12	62:23 63:11,23	166:14 167:14
create 24:7	culture 249:16		64:12 65:16,21	167:17 168:3,4
36:14 43:19	cure 173:10	D	65:24 68:20	168:7,10,14,20
55:9 61:1	curious 182:24	D 6:1	69:22,25 70:1	168:21 170:9
65:17 100:7	183:25	D.C 1:24 49:17	70:13,15,16	170:11,11,16
111:18 128:2	current 15:21	297:7 298:6	71:8,9 72:6,18	170:19,20,20
132:17 152:19	19:23 20:24	dais 10:25 55:24	73:5,6,7 74:3,7	170:21 171:5
185:5 210:19	23:7,7 35:2	damn 161:25	74:12 76:3,15	173:16 175:21
257:24 268:11	41:11,18 42:14	Dan 2:7 6:10	76:16 77:5,5	179:15 180:1
286:4,7 289:10	46:15 50:9	167:25 252:21	78:4,6,20	180:19,22
created 37:3	51:25 52:10	dark 130:10	80:22 83:15,24	183:4,6 184:6
94:23 98:15	70:2 86:19	220:22	84:8,9,12	184:11,13,14
276:18 288:6	94:9 98:8 99:6	data 1:5 5:8,11	85:18 90:15	185:20 186:1
creates 30:9	100:8 113:20	5:14 6:4 7:6,17	92:18,22,23,25	186:18 187:4,4
129:15 249:18	114:9 119:25	8:3,7,8,15,16	93:1,3,6,14,15	188:9 190:1,9
creating 33:17	133:22 147:7	8:17,18,22,25	93:16,17,19	190:11,12
37:1 149:18	148:1 149:1	9:8,11 10:24	94:25 95:4,14	191:23 192:6
163:4 185:6	219:15 233:24	11:5,9,18,19	100:4,21 101:4	192:17 193:1
293:4	261:1	11:23,24,25	101:24,25	193:11 196:5,7
creation 36:1	currently 8:11	12:6,6,9,10,13	102:11,12,22	196:19,21,22
84:20 265:6	12:5,20 13:10	12:14,17,22	103:21 104:11	197:2,16,20,20
credit 143:12	21:5 34:18	13:8,9,12,15	106:22 107:1,3	197:21 198:5,8
critical 43:7	40:3 49:24	13:20,24 14:5	108:12 109:20	200:16,17
93:13,22 95:8	55:6 65:5 80:2	14:13,16,17,19	109:25 110:2,3	201:11,11,21
111:14,22	82:3,5 83:3	14:20,21 15:4	110:12 111:2	202:3,24 203:1
179:5 188:5	129:6 226:13	15:5,6,8,11,14	111:15,22	203:23 204:16
260:9	227:11 228:3	15:15,17,22,25	112:12 115:7	204:20,23
criticism 143:19	custody 155:17	16:13 17:17,18	115:21 116:8	205:4,6,15
149:18	customer 165:2	17:18,21,24,25	124:7,8 125:19	209:3,5,17
criticisms	198:2 219:12	18:2,4,6,7,12	135:10 136:10	211:23 212:5
130:13	234:25 280:3	18:17,18,20	137:20,20	212:15 213:6
Cronin 3:4 81:6	289:18	19:7,8,14	138:24 139:2,7	213:15,17,18
81:8 100:18	customer's	20:23 23:8,21	139:9 147:12	213:22,23,24
104:24 138:1,7	61:13	24:10,14,17,24	152:5,20	214:15 215:13
145:3 147:22	customers	25:7,16,18,21	153:17,21,23	217:8,12 219:8
cross 220:5	107:14,19	25:23 26:7,9	154:18 155:11	219:22 220:8
cross-connect	116:19,23	27:24 28:3,3,6	155:14,16,18	222:7,12
269:7	160:22 167:12	28:6,15 29:3,7	155:20 156:22	225:12,18,20
cross-connects	195:17 197:20	32:6 33:11,13	156:25 157:1,2	226:2,3 229:19
223:9 231:20	197:21 198:4	33:14,17,18,24	157:4,4,7,12	229:19,20
231:24	218:25 221:7	36:19 37:10	158:7 159:2,6	230:11,25
CSPAN 292:5,6	228:6 250:13	42:20 44:4,4	159:15 160:6,7	231:6,14 232:6
CTA 52:4 95:14	258:23 259:10	45:20 47:5	160:13,18,19	232:10,18
99:10 124:13	259:23 269:6,9	48:9 50:6,18	160:21,21	234:13 236:25
125:4 200:7	270:18	50:24 53:11,13	161:4,11 162:8	237:9 238:4,25
227:19 244:7	cut 59:22 171:15	53:15 54:11	162:21,22	239:12,16,22
258:21 264:24	175:1 292:3	55:3,20 56:8	163:2,7,8,14	239:24 240:5

240:19,24	283:1,3 291:22	101:12 107:9	decrease 169:17	deliver 27:22
241:23 242:21	292:6	223:24 240:22	decreasing	153:19 163:3
242:23,24,25	day 9:6 20:19	251:19	95:25	175:22 197:19
243:2,25 244:1	32:25 33:19	decade 82:25	dedicated 220:7	delivered 28:3
244:5,6,24	34:12 78:17	184:7	244:13 246:22	218:25 235:7
247:14 248:7	80:19 86:19	decades 121:1	246:25 253:13	delivering
250:9,17,21	103:22 108:19	230:12 248:25	295:7	213:22
252:14,20	113:23 134:16	decay 32:11	deducted 178:10	delivers 197:20
253:9,10	155:13 167:4	December 239:5	deem 140:4	deltas 36:21
254:17 258:19	198:21 214:23	decentralized	deemed 197:22	demand 26:13
258:21 259:6	225:5 229:25	20:7	deep 69:15,18	218:3 241:7
259:21 265:12	236:18 258:7,9	decide 23:17,18	232:20	271:25
267:25 268:3,5	264:9 268:3	26:5 30:5	deeper 252:17	demands 220:25
268:8,11 270:1	273:11 286:5	35:15 65:20	default 159:15	demonstrate
271:3,17,21	294:12	141:21 169:24	defeat 127:2	59:12 218:11
272:7 273:5,13	day-and-a-half	170:8 176:22	defective 268:5	218:12
274:4,25	160:5	294:22	define 27:8	demutualizati...
277:22,23	days 77:1	decided 44:22	166:17	244:13
278:23 279:4,7	161:19 162:6	254:18 276:17	defined 47:22	Department
279:11,14,18	224:22 225:5	decides 23:21	49:18	91:23 156:17
279:22 280:5	240:16,22	decimal 190:21	defining 172:21	depend 39:9
280:18,19,22	245:15 250:7	decision 24:4	definitely 81:24	dependent
281:3,9,13,23	271:18 282:14	26:20 30:1	92:6 93:21	146:25
281:24 282:3	283:20 286:7	41:1 44:13	110:4 144:6	depending
285:3 289:12	292:12 294:2,9	60:4 67:10,13	162:2 166:11	47:25 76:12
290:16 292:21	295:7	67:14,14,14,15	192:21 193:13	147:14 193:4
293:4 297:3	de 3:5 81:12,14	109:23 111:5	198:13,15	depends 73:3
298:8	89:23 103:12	150:24 158:5,9	199:11 202:18	166:17 217:10
date 112:10	104:19 136:17	158:12 161:6	216:23 221:13	deprecated 66:7
129:16 140:15	144:14 150:10	170:10 172:16	250:3 257:16	66:8
144:15 145:22	150:12	176:4 179:16	258:13 283:20	depth 14:20
173:10 182:23	de-mutualize	201:18 221:6	definition 32:9	60:7 63:20
199:24 208:5	84:6	233:22 240:23	71:25 72:21	64:1,8 68:21
297:6,16	deal 39:18,19	241:1,2	82:10	68:22,23,24
298:14	66:18 114:20	decision-make...	definitions	69:14 70:9,10
Dave 6:8 82:10	123:17 127:3	165:16	167:20 200:10	73:11,12 74:3
100:18 103:6	128:5 149:9	decision-maki...	242:1	74:10,12,17
110:6 112:2	241:20,21	147:2	defray 174:11	75:10,17 93:9
115:5 124:1	dealer 147:25	decisions 24:6	183:4	93:17 214:22
David 2:14 88:5	dealers 11:7	70:14 91:18	degree 43:24	236:1 245:25
118:8	65:6 228:8	108:7 210:21	degrees 114:19	depth-of-book
Davis 4:6 226:9	dealing 114:15	285:9	delay 139:13	107:17
226:9 249:12	231:21	declare 198:3,5	delayed 195:23	depths 60:11
252:6 256:2	dealt 119:2	198:7	199:2	deputized
261:16 263:12	131:5 238:19	decline 167:23	delays 17:17	190:17
274:18,22	death 66:16	declined 184:7	delegation 94:23	deputy 156:14
278:15,19	171:5	declines 167:16	deliberately	derived 199:2
280:7 282:13	debate 31:17	167:19	266:13	derogatory
282:18,20,24	69:2 85:21	declining 252:13	delineate 200:22	119:21

describe 57:8 243:6	developer 154:25	168:11,18 171:25 173:2	11:13,21	207:11,13
describes 141:23	development 10:5 85:16	176:10 178:21 178:25 181:9	dinner 216:10	disciplinary 226:12
describing 47:2 83:14 205:25	155:2 164:21	183:22 184:13	direct 15:1 21:4	discipline 212:10 222:11
description 229:15	225:19 239:23	193:24 194:12	22:6 25:23	disclaimer 6:20 89:23
descriptive 142:22	279:24	194:14 195:5	27:10,14,17,19	disclose 59:18 108:16 192:8
deserves 69:25 148:18	developments 86:24	198:24,25	27:22,25 28:20	disclosed 173:16 177:15,18
design 17:11 91:3	deviated 63:6	199:3 201:2,4	30:15 58:20	248:25
designated 110:9	dichotomy 54:6	201:6 202:4,5	59:1 65:5	disclosing 174:2 177:3 270:21
designed 159:7 181:17 276:8	dictionary 198:24	202:16 208:2	74:16,18 76:19	disclosure 7:21 96:8 100:16
designing 41:10	differ 19:14	208:14 209:14	80:3,5 92:22	106:2,10
despite 15:11 101:9	200:7 293:10	210:25 221:21	93:19 110:12	107:23 108:19
detail 26:16 106:11 202:9	difference 25:9	223:9,10	143:20 160:8	108:24 109:3
208:10 261:14	28:11 103:18	234:13,14,14	178:9 196:24	117:25 208:8
272:1 287:7,9	104:2 149:10	236:5,8 241:16	207:17 214:7	233:7,15 238:4
detailed 262:1	214:21 253:1	245:18 272:17	225:21 233:19	238:12,16
details 32:22,22 48:25 235:13	differences 15:10 218:3	272:17 286:23	238:12 240:2	239:11 240:8
238:14 255:3	different 12:12	differential 12:8 13:8,25 15:5	252:15 276:2	285:1 286:2,3
determination 161:12 180:21	14:1,12,14	54:13	direct-line 125:18	disclosures 58:17 166:12
211:10	16:19 19:22	differentials 8:15 11:17	directed 83:21	177:16 208:4
determinations 236:24 237:14	21:15 22:13,24	12:5 15:15	direction 45:19	229:13,21
determine 146:24 184:24	27:4,5 29:14	54:14 103:18	109:12 223:4	252:11,17
194:16 242:1	34:19 35:12	differentiate 255:8,10 277:8	243:1 287:4	270:14
247:21 271:1,3	36:25 39:2	differentiating 255:18	298:11	discounts 255:12
determines 85:12 143:11	45:14 48:3,16	differentiation 255:5,6 279:21	directions 290:2	discourage 73:23
149:3	48:17 49:5	differently 48:1	directly 18:6	discovery 164:3 171:3,8 183:13
determining 48:9 173:5	53:5 61:4,8	71:20 207:1,4	21:8 68:16	276:19
178:3 209:12	66:4 74:21	208:16	71:20 93:2	discreet 119:7 205:14 238:10
detract 240:5	75:9 76:12	difficult 24:4	100:7 112:4	discrepancy 104:12
develop 258:21 294:10	79:24 81:16	69:11 114:24	116:8 124:5	discretion 30:11 61:21
developed 140:18 258:22	83:7,10 103:23	120:20,24	126:17 195:16	discriminatory 7:20 8:23
272:8 273:5	103:24,24	170:13 172:10	276:22 291:22	100:22,25
	104:3 106:4,19	183:11 208:4	director 6:5	146:22,25
	112:16 117:15	230:20,20	9:24 10:8	157:3,24
	117:15,20	235:23 236:5,6	168:1 226:22	158:21 161:7
	127:24 128:9	289:6	227:12	
	131:12 133:19	difficulty 172:10	Directors 6:9	
	133:21,21	dig 178:1 248:17	disadvantage 162:10	
	134:11,12,12	265:2	disaggregate 164:15	
	136:23 137:3	diluted 262:18	disagree 114:2	
	147:10 150:23	diminution 195:25	132:22 172:9	
	151:2,13	Ding 2:5 6:11	disappointed 252:7	
	152:20 157:3,5		disapproval 239:19	
	157:25 163:21		discern 210:25	
	166:23,24		discharging	

161:13 171:23 209:13 210:2 211:11 247:18 247:22 255:1,4 266:20 267:11 284:13 discuss 7:20 8:2 8:24 17:4 96:17 98:19 133:24 141:9 230:4 290:10 290:18 discussed 12:7 13:7 14:15,22 16:5 29:17 41:13 69:7 79:25 81:17 83:16 85:19 98:23 105:23 106:14 136:24 140:1 147:9 152:18 195:12 290:25 discussing 15:13 27:8 43:6 92:9 105:23 122:2 273:18 291:12 discussion 7:2 7:24 8:6 9:3 11:16,24 44:9 44:10 63:7 75:22 76:6 90:10 93:22 96:13 116:6 129:3 141:13 143:10 149:4 154:2 156:23 166:16 176:9 199:13 223:17 225:24 230:1 243:22,23 244:14,16 247:12,15 248:22 249:3 261:5 262:4,15 265:16 266:3 285:21 287:3 290:5,6 295:4 295:23	discussions 9:16 16:8 17:6 43:5 94:6,10 100:2 136:21 224:22 245:14 252:17 261:24 292:12 294:3 disenfranchise 149:22 disenfranchisi... 167:11 disincentive 180:12 disincentivize 151:15 dislocation 73:24 disparities 93:3 dispel 238:5 291:25 293:24 dispelling 251:25 display 173:21 255:9 256:22 281:18 disposal 267:18 disproportion... 91:2 disproportion... 281:1,8 disputes 261:20 disseminate 94:25 161:1 163:18 201:11 231:19 285:14 disseminating 160:13 dissemination 19:24 163:8 164:4,7 181:8 190:12 205:14 270:1 285:3 dissimilar 159:12 distant 17:18 distinction 71:11 distractions 236:17	distribute 76:22 157:1 203:15 distributed 16:9 16:24 17:14,19 20:14 27:15 36:12 38:12,13 38:25 44:16 52:15,18 57:15 85:8 98:20 103:25 104:21 116:7 126:18 163:23 177:4 177:13,23 213:18 244:8 246:3 290:15 distributing 242:25 distribution 43:8 53:9 83:24 233:3 240:4 255:10 distributions 229:14 distributor 233:3 distributors 34:17 52:21 distrust 30:10 diverse 91:15 diversified 33:2 81:9 diversity 280:16 divide 204:10 217:4 divided 147:16 division 6:5,14 26:22 81:21 82:6 228:20 242:13 divvy 172:8 docket 159:19 doctrine 215:20 Dodd 266:10 doing 39:24 63:3 72:2 75:7,7 82:14 99:9 107:14,18 120:16,17 121:22 122:23	125:11 133:17 135:21 150:4 188:6 202:10 206:7 226:12 243:7 259:24 260:6 276:9 279:15 292:19 dollars 273:13 Dom 10:18 57:8 79:9 216:19 dominant 147:11 179:6 Dominick 2:23 20:18 35:20 40:18 51:20 52:12 55:13 59:6 65:9 71:1 71:23 Dominick's 47:21 72:5 Donohue 2:6 6:12 61:24 73:13 225:7,8 225:25 228:23 230:6 237:16 237:18 238:22 241:14 243:9 243:13,16 249:6 256:12 260:1,12 261:10 262:6 263:8 271:7,10 272:9,13,16 274:19 278:1 278:18 282:6 283:21 288:19 289:1,23 291:15,18,21 door 21:25 dormant 152:25 doubt 105:14 Doug 10:24 downside 114:15 downstream 136:9 272:2 dozens 235:20 244:20 DR 45:22	draft 142:24 182:14 drafted 97:19 dramatic 23:20 104:14 dramatically 117:13 drastic 21:5 draw 70:23 128:8 drawn 166:15 dream 236:7 drill 176:10,12 drilling 288:3,16 drive 152:22 163:17 205:10 205:17 213:10 driven 26:11 167:7 driving 108:17 183:21 dropped 177:7 due 78:14 93:4 96:16 162:9 dullest 126:9 duplication 51:24 52:2 duration 82:21 duties 95:19 duty 111:11 dynamic 200:4 dynamics 191:17 <hr/> E E 5:1 6:1,1 eager 74:13 earlier 35:22 52:18 73:2 85:19 99:10 142:2 150:4 154:3 162:14 166:10 182:2 189:4,20 191:5 199:5 205:11 210:10 228:23 242:20 244:2 252:22 254:6 261:12 263:1
--	--	---	--	---

263:19 264:19 266:23 274:25 early 34:15 77:23 84:4 197:23 212:22 224:11,12 289:24 earned 207:21 earning 278:8 earnings 192:1 209:23 246:13 earth 79:1 ease 279:17 easier 99:19,24 127:6 185:1 187:19 250:13 easiest 131:9 easily 131:5 East 231:22 easy 38:1,1 124:17 223:23 276:3 echo 49:16 77:22 123:12 160:16 178:15 194:18 290:11 294:4,6,24 echoed 290:12 economic 6:14 91:11 92:12 109:6 175:22 217:22 239:25 252:19 253:14 economically 188:14 economics 57:13 57:25 economist 169:19 284:10 economists 246:24,24 264:6 286:17 286:21 ecosystem 60:25 103:4 254:10 273:21 Edge 225:21 276:2 Edwin 286:24	effect 50:8 91:23 91:24 95:2 201:9 222:10 231:9 249:5 effective 34:20 37:14 39:6 139:6 239:17 254:13,19,22 266:8,16 275:13 effectively 8:10 9:9 12:2 15:18 37:2 39:18 54:4 61:1 66:12 78:7 86:11 95:18 220:24 273:7 275:20 282:12 284:18,19 effectiveness 85:23 239:15 effects 165:19 efficacy 94:1 efficiencies 234:23 efficiency 86:3 164:22 240:5 efficient 84:10 180:13,14 186:10 228:17 efficiently 95:18 effort 74:1 95:10 99:2 efforts 123:17 127:2 eggs 49:21 egregious 237:9 eight 156:1 169:5,5 either 21:8 23:15 35:7 57:8 70:22 100:15 121:17 124:24 151:18 159:14 179:24 184:25 196:24 206:23 211:2 272:13 elaborate	103:11 Elad 2:13 elasticity 167:21 167:22 218:4 elected 82:4 Electrician 231:23 electronic 10:8 10:21 81:15 84:5 154:24 228:10 240:25 elements 5:7 15:14 16:19 138:15 284:10 294:19 eliminate 93:15 93:18 150:25 151:17 eliminating 20:9 embrace 106:6 115:20 emergence 85:17 Emily 3:7 82:1 89:18 94:19 99:15 105:8,18 117:6,11 120:8 120:13 123:14 136:7 140:24 142:6 144:5,17 149:16 251:11 290:13 emphasize 210:10 employees 118:3 employer 98:8 employing 197:14 empower 229:3 empowered 91:18 Emrich 62:22 encompass 11:25 encompasses 156:1 encourage 73:19 99:4 183:7,12 199:11 220:24	243:11 264:20 286:25 encouraged 293:1 encouraging 89:12 175:4 ended 171:6 endorsed 91:21 endowment 155:18 ends 138:13 energize 229:4 Energy 154:16 enforce 248:19 enforcement 164:25 226:12 254:2 enforcing 236:9 enfranchising 146:12 engage 173:4 engagement 7:2 225:3 engaging 266:4 engine 21:24 164:20 180:17 engineer 35:22 engineering 35:23 52:19 77:14,15 engines 42:20 English 229:14 enhance 98:1 175:5 238:7,8 239:25 enhanced 49:8 98:4 101:25 240:1 244:8 enhancement 137:2 enhancements 43:22 95:23 112:11 180:16 185:23 189:18 enhancing 208:3 enjoyed 234:24 enormous 30:9 30:24 enshrined 23:6	ensure 88:14 159:15 ensuring 7:18 entered 197:4 enterprise 10:18 190:13 240:23 enterprises 179:23 enterprising 49:12 enthusiastic 225:2 entire 36:5,6 38:3 39:1 121:24 163:11 261:6 267:24 270:5,6 286:19 entirely 24:1 43:12 256:22 entities 61:17 91:10 119:6 121:8 149:23 246:15 entitlement 243:3 entitlements 241:25 242:13 entity 184:22 200:22 246:11 246:12 249:22 282:15 283:18 entrant 183:10 entrants 183:7 212:22 entry 273:17 275:8 envelope 105:13 115:12 environment 36:24 99:22 241:10 275:18 envision 35:6 187:16 envisioned 35:4 265:4 envy 171:14 215:9 equal 78:9 293:4 equally 57:4
---	--	---	--	---

100:24 104:21	Europe 193:1	40:20	23:21,23 26:8	276:4,4 284:9
equation 176:12	215:18 228:6	evolving 229:8	28:1,4 35:9	284:23,23
equipped 287:1	European 43:11	ex 30:21 31:17	42:20 48:22	294:16,18
equitable 91:16	44:24 45:18	31:19,20,21	67:14 71:2	exchange's
247:17	165:18 193:9	179:9 215:4	75:2 76:20	14:18 18:12
equitably 171:7	evaluate 7:22	241:2,3,4,5,8	81:23,24 82:6	111:5 119:5
247:11	8:21 30:20	293:9	83:10 85:18,20	205:4 222:23
equities 55:23	32:3,12 59:20	exact 52:16	89:1,2,3,4	280:1
81:22 107:3	62:9,12 73:9	267:12	100:4 101:10	exchange-listed
165:18,18	218:13 267:16	exactly 21:22	101:18 107:6	13:5
167:16 187:25	270:25 271:3	22:21 54:17	107:15 108:4,6	exchange-rela...
193:6,9 226:13	278:14 284:18	59:20 70:23	108:10 109:1,5	165:8
256:19	284:19 286:18	75:7 137:3	109:22 110:24	exchange-spec...
equity 7:2,7	evaluating 7:17	159:19 194:10	111:6,11	165:10
10:12 34:18	218:5	235:14 255:21	119:23 124:12	exchanged 8:15
81:8 82:20,23	evaluation 282:9	274:19	129:9 131:23	11:19 12:6
86:14 129:7	event 87:21	examinations	136:9 137:17	13:9 14:16
132:16 150:17	171:20 173:1	165:1	147:13,14,15	15:6,8 157:22
151:9,11	190:24 227:1	examine 73:24	148:6,14	exchanges 11:7
163:25 165:4	295:25	examined	149:20 150:13	12:12 13:10,14
186:22 193:3	events 224:10	159:19 253:18	151:18,20,22	14:11 17:22
209:2 227:12	eventually 77:25	examining	152:1,7 154:22	22:6 24:10,14
227:14 228:25	148:16 154:22	167:15	156:1 157:4	24:23 25:8,22
237:25 239:12	everybody 24:14	example 12:14	158:3 161:24	25:22 33:13
239:21	44:19 48:20	13:14 14:3,12	164:10 165:3	34:23 37:17
equivalent 47:13	52:16 70:19	14:17,24 15:9	167:3 175:14	41:16,19 45:2
especially	80:9 122:17	23:20,23 41:20	175:18 178:20	58:16,19 65:16
120:15 144:5	148:23 187:11	48:24 60:1	178:20 181:4,7	69:10 77:5
146:14 231:14	224:8 226:8	96:4 98:7,19	181:16,21	84:6 85:2 89:5
238:5 260:6	230:18 231:6	101:11 102:20	183:5,8 185:7	91:1,8 94:24
essential 160:6	243:11 249:12	107:1 108:25	186:24 188:25	101:8,24
265:12	271:12 291:3	134:8 135:20	189:16 196:18	102:10,11
essentially 55:14	293:5	138:23 146:14	196:25 198:25	108:6 110:7,10
77:14 94:1	everybody's	166:8 212:23	200:18,21,23	111:21 117:18
149:22 166:18	39:2	213:19 235:24	204:15,18,21	118:3,24 121:5
177:8 275:20	everyone's	244:24 245:2	207:5,11,14	121:8,10,14
280:19 284:7	25:17	268:2	208:15 215:11	124:19 125:17
establish 17:20	evidence 166:2	examples 141:17	216:9 217:5	128:4 129:7,8
74:25 84:24	218:9 292:20	238:10	222:1,21	130:16 136:7
established	292:23	excellent 121:18	234:12 235:22	136:21 147:11
84:16 93:2	evolution 63:4	257:12	242:10 244:5	148:7,11,24
121:4 176:13	evolve 27:12	exception 96:6	244:10 245:2	150:14 152:19
179:3	85:15 208:5	exceptional	247:9 248:19	152:25 157:1,6
et 24:21,21	230:13	271:25	251:3 254:7,10	158:2,6,11
25:17,17 77:2	evolved 76:7	excessive 69:9	254:12,12	159:21 161:1
200:10	83:19 84:5	69:13 151:15	255:13 256:20	162:20 163:10
ETFs 23:24	117:12 188:1	exchange 1:1,22	257:6 265:20	163:13 164:1
eTrade 239:7	287:13 288:12	6:3 12:9 14:9	266:19 267:3,6	168:11 169:13
ETSN 106:5	evolves 27:12	14:10 22:4	267:19 269:13	170:16 174:12

174:14,16	executions 10:12	123:1,2 292:14	explanatory	F
178:19 179:4	175:7 245:16	expand 87:8,17	284:2	F 1:23 8:20
186:1 189:25	executive 8:5	101:23 112:6	explicitly 254:16	223:21
190:9 191:12	85:10,25 88:6	196:13	exploration	face 108:14
196:23 197:5	90:17 94:2	expanded 84:8	43:11	faced 86:7
199:19,24	95:25 96:2,4	85:3 183:20	explore 7:9 8:16	faces 226:19
201:12,18,23	96:10,12,18	expanding	57:1 176:17	facilitate 83:21
202:6 207:8	97:1,2 105:21	74:10 116:2	express 6:21	138:18 197:5
212:17,25	105:25 108:8	146:12	217:23	facilitating
213:1,9,16	130:8,9 131:16	expansively	expressed 84:6	139:8 229:1
215:1 216:4	132:25 139:25	104:11	140:6 157:18	facility 269:6
217:7 220:23	140:3,7,9,14	expect 78:14	223:20	Facini 3:14
221:5 231:3,20	140:20 141:4,9	80:5	expressing	154:20,20
233:16 234:9	141:18,24	expectations	85:22 205:8	160:16 182:24
234:11,12,15	142:16,18	247:10	expressly 244:12	200:6 202:18
235:11,18,18	143:7,17,21	expected 108:15	266:17	202:20 205:19
237:4,7 238:1	144:4,15,20	expecting	extensive 174:18	221:4,13,15,17
238:6 240:20	145:2,11,17,19	187:21	251:9	221:19,22,24
242:18 243:1	145:21,23	expense 61:20	extent 26:20	fact 33:19 36:15
243:24 244:4,6	146:3 226:22	233:17,18	40:19 54:9	37:16 40:25
244:11,13	238:20 251:22	expenses 108:17	75:11 115:2	58:20 71:13
245:6,12 247:3	257:18 261:17	177:16,17,18	116:22 130:20	93:6 101:20
248:12 253:9	261:23	177:22 178:9	144:19 150:6	115:7 118:17
256:17 268:19	executors 64:6	189:24,25	170:23 173:23	122:15 125:3
268:20,22	exempt 275:20	208:13 233:19	207:21	132:2 138:8
270:11 275:8	exempted	233:19,20	external 233:3	177:2,2 186:6
275:20,23	281:21,25	236:22	extra 29:5	206:13 215:10
276:5,9 279:6	exercise 173:5	expensive 77:7	265:17	217:7 218:1
279:25 281:16	218:11	222:2 231:24	extract 180:16	240:11 252:11
283:4 291:6	exhausted 80:8	274:4,12 276:7	188:11	252:18 259:4
exchanging 11:5	153:4	expensively	extracted	265:10,11
exciting 81:13	exist 19:21	112:5	159:16	266:13,17
153:18	36:10 41:24	experience	extraction	277:21,22
exclude 71:10	42:4 93:1,7	29:22 81:18	188:13	factor 152:16
excluded 85:10	108:4,4,14	126:10 180:18	extranet 268:24	259:20
exclusive 29:12	145:21 166:18	190:20 250:9	269:1	facts 107:20,20
156:24	166:20,23	experienced	extraordinarily	147:1
execute 151:13	167:7,22	112:15	46:16,17	fade 175:9
220:16 256:22	218:18	expert 215:21	extremely 53:17	failed 293:18
executed 59:19	existed 292:1	expertise 95:8	154:1 220:18	failing 144:8
62:10 73:10	existence 66:9	95:10 98:18	221:3,20 222:1	failure 136:12
executing 30:12	96:23	111:4 151:1	295:5	fair 7:19 8:22
44:4	existing 17:15	264:7	eye 56:1	92:24 99:16
execution 59:2	18:15 19:1,4	experts 108:11	eyeball 73:24	100:21,24
62:6 65:6	51:7 55:1,7	explain 32:19	eyeballs 20:22	104:4 146:21
163:7 170:2	179:3 188:12	87:23 192:5	20:25 21:3,8	146:24 150:21
184:25 245:13	193:10 229:21	242:21 255:17	37:23,25 38:1	157:2,24
256:6 282:18	exists 27:21	explaining	54:8 198:17	158:20 161:6
283:6	28:24 38:25	21:16 216:12		161:13 171:22

172:2,19 196:8 209:12 211:10 219:4 223:11 237:11 278:8 285:22 295:18 fairly 33:2 54:12 107:16 164:14 193:23 200:9 221:19 fairness 157:14 217:6 233:22 236:24 faith 179:19 fall 72:12 fall- 167:16 fall-off 167:21 falling 173:18 173:22 174:1 186:3,7,11 281:1 falls 217:13 false 28:23 falsity 133:25 familiar 196:16 226:19 231:22 families 129:10 152:7 198:25 family 89:5 284:23 far 16:5 29:18 37:17 60:15 69:8 75:21 104:19 122:17 130:18 136:25 137:18 188:6,6 193:14 252:10 256:17 261:22 271:17 farther 53:7 fascinating 197:8 fashion 46:13 137:13 fast 21:24 22:3 23:10 27:10,19 28:20 76:21 111:25 209:21 245:21 269:12 faster 13:17,24	14:6 23:13 26:10 31:21,25 103:16,25 104:1 160:21 162:7 189:11 230:16 241:6,6 269:1 fastest 248:7 favor 108:19 109:15 127:11 148:20,21 153:2 favored 124:11 FDIC 156:2 fear 130:16 174:5 242:8 258:7 274:11 feature 71:4 features 204:2 February 142:4 fed 22:23 Federal 256:25 fee 16:15 100:21 126:13 179:24 191:2,3 196:10 196:11 200:14 204:14,17 209:8 212:18 219:8 220:8 221:25 234:2,6 235:17,19,19 239:16,19,24 240:3 247:11 254:14,16,17 267:11 268:15 268:16,16 277:6 278:9,9 278:11 281:22 282:8,10,11 287:25 fee-setting 238:13 feed 15:1 22:6 25:23 27:1,17 31:21,25 41:15 43:15 63:18 66:5,6,11 70:10 75:8 76:19 77:8,9	92:18,22 93:3 93:19 124:13 162:14 216:16 219:22 feedback 43:5,7 43:9 44:25 96:4 218:19 243:7 feeds 21:4 22:24 22:25 27:11,14 27:19,22,25 28:20 30:15 39:6 40:1 41:15 58:20 59:1 65:5,7 74:16,18,24 76:19 93:6,9 93:10,11,15 103:21 104:6 107:1 115:21 124:1,3,6 147:12 152:20 157:12 159:12 160:1 161:1,8 162:7 214:22 223:10 240:19 240:24 241:6 245:24 248:8 275:5 283:7,7 284:23 feel 12:1 15:18 27:2 42:12 56:18 58:6 62:19 92:6 103:11 117:11 131:22 132:13 146:17 155:11 174:20 183:20 184:20 217:19 233:7 236:16 241:18 242:2,4 250:25 262:12 271:20 273:16 275:1 279:25 284:5 285:14 287:2 293:17 293:25 295:8 feeling 261:7 feels 45:3 67:25	115:3 148:14 198:3 205:3 216:21 230:17 fees 1:6 7:17,22 9:1 24:21 105:23 139:12 153:24 156:22 157:6,10,17,19 157:22 158:1,5 158:7,8,15,20 161:12 163:6,7 167:18 169:2 170:11 171:21 172:19 173:17 173:19,21,25 174:23 180:2,2 187:3 189:3 193:16 200:17 201:12,22,23 201:24 202:4 202:14 204:12 204:23,25 205:3 206:7 211:23 212:6 212:10,14 214:20,24 217:6 220:6,7 220:8 229:20 231:12,15,20 233:2,2,3,3,11 233:12,23 234:1,3,4,7,7 234:25 237:9 238:11,25 239:12,22 242:15 247:5 248:21 249:21 256:23 257:1 259:25 269:24 271:23 272:8 281:17,18 felt 28:21 161:24 fence 186:20 FERC 173:3 fiber 10:24 12:21 13:14,17 13:17,21,21,23 77:8 78:4,9 Fidelity 155:20	197:20 198:3 239:8 fiduciary 33:1 71:16 119:7,12 119:25 170:2 241:8 field 93:5 162:4 162:13 215:22 223:12 fields 101:24,25 fierce 192:3 218:17 fight 44:22 167:4 169:12 fighting 191:3 figure 35:23 46:9 62:16 128:10 168:7 171:15,19,24 172:5,11 176:25 194:10 201:16 203:16 209:11,25 210:4 278:7,10 288:18 figured 116:9 203:11 225:5 figures 79:1 figuring 66:2 file 225:3 297:5 filed 83:23 165:9 165:11 173:8 filing 87:22 229:18 247:3 247:20 264:22 266:8 267:21 278:11 282:8 282:10,11 283:10 284:5 284:13 294:20 filings 165:1,14 182:9,16 194:8 194:8 209:8 230:3 239:16 239:24 247:18 247:24 248:14 248:18 254:13 254:14,16,17 254:22 255:16
--	---	--	---	--

255:17 266:15 267:2,6,8 268:15 282:21 283:13 287:25 289:19 294:11 294:13,15 fill 61:10,12 243:3,6 FIMSAC 296:8 296:9 final 225:11 finally 14:15 88:1 98:25 175:11 195:22 295:1 financial 10:9 11:8 154:14 155:2 156:5 164:10 165:9 165:12,15 167:9 267:24 financially 109:3 financing 295:14 find 47:7 78:18 113:16 172:17 172:18,20 188:17,17 231:2 247:20 250:19 264:25 265:24 288:9 finding 58:7 266:18 findings 141:9 141:12 142:19 143:8 229:24 finger 69:3 finished 256:2 FINRA 82:11 94:24 118:24 128:4 129:7 149:22 174:15 174:16,21 FINRA's 119:5 firm 10:1,6 48:5 50:5 97:25 107:25 154:13 155:8,19 156:6	219:15 228:1 238:23 239:6 240:25 245:8 245:13 259:14 259:16,17 281:2 285:20 firm's 50:3 250:8 firm-identifying 288:22,24 firms 11:7 19:6 21:1,13 29:4 55:17 56:20 78:19 79:18 94:15 155:17 167:7 169:3 170:18 196:20 197:13,19 209:20 219:14 228:7,8 239:5 242:12 243:8 247:14,17 255:22 261:21 272:5 273:15 277:4,10,16,17 277:19 278:25 279:9 284:15 284:16 285:12 289:9 firms' 263:15 first 6:6 8:19 9:5 16:25 19:3 32:11 35:22 40:8 43:6 45:10 52:3 58:6 67:20 71:25 82:18 87:11 94:2 96:23 98:2 99:12 117:11 128:11 132:15 133:15 137:4 138:2 140:22 154:3 158:23 160:11 176:11 178:17 184:19 212:20,24 214:4 216:8 220:2 223:2	224:18 230:10 245:18 247:2 260:14 267:20 275:9 287:20 first-ever 98:25 Firstly 47:21 FISD 197:12 fit 184:6 293:9 fits 70:3 five 3:3 5:10 61:8 97:10 170:17 177:23 189:21 234:3,6 251:11,15 277:14 278:24 five- 32:8 fix 77:14 145:1 fixed 156:11 180:2 187:1 206:1,1,5,5,20 206:21,22 221:10 226:14 227:14 296:6 fixed-income 296:6 fixing 30:19 flagged 103:10 flat 116:17,23 177:9 191:21 191:23 192:4 193:12 233:10 233:11 234:25 flawed 120:18 flexibility 50:1 flexible 27:11 39:21 40:4,12 40:18 flip 136:13 260:2 282:16 flow 159:24 179:10 185:16 201:24 202:24 206:15 214:14 218:17,22 219:11,12 223:13 flowing 191:10 220:21 focus 9:6 30:18	30:19 153:22 228:12 262:20 290:3 focused 11:22 59:11 80:20 87:2 92:15 117:3 134:10 187:25 focusing 86:18 87:3,6,8 181:24 folks 55:23 123:13 126:19 143:19 170:1 170:16 194:14 196:15 197:4 230:11 240:21 262:12 273:8 294:8 folks' 31:7 follow 105:8 108:21 186:23 202:7 274:23 278:2,21 295:10 follow-up 131:15 225:3 288:20 following 83:20 111:8 195:12 215:8 footing 274:13 footnote 243:20 footnotes 235:21 for-profit 61:17 91:10 121:8 265:21 force 42:20 70:10 forced 95:9 215:3 forces 9:3 26:11 46:9 59:20 157:9 158:4 160:1 166:22 212:9,14 214:10 229:4,8 250:23 forcing 29:2	170:16 223:1 forecasted 192:2 forego 46:12 foregoing 297:10 298:4 298:10 foreign 81:22,23 219:15 foremost 43:7 99:13 forever 32:23 118:25 forget 165:2 forgive 118:9 form 137:3 152:3,5 220:22 243:6 276:23 formal 17:3 85:24 87:19 135:15 formalize 87:8 87:17 formally 88:4,17 135:17 formation 85:19 274:15 formed 17:2 former 82:11 115:18 forms 243:3 formula 97:18 97:21 175:1 229:15 276:19 formulas 264:2 formulated 17:5 forth 55:9 140:19 175:17 233:9 fortunate 153:25 168:2 forum 246:17 forums 260:23 291:14 forward 73:3 81:11 99:14 103:1 106:18 131:13 134:5 134:24 139:5 143:15 162:15
--	---	--	--	---

176:5 225:24	248:16,21	155:6	gateways 203:6	220:10 222:19
227:8 228:21	249:20 250:12	function 58:15	203:22 220:7	241:6 247:7
230:22 246:8	251:22 254:1	114:7,7 174:24	gathered 275:10	273:1 277:24
257:16 264:17	255:16 262:8	266:5 275:4	gee 185:9	281:7,23 282:3
269:25 288:17	266:10 281:24	functionalities	geez 259:20	292:9
291:10,24	289:25	14:12	Gellach 4:7	gig 245:3 268:17
294:1,5 295:21	fraught 102:12	functions 69:17	226:21,21	268:18
foster 98:13	free 18:16	184:22,23	243:15,18	gigabit 14:3
found 159:20	103:11 258:5	234:21,21	255:25 262:7	gigabyte 76:4,4
177:21	261:5 262:3	265:23	264:18 270:25	give 21:12 26:17
founder 11:4	free-market	fund 33:3,3	271:6 280:10	35:17 54:14
156:4	34:1	34:16 52:10	283:25 284:4	59:2 86:22
four 2:17 5:7	freely 261:8	71:17 137:19	285:19 286:17	102:20 135:7
7:13 9:6 53:11	frequently 15:3	265:22	286:24 287:20	143:12 158:17
83:1 95:16	Friday 1:12 7:12	fundamental	294:4	178:4 197:21
98:21 162:11	224:14 271:15	33:22 34:10	general 82:5,19	208:5 218:19
170:17 234:12	295:13 297:6	56:11 102:4	96:2,17,18,22	237:21 239:1
234:12 251:15	friend 123:14	103:7 126:24	96:24 98:9	246:20 253:20
276:1,2,5	145:4 213:12	206:13 262:21	102:7 138:20	253:21 255:11
Fourteen 82:18	frog 245:5	fundamentally	150:19 156:14	256:13 259:20
fourth 19:23	front 147:1	87:2 263:6	156:16 212:8	261:7 271:7
88:18 126:5	260:13	funded 9:1	246:16 261:25	278:1 280:2
296:9	front-running	153:23	293:3	283:5 289:11
FPGA 26:10	224:23	funding 5:13	generally 15:10	given 15:14 29:9
50:14 216:16	fruit 122:4	8:20 25:1	79:3 87:3 89:2	30:11 37:2
216:19	142:14	153:20 154:2	89:4 150:17	39:5 41:25
fraction 33:4	frustrating	156:23 212:5	215:22 243:20	48:22 53:21,22
252:19	113:25 114:8	funds 275:7	255:4	56:3,3 71:12
fragmentation	frustration	further 8:16	generate 54:24	88:25 91:17
151:16 152:14	242:4	55:9 86:1	166:24 183:4	106:4,18 111:3
152:22 175:15	fueling 85:16	92:21 102:1	253:9 275:4	111:14 127:8
fragmented	fulfill 69:17	123:2 148:18	generating	140:14 147:6
151:10	101:16	158:11 178:1	190:9 192:21	148:22 156:2
framed 34:23	full 64:8 129:18	238:11 256:11	252:20 253:8	157:3 158:14
69:20	140:1 147:1	298:9	geographic	182:18 202:3
framework	190:12 232:2	future 39:22	12:20 19:9	233:6 285:24
11:15 27:21,21	232:13,13,23	122:24,24	22:19 35:10	gives 145:7
28:4,24 35:1	235:8 236:19	136:22 139:3	36:16,18,23	228:14 268:18
37:5 95:5	236:21 238:3	230:22	42:19 45:21	giving 25:10
104:7 238:13	263:19 269:23	futures 81:22	geography 39:2	43:17 87:18
239:24 244:15	290:5	165:18	getting 21:20	102:2 103:8
framing 121:19	full-fledged	<hr/>	30:10 32:3,13	109:11 127:11
Frank 266:10	178:6	G	48:13 66:25	134:21 190:18
frankly 27:4	full-time 198:19	G 6:1 7:23	107:21 161:20	285:25
41:20 60:6	fully 62:4 98:11	gain 148:3	169:21 175:10	glad 124:10
62:8 71:13	99:4 121:13	268:21	175:19 184:16	glean 110:2
145:11 181:12	166:6 254:1	game 148:15	187:17 191:1	Glenmede
182:13 227:5	277:6	197:16 233:15	205:3 207:22	227:12,13,21
244:3 246:24	fully-fledged	234:5	210:16 220:8	global 11:6 81:8

81:8,9,14,21	185:3 186:14	166:21 168:23	142:1 143:3	governing 25:15
154:9 155:3,24	186:21 191:10	170:10 174:9	149:12,12	49:2 160:1
155:25 165:19	goals 27:9 58:1	175:24,24	153:15 155:9	government
215:9 225:17	God 36:4	176:5 179:5,17	155:21 156:13	78:7 91:6
225:18	goes 25:8 39:23	179:17,23	158:16 162:15	154:11 206:10
globally 235:19	49:7 52:15	180:1 184:4	171:3 173:13	246:6 250:18
go 8:10 11:1	60:8,15 64:5	185:10 188:3	182:3 185:5	250:20 256:11
21:22 23:22	130:8 138:9	192:2,24	211:5,21 217:3	264:3 271:22
25:25 29:15	185:20 195:24	193:16 194:10	223:4 224:16	government-set
33:14,15 34:19	204:5,6,17	194:20 195:5	225:16 227:23	264:2
38:13 40:3	210:21 245:3	205:12 208:11	228:9,14	grand 29:9
48:11 54:5	268:12 277:21	210:4 214:18	238:17 246:17	granted 207:19
59:21 64:10,20	going 9:12,14	216:1 219:22	246:21 249:10	240:8
66:4,6 68:5	11:13 16:3,8	224:3 225:7	251:7 257:24	granular 208:4
69:8 73:17	16:11,14,17	233:14 234:19	262:18 265:24	233:17,17
77:11,17 92:20	17:4 21:11	234:19 243:2,6	274:2,10	235:11 285:6,6
98:24 99:20	26:9 27:6	243:18,21	276:13 281:5	285:8,25
100:12 101:9	30:16,18 33:17	244:17,19	289:18 291:1	289:16
104:19 111:13	37:19 42:1	245:13 246:14	292:8 293:20	granularity
113:16,17	45:8,14 48:1	248:4,10	gosh 142:21	62:16
125:9 136:25	48:11 50:22	258:12 259:21	187:18	Gray 2:7 6:10
140:24 153:11	51:8 52:17,21	260:14 265:21	gotchas 259:1	153:15 156:19
158:19 163:3	52:21 53:2,8	265:22 267:23	gotten 86:13	160:14 161:14
163:12 169:24	53:14 59:8	268:23 274:14	144:17 269:1	162:16 163:20
183:14 184:2	61:21 62:14	278:18 279:24	govern 103:1	172:12 176:6
187:9,11 196:5	64:10 65:17	280:25 281:11	156:21	181:19,25
196:10,24	66:12 68:16	286:18 291:19	governance 5:10	183:17 184:3
199:17,25	69:13,23 70:24	294:5	7:23,24 8:2	184:18 185:17
204:13 205:12	71:4,5 73:3	gold 25:19 60:21	80:21 81:1	186:23 188:19
225:12 231:16	75:19 80:11,20	60:22,22 61:2	83:14 84:7,9	189:19 196:1
233:8 235:6	83:9 90:9	golden 48:14	84:15,18 85:21	199:12 202:7
240:18 243:5	101:25 104:2	Goldman 226:2	86:5 87:3	202:19 210:22
251:22,25	105:6,21 108:4	good 6:2 9:22	89:16,21 90:2	211:20 216:22
252:4 253:8	108:4 109:22	17:6 21:16	90:8,20,25	222:3 223:15
256:9,12	109:23 110:23	22:5,7 23:18	91:14 93:19,20	224:3,7,16,18
259:11 260:8	110:25 111:4	24:9 33:24	95:24 99:5,17	great 23:25
260:18,19	116:8,24	34:6 56:1	100:24 104:7	32:15 47:23
261:11,23	119:15 124:20	57:23 68:12	104:24,25	70:7 83:12
262:24 263:8	131:7 133:18	69:23 71:9,24	105:11,14,16	89:13 94:18
263:24 265:2	133:20 134:24	72:14 78:12	105:17 114:1,1	112:25 113:9
265:13 266:24	134:25 137:16	80:7 81:20	115:9 117:14	119:20 120:7
267:12,20	137:22 139:5	82:1,7,9,17	122:5 126:23	120:21 143:2
268:14 272:2	139:11 141:1	89:7 94:17	127:16 130:3	153:3,25 154:5
277:9 281:2	142:5 143:15	111:16 113:24	136:19 145:8	178:14 179:6
282:6,8,9	144:20,25	117:4 118:16	145:13 199:16	182:22 185:14
284:14 289:10	147:22 148:23	118:21 119:13	199:18 200:1	199:6 216:20
goal 95:16 98:4	149:21 151:21	123:14,17,22	295:14	224:23 259:5
130:23,23,25	153:19,21	127:3,10	governed 83:25	295:23
179:1 182:22	156:20 166:7	135:17,21	102:9	greater 14:4

88:15 105:16 159:1 257:6 greatly 141:23 144:9 green 80:10 153:11 230:13 Greg 3:13 154:6 154:7 158:22 160:14,17 176:15 184:12 184:18 214:23 grew 97:10 gritty 32:21 ground 7:3 290:7 group 10:8 95:10 98:17 138:25 148:14 150:13,19 153:25 156:5,7 178:19 192:18 197:4 207:23 234:24 274:2 groups 85:20 88:13,16 91:21 100:4 129:9 146:13 147:13 149:20 151:20 197:12 208:15 291:8 grow 178:22 179:5 188:10 193:8 growing 112:6 188:4,5 191:24 193:2 grown 292:1 growth 168:13 169:5 188:15 191:22 192:1,5 192:10,10,15 192:21,24,25 193:2,15,17,18 195:4,9,14 209:24 guess 28:25 39:20 56:15 58:6 62:14,15 70:21 71:21	72:5 75:4 76:6 77:21 100:13 111:12 112:1 116:4 136:13 140:12 148:5 166:17 183:16 183:18 191:20 197:10 199:8 219:6 guessing 33:12 45:24 guidance 80:3 113:15 264:10 283:5,12 guide 173:15 guiding 229:1 gum 130:17 guys 25:25 26:4 71:3 141:3 170:5 171:14 184:1 211:7,9 220:4 225:9 <hr/> H H.R 156:2 haircutting 50:9 Hal 122:13 half 10:2,3 107:17,19 248:16 290:14 half-a-step 20:16 half-hour 127:5 halted 148:11 halts 73:15 hand 27:3 29:3 105:7 106:6 225:12,13 251:6 hand- 242:17 handle 24:19 52:4,4 handled 30:25 88:17 291:14 handling 26:12 hands 198:10 209:4 260:17 292:2 Hans 2:8 6:13	happen 23:8 44:19 66:25 67:2 116:12 124:21 132:24 133:15 282:10 happened 62:20 86:16 167:3 169:18 194:25 262:9 happening 62:17 69:11 144:23 194:17 219:19,24 262:5 happens 143:13 252:8 254:8,9 254:9 happy 10:15 27:13 28:14 50:21 149:4 158:23 183:23 183:24 211:17 220:12 226:15 255:3,15,23 256:8 270:2 hard 23:4 25:5 49:11 59:5,13 59:15 66:24 68:1 77:10 99:9 109:19 138:5 146:11 168:4 194:9 206:11,19 223:23 230:17 247:22 250:18 275:11 276:6 harder 67:1 281:8 hardware 164:21 189:10 Harkins 3:6 81:20,20 105:6 109:8 110:19 111:23 115:5 135:25 136:3 144:1 148:19 harm 99:13 135:1 292:25 293:19	harmonized 235:5 hashed 290:25 hat 122:15 hate 282:16 head 9:23 10:4 10:20 39:13 81:8,8,14 82:19 152:12 154:9,11,20,23 215:10 225:17 headed 190:22 heads 242:16 healthier 250:3 healthy 89:14 106:1 107:7 164:5 186:21 226:22 hear 15:16,20 29:24 56:21 57:10 75:15 89:17 100:11 137:9 141:1 147:20 151:8 151:19 174:15 193:25 209:23 234:1 250:9 heard 12:4 13:15 54:12 56:16 57:7 60:19 90:3 93:10,10 94:22 97:23 98:21 100:19 125:6 125:23 130:1,2 130:13,15 131:6 138:12 138:24 140:6 141:3 147:23 149:17,18 161:19 162:5 167:2 184:7 208:25 211:18 227:2 230:23 233:8,10,11,11 240:21 242:10 243:23 244:2 245:20,21 247:4 248:5	250:6,7,15 292:20 293:2 293:11,14 hearing 56:22 57:9 127:12 136:15 272:20 280:20 heavy 279:14 Heidle 2:8 6:13 held 85:11 96:18 98:25 150:13 158:6 225:21 294:15 298:5 held-back 262:12 Hello 226:21 227:9 help 7:21 24:5 110:2 120:11 144:22 156:23 174:11 190:7 194:14,16 197:5,6 210:19 213:6 215:18 238:5 241:21 243:4 253:7 258:20 259:16 259:23 273:14 276:8,22,23 282:22 283:3 283:20 289:13 295:20,20 helped 212:14 helpful 32:19 44:8 48:14 73:7 80:14 89:17 141:25 176:24 189:1,1 190:5,6 193:20 194:6,13 196:14 223:25 224:22 225:1 258:25 272:23 278:5 285:4 287:10 294:6 helpfully 58:17 helping 59:12 179:8 194:7 212:9 253:13
---	--	--	---	--

261:13	188:21	188:13 192:22	ICI 91:22	266:8,16
helps 287:8	highlights	hook 135:5	idea 22:5,7,9	impact 69:9,13
herring 36:24	292:13	hooks 203:7	35:14 41:10	114:12,14
39:16	highly 19:20	hop 12:20 18:3	45:10 46:6	134:20 162:6
hesitancy	37:14 65:25	29:5	60:20 62:5	171:9 240:2
252:16	163:24 164:9	hope 83:9 151:7	70:22 76:18	244:17 248:1
Hester 2:10	270:11	191:9 284:8	99:24 131:14	impacted 112:10
hey 184:10	hike 182:7	hopefully 10:21	135:17 224:16	123:21
260:16 265:17	Hinmon 4:8	81:17 142:15	240:12 246:17	impacts 171:10
265:19	227:9,11	156:22 187:13	254:23 265:8	240:3
Hi 9:24 83:2	237:23 260:11	187:22	293:19	impartially
226:9	260:13 273:22	hoping 289:24	ideal 151:11	91:14
hide 106:16	hire 197:6	horribly 32:8	ideally 73:11	impede 229:7
high 48:13 68:19	286:18	62:8	ideas 17:6,7 27:8	implement
91:20 105:9	hired 97:24	horse 153:17	29:14 134:3,13	258:2
136:12 176:22	historical 32:6	host 123:25	295:3	implementation
178:4 179:24	56:5 113:2	201:4	identical 19:17	17:15 46:8
183:6 186:18	165:12	hosting 11:4	identified 83:18	implemented
220:6 221:2,20	historically	82:2 227:1	86:6 164:19	20:4 123:4
222:9 237:9	157:25 189:21	hotel 148:16	identify 289:18	127:17 257:3
268:7 273:16	288:4	hour 34:16	identifying	implementing
282:4	history 80:25	153:9	284:15 285:12	49:6 181:5
high- 275:4	82:10,11 86:12	house 123:10	IEX 83:3,6	implication
high-level	113:11 115:13	154:16 219:18	149:22 154:21	42:23 46:23
187:15	126:10 146:11	219:19	175:18 178:24	implications
high-price 66:17	146:18 179:4	Houston 155:3	183:10 201:8	17:11 34:17
high-priced 15:3	249:16 255:2	Hubert 3:5	202:7 275:10	60:6
70:5	275:15	81:14 89:17	276:1	importance 90:2
high-quality	hit 41:6,6 118:8	94:18 96:9	ignore 186:17	139:21 188:21
164:5	152:12 220:10	102:2 103:10	illuminated	important 7:2
high-speed	240:10 259:21	105:12 122:6	223:24	14:3,23 28:18
13:11 53:24,24	281:7	144:10	illuminating	29:10 34:13
high-volume	hold 16:25 53:11	Hudson 10:5	217:25 223:17	43:13,21 45:17
268:2	55:19 118:18	huge 163:14	illustrates 33:22	48:19 57:25
higher 40:15	133:8 146:21	182:4 206:6	34:9	58:2 68:12
67:16 112:13	147:15	human 42:2	imagine 53:2	81:7 87:6 90:1
139:17 148:24	holding 135:19	hundred 233:6	61:7 161:23	91:9 93:11
148:25 179:25	159:11,13	276:2	191:14 198:16	95:7,24 99:8
208:18 217:12	190:14 242:18	hundreds 47:14	244:18,20,21	102:19,23
281:8	260:17 292:2	244:22,22	244:23 287:9	103:3 105:2
higher-level	holds 139:15	289:9	imbalance 14:21	108:12 114:3,5
106:21 179:1	hole 69:7 232:8	hurdle 25:19	64:8 68:11,17	115:3,17 118:6
highest 255:11	holistic 220:13	hurdles 25:13	72:19 73:14,18	118:12 119:12
277:7	holistically	28:16	93:10 124:13	127:13 138:11
highlight 93:23	220:5	hurting 281:14	immediate	138:22 144:2
highlighted	home 10:15		239:15 250:8	145:10 149:2,5
105:18 136:20	honest 187:24	I	immediately	149:9,13 150:2
highlighting	honestly 115:17	IBM 151:13	239:17 254:13	150:3,6 151:5
90:2 156:20	180:15 187:7	ICE 82:6	254:19,22	158:18 198:4,9

217:19 238:2,3 256:16 258:5 260:24 267:23 273:6 295:5 importantly 198:22 impose 196:12 impractical 106:11 208:10 impression 214:4,4 improve 7:6 8:2 42:15 57:11 62:19 74:5,6 80:21 95:17,20 103:15 136:14 144:6 180:17 180:18,18 186:14 205:16 250:8,15 251:12 improved 15:23 117:13 144:9 238:11 improvement 90:22 improvements 20:9 98:22 105:17,19 127:15 164:21 173:15 186:12 251:14 improving 89:21 99:17 213:6 228:13 229:11 250:11 in- 98:25 inaccessible 97:24 114:1 inadequate 229:22 incarnation 74:23 incent 179:7 incentive 167:9 180:14 289:11 incentives 100:8 152:13,19 incentivize	276:13,18 incentivized 107:8 260:22 include 8:3 9:3 9:20 11:6,9 14:19 62:1 63:18 64:1,1 73:18 84:8,18 85:3 91:15 113:8 177:17 228:3,7 238:11 245:25 254:16 included 14:16 14:20 63:11,24 71:9 236:12 includes 9:10 14:20 15:7 83:8 240:2 254:14 including 7:25 51:4 72:17,19 73:4,6 78:4 81:17 86:6 145:20 173:20 219:14 238:19 240:4 260:23 261:6 266:20 inclusion 131:1 inclusive 90:20 102:17 income 126:13 156:11 226:14 227:14 296:6 inconsequential 161:21 inconsistent 185:3 incorporate 145:9 incorporates 22:12 increase 53:9 97:6 150:14 152:25 185:4 191:2,2 194:1 194:2,3 195:8 209:10 213:20 214:1,24 218:9 221:7 233:9	240:3 279:11 increased 96:25 97:17 105:20 106:9 192:5 201:25 219:8 234:7 257:11 261:14 278:24 279:11 increases 169:17 193:14,24 194:15 216:2 increasing 73:8 97:4 116:11 175:6,6 186:8 280:5 incredibly 73:5 187:22 197:15 273:6,16 incremental 24:15 68:1 incrementally 23:17 27:4,5 42:15 incumbent 102:11 independent 47:4 137:13 independently 18:7 31:12 indicate 41:7 indicated 108:22 298:5 indicative 184:16 indices 159:14 indicia 159:14 indirect 233:19 240:3 indirectly 118:18 individual 19:25 85:2 128:21 164:13 197:17 222:15 258:24 263:16 268:1 284:23 286:6,8 289:10 individuals 65:24 71:13,17	95:12 98:17 110:10 industries 166:1 industry 17:12 17:16 20:6 29:22 37:6 55:5 57:12 65:20 79:3,5 91:6,9 95:12 96:20 97:5 98:1,18 102:8 102:13 105:8 107:16 111:6 117:22 119:3 119:15,22 121:25 138:11 139:18 141:3 141:11 143:19 146:15 148:10 150:25 155:11 163:12,15 196:17 197:5 197:10,12,14 198:13 206:3 216:7 220:25 224:9 227:16 227:17 250:6 255:12 262:4 283:17 292:14 industry's 251:8 ineffective 229:9 inefficiencies 149:19 inefficiency 163:10 inevitably 61:3 inexplicably 219:16 inextricably 130:4 164:9 infinite 39:22 inflated 101:21 influence 91:3 informal 290:19 informally 89:10 information 12:15,23 14:16 14:18,19,21,23	15:7 19:25 38:20 45:14 53:3,23,25 54:2 60:10,16 62:20 63:25 64:7,8,8 68:11 68:18 72:10,19 73:14,19 74:10 79:2 84:17 85:8 93:9 107:24 110:2 126:16 139:5 161:11 163:23 165:15 190:4,5 193:22 208:8 208:22 229:3 229:22 232:11 233:23,24 236:15 237:12 237:14 239:12 245:20 246:1 246:12 247:9 248:7,12 251:24 253:20 253:21 257:2 258:23 260:4 263:10 267:15 267:17 270:20 270:22 272:21 284:12 286:15 286:19,20 287:5,7 288:14 288:20,23,25 289:13,17 291:12 293:24 294:21,22 informational 131:18 informed 91:13 229:23 informs 70:14 206:16 infrastructure 5:8,11,14 7:6 8:1,3,7,13,17 8:18,25 9:7 10:20 11:4,23 11:24 15:14,21 15:23,25 27:11
---	---	---	---	--

38:2,4 39:22	66:17 69:14	101:2 102:14	124:16	139:6 171:11
52:6 54:11	144:11 186:24	105:7 106:20	interpretations	197:17 198:9
63:23 75:24	installations	107:21 108:3	159:3	286:6,8,9
76:17 80:22	20:3	108:13,23	interpreted	investors 10:13
92:23 93:4,14	installing 203:3	109:6,14	255:4	33:1,4 55:25
95:5 103:16	instance 17:24	111:24 112:16	interrupt 54:20	68:8 71:18
137:21 153:21	18:4,11,12	113:5 114:22	Interstate 173:3	84:20 91:16
153:23 186:1	19:10 114:25	123:15,21	intervene 125:2	116:15 139:2
195:3 202:22	136:24 159:6	125:15,22	interviews 167:2	173:18 179:19
203:7 238:11	instances 17:20	128:6 134:9,14	intraday 73:15	223:13 227:4
270:5,13,24	18:13,25 144:5	135:19 136:24	introduce 6:7	227:15 228:13
295:14	instantaneous	138:3 167:12	9:13 57:20	229:3,5 249:18
inherent 41:17	78:25	167:13 205:9	81:4 103:17	249:24 252:15
42:7 90:25	instantaneously	205:15 213:4	154:4 225:14	268:4,12 272:6
103:22 112:19	78:20	238:18 257:20	introduced 40:8	274:15 276:23
129:5	institution 10:10	258:3 280:1	165:6 234:8	289:10 292:18
inherit 122:25	21:9	interested 46:22	281:17	292:21,25
initial 29:17	institutional	74:9 100:11	introductory	invitation
43:4 44:24	10:12 55:16	125:8 259:1	9:14 178:13	172:15
134:25 214:17	84:25 155:17	263:22	intrusion 256:11	invite 263:20
initially 43:10	155:18 226:6	interesting	264:3	inviting 81:6
63:7 82:4 97:9	227:15 228:13	30:14 40:17,20	intrusive 250:20	225:23 227:24
114:11 287:25	237:25 272:6	41:3 44:7	invaluable	involve 129:24
initiate 88:2	institutions	45:21 46:6	163:25 217:12	261:21
initiative 98:12	68:18 184:8	62:21 63:3	inventory	involved 29:6
151:21	277:19 283:4	75:5 147:20	164:18	82:25 109:1
inner 97:17	insurance	149:17 153:5	inverted 179:14	112:17 266:11
98:10	137:24	176:8 247:20	Invesco 81:9,9	involves 124:22
innovate 78:14	integrated 245:9	interestingly	invest 188:3	185:25 264:5
167:8	integrity 130:21	34:7	273:14 274:17	ionosphere 35:8
innovating	165:3 238:2	interests 9:20	invested 216:4	IP 28:2
78:13	intelligent 70:17	61:13,14 71:19	investigative	iPhone 185:12
innovation 28:7	intend 7:8 295:9	92:18 102:23	297:13	216:13
65:19 72:8	295:16	111:19 123:16	investing 71:18	iPhones 37:22
185:16	intended 8:8	137:17 148:10	111:15	Isaac 2:20 9:24
innovations	159:1	interfering 86:9	investment	32:16 39:21
65:16,25	intent 171:18	interim 153:10	62:22 93:12	41:6 46:5
164:23 186:5	intention 41:19	195:1	136:11 139:6	55:11 57:21
innovative 72:6	intentions	interject 119:24	168:25 169:2	59:14 69:20
72:12 78:15	123:16	internal 208:6	169:13 227:12	70:18 72:15
216:4	interaction	233:2	227:21	121:18 123:22
input 97:5,19	139:22	internally 201:7	investments	Isaac's 21:9 62:4
115:3 239:20	interconnected	international	155:20 156:7	Isaacson 135:4
291:9	281:12	192:23 231:23	195:1,2	ISO 64:20
inquiry 125:7	interest 8:4	Internet 38:3	investor 33:2,4	isolation 43:25
263:21	41:17,23 61:13	interplay 60:14	34:11 55:16	108:7 194:22
inside 15:4	86:7 90:8 91:1	243:25	58:2 70:4	218:9
22:19 47:15	91:11 92:9,13	interpret 196:18	71:15 85:1	ISOs 64:13
48:25 50:3	93:18 99:25	interpretation	128:21 132:9	issue 34:11

42:13 47:19	J	219:21 222:12	230:20 261:24	120:19 124:17
76:22 94:8	Jackson 2:9	joyful 135:3	keeping 43:8,15	125:15 128:15
103:11,13	January 194:1	JP 156:3	43:24 73:2	130:17 136:20
113:14 121:14	Jarrold 2:24	Jr 2:9	183:19 184:1	137:17,24
122:20 131:18	11:3 42:16	judged 191:11	242:13,14	140:5 142:13
134:10 138:8	64:3 269:4,5	judgement	keeps 115:10	142:15 145:15
139:10 168:19	Jay 2:4	189:2 266:15	169:12 215:22	151:14 152:13
169:11 171:1	Jeff 4:6 112:24	July 157:10	Kennedy 223:22	152:24 161:9
178:1,8,12	226:9 249:7,9	jump 25:12 41:5	kept 277:17	168:2,4 171:6
191:6 196:11	260:8 263:9	51:17 61:24	Ketchum 3:8	173:24 178:13
202:15 223:20	279:20 280:13	205:24 214:3	82:9,9 86:22	179:21 192:16
254:22 278:14	Jeff's 294:7	229:25 236:10	117:9 120:7,11	194:9,9 199:10
290:3 295:5,17	Jesus 3:5 81:12	243:13 260:11	132:13 150:17	212:12 214:19
issued 84:11	81:14 89:23	260:13	Kevin 3:4 4:4	215:3 220:11
91:23	103:12 104:19	jumped 212:12	81:5,7 100:17	221:1 231:24
issuer 67:15	136:17 144:14	justification	104:9 107:12	241:11 242:8
issuers 91:16	150:10,12	182:11,15	139:24 147:20	242:12,19
249:18	job 21:16 49:2	266:25 267:9	225:16 249:7	273:1 280:1
issues 7:4,8	56:1 118:23	267:10,10,11	256:13 260:8	295:20
49:24 57:4	121:18 122:23	justifications	262:3 267:4	kinds 102:18
83:17 86:5,16	135:21 142:1	191:11	288:19 290:12	128:5 152:21
86:19 88:20	171:3 172:10	justified 233:22	290:16,21	261:24
89:16,19,21,24	173:13,14	236:23 237:11	298:3,15	knew 126:16
90:5 91:7 94:4	182:3 216:20	255:5 267:1,2	Kevin's 274:23	281:22 282:1
98:19 99:18	237:2 259:24	269:24 272:8	key 129:3 151:2	knob 219:23
108:9 115:25	jobs 25:14	273:10	162:2,19 165:5	know 10:9 11:17
124:3 126:20	Joe 273:15	justify 48:8	213:9 241:12	16:6 17:5,10
126:22 127:6	274:1	96:13	kick 9:5 36:15	17:13,14 21:7
136:20,23	John 2:12 3:10	K	137:16 156:20	22:1,16,20
144:3,3 148:1	3:19 6:9 80:11	Kara 2:15	kid 38:21	24:18 26:15
148:9 153:6	83:2 113:6,11	Kasparov 3:7	kidding 139:7	27:13,20 28:1
159:19 162:6	127:4 129:19	82:1,2 94:20	155:22	28:2,7,8,13,13
166:11 168:20	135:10 156:13	112:9 113:11	kids 122:25,25	28:18,21,23,24
176:17 187:3,6	172:13 176:6	114:18 119:24	Kimsey 112:24	28:25 29:1,6,7
223:18 230:8	181:20 210:9	120:9 133:20	kind 21:6 27:2	29:8,16 30:1
260:9 263:7	216:24 223:21	136:2 141:1	27:15,16 28:10	30:22 31:13,17
292:24	252:6	142:9,11,21	28:12,12,15,19	31:18 32:5,10
it'd 23:24	John's 127:18	143:2,23	36:3,23 38:17	32:11,24 33:3
206:11	join 296:12	145:22 149:1	39:3 40:1	33:15 34:6,15
it'll 251:25	joined 154:21	149:24 150:1	41:25 50:1	34:15,19 35:7
252:12	joining 224:20	keep 9:15 29:2,5	66:10,24 70:11	35:10 36:3,19
item 53:21	joint 164:8	34:6 36:1	78:7,10,11	38:21,23 39:22
168:11 192:12	165:13	54:17 67:16	83:10,13 86:12	40:13,17,22,24
193:5 258:8	jointly 83:17	100:8 106:3	86:18 100:1	42:22 43:21
itemized 285:1	Jonas 3:15	133:17 148:15	103:13 104:14	44:9,13,14,20
items 66:7 96:2	155:1,1 161:15	170:3 173:15	105:8 106:7,21	45:10,15 46:4
165:24 167:18	189:4 198:15	183:23,24	107:11,12	46:5,5,11,13
261:17	199:10 214:19	208:4 230:17	109:10,17	46:19,21,25
	215:25 216:18		111:8 117:4,7	47:1,4,18,21

48:13,22,24	117:1,2,5	180:10 181:5	242:1,5,10,10	279:22,23,25
49:17,22,23,25	120:10,19	181:14 182:5,8	242:11,15,17	280:1,5,15
50:5,10,12,13	122:4,8,15,24	182:9,10,12,15	242:19,23	281:16 282:2
50:22,24 51:5	124:10,18,24	182:19 183:6,9	243:2,19,22	282:21 283:14
51:6 53:21	125:1,8,19	183:12,14	245:1 246:2,4	283:16,17
54:7,16 55:2,6	126:11,16,19	184:5,8,12,16	246:8,9,15	284:12,25
55:20 56:5,12	127:7 128:13	184:17 187:4,5	247:8,13,22,22	285:13,18
57:6,12,15,16	128:17 129:2,5	188:11,20,23	247:24,25	286:4,7,9,11
57:19 58:13,14	129:13,23	189:5,8,11,15	248:10,11	287:9,11,14,17
58:16,23 59:14	130:5,9,15,16	190:4,7 191:12	249:14,15,17	287:23,24
59:18 60:1,6,7	130:22 131:3,6	191:14 192:17	250:5,7,11	288:2,11,16
60:9,16 61:3,8	131:11,20	192:18 193:20	251:1,9,23	289:5,7,13
61:19 63:10,11	132:2,4 134:19	193:25 194:16	252:2,6,9,10	290:11,13
63:16,18,20,24	134:23 135:4	194:25 195:6	252:12,13,15	291:3,3,4,24
64:6,11,16	135:12 136:3	195:13,22,24	252:16,17,23	292:7,11,12,16
65:14 66:11,16	137:1 138:8	196:24 197:2	253:15,15,22	292:17,19,20
67:2,3,5,20,21	139:25 140:19	197:12 198:1,6	253:23,23,24	292:23 293:2,2
68:2,6,24	142:4,12 143:7	198:18,19,25	254:1,1,2,3,3,3	293:3,7,9,11
69:12,18,21,22	144:2,18,19,24	200:4 201:1	254:6,7,21	293:12,15,17
70:2,4,4,9,16	145:6,11,16	203:20 204:4	255:2,11,15,22	293:21,22
70:17 72:4,20	146:1,18,22	205:12 206:6,8	255:23 256:4,4	294:20 295:15
73:2,9,17 74:5	147:5,9,10,20	206:19,20,22	256:6,7,9,17	295:17
74:7,10,12,24	148:2,21 149:3	207:17 208:12	257:5 258:7,8	knowing 69:13
75:12 76:1,3,4	149:9 150:1	209:1,9,16,21	258:16 259:1,2	124:18 232:9
76:4,7 77:13	151:19 152:7	209:23 210:2,4	259:9,12,19,20	263:22 287:24
77:15,22,23,24	152:19,24	210:5,24 211:1	259:23 261:16	knowledgeable
78:10,15 80:20	153:18 155:13	211:8,12 212:2	261:18,20,22	95:11 154:1
80:23 85:3	161:18 162:5	212:18 213:4	262:2,3 263:3	known 16:12
94:5 99:21	162:23,25	214:20,22	263:12,13,15	41:20 115:25
100:9 101:8,10	163:1,22,24	215:1,3,7,25	263:16,18,18	knows 53:13
101:24 103:7	164:1,6,9,10	216:6,13,18	263:20,21,21	142:4 269:5
103:25 104:6	164:14 166:2,8	217:6,14,16,17	263:22,23	270:10
104:10,23	166:15 167:25	217:21 218:16	264:1,2,4,6,8	KPMG 156:3
105:15,16	168:5,10 169:1	218:17,20,24	264:11,12,14	
106:3,6,15,22	169:3,4,9,12	219:1,2,5,19	264:15,16	L
107:9,16,18,18	169:16,18,22	219:22 220:1	267:14 268:25	lack 9:4 214:12
107:23,24,25	169:23 170:5,6	220:20,24	269:14 270:3	214:13
109:9,10,12,13	170:7,15,17,18	222:8,17,18,22	270:22 272:21	laid 21:18
109:15,16,17	170:22 171:2,4	223:4,8,13,14	273:9,19 275:4	228:25
109:19,21,22	171:4,6,11	224:19,23	275:11,12,16	land 75:20
110:2,17,23	172:2,16,22	230:12,15,23	275:18,19,22	landscape 200:5
111:2,9,10,14	173:5,9,13,16	230:25 231:17	275:25 276:14	213:12
111:22,24	173:24,25	231:19 232:2	276:21,22,24	language 135:6
112:1,18 113:4	174:2,3,9,14	232:16 233:10	277:11,11,13	208:20
113:12,13	174:17,23	234:1,3,9,10	277:14,18,19	LANS 230:15
114:11,12,14	175:4,6,13,15	235:6,12,13,14	277:24 278:24	laptop 37:13
115:1,10,15,17	175:21 176:2	235:24 237:12	279:2,3,6,8,8	39:13
115:18,19	176:22 178:4	237:13 238:17	279:10,11,13	large 10:9,20
116:1,1,4,9,13	178:16 179:8	240:7,19,22	279:13,15,19	14:5 85:20

107:15 147:13 170:23 179:6 182:16 196:20 228:7 279:10 292:19 large- 182:17 largely 22:9 138:1 larger 14:2 234:23 281:2 281:11,12 Larry 3:18 156:4 171:17 172:12 177:9 184:3 210:22 211:14 laser 23:14 lasted 96:5 lastly 68:21 93:23 late 84:4 latencies 14:14 35:11 36:23 39:18 42:19 43:1 74:5 78:25 93:4 latency 8:14 11:17 12:5,8 13:8,25 14:5 18:19,20 19:6 19:9 20:25 22:20 36:17,18 36:21 39:5 54:13 74:18 103:17 139:14 160:20 229:12 238:16 latest 125:23 latitude 36:10 laughable 40:2,8 laughing 216:10 Laughter 10:17 17:9 22:10 46:3 57:18,22 64:23 79:10,12 80:12 113:10 120:6,22 138:6 142:8 155:23 216:17 224:13	230:5 237:17 237:20 243:12 249:11 252:5 272:11 282:19 287:22 launch 154:21 154:22 launched 212:24 280:14 launching 226:23 law 42:11 52:19 52:20 113:15 244:10 laws 47:25 lawyer 47:24 55:21 118:10 254:8 262:17 laymen's 271:14 lead 46:9 175:7 199:14 225:7 leader 155:3 leaders 167:3 leadership 20:14 151:19 leads 59:9 61:11 learn 113:15 learned 55:22 leave 143:6 237:18 leaves 191:4 lecturing 119:4 led 49:14,15 95:12 110:21 left 79:21 140:24 206:12 230:3 legacy 188:1 legal 118:19 126:3 204:5 261:19 263:14 legalese 271:13 legally 119:11 legitimate 132:5 179:11 Lehman 156:9 length 22:1 41:13 95:25 lengths 78:10 lengthy 159:17	let's 9:5 16:20 23:20 24:16,17 24:19,25 25:3 25:6,11 36:10 40:3,4 42:10 55:3,18,19 64:20 68:21 77:15 101:1,23 104:15 108:14 108:25 114:13 127:6 129:24 133:19 140:24 151:6 152:6 165:2 179:3 189:6 219:23 225:13 229:25 230:1 242:23 260:5,16 263:8 267:7 268:15 270:7 284:2 290:3 letter 80:23 106:5,9 135:13 207:25 208:21 264:20 letters 166:9,10 193:21 level 38:16 52:15 68:24 72:20 75:3 91:20 101:15 105:9 108:5 114:17 131:1 139:16 145:12 147:11 157:10 164:1 177:22 182:11 189:24 209:18 214:7 223:12 233:1 274:13 285:8 285:12 leveling 162:3 162:13 levels 68:23 69:14 73:12 74:17 218:13 lever 188:14 leverage 184:9 leveraging 50:17	192:22 liabilities 19:21 liability 137:22 137:24 licenses 147:14 147:15 licensing 170:14 170:15,24 life 178:23 256:18 light 41:7,7 140:22 151:18 151:21 190:7 205:8 light's 184:3 lighten 199:7 lightweight 19:12 limit 15:9 18:9 18:10 30:2 31:5 94:12 142:18 148:22 limitations 15:11 limited 94:3,23 96:10 105:22 131:17 141:6 143:7 238:19 261:19,20 263:13 288:22 limiting 90:17 109:16 140:13 143:13,15 144:4 limits 88:18 123:6 132:4 142:15 203:10 line 36:15 61:19 70:12,23 100:12 111:13 163:4 168:10 168:11 192:12 193:2,5 194:11 232:25 234:18 236:13,14 lines 7:10 140:11 193:24 208:6 link 175:7	linked 130:4 164:9 200:15 206:15 219:17 liquid 227:13 liquidity 179:13 274:11 list 13:3 63:24 75:25 78:15 113:8 listed 67:7 174:13,19 233:19 listen 146:9 listened 252:21 listening 28:21 70:19 listing 18:12 67:22 68:3 125:1 154:22 litany 122:4 litigation 88:10 141:15 142:19 143:9 160:3 173:7,10 214:18 litmus 145:13 little 21:21 23:14 27:6 47:7 48:2 63:8 64:10,18 69:2 69:18 70:8 72:3 77:7,17 106:7 109:11 127:5 133:13 155:11 176:18 178:1 188:5,20 194:19 195:13 197:9 202:8,19 208:24 217:5 224:10,24 237:1 240:17 247:5 252:15 258:16,17 262:5 266:7 268:9 272:21 273:20 280:2 288:4,12 293:10 295:1 live 56:6,6 98:10
---	---	---	---	---

195:20 242:8 252:2 load 199:8 204:20 loaded 132:17 lobby 213:1 Local 231:22 locally 54:2 located 12:11,12 12:14 18:12 location 52:15 53:18,20 56:3 63:2 297:7 locations 18:1 locked 210:23 logic 19:16 logical 14:10,11 201:1,9,20 203:5,12,18,19 264:13 London 215:10 long 9:14 10:2 36:20 41:2 64:16 125:7 128:4 133:5 135:21 142:4 172:21 173:19 173:22 198:21 235:20 251:25 255:7,7 262:17 275:14 276:15 283:10 286:15 289:17 long-term 46:20 167:12 179:16 186:21 187:8 long-winded 148:5 longer 53:6,7 175:3 187:14 188:14 210:19 224:10 268:3 295:8 longer-term 210:11,17 longitude 36:10 longstanding 157:11 look 33:25 42:9	42:14 43:23,25 55:25 58:16,18 59:3 69:24 81:11 95:17 99:14 106:13 107:21 111:14 111:17 117:9 123:2 135:20 138:7 148:14 148:18 149:20 159:15 161:10 169:1,2,3,16 170:13,24 171:6 178:23 178:24 185:23 188:1 193:4 194:8,9,14,15 194:21 195:3,6 195:7 198:13 200:24 204:16 204:18 205:7 207:8,12,24 208:15 210:24 215:14 218:23 219:4 220:4,16 220:20 221:1 225:23 227:8 228:21 233:4 235:17 241:2,7 246:8 253:3 256:16 257:18 259:3 270:3 279:21 280:6 282:2 284:11 287:12 288:14 288:16 294:1 295:1 looked 64:25 86:16 113:14 141:4 165:25 169:19 182:10 185:20 201:7,8 202:21 251:4 252:22,24 looking 25:18 32:6 35:24 43:22 64:11 106:5 120:23 130:6,17	150:15 168:13 186:9 188:7,11 190:19 193:3 205:13 208:13 210:18 216:1 218:8 219:1 220:3,13 222:12,13 230:21 231:10 269:20 270:19 278:24 284:9 295:13 looks 188:3 193:23 lose 116:22 274:14 288:8,8 losing 263:2 losses 231:3 lost 68:9 116:19 119:10 142:11 288:7 lot 7:3 15:4 17:4 21:10 23:1 24:13 25:15 26:8,16 28:16 43:18 46:21,24 48:21,23 50:17 51:24 52:2 59:24 62:19 66:16,20 67:2 67:11,24,25 68:13 69:17 70:20 76:19 78:14 79:18 80:25 83:4,7 90:3,12,21 92:5 101:19 102:9 103:5 105:17,21 106:1,4,13,25 107:15 111:3 111:16 113:6 116:11,19 117:16 119:4 125:3 127:24 137:9 138:9,24 139:20,21 141:7 144:22 145:7 166:15	166:16 167:6 170:23 176:9 184:19 187:19 191:25 193:17 195:14 196:12 216:4 224:9 226:18 230:11 230:23 231:19 233:8 234:22 235:22 236:16 236:17 237:3 241:21 243:8 243:23,25 244:15 245:20 245:21 246:14 247:4,12,14 248:20 249:13 251:19 255:1,6 255:17 257:10 260:21 261:18 268:20 269:1 280:7 282:22 283:3,8,8,18 283:19 286:21 286:23 287:14 288:13 291:4,4 291:5,8 292:8 292:13,20 295:9 lots 14:25 59:7 63:20 64:1 66:20 67:18 70:3 72:18 73:4 246:1 253:20 loud 250:16 love 78:16 169:4 263:5 282:15 282:21 low 14:5 176:22 178:4 179:7 192:20 220:18 221:3 292:22 low-hanging 142:14 low-latency 85:17 lower 180:22 187:6 208:18	223:14 lower-cost 205:16 lowest-hanging 122:3 LP 154:10 lucrative 276:4 LULD 73:15 lunch 153:9,16 <hr/> M <hr/> machine 22:1 204:24 machines 169:7 169:8,11 magnificent 118:23 Mahwah 12:18 17:21 19:8 38:8 45:25 46:1 48:3 55:4 60:22,24 61:5 Main 10:10 20:22,25 21:3 21:8 37:7 68:15 173:18 249:19 272:6 276:23 292:18 292:21,25 maintain 95:4 223:8 268:7 269:19 272:4 maintaining 203:3 major 18:4 129:9,11 251:2 majority 56:17 85:11 88:21 96:1 124:17 129:12 140:3 149:21 maker 170:19 makers 228:16 making 10:6 18:15 43:22 67:15 98:5 104:20 109:17 111:25 118:1 125:9 139:19
--	---	---	---	--

148:8 166:6	196:4 199:5	91:15 92:25	226:2,3 228:2	7:7 9:21 34:8
178:7 179:1	212:11 219:5	93:1,5,14	228:25 229:19	58:8,11 60:12
180:17 189:2	Marcy's 185:8	94:25 95:4,14	229:20,23	69:1,2 81:21
191:6 198:21	margin 182:17	100:4,21 101:6	230:11,25	81:21 82:23
198:22 230:18	187:2 231:4	102:22 104:11	231:6 232:18	83:18 84:5
230:20 231:4,5	248:23,23	104:22 107:3	237:9 238:14	85:15 92:24
253:8 254:21	marginal 52:6	108:11 109:20	238:24,25	95:3 104:5
259:24 261:4	206:2,4 221:10	111:2,15,22	239:12,16,22	107:7 122:10
294:20	margins 191:4	116:8 121:10	239:24 240:5	122:14,25
manage 10:1	191:23 192:5,7	129:20 137:20	240:11,19	125:1 136:14
83:23 92:19	192:8	137:20 138:24	241:23 243:24	147:11 151:9
102:15 125:21	Mark 2:6 6:12	146:14,21	244:1,5,6,24	155:5,24,25
163:3 165:16	225:6 239:3	150:20 151:9	250:9,22,23	156:5 163:25
165:21 180:7,7	257:9 260:11	151:11 152:5,9	251:2,3,4	164:13 165:4
259:17	273:2	153:17,17	254:17 256:19	167:16 171:2
managed 26:13	market 1:5,6 6:4	154:18,23	258:19,21	172:17 175:23
41:17 83:17	6:4,10,12 7:6	155:11,14,15	267:25 269:7	179:2 183:5
91:1 118:2	7:17,17 8:8,9	155:20 156:25	270:1,17	186:22 187:23
155:17,19	8:10,22,22 9:8	157:19 160:4,6	271:17,21	187:25 191:18
156:10 242:22	9:8,9,10,21	161:4,11 164:5	272:7 273:5,13	192:24 193:6
269:3 281:20	11:14,25,25	164:12,15	276:13 278:5	194:7 209:2,5
281:20	12:1 14:8,13	165:23 166:22	278:23 279:11	209:17 215:1,9
management	14:24 15:4,12	166:24 167:4	280:18,18,22	217:8 225:18
9:25 10:1	15:15,15,17,17	167:15,17,23	281:3,9,13	226:22 228:11
62:22 81:10	15:22 16:13	168:3,4,7,10	285:3 290:16	228:18,20
84:8 91:12	17:17 18:2,20	168:14 170:10	297:3,3 298:8	238:3 239:6
114:17 227:13	24:5,7,10,17	170:18 171:5	298:8	244:17 249:16
227:21 228:4	26:11,22 28:8	177:4,13,21	market's 70:10	254:9 268:1
manager 81:10	33:11,13,14,15	179:15,17	market- 10:5	296:6
129:17 139:6	33:17,18,24	180:1,17,19,25	market-based	markup 206:24
147:24 169:2	34:1,18 35:14	183:13 186:18	158:2	Martin 132:13
managers 169:1	40:19 44:4,4	187:22 188:9	market-maker	Masone 3:9
169:13 196:20	46:9,11 47:15	188:17 189:7	10:20,21	82:17,17
274:9,16	48:8,9 55:21	190:12 191:18	market-making	120:12,23
managing 9:24	56:18 57:14	191:23 192:6	21:7	123:8 128:25
10:7 155:16	59:4,20 61:2	192:17 193:1	marketable	131:20 142:6
200:3 226:2,3	64:13 65:16	193:11 195:3	213:3	146:9 151:6
mandate 7:18	66:17 67:22	200:17 201:10	marketplace	mass 188:5
mandatory 57:2	68:3,13 69:4,9	201:11,21	12:3 15:19	massive 182:7
manner 37:14	69:12,19 71:8	202:1,4,24	30:18 55:18	Masso 4:9
38:12 220:14	71:15 72:11	204:16,19,23	57:3 60:3 62:3	227:23,25
256:21	73:9 76:2,11	209:1,3,5	62:17 66:12	241:19 278:20
manpower	77:20 78:1	214:15 215:13	102:4,18 105:3	match 169:8
231:18	80:22 81:14,24	215:14,15	119:1 145:10	171:5
manufacturer	82:2 83:3,7,15	218:4,11,23	163:19 209:6	matching 42:20
207:12	83:16,22,24	219:8,24,25	212:21 213:21	164:2,6,20
Marcy 3:16	84:9,12,13,16	220:8 222:12	214:1 270:11	180:17 201:10
155:9 162:17	85:18 86:14	222:25 225:12	273:24 274:14	203:24 204:1,2
164:19 183:17	89:6 90:15	225:18,20	markets 6:6 7:3	material 36:21

114:14 213:21 229:3 materially 248:4 math 147:25 192:20 Matt 273:25 matter 85:12 87:19,21 101:20 110:8 110:25 111:4 115:20 126:3 135:16 214:17 297:3 298:5,7 matters 88:7,9,9 88:22 96:6,11 96:12 140:4 141:15 143:8 143:10,17 152:16 262:7 297:12 maturity 117:16 maximize 61:19 121:12 184:21 187:2 maximum 203:13,20,22 mean 15:10 29:25 33:19 35:12 39:9 40:22 41:22 42:9,23 56:15 59:22 60:6,9 64:10 66:18 67:12 71:11 72:10 74:22 75:15 109:8,18 110:1,19 111:23 115:11 121:21,22 123:13 125:6 126:7 127:24 128:2 129:4 130:18 144:4 144:14 146:9 148:19,23 152:15 176:7 179:11 182:1,2 189:8 192:7 194:10 198:16	198:16 199:1,2 202:12 207:14 207:20 215:25 217:4 221:9 235:12 241:20 244:14 251:22 252:11,21 254:7 255:4,15 256:5 266:1 272:19 273:1 275:16 276:3 283:13 285:16 286:22 287:2 287:15 292:10 meaning 51:10 222:25 meaningful 60:12,13 88:24 99:16 114:16 126:11 257:14 meaningfully 74:17 means 46:24 47:23 61:9 85:25 107:4 128:13 130:9 137:5 167:20 206:4 255:2 259:5 268:10 270:12 283:6 meant 205:2 255:19 measurable 20:8 measure 49:13 170:6,7,8 252:13 measuring 64:13 245:13 mechanics 78:24 mechanisms 104:1 medallion 151:18 medallions 151:22 media 126:10 median 22:18 medium 220:12 278:22	meet 7:18 15:24 54:10 80:10 145:19 meeting 96:15 140:3 146:1,5 228:16 257:10 260:7 296:10 meetings 85:8,9 92:8 96:21,22 97:2 126:8 136:22 145:17 145:21,24 229:17 252:4,9 260:21 290:24 Melissa 4:8 227:11 230:6 237:19 238:22 273:18,19 280:14 Melissa's 240:9 278:21 member 82:14 89:17 141:11 149:8 272:5 member-owned 121:5 147:10 members 6:23 49:13 84:14 86:8,10 88:8 97:10,12 98:15 100:6 107:14 117:19,22 118:11 119:18 127:8,12 129:12,25 131:7,8 143:18 145:19 147:6 147:23 249:18 memory 145:23 mentality 241:11 mention 41:10 170:14 258:15 267:23 277:24 281:15 mentioned 11:23 12:19 43:14 44:12 64:12 76:1,25	88:5 96:1,9 105:12 106:25 107:12 111:9 124:1 129:5 135:4 176:24 189:19 222:18 231:8 264:19 265:6,7,9 266:7,23 267:1 274:25 276:25 280:13 mentions 129:19 merged 104:8 merit 17:12 162:3 mess 171:7 message 14:4 messages 15:9 18:10 19:16 met 25:19 146:4 158:6 197:12 Metcalf's 52:20 method 206:9 methodically 81:2 99:21 metrics 103:20 229:12 MFS 239:8 mic 294:25 Michael 2:19 3:9 9:22 16:8 16:20,22 20:11 20:13 21:16 22:4,14 23:23 23:24 41:4,20 45:6 47:10,24 68:3 72:16 74:15 79:22 112:25 121:20 124:10 136:13 Michael's 41:25 66:19 76:18 77:17 micro- 60:9 micro-cap 274:7 274:10 micro-decisions 26:8 micro-seconds	12:21 23:12 microbe 23:11 microseconds 13:2,4 22:17 22:19 23:9 32:12 36:16 162:12 microstructure 9:21 microwave 50:14 76:2 microwaves 78:4,10 mid-tier 273:23 274:6 middle 132:12 140:23 290:7 midpoint 62:13 migrate 19:11 Mike 82:17 117:8 128:24 142:2,13 146:7 152:12 million 24:20 51:12 107:2,4 116:15 168:16 176:25 177:6,7 177:8,10,11 178:3 189:23 190:8 275:10 277:15,16,25 millions 273:13 millisecond 53:6 mind 26:24 34:6 71:22 143:4 mind-numbin... 260:18 minds 31:7 34:21 112:25 113:9 120:21 mine 227:20 291:22 minimize 17:17 minimum 15:24 92:18 128:22 129:23 130:11 minor 28:11,19 29:8 210:9 minority 149:7
--	---	---	--	--

150:3,12,14	279:13	239:7	mutual 33:3	232:18 234:12
minus 168:16	models 48:6	morning 6:2	71:17 147:10	235:24 236:1,4
minute 32:9	52:18 90:7	9:22 81:20	mutually 29:12	249:16 250:4,8
51:18 79:21	93:19 170:24	82:1,9,17	myriad 48:25	250:25 251:17
81:4 154:4	moderating 6:6	161:19	mysterious	276:25 277:1
261:11 267:8	moderators 6:8	motivating	176:25	277:16
279:17	modernization	109:14	<hr/> N <hr/>	NASDAQ's
minutes 65:21	122:5	move 9:15 36:18	N 5:1,1 6:1	12:17 119:6
96:5 158:17	modernize 8:18	37:10 45:3	N.E 1:23	249:15
240:9 256:14	9:7 121:15	52:18 78:6	Nah 246:13	nation 36:4,5,6
261:1,14 262:2	modernized	79:1 104:14	naive 119:9	39:1
262:15,16,17	8:25 15:25	106:17 114:11	name 9:13 11:3	national 36:4
263:5 292:4	153:22	117:7 134:5	16:22 26:25	37:8,13 38:20
misconception	moment 8:19	211:22 215:8	27:3 81:13	48:13 53:17,19
76:25	104:15 199:23	222:10 230:2	83:2 115:10	83:16,21 94:24
misfortunate	267:4	269:25 294:25	225:16 227:11	270:17
266:9	Monday 290:1,2	295:21	227:25 238:20	nationwide
misinformation	290:8 296:9,12	moved 96:1	239:9 291:18	293:8
283:8	money 46:24	257:16	297:16	nature 37:15
misperception	52:9 71:18	mover 192:16,17	nanosecond	108:2 121:14
277:12	106:25 110:21	moves 23:11	36:19 61:9	165:13
missing 93:22	161:21 185:25	79:2 189:24	nanoseconds	nauseam 80:1
136:6 212:22	216:4,10 223:5	moving 37:17	36:17 64:17	navigate 196:17
misspoke 218:20	244:11 245:6	45:20 75:22	narrow 58:9	NBBO 12:24
mistrust 251:20	276:21,24	89:3 106:3	88:6 131:17	15:2 30:23
253:24 261:18	277:2,13 278:7	131:13 153:6	narrowed 140:9	31:10,10,14
292:1 293:24	278:8	182:17 230:16	narrower	36:1,14 45:11
misunderstan...	monitor 163:2	230:19 264:17	140:19	47:21,22 48:12
287:14	monitoring	287:4 291:24	narrowing	50:1 52:14
misunderstan...	238:16	MSAC 86:15	140:14	60:21 61:21
238:5	monopolies	122:8	narrows 141:23	62:1 64:14,16
mitigated	166:21 167:1	much-disputed	NASD 226:12	66:18 68:25
238:18	207:10,20	173:20	NASDAQ 10:19	NBBOs 30:8,16
mix 29:5	monopoly	multi- 36:12	12:16 13:3	31:2,11 36:2,9
mixed 78:11	148:15 157:8	multi-tasking	17:19 19:8	45:11
model 16:13	159:7,8,16	6:17	20:2 47:12,13	near 106:10
17:19 18:14	160:7,23,25	multiple 17:21	50:24 78:15	nearest 19:10
43:11 44:24	161:2,9 166:17	18:25 20:3	91:24 112:24	nearing 229:25
45:18 47:7	167:20 176:21	30:6,8,16 31:2	122:14 145:24	nearly 248:13
49:8,22 51:25	184:22 185:2,6	31:11 36:2	156:14,15	281:5
52:10 61:6	213:17 215:12	45:11 73:12	161:23 182:25	necessarily 6:21
63:12,17 75:11	215:16 231:11	74:16 85:20	189:8 192:18	29:12 41:19
89:4 166:24	251:1,5	147:13 152:19	195:24 204:23	135:2 169:24
178:21 179:4	month 47:17	152:20,24	212:19 214:7	173:10 195:16
180:4,15 181:4	198:6,8 245:9	155:4 198:20	215:13 216:11	204:13,25
188:1 217:20	months 143:13	228:6 269:9,14	219:24 220:3	209:14 216:6
220:2 221:21	Morgan 10:8,9	270:11	225:21 226:10	262:22 294:15
222:23 232:23	16:11 55:17	multitudes	226:11,16	necessary 7:16
269:18,18,21	112:23 156:3	269:20		14:23 29:7

56:18 218:6,13	294:21,22	124:12 183:7	281:17 283:4	28:22 40:1
263:14,15	needed 142:13	183:10 186:5	non-core 250:17	49:9,10 77:12
need 8:9 9:9	212:23,24	192:24 193:8	non-discrimin...	145:5 151:17
12:2 15:18	275:4 285:9	193:17 195:16	247:19 254:24	166:16 167:1
20:17 21:4,9	needing 256:6	208:22 213:5	271:24 285:22	219:8
21:15,19,24	needs 21:10,21	214:25 216:1,2	295:18	notwithstandi...
22:3 23:18	24:15 38:25	223:6 234:7	non-display	67:17
24:5 26:10	41:17 47:10	244:24 275:8	198:18 199:1	nuances 34:19
27:8 28:24	54:11,14 63:10	news 78:12	233:12 234:4	number 7:4 15:7
31:21 34:11	63:11 66:4	nice 246:4	235:25 242:15	23:24 25:1,5,5
42:12 43:23	70:13 76:13	nightmare 199:4	255:9 281:17	25:12 31:19
44:3,20 48:3	102:8 122:16	nine 228:12	281:22 287:25	38:23 51:12
48:11 49:1	132:9 140:13	nitty 32:21	non-exchange	53:12 55:23
50:15 53:25	140:15 159:8	NMS 7:25 19:23	188:23	56:20,20 68:15
54:1,4 55:5,13	163:12 169:19	19:25 20:4	non-pro 233:1	68:17 69:5
56:1,2,11 60:3	211:10 242:17	24:8 30:2	non-professio...	72:10,14 88:25
62:23 63:18	284:2	43:23 44:8	197:25 198:7	89:9,11 99:18
65:6,19 66:18	negative 43:7	47:22 50:2	non-professio...	100:19 123:8
69:18 72:12	220:18,19	64:11,13 81:1	173:17	131:11 147:14
77:18 78:20,21	221:3,11	81:16,18 83:22	non-profit 227:4	148:6 172:2
79:7 91:1	negatively	83:24 84:7,15	non-profits	177:20 178:1
100:23 131:18	270:18	84:18,23,23	227:3	187:1 188:15
131:24 132:5	negotiate 138:19	85:5,14,21	non-public	188:20 195:5
136:17,18	208:17	86:9 88:6	260:10	201:15 203:13
139:3,8,20	negotiation	90:13,21,24	non-SRO 84:13	203:20,22
141:8,14,16,18	208:16	91:3,13,19	133:11	204:10 208:25
143:9 145:11	negotiations	93:20 104:19	non-voting	209:18 217:10
146:21 157:12	146:1	112:20 114:23	84:20,24	242:14,14
159:13 170:11	net 159:10 203:1	121:7 123:1,2	Norges 62:22	243:1 248:17
182:22 190:11	network 11:5	132:4 136:19	293:11	257:11 261:17
198:23 201:2	22:3 181:9	234:9 267:22	normalizer	269:3 275:9
209:2,3,11,19	202:25	268:10 276:14	43:15	285:3 289:9
209:20,25	networks 177:6	no-brainer	normalizers	297:5
210:2,4 211:2	268:1,4,5	110:1,4	43:17	numbers 135:20
211:5 212:3	neutral 288:2	no-brainers	North 226:10	186:9 233:8
217:15,16,17	neutrinos 79:1	144:6	note 10:14 43:13	236:11,17
221:8 229:6	79:11	nod 17:8 122:15	43:22 82:12	numerous 98:22
232:3,12,23	never 18:2 49:19	132:2 152:7	89:9,25 91:25	Nunes 2:21 10:4
240:24,25	72:21 219:13	172:10	124:11 165:5	10:4 16:14
243:1 246:2,4	265:6,6	noises 172:3	195:11 205:25	27:2 39:20
247:8 248:6	Nevertheless	nomenclature	256:16	40:10 49:16
259:18 264:6,6	220:23	271:13	noted 13:20 37:1	51:3,10,15
278:10,11	new 23:21,21	nominate 87:15	37:16 157:18	57:21 69:20
280:16 282:10	24:1 26:7,10	nominees 85:2	notes 27:5	77:21
282:11 284:12	40:7 65:15,19	non 71:12	237:22	NYSE 9:23 13:4
286:11 287:8	71:4 74:6,8,23	207:14	notice 91:23	16:9,22 50:24
287:12 288:14	78:17 86:5	non- 173:20	239:18 254:20	98:8 126:7
290:9 292:21	98:15 101:10	189:15 227:5	noting 14:8	155:8 160:18
293:6,25	104:16 119:5	255:8 267:10	notion 27:23	212:19 213:18

213:23 214:6 227:18 232:18 234:11 245:9 245:10,10 260:15,17 292:2 NYSE's 160:19 NYSE-listed 12:16	241:3 observation 100:19 102:15 observed 59:19 62:3 140:8 obstruct 130:24 130:24 obtained 157:7 obvious 121:3 obviously 51:13 103:12 104:20 108:9 117:14 117:22 122:8 144:18 157:20 160:10 165:6 165:22,23 166:19 174:10 187:13 192:18 193:5 194:6 195:15 207:22 216:9 220:12 225:4,12 245:19 268:20 288:15 289:2 occasions 14:25 176:20 occupant 164:24 occupies 215:22 occurred 62:18 94:21 140:15 146:5 276:16 occurring 37:5 occurs 36:22 83:16 October 1:12 297:6 odd 14:25 15:4 25:15 48:21,23 63:20 64:1 66:16,20 67:18 70:3 72:18 73:4 246:1 of-the 30:7 offer 13:10,14 14:11,17,25 15:2 37:8 38:20 50:16 53:17 93:16 124:18 200:24	201:2 238:1 257:1 263:3 offered 8:11 284:4 offering 47:13 100:3 102:11 192:19 248:3 249:19 267:12 offerings 15:16 22:22,25 244:24 offers 30:7 228:2 office 6:10,11,13 11:14 82:19 156:9,11,17 officer 83:3 155:2 Official 298:15 offsite 265:2 oh 40:10 41:6 42:5 55:2 59:22 65:18 77:12 161:20 181:7 195:6 204:7 209:15 219:23 259:2 259:12,20 266:25 268:24 273:22 Ohio 217:23 okay 11:11 42:16 45:6 57:2 64:22 78:11 79:20 83:12 89:13 102:8 107:4 109:13 114:10 127:4 139:11 139:24 140:25 143:2 150:8 156:19 169:22 188:19 197:2 216:22 217:3 231:11 268:19 270:9 279:7 280:24 289:21 old 155:11,22 OMEX 236:4	on-ramp 280:2 once 14:8 25:19 30:5 49:4 87:14 128:12 191:8,12 203:11 215:2 258:2 269:23 one-for-one 195:23 one-size-fits- 222:22 one-vote-per-... 86:4 ones 65:12 81:17 132:6 184:15 ongoing 88:10 143:9 online 256:21 265:1 onus 117:6 opaque 198:1 210:25 open 23:21 28:6 38:3 40:12 49:22 105:24 108:23 118:15 120:5 130:12 133:25 212:7 233:1 234:2 258:5 261:5 263:23 270:19 270:21 290:20 opening 5:5 44:12 73:14 110:22 129:2 129:21 183:2 188:22 196:2 205:2 216:25 262:13 openly 261:8 openness 295:23 opens 44:6 operate 18:5 95:3,4 107:6 115:1,14,16,21 129:10 130:10 137:7 139:12 150:5 200:22 203:22 228:5	275:22 operated 91:14 114:21 250:12 operates 272:2 operating 10:14 16:24 17:4 19:18,19 26:21 82:3 83:25 84:14 85:6,7 85:11 86:7 87:19,22 88:3 88:3,17 89:16 89:18 92:8 95:17,22 97:13 98:11,14 99:3 100:6 108:5,10 111:10,18 114:25 118:5,6 120:14 122:19 122:22 127:8 129:2,6,18 130:6,25 135:16,18 137:5,25 140:2 141:16 145:18 152:2,4 155:4 158:24 226:5 226:17 229:16 234:14 249:23 250:2,2 251:3 251:18,21 252:3,9 258:19 260:7 268:6 270:10,16 272:5 289:25 290:8,13 operation 25:7 86:25 91:3 93:12 114:15 155:18 183:4 275:10 operations 25:10 26:2 87:9 93:12 155:16 156:11 188:25 192:23 204:6 208:3,6 operator 109:22 136:8 148:6
O				
o 5:1 6:1 38:5 O'Donnell 2:22 10:7,7 16:11 20:13 22:11 47:20 51:14,17 51:21 66:15 67:1,4,11,19 68:5,9 76:18 79:13 112:22 115:10 obfuscate 285:16 obfuscation 138:9 object 133:16 objection 129:21 133:3 284:5 objective 20:8 100:20,23 176:19 286:9 286:16 objectives 102:23 123:24 obligated 58:7 61:18 143:14 184:20 obligation 74:13 88:4 101:13,17 102:3 111:18 148:24 170:2 171:21 178:16 241:8,8 271:2 271:5 obligations 101:15 113:16 135:8 136:7,15 137:19 148:23 207:11,13				

200:21 204:18	65:19 69:12,17	192:16 262:10	P	63:22 81:3
operators	100:23 123:9	outcomes 40:11	P 6:1	140:12 153:10
129:13 178:20	123:10 128:5	46:10 228:13	p.m 271:15	154:1 156:19
203:1	133:18 157:10	263:2	296:14	158:17 162:18
opine 168:4	157:13,17	outdated 62:8	pace 205:13	176:7 188:21
228:14	159:4,11,23	229:9	230:13,16	188:23 217:2
opinion 30:25	163:12 169:22	outline 11:16	package 219:4	223:16 224:21
95:11 114:4	169:23 191:10	outlined 256:20	page 5:3 264:22	225:14 226:7
150:2	201:24 202:23	output 180:19	287:18,20	228:23 242:11
opinions 29:23	206:15 214:14	outputs 19:14	pages 235:20	panelists' 15:16
106:19 145:10	218:17,22	outset 125:16	264:21	15:20 100:12
227:20	244:21 256:18	outside 72:11	paid 116:10	panels 12:4
opportunistic	268:12 269:11	76:15 145:18	173:17,17,20	100:20 102:21
102:3	269:12 282:11	193:6 267:5	216:18 222:19	122:2 153:19
opportunity	286:12,18	outsourced	pain 184:20	154:3 165:7
32:18 40:19	order-by-order	174:15	palatable 45:5	176:25 202:25
71:24 81:12	74:23	outvoted 263:1	148:8	205:11 211:25
93:22 163:14	orderly 92:24	over-charging	panel 2:17 3:3	248:6 275:1
163:17 188:10	orders 14:6	161:24	3:12 4:3 5:7,10	294:9
226:20 227:10	30:12 33:16	over-used 140:7	5:13,16 6:6,8	Paniscotti 2:23
256:13 257:7	58:18 64:13	overall 13:18	8:19 9:5,6	10:18,18 35:21
259:11 271:7	203:25 256:22	18:19 90:2	10:22 11:15,22	37:24 38:9
274:17 276:6	269:13	163:17 168:13	15:13 32:18	39:8 40:7
opposed 38:7	organization	197:9 220:4	33:12 79:9	52:13 54:19
205:5 261:14	9:13 83:5	222:13 230:24	80:10,19,20,25	65:10 78:12
281:2	135:3 269:4,6	overhead 223:11	81:3 90:3	79:17
opposite 180:3	organizational	overlapping	98:21 105:10	panoply 147:1
213:14	208:7	234:21,22	121:19 124:10	paper 34:7 58:7
OPR 169:21	organizations	overly 146:19	130:3,5 153:4	91:24 258:9
170:3,3	91:2 134:12	151:10 229:6	153:5,10,20	par 131:22,24
optic 12:21	155:15 186:4	oversee 81:22	166:6 168:6,12	paragraph
optimal 151:23	186:10 187:11	108:17 226:13	173:23 181:22	244:14 265:23
optimization	organize 191:9	overseeing	197:23 199:16	265:24
55:8	230:1	225:19	212:4,8 218:20	parallel 18:5
optimize 46:11	original 59:10	oversight 115:2	224:5,24 225:7	paramount
46:13 54:25	264:23 265:11	118:19 251:9	225:11,23	161:16
55:7	originally 93:1	265:23	230:9 231:1	paraphrase
option 13:22	265:4,8,9,15	overturned	233:12 242:11	223:21 267:24
43:18 67:6	originates 91:4	148:12	251:11 272:14	parent 234:24
162:1	origins 83:14	overused 141:6	290:4 292:13	parsed 170:13
options 13:10,11	OS-1026 297:5	overwhelm	295:22	part 44:15 46:23
79:24 81:22	ought 37:9	123:16	panel's 156:23	49:2 50:18,19
165:18 226:14	46:18 126:20	owned 216:14	261:15	59:17 61:15,19
oranges 235:10	126:21 128:18	owners 179:11	panelists 6:25	78:3 93:14
235:10	128:19,20,22	274:16	7:16 8:14,20	106:8 117:1
order 12:2 15:24	152:9 249:4	ownership	9:12 10:23	130:1,5 134:2
28:1 30:2 31:5	outage 49:11	92:13	11:22 13:7	134:3 138:23
52:22,22 60:2	outages 238:16	owns 33:11	14:22 29:15	139:23 141:12
60:10 62:15,15	outcome 45:23	102:21	31:19 51:5	141:13 147:2

150:22 151:5 172:22 192:24 193:1 216:2 220:17 241:7 243:8 249:2 253:6,6 254:10 256:18 266:25 276:8 282:25 294:1 participant 12:9 14:4,9 55:17 71:16 115:15 123:6,7 141:21 149:8 215:2 222:16 224:14 227:18 282:17 282:23,25 283:2 292:5 participant's 113:19 participants 2:1 2:3 8:9 9:9 12:1 14:24 15:12,18 18:6 28:8 33:16 68:8 72:12 73:20 75:13 84:13 88:11 90:14 91:15 95:3 97:4 98:8 101:6 102:18 103:3,14 104:22 112:17 113:18 118:19 119:3,19 120:1 129:20 132:4 134:22 137:6 137:14,15 141:17 142:23 144:21 146:15 147:8 149:15 151:9 157:19 160:4,6 172:3 177:4,13,14,24 209:1 217:10 222:19 228:15 229:23 238:24 240:11 257:15 258:6	PARTICIPA... 3:1 4:1 participate 12:2 15:19 29:21 32:18 34:20 57:3 73:25 84:15 85:7 96:3 140:2 209:2,6,15 225:23 274:13 participated 6:25 119:7 292:11 participates 133:7 participating 87:5 94:5 295:3,24,25 participation 73:23 84:17 139:22 224:23 particular 10:11 36:11 58:9 60:25 65:12 106:11 108:16 109:18,21,23 110:8 121:1 125:18 137:2 152:1 158:1 192:9 204:9 219:10 224:24 239:25 245:2 particularly 22:13 45:16 47:16 69:5 87:12,13 124:4 149:19 153:21 163:10 176:21 178:20 242:15 243:23 281:19 parties 71:8 171:25 197:6 231:21 partners 92:12 parts 116:20,24 pass 266:15 passed 141:20 141:22 234:25 patch 202:25	path 55:6 64:21 183:9 263:25 264:17 293:17 patience 249:7 Paul 2:22 10:7 10:15,15 16:11 17:8 20:12 22:8 26:19 27:3,18 33:9 34:25 39:20 44:17 46:5 47:1,18 50:4 55:17 60:1 66:14 76:10 77:22 112:22 115:9 Paul's 28:12 35:22 38:6 49:25 51:11 52:17 pause 26:17 pay 24:21,21 47:17 51:8,8 103:9 137:21 137:24 184:14 197:21 198:8 215:12,13 216:13 220:5,6 236:2 241:11 253:7 269:8 277:22,23 289:3 paying 50:18,19 132:6,7 222:20 240:12 242:2 244:1 247:14 259:24 275:2 280:25 287:15 287:16 pays 221:24 peers 198:20 Peirce 2:10 pending 141:20 pendulum 175:16 pensioners 71:17 pensions 33:3 people 31:15,18	32:3 37:1,11 42:10 43:16 44:1 46:22 47:6 49:18 51:22 57:2 59:4,12 60:6 62:24 68:24 71:14 74:9 76:11 77:4,11 77:24 83:6 101:17 102:1 103:2 116:5,6 117:2,2,3 119:16,22,23 121:21 123:14 123:17 125:3 125:17,24 126:16 127:3 128:8,14 130:21,22 138:25 139:4 145:7,9,13 152:24 153:8 155:12 169:21 171:9,9 174:2 174:5 177:10 183:8 184:14 185:5 190:19 195:22 198:20 200:13 201:2 201:25 205:25 209:16 211:3 212:3 217:15 217:18 218:18 220:21 224:19 231:21 234:22 242:2,16 243:21 244:16 244:18 248:12 252:7 254:3,6 255:24 259:5 260:22 263:4 269:20 273:24 274:1 282:22 283:3,19 288:9 293:6,9,25 people's 23:19 34:21 per- 289:3	per-port 203:16 per-transaction 179:25 perceive 48:1 232:19 perceived 73:9 111:20 114:12 114:13 121:17 162:21 205:4 percent 13:16 18:22 25:4,4 40:14 43:14 50:11 51:7,8 95:13 99:10 168:23 169:5 177:23 180:23 180:23,24,25 189:21 191:2,2 193:25 194:2,3 195:7,10 209:9 213:19 215:16 232:14 233:6,9 233:9,15 236:21 237:5,8 248:24,24,25 249:3 251:2,3 251:4 253:16 255:13 276:16 277:1,4,8 279:18 percentage 181:14 percentile 22:18 perception 20:9 58:1 114:16 116:18 perfect 72:21 121:10 160:8 167:21 176:15 perfectly 20:24 61:18 185:2 perform 95:19 240:24 performance 74:6 115:14 118:5 169:17 189:18 238:15 238:15 268:8 performing
---	--	---	--	--

59:21	204:21,22	219:13	40:3 51:23	28:19 29:8,13
period 154:15	210:11,17,20	pin 114:24	52:8 81:16,19	31:16 34:10
173:19,22	228:14 241:5	pitch 181:20	83:17,22,24	35:22 38:15,19
194:23 195:4	241:16 260:6	pitfalls 106:8	84:7,23 86:25	39:2 40:10,21
239:18	261:16 270:15	place 12:11	87:5 88:7	41:9 47:22
periodically	perspectives	36:11 39:12	89:10 90:21	49:25 52:13,18
177:19	81:25 106:4	54:17 89:7	91:4,13,19	53:16,22 54:19
periods 65:1	108:12	94:10,17 96:5	93:1 96:23	54:20 56:3
194:3	persuade 243:21	128:3,11 137:4	97:13 99:7	59:6,10,25
permeate	pertains 105:10	141:14 158:16	104:19 112:20	62:4 71:24
126:23	petition 238:24	161:10 189:9	117:15 118:24	72:5,6 75:5,9
permissible	239:4	200:1 216:8	119:23 120:2	76:20 77:17,23
61:20 132:4	phase 23:17	plain 229:14	123:2,23	78:7 83:7
173:7 195:19	188:9	283:6	126:14 133:5	101:13 106:17
permitted 85:10	philosophical	plain-language	136:19 137:5,7	116:2 118:9
88:2 113:18	72:20	97:20	149:10,15	120:18 123:12
perpetuate 42:5	phone 218:21	plan 20:1 23:6	230:4 247:3	123:13 129:14
perpetuates	phrased 196:6	23:16 25:24	platform 107:19	129:23 132:8,8
237:8	physical 14:9	26:21,22 35:13	159:23 175:23	139:9 140:8
perpetuity 25:11	53:20 200:24	43:16 49:3	216:25 217:7,9	145:17 148:5
persist 45:17	201:8,20	81:1 84:2,15	218:6,8,10,15	149:17 152:12
person 29:21	202:20 203:3,9	84:18 85:5,6	220:1 222:5,13	163:22 165:13
99:1 109:20,24	203:12,17	86:9 87:7	240:25 272:1	171:17 174:25
110:25 111:1	268:16,17	88:11,19 89:15	273:12	177:22 179:13
128:18 204:15	269:15	89:15 90:13,24	platform's	181:1,5 185:8
223:2	physically 12:11	92:3 95:1,2,2	218:14	190:21 202:7
personal 110:15	203:15	95:19 96:22	platforms 218:1	208:2,11 210:9
personally 41:21	physicists 79:15	97:3,8,22 99:7	play 123:25	210:13 214:6
98:7 112:15,18	79:18	109:17 111:19	214:10 238:2	216:19,21
133:2 164:14	physics 47:25	112:18 113:13	241:11	217:15 223:5
180:6 201:19	pick 7:8 24:11	113:14,17,17	players 179:6	224:20 230:15
personnel 163:2	45:24 46:8	114:4,6,17	playing 73:8	235:2 242:25
164:24 203:2	63:9 76:20	115:15 117:14	93:5 162:3,13	245:4 249:14
204:4	216:23 223:19	118:11,19	223:12	249:23 255:25
persons 119:15	PICO 11:4	119:18 123:1	please 119:15	256:10 257:24
perspective	picture 210:13	123:24 125:24	123:7,7 143:2	262:24,25
10:22 20:25	220:17 232:12	126:1,23 132:4	225:14 256:14	263:19 266:1,6
27:7,18,20	287:12	133:10 135:5	pleased 82:12	274:23 278:3
32:2,20,25	pie 26:2 177:12	141:15 142:22	pleasure 11:2,10	278:21 280:11
33:15 35:16	177:12 189:22	145:20 150:4,5	plenty 58:10	283:23
55:16 83:10	piece 24:20 25:4	177:14 187:14	290:1	point-in-time
104:20 108:11	26:2 171:4	257:22 264:24	plugged 291:7	90:6
131:24 136:25	pieces 217:5	265:11	plummeting	pointed 18:18
138:21 143:22	Pike 3:16 155:9	plan's 86:3	185:11	47:24 49:11
179:16 181:21	155:9 162:18	135:6	plus 65:4,7	121:19
186:24 187:8	183:16,18	planned 85:21	168:16 226:4	pointedly
188:20 190:3,3	196:15 199:9	88:18	269:23	172:17,18
200:18 202:21	199:17 205:1	planning 93:20	pocket 39:12	pointing 22:8
203:21,24	205:22 212:12	plans 7:25 19:24	point 23:4 28:11	51:24 231:7

48:16 72:14	pops 23:21	88:10 91:11	present 6:16	75:9 164:3
156:21 158:18	popular 67:16	92:11,13 94:16	88:7	167:21,22
166:7 176:8	71:7	99:25 132:3	presentation	171:3,8 182:7
196:1 206:17	port 28:2 268:16	153:22 238:17	174:13	183:13 185:10
207:16 208:1	268:17,20,22	potentially 7:6	presentations	186:5 188:11
213:10 254:5	268:23 269:19	19:21 71:25	16:4	188:13 194:22
256:5,7 280:12	269:20 270:4,4	93:18 94:11,14	presented 54:6	194:23 195:8
policies 8:4 48:7	portfolio 228:4	104:2 116:22	presents 99:8	213:10 214:2
48:10 86:9	portion 137:23	125:5 137:15	preserve 19:18	218:2,9 220:6
90:16 92:15	152:8 161:22	151:16 222:13	president	222:9,11 239:8
94:10 108:23	203:9 253:13	257:21 270:18	225:17 226:10	276:19 282:4
113:5 139:17	ports 203:19,19	272:22 273:20	227:25	286:7 293:8
142:17,24,24	209:18,18	power 50:14	pressed 250:19	priced 112:4
143:5 163:13	220:7	147:16 148:25	pressure 116:11	179:24 212:21
196:18 199:3	pose 208:9	218:4,11 284:2	presumably	prices 45:3 53:3
199:14,19,21	posit 55:15	practical 128:10	19:11 40:18	59:8 61:8
199:22,25	241:1	practically	215:12 223:11	67:16 70:15
200:3,7,10	position 49:20	112:10	pretty 21:5,18	74:11 168:17
230:18,21	61:16 65:23	practice 140:13	22:20 23:1	185:9 186:3,18
235:5,18,22	121:23 125:24	142:1 154:13	28:11 29:8	245:16 249:17
257:19,20	126:2 136:4	156:18 219:14	52:7 56:7	249:19 268:13
258:3,4,4	154:10 157:12	practices 170:14	75:20 78:1,19	pricing 30:14
policy 6:12 7:9	188:17	170:15 255:12	80:7 99:9	32:1,13 44:19
7:13 21:15	positions 119:1	pre-trade 228:3	141:22 142:1	45:4 62:12
30:1 67:5,13	positive 43:9	preclude 39:24	142:22 146:18	100:9 155:16
83:3 92:10,10	90:19	239:16	146:19 151:7	168:19,20
92:16 108:9	possibilities	precluded	168:15 177:9	179:12,14
114:22 125:15	39:23	215:19	186:25 191:24	180:22 188:2,5
125:20,25	possibility 30:8	predecessor	197:11 206:24	206:3 213:20
134:9,14	119:14 189:5	166:19	213:17,21	218:4,12,14
136:24 137:1	possible 18:23	predecessors	222:4 232:20	220:13 221:11
140:18 141:19	19:10 56:14	105:12	232:21 267:23	225:19 244:22
185:3 199:6	59:15,17 95:19	predicament	274:2	250:22 281:5
225:19 228:16	107:10 111:25	210:7	prevailing 61:9	281:13 286:10
236:5 250:19	134:6 154:2	predict 46:14	prevent 94:5,14	289:15
256:10 258:17	257:21 258:14	preference	131:3 281:23	primarily 58:19
279:9 280:8	259:7 268:13	56:12 118:1	previous 83:1	211:21 227:14
293:18	possibly 39:3,13	157:18	165:13 176:25	primary 164:23
policy-making	157:20 244:23	preliminarily	previously 83:15	principal 219:11
295:12	254:1 291:16	18:25	96:1 157:18	principle 33:7
polished 262:14	post 123:3	preliminary	price 8:22 15:10	33:23 94:5
pool 24:17,22	post-trade 62:25	43:5	18:10 24:11,13	126:3
25:6,7,7,10	63:1 228:4	premise 247:13	30:11 32:4	principled
26:3 47:2 50:9	posted 193:22	prepared 298:10	53:21 58:3,18	228:25
50:15 128:8	potential 7:9 8:2	prepping 51:22	58:19,24 59:5	principles 32:21
287:13	8:17,24 9:6	prescribed 97:9	59:7,15,19,24	34:1,2 229:1
pools 220:22	15:11 18:18	prescriptive	60:5 61:10	prior 10:19
poor 186:18	35:12 40:11	35:15 166:5	62:2,6 66:2	97:14 101:8
popping 31:6	80:20 86:6	229:6	70:5,6 73:11	106:22 115:8

154:11,15,21 154:23,24 155:7,25 156:1 225:20 226:23 239:18 242:11 263:8 priority 250:13 privacy 263:17 private 33:2 71:17 75:6 92:25 101:4 116:8 139:12 154:13 156:18 189:15 207:4 286:2 privately 211:8 privilege 16:23 82:22 154:17 251:23 privileged 83:5 privileges 263:14 Pro 233:1 pro- 175:19 pro-competitive 175:12 267:10 275:1,6 pro-market 267:9 pro-regulatory 280:8 probably 10:9 10:22 18:11 19:13 26:14 35:5 38:9 40:14 41:12 48:14,18 49:7 50:16,23 52:7 67:1 68:17 69:7 70:8 71:3 71:7 81:1 83:6 89:7 94:17 102:1 122:3 123:9 130:1 131:23 132:15 137:8,11,13 141:5 143:3 148:13,17 152:9,16	171:12 199:17 206:23 209:19 218:21 222:4 222:14 233:24 233:25 263:4 281:5 284:1 287:24 288:2 288:10 problem 20:19 20:21 23:6 30:5,9,16 33:21 35:24,25 36:8,14 42:5 42:12 49:23 53:15 54:22,24 55:8,14,14 59:8,23 62:7 66:10 77:9,10 77:14,15 78:2 78:24 93:8 104:13 126:9 128:10 129:4 143:5 145:1 173:24 182:4 243:8 249:4 253:3 280:5 285:11,11 286:1,2,14 problematic 58:11 problems 39:17 55:1 66:1 273:12 278:25 279:3 procedural 199:13 Procedure 191:8 procedures 19:5 48:7 50:4 92:19 100:14 114:17 144:11 163:13 199:15 proceeding 81:7 298:9 proceedings 158:12 297:12 process 25:6 51:21 87:11 95:8 102:16,17	122:16 125:11 125:13 131:2 145:6 146:2 147:3 160:11 164:7,11 166:13 174:20 180:14 191:15 197:7 229:18 230:2,8 231:19 239:2 242:7,20 242:22 250:1 253:12 264:8 284:6 processed 50:14 273:5 processes 52:2 74:14 95:17,21 196:24 243:17 processing 12:23 13:1,2 14:6 19:16 74:7,24 83:23 164:16 185:11 189:20 263:10 processor 12:18 20:1 51:7 124:23 125:1,6 125:9 126:18 135:14 145:25 156:24 177:17 183:15 processors 17:15 19:1 20:2 24:21 25:10 46:15 47:3 95:14 produce 47:5 75:2,3 80:2 90:14 112:12 159:18 161:4 161:11 162:22 163:18,24 168:12 200:15 200:17 201:10 204:3 205:17 268:8 produced 41:16 53:18,20 101:4 103:24 213:15	producing 53:4 77:20 164:12 168:3 205:6 250:21 267:25 product 15:12 93:16,17 102:11,12 104:8,17 107:17 109:2 112:3,8 116:15 117:4 154:20 154:24 159:7,8 160:25 161:2 165:21 176:21 181:17 186:16 192:9 193:24 195:2 204:6 205:18 209:15 213:20 217:19 222:25 223:6 232:25 253:11 285:1,25 289:17 product's 274:2 production 163:8 productive 287:3 290:20 productivity 186:7 260:21 products 1:5 8:8 8:11 9:8 11:25 14:19 15:17 72:6,11 75:1,2 85:18 92:25 100:4,6 103:23 103:24 104:3 104:16 109:7 110:3,13 115:7 117:17 118:6 156:22 159:22 161:17 162:4 162:21 163:5 163:18 164:8 165:19 166:4 167:6,22 195:13,18 198:24 208:5 212:1,1,3,16	212:18,20,22 213:2,3,5,7,10 213:15,16,24 214:2,9,13,25 215:20 216:1,3 221:8 222:7,9 223:8 238:9 255:21 257:1 272:7 285:4 288:6 professional 71:11,14,15 197:22,22,25 198:6 258:25 259:11 professionals 70:15,16 111:3 173:20 255:8,9 Professor 9:17 9:19 29:19 34:5 51:20 56:4 58:5 60:19 72:25 profiles 11:9 profit 121:12 234:10,16 248:23,23 profitability 118:7 169:12 183:10 profits 169:3 227:6 265:17 283:5 progress 89:20 90:12 98:5,6 99:16,21 130:24 144:15 153:6 229:11 232:8 295:9 prohibiting 100:15 prohibition 109:5 promise 256:15 promised 289:24 promote 159:1 165:3 229:2 276:22 279:9
--	---	--	---	--

promotes 262:3 275:8 286:7	11:19 12:6 13:9,12 14:17 14:18 15:6,8 17:18 40:1 41:15 56:19 85:18 92:18 93:15 103:21 104:16 107:1,3 109:20 110:3 110:12 115:7 115:21 117:17 125:19 155:4 157:1,4,22 158:1,7 159:12 160:1 161:1 166:14 167:6 168:21 169:3 208:8 211:23 212:5,9,15,15 213:16 222:7 229:20 231:14 232:15,17 238:9 240:19 240:24 250:21 263:16 270:13 270:22 273:6	211:21 218:18 222:11 229:22 240:1,18 246:11 249:17 258:22 265:12 268:3	102:24 107:7 111:15,16 119:16 123:22 126:13 133:6 136:10 139:12 166:2 167:10 170:9 171:10 185:5 190:6 208:7 211:8 229:2 232:6 233:5 236:20 237:4,5 238:16 239:17 246:5 246:17 249:17 250:19 251:7 253:22 256:10 256:25 260:23 270:14 278:12 283:15 285:24 286:3 288:22 291:13,13 293:18	264:12 265:11 265:14 276:12
promoting 92:23 174:25 256:8 281:10		provided 8:14 8:20 14:2 58:17 60:16 96:25 135:13 167:8 182:12 182:15 191:12 248:13 250:23 251:22 272:22		purposeness 184:6
pronounced 59:9				purposes 11:24 124:4 174:7,9 183:3 215:4 265:5,5,15 279:5
proof 159:21				pursuant 95:1
Proofreader's 297:1,16				push 101:22 115:12 293:16 293:18
prop 39:6 62:23 93:8 124:1 147:12 161:8 161:17 175:21 187:4 198:24 214:19 232:4 232:20,24 233:16,20 245:24 267:7 274:20,25 277:22 283:7 284:22		provider 25:21 43:3,8,9 157:8 268:24,25 269:4		pushed 125:14 221:6
proper 222:24 264:13		providers 19:22 75:6 189:6 269:1 281:20		pushing 38:17 105:13 115:14 124:8 125:20
properly 136:20 219:7 264:16		provides 14:6 113:18 124:12 161:5 229:18 241:4		put 22:25 28:15 38:1 55:9 69:3 78:7 91:22 104:7 117:6 142:15,16 148:16 152:13 155:10 161:10 189:6,8,12,14 204:8 236:2,15 236:20 255:17 260:16 283:15 292:6
properties 148:16	protect 149:7,19 150:2 162:1 263:14,15 292:18	providing 9:7 10:11 21:2,6 39:21 87:22 89:2 94:1 98:4 133:3 162:8 164:3 179:2 186:1 241:2 270:19 286:14	public's 138:20 publicly 97:21 249:23 250:2 250:12 257:2 270:21 285:15	publicly-traded 161:22
proponent 113:7			publicly-traded 161:22	publish 98:2 229:16
proposal 16:16 26:17,25 60:20 88:5 182:7 241:13 258:9	protection 150:23 169:22 169:23		publicly-traded 161:22	published 97:20 256:25
proposals 29:12 29:25 30:13 43:6 55:9 65:11 134:11 148:22 175:4 239:10 293:16	protections 207:9	proving 158:3	publicly-traded 161:22	publishing 97:20 256:25
propose 272:5	protocols 104:1	provision 92:22 101:4 125:4 266:11	publicly-traded 161:22	pull 139:9 207:25 242:24
proposed 54:21 74:22 92:10 239:11,13,21	proud 94:20 115:13 117:11 120:14 290:22	provisions 88:19 89:5	publicly-traded 161:22	published 97:20 256:25
proposing 42:25 126:7	provide 6:19 11:4,15 19:17 19:24 22:6 25:22,24 30:11 30:14,24 40:19 74:16,24 83:9 87:14 96:3 98:10 125:25 144:21 160:20 165:15 190:1	proximate 21:25	publicly-traded 161:22	publishing 97:1 207:25 242:24
proposition 52:14 238:2		PSX 236:3	publicly-traded 161:22	pulling 10:24 193:5
proprietary 8:15 10:6		public 5:16 7:21 33:2,24 41:15 69:23 70:13,14 71:8,17 92:23 93:3,4,14 95:20 96:22 97:2 98:1 101:4 102:12	publicly-traded 161:22	pulling 78:16 punish 219:23 purchase 15:12 purchasing 250:21 pure 192:20 193:15 purpose 33:21 175:3,13,20 182:20 253:4,4 253:6,7 264:11

Q

Qs 168:10
quadratic-type
52:22
quality 111:22
180:19 183:6
245:13 268:11
275:5
quantities
288:25
Quantlab 155:2
204:19
quantum 78:24
79:15,18

quarter 107:2	71:21 74:15,15	187:5	185:2 233:21	really 22:12
quarterly 187:9	115:23 119:25	raised 7:4,9	236:23 267:9	24:5 31:20
229:16 237:2	145:16 191:16	40:21 45:9	rationale 87:24	32:25 34:13,21
290:24	260:11 272:25	53:9 55:13	250:19 256:11	36:7,12 37:7,8
quasi-regulat...	quickly 38:3	72:6,14 86:2	289:14	38:1,1 39:8,8
121:13	63:5 78:1 80:9	100:5 166:9	rationalized	42:10,12 43:23
query 233:3	154:2,4 156:20	167:17 176:10	269:24	43:25 44:1,25
question 20:17	175:19 206:17	178:2 214:16	raw 186:2	46:25 55:8,12
20:23 21:12	224:7,9 278:21	216:24 229:21	RBC 228:11,12	58:2 59:5
31:13 33:9	quiet 224:9	263:1	238:23 239:6	65:23 68:23
34:21 44:18	quite 41:21	raises 56:25	re-articulated	70:7 72:22
54:10 55:12	52:14 64:16	59:6	159:5	74:11,13 75:21
56:11,15 58:9	121:6 133:1	raising 191:5	re-deployed	90:1 94:6
58:15 60:4	143:23 198:1	196:9	52:10	100:20 104:5
69:21 72:5	217:17 236:14	raking 277:13	re-frame 282:7	105:9,13,22,22
73:13 74:16,19	240:10,15	Ramsay 3:10	re-imagine 52:8	105:25 106:3
75:5,12,19	254:24,25	80:11 83:2,2	reach 38:3	106:14,15,16
76:7 93:13,20	272:2 286:22	110:5,16 113:6	157:19 162:9	107:8,11,12,13
105:7 109:9	289:25	113:8 123:12	reached 157:20	109:13 111:6
110:6,7,20	quo 272:4	127:20,23	react 182:7	114:14,20,20
111:12 112:2	quotations	140:22,25	reactions 31:3	115:11,20
114:11 116:4	14:20	142:10,25	read 194:20	116:10 117:3,4
116:21 124:7	quote 17:23 18:5	143:4 152:11	200:9 208:20	119:24 120:24
126:2 138:3,17	18:21 19:15	252:7	217:23 247:24	120:24 121:14
140:12 143:1	47:15 73:6	ran 10:19 146:3	262:10 263:5	125:2,10
145:16 152:13	106:8 107:7	156:8	265:10 287:18	126:11,22
178:14 181:22	164:4 175:9	randomly 49:17	readily 256:20	130:18 131:1
191:16,20	253:10	randomness	ready 99:12	132:9 134:10
206:13 212:7,8	quoted 92:2	52:25	161:20 275:13	134:19,20
222:4 249:1	quotes 12:15	range 18:23	290:24,25	135:15,21
250:18 260:2	23:25 63:2	79:24 85:18	real 23:3 100:13	138:11,17,21
261:12 263:9	174:25 175:7	91:15 117:15	103:6 105:3	138:21 141:4,6
267:3 272:9,17	183:12 184:16	rapid 205:13	111:20 114:13	143:20,21
272:17 273:3	217:24 253:8	rapidly 230:19	121:17 126:4	144:9 145:6
282:6 283:24	268:13 275:5	rate 78:13 173:5	173:19,22	146:13 147:2
286:25 288:5,8	276:18,20,22	173:6,7 174:6	175:9 230:25	147:15 148:3
288:10,20	quoting 175:6	175:2 195:4,9	233:8,15	162:6 168:24
questions 7:23		247:7	260:11 264:11	169:6,7,11,25
9:16 21:15	R	rate- 178:6	272:25 283:24	170:12 171:1,3
33:8 47:4 53:3	R 6:1	191:5	real-time 174:18	171:4 172:21
53:8 57:1	R&D 223:5	rate-making	228:3 265:12	176:8,8 179:24
75:24,25 83:11	rabbit 69:7	172:24 190:20	reality 47:24	185:10 192:8
86:2 99:14	races 153:17	191:7,15	48:1,2,6 59:23	196:14 197:13
116:5,13 124:5	radio 35:8	206:10 210:6	realize 47:6	197:17 198:17
127:3 176:2	rains 77:8	263:25 264:3,4	68:24 125:3	204:10,16,20
223:22 247:1	raise 45:2 46:5	264:5 271:22	231:17 269:2	205:13 211:5,5
253:25 274:25	71:23 117:15	rates 192:1	287:17	212:3 214:20
279:5,6 288:16	136:20 149:16	rational 61:18	realized 32:9,11	219:15,22
quick 63:13	184:25 185:1	121:11 152:2	realizes 77:3	223:25 224:22

224:23,25	reasonably	17:3 46:2,19	70:18 71:21	44:8 47:22
231:15 233:21	189:3 190:8	80:4 91:21	72:24 75:4	64:11,13
243:21 247:9	200:15 202:16	150:18 181:13	79:11,15,20	112:19 114:23
247:17,20	221:17,19	recommendati...	80:7,13 115:23	121:7 181:7
248:4,17	264:15	86:20 87:2,10	145:16 168:1	205:19 234:9
249:15 251:20	reasons 19:2	88:2 89:10	171:17 172:8	241:15 244:12
252:19 253:1	54:1 56:5	91:22 122:9,11	191:16 192:10	256:7 267:22
258:5,5 260:15	118:14,16	122:12 129:16	192:13 193:19	268:10 275:17
260:20 262:9	121:17 123:5	132:2 140:10	208:23 211:14	275:19,24
263:2,24,24	131:23 132:5	147:19	219:5 272:18	276:14 279:3
264:5 270:4	152:20 162:9	recommended	278:16 284:1	regard 30:22
274:10 279:11	172:1 173:1	22:5 84:17	286:21 287:2	59:4 152:17
279:14 283:13	208:14 246:3	103:14 132:17	287:21,23	175:21,23
283:13 288:22	275:12	reconcile 209:8	294:23 296:3	176:23 258:18
291:5 293:10	rebates 222:19	209:25	redistributed	regarding
293:19 294:2,6	receive 28:2	reconsider	280:22	135:10 229:12
294:17,17	45:14 85:8	105:1	Redline 31:9	239:10 273:4
295:9	89:6 207:9	record 115:21	reduce 42:6,6,19	regardless 53:18
realm 115:4	277:14	recorded 297:12	43:1 223:11	72:2 100:14
reason 24:9	received 7:4	298:9	229:6	268:5
38:24 44:15	17:18 19:16	recording 252:3	reduced 13:1	regards 44:24
61:15 76:21	44:25	recordings	18:21	47:10 146:10
126:15 130:5	receiving 12:10	262:2	reducing 140:17	236:10
152:23 179:1	14:13 202:24	recoup 187:2	redundancy	regime 30:7 74:3
242:17 269:22	281:21	201:19 221:15	165:1	100:21 101:4,8
275:12 276:6	recess 80:17	recover 202:13	reeks 151:22	106:10
reasonability	153:14 224:6	recoveries 259:3	refer 8:8 16:15	regional 36:9,25
247:5 248:21	recipient 12:14	259:4	reference 38:16	37:2
267:7	12:18 18:4,14	recruit 201:20	39:1 44:17	register 43:18
reasonable 7:19	18:20	recused 109:21	176:16	256:25
8:23 42:1	recipients 17:24	red 36:24 39:16	referencing	registration
48:10 57:21	18:8 19:3	redefine 48:12	265:19	89:3,4 275:21
100:21,25	recognize 24:8	Redfearn 2:11	referring 177:1	registrations
103:1 146:14	97:4 133:18	6:2,5 11:11	183:1 273:22	89:1
146:22,24	145:11 235:1	16:2 20:11	reflect 6:21	regular 88:15
157:2,24	recognized	26:19 29:11	116:22 118:25	94:7
158:20 161:7	117:21 157:8	31:6 32:15	286:10	regularly 253:18
171:22 172:19	173:2 174:8,11	35:19 37:21	reflected 118:22	regulate 45:4
176:14 189:23	174:24 175:12	38:5 39:5	118:23 131:8	91:7 174:14
189:23 196:8	217:22 293:12	40:17 42:16,22	180:5	183:5
202:11 209:13	293:13	44:5,7 45:6,24	reflecting 119:1	regulated
210:1 211:11	recognizing	47:18 51:19	reflection	164:10 165:25
237:11 240:13	86:23 87:6	52:12 54:5	150:20	207:1,4 246:5
247:11 271:24	88:13	55:11 56:15	reflects 165:13	246:11,12,14
273:10 278:8	recommend	57:23 58:4	218:3	249:21 282:15
280:4 295:18	18:9 20:5	60:18 62:21	reform 122:5,16	283:18
reasonableness	72:17,19	64:20,25 65:8	reg 19:20,23	regulating
157:14 233:22	118:15	66:14,24 67:3	20:4 24:8	252:10
236:24	recommendati...	67:5,9,12	25:13 43:23	regulation 30:2

33:6 42:8	164:7,15,16	rely 60:2	196:25 258:23	republishing
84:22 85:14	165:5 166:4	remain 29:2	277:5,25	18:7
91:6 151:15	189:3 190:8	89:21 99:18	reported 99:10	request 210:14
174:18,19	196:4 214:6	104:16 260:4	277:3	270:21
250:20 287:16	222:5 225:20	260:10 263:11	reporter 298:3	requested 84:12
regulations	230:2,8 296:6	290:6	298:15	requests 96:20
41:23 44:1	relates 96:6	remained	REPORTER'S	require 64:14
54:3 196:18	100:1 289:2	116:17	298:1	96:14 106:9
229:2	relating 88:9	remaining	reporting 61:25	108:23 140:4
regulator	relation 176:14	104:18	165:12,17	143:11,21
246:10,18	relationship	remains 26:23	196:22 198:21	148:2 156:24
253:17,18,20	99:3 108:1	59:16,16	208:6 220:21	165:14 178:6
253:25	159:8 160:9,10	remanded	228:5 237:2	191:7 239:17
regulators 45:4	190:23	158:10	258:18 259:6,7	240:1
146:20 228:16	relationships	remarks 5:5,18	259:24	required 19:4
249:22 263:20	98:13 257:13	9:14 44:12	reports 237:2	48:7 84:2
263:21 273:8	274:7	110:22 135:9	represent 15:1	149:11 165:1
regulatory 9:2	relative 101:7	175:22 178:14	91:8 111:10	166:12 282:20
15:8 18:10	relatively 28:19	183:2 188:22	289:9	283:12,14
31:14 35:1,16	86:13 191:21	216:25 227:8	representation	requirement
37:4 69:8 88:9	191:22 193:8	294:7	91:17 97:6	29:1 58:23
91:2,12 112:6	193:11	remember 77:15	104:21 105:3,4	69:9 113:24,25
115:2 131:25	release 84:12	95:7 99:8	122:19 129:3	179:9 180:10
132:3 135:3	177:21 260:25	149:5 156:16	129:22 137:12	requirements
143:8 146:16	released 223:2	230:14 287:15	139:18 150:14	15:24 57:12
147:17 151:21	232:11 233:5	remind 153:8	153:1 200:2	86:3 156:21
153:24 154:9	releases 177:19	reminded 29:25	representative	164:25 275:21
156:21 157:23	releasing 222:25	reminder 8:6	84:1,25 92:3	requires 19:23
158:15 164:11	relevance 188:4	remove 45:1	108:10 113:19	85:12 95:2
164:24 174:11	relevant 178:3	239:13	119:16 133:14	124:20 258:12
174:18,22	178:11 188:6	removing 42:7	226:6	258:13 294:18
204:5 215:21	194:21 239:1	43:12	representatives	requiring 19:13
226:13 241:5	285:21 288:10	rendered 159:3	33:12 87:12	88:19 94:4
244:15 265:5	reliability 77:1	renew 137:15	92:20 94:15	96:6 100:16
265:22 266:5	reliable 13:18	rents 159:16	97:9,11 108:5	239:11
266:15 275:4	13:22 19:20	reopening 73:16	110:8,9 111:9	research 6:13
276:10	23:15 46:16	73:18,20	128:9 133:12	9:20 60:10
reign 142:3	49:10 77:7,13	rep 109:1	represented	156:4,6,8
reinvested	77:19,20	216:12 220:4	21:2 127:1	298:8
126:17	253:11 292:22	226:17	128:20,21,22	researcher 32:2
reiterate 120:12	reliably 78:9	repeat 251:13	129:18 132:10	62:11
182:2	relief 112:6	repeated 157:11	representing	reserve 175:24
reiterating	relies 136:11	rephrased 33:10	89:24 112:16	resides 202:22
31:21	relieve 163:16	replaced 15:24	133:6 154:14	resiliency 46:12
rejected 24:9	266:14,18	replacement	represents	47:19 48:15,18
relate 199:15	relieved 266:17	87:16 160:18	204:10	49:7 105:20
204:25 283:19	religion 131:10	report 122:10	reps 109:5	115:14 203:21
related 29:17	reluctance 237:7	165:17,19,22	republished	resilient 46:17
87:24 109:10	reluctant 293:21	165:23 196:23	18:13	49:21 112:1

205:21	203:24 215:8	277:2,2,4,9,15	rid 169:21 170:3	220:18 223:4
resistance 174:4	286:19 292:24	277:21 288:8	ridiculous	230:1,13 232:8
174:4	restore 42:13	revenue- 288:1	138:16 214:1	233:1 234:11
resolve 98:19	restricted 86:1	revenues 98:2	216:21	234:17 236:7
99:19 122:1	restrictions	116:17,19,23	rigged 34:8 58:8	237:15,23,25
129:15	229:7	137:20,23	right 16:21	240:14,18
resolved 171:7	result 18:2	161:22 168:15	22:22 24:2,25	241:18,18
resources 238:6	73:21 79:6,7	175:1,12 177:5	32:7,13 33:11	242:21,24
238:8 246:22	98:16 181:11	182:18,21,25	36:15,18,20,25	243:13 246:16
respect 30:15	242:9	187:4,5 190:8	38:2 39:9,25	250:9 252:9
58:10 65:16	resulted 105:17	192:8 193:10	40:22,23 42:23	254:14,14
88:23 101:2	resulting 180:19	220:21 229:14	43:24 45:13	259:13 268:15
105:11,25	results 87:23	231:5,5,9	46:12,25 50:16	268:16 270:4,9
109:25 115:24	189:17	232:6,17,20,24	52:15,19 53:1	275:2,7,23
117:14 119:3	retail 10:12,13	233:10 234:20	53:13 54:25	278:18 280:10
119:14,23	45:16 47:10,16	236:12,22	56:19 58:3,4	282:16,21
132:20 133:10	70:3 71:12,13	244:8 246:4	58:14 60:8	283:21 285:9
133:11 163:11	84:25 97:11	252:12 264:15	62:7,9 63:12	288:2 289:7,8
166:5,14 196:2	128:21 139:6	264:20 265:14	63:17 65:24	rightfully 121:9
217:14 222:6	197:20 198:4,9	275:2 280:21	66:25 68:5	rights 85:24
246:19 250:17	252:15 286:8	281:3,10 285:1	72:8 74:4 75:7	88:25 115:19
respects 172:19	rethink 55:5	289:17	75:24 80:11,11	129:19 130:6
respond 47:19	197:14	review 158:15	81:10 85:5	137:8 140:2
74:2 88:4	rethinking	171:21 179:4	87:18 101:13	149:7 238:20
194:19 272:14	197:18	191:8 239:22	101:18 104:10	262:21,22
responded 89:10	return 54:23	256:24 257:4	104:25 109:12	263:16,16,17
response 96:20	173:7 179:18	266:15	110:14 112:14	ripped 242:5
97:18 151:20	283:21	reviewed 97:14	113:5,22,24	rise 100:3
217:2 272:15	revealing 291:11	reviewing 157:6	114:19,20	risk 6:14 45:22
responsibilities	revenue 90:15	158:1 215:19	116:18 120:21	137:14 228:3
91:12 119:8	97:18,20 107:4	294:11	121:20 129:12	247:6 254:2
131:25 205:20	152:5 165:23	revisit 88:24	131:8 135:1,7	risks 88:13
227:18	165:24 169:9	263:18	136:17,25	River 10:5
responsibility	174:9 175:1,8	revolving 70:25	137:19 138:12	road 30:3
19:19 33:5	175:19 177:3	rewards 152:3,3	138:24 139:8	231:25
110:11,11	177:23 179:22	152:4	139:14 141:3,6	rob 42:10,11
118:11 119:12	184:5 185:6	RFX 193:7	141:8 142:2,9	Robert 2:9,18
119:18 120:1	189:22 191:22	rhyming 57:16	142:11 143:7	9:19
125:19 128:15	192:4,12	rich 4:10 53:25	144:12 147:8	robust 17:12
133:9 147:17	195:25 220:9	228:9 238:23	147:25 149:7	49:14 186:22
responsible	220:25 229:15	241:14 271:7	151:24 177:15	239:23
118:18 137:25	232:6,10,16	Richard 3:8	178:24 181:24	Roeser 2:12 6:9
139:1 199:23	233:17 235:15	Rick 82:9,19	182:1 183:20	Roisman 2:13
228:10	252:14,23,25	86:16,19 89:13	187:10 191:21	296:5
responsive	253:5,7,13	117:7 132:11	191:22 193:24	role 9:14 68:4
218:22	259:3 264:12	150:8	198:22 199:13	73:8 85:24
rest 24:23 25:7	264:13 275:10	Rick's 120:12	199:18,19,19	87:7,17 124:23
101:14 181:21	275:14 276:7	122:9 132:1	204:7 205:10	135:14 138:15
190:13 203:8	276:12,15	140:9 147:18	205:13 213:5	238:2 250:18

roles 225:21	48:21 49:4,4	220:15 224:9	239:4,13,14,21	98:4 99:21
rolling 191:5	148:21 156:24	231:7 246:6,6	239:22,25	101:14 107:24
223:5	197:24 198:23	250:5,6 251:19	244:12 246:21	113:2 115:9
Ronan 160:23	236:6,8 249:21	255:20 283:19	246:22 251:8	116:5 124:10
room 21:2 36:21	255:7	284:10	256:24 266:7	138:4 167:6,20
70:12,12 80:10	ruling 267:22	says 25:20 58:23	267:21,21	167:21,22
90:22 106:4,19	run 7:25 15:6	62:13 67:23	269:23 270:20	177:2,4 188:15
112:22 153:11	25:21 51:5	133:20 254:12	285:24 286:2	188:18,24
156:2 157:9	54:3 63:7	254:25,25	286:17	189:7 191:18
171:10 176:9	65:19 109:19	255:1	SEC's 239:18	191:18,21,25
176:18 246:15	110:24 118:10	scale 182:18	271:2,5	193:2 195:5
282:22 283:4	134:1,6 151:24	274:4	Secaucus 17:22	209:8 217:1
roughly 10:1,2	153:16,18	scenes 38:14	18:20 22:25	219:19,25
251:1	203:6,12 206:9	schedule 146:2	26:6 38:7 48:2	232:1,22 235:4
round 177:10	216:22 247:6	235:19 277:6	55:4 60:21,23	235:5,7,10
roundtable 1:5	265:20 273:11	schedules	60:24	236:18 237:3,3
6:4 82:2 122:3	running 38:2	235:20	second 58:1	244:19 246:9
152:18 153:16	39:13 48:17	Schell 3:17	61:24 64:15	247:12 251:16
154:9 226:8	224:19 253:14	155:21,21,24	65:2 71:2 78:3	252:8 253:23
228:24 264:23	runs 23:23	163:21 178:13	80:19,23 89:6	270:7 272:18
296:14 297:3	24:22 227:13	185:18 187:7	107:2 247:1	273:8 276:11
298:8		192:7,12,14	268:15	278:25 284:14
roundtables	S	193:13 207:18	secondary	284:25
61:23	S 5:1 6:1	210:9 211:18	164:24	seeing 69:10
route 58:18,19	Sachs 226:2	scheme 29:9	secondly 21:24	193:23 209:23
58:24 59:2	SAIC's 135:20	school 35:23	48:15 66:23	209:24 240:10
201:12 269:12	sake 131:16	113:15	68:11 87:6,17	284:20
router 269:11	222:23	scope 42:6 63:16	120:3 140:17	seek 132:21
269:12	sale 14:18 37:13	63:16 64:2	276:11	seeking 112:6
routers 60:3	40:24 53:20	75:13 76:16	secret 252:12	seen 26:23 43:9
routinely 253:19	139:9	94:8 106:11	section 239:13	89:11 91:22
routing 31:25	sales 167:17	208:9	239:14	123:20 144:10
44:2 50:2	satisfy 9:1 56:9	Scott's 122:14	sectors 183:22	144:11 160:2
Rowe 239:8	153:24	screens 230:14	securities 1:1,22	167:16,18
Royer 154:13	sausage 139:19	screw 171:12	6:3 12:16 13:3	169:5 186:12
rule 32:7 34:1,2	saved 52:9	scrutinized	13:3,5,6 15:3	189:17 192:11
67:23 87:22	116:15 225:10	257:3	17:25 83:20	212:13 213:14
89:2 158:10	savings 185:15	seat 24:4 41:25	91:8 94:24	214:1 219:13
164:25 169:22	234:23,24	42:4 128:15	156:7	231:15,15,16
196:6 229:18	saw 101:13	168:3	security 18:21	233:13 243:25
230:3 239:11	212:20 213:19	seats 121:21	53:22 66:2	248:17 262:17
239:14,15	230:13 246:10	130:6,11 224:8	270:15	sees 52:16 286:3
254:25,25	248:18	SEC 2:3 70:22	see 21:13 29:16	segment 98:18
255:16,17	saying 42:9 43:1	94:23 95:5,9	29:24 30:9	146:21 165:17
256:20 266:8	56:8 59:14	99:1,4 123:4	37:5 38:19	193:3
rule- 254:20	74:11 75:15	135:11 139:1	41:7 43:10	segregate
rule-making	78:20 92:2	142:23 156:24	57:10 58:3	165:20
115:4 238:25	139:1 171:6	165:10,14	63:2 65:3	segue 211:21
rules 34:2 35:4	200:19 219:1	208:21 226:15	74:13 90:4	SEI 28:13 29:1

181:7 205:19	sentiments	222:7 225:18	150:20 151:13	193:10 289:16
select 113:18	160:17 290:12	225:20 250:14	152:5,9 166:25	289:21
selected 137:13	294:24	servicing 16:23	167:4,15,23	ship 23:25
137:14	separate 32:4	56:23 82:23,25	175:6 179:5	shipped 26:9
selecting 87:11	44:3 52:1	session 12:7	180:18 191:18	shipping 77:4
97:7	116:14 139:12	95:25 96:2,3,4	220:25 227:20	shocking 244:4
selection 67:8	158:9 235:25	96:12,17,18,18	238:14 251:2,4	shop 175:18
145:24 227:19	266:3	96:22,24 97:2	251:5,7 277:4	short 9:15
self- 91:1 135:2	separately 81:2	105:21 106:1	shared 160:17	108:19 122:18
146:15	284:22	130:9 140:4	233:19 277:10	123:9 125:20
self-interest	September 96:5	141:18 143:7	277:16	131:20 216:22
119:10	96:15	143:17,21	shareholder	256:15
self-motivated	sequence 19:15	144:5,20 145:2	167:10 184:21	Shortly 84:15
148:10	sequencing	220:7 257:18	shareholders	shot 274:24
self-regulators	204:1	sessions 8:5	121:9,12 162:1	show 64:15
249:20	sequitur 207:14	85:11,25 88:6	167:13 234:17	232:12 234:18
self-select	series 25:11	90:18 94:2,3,6	shares 48:24	270:7
128:13	serious 207:15	96:10 97:1	70:5,6,6	showed 10:24
sell 24:10,12	264:5 288:15	98:10 131:16	sharing 277:20	showing 159:22
62:15 110:3	seriously 33:5	139:25 140:7,9	277:22 295:3	193:23
115:6 128:18	295:6,16 296:7	140:14,20	shed 190:7	shown 60:10
213:5,23	serve 66:12	141:5,9,24	202:8	shows 173:17
227:17	81:16 97:8	142:16,19	shift 19:9,12	258:24
sellers 164:2	128:8 174:7,8	144:15 145:12	57:24 139:25	shut 184:11
selling 25:25	174:24 175:3	238:20 251:22	275:18	SIAC 17:19 19:7
75:8 100:6	175:12 183:3	260:20 261:18	shifted 116:20	20:1
109:2 112:3	227:18	261:23,25	276:19	sic 49:15 252:1
195:15 269:19	served 182:21	set 21:14 26:7	shifting 68:14	side 36:20 50:7
Senate 226:25	226:17,24	37:14 38:22	69:10 116:23	57:13 75:2,23
266:9	server 204:19	48:10,19 49:4	shifts 86:24	85:4 92:3
sending 30:6	servers 39:15	49:4 57:1,4,12	218:21	99:24 101:22
69:12 190:10	201:2,3 203:6	65:20,22 71:2	Shillman 2:14	108:14 117:19
202:23 245:11	203:23 235:15	83:13 87:14	6:9 80:18	125:4 128:18
senior 6:11,12	236:2,3 242:15	146:2 156:23	83:12 89:13	128:18 146:17
11:14	serves 61:1,12	158:7 170:11	94:18 99:15	150:25 155:15
sense 29:25 32:5	61:14	172:23 175:18	103:10 104:9	155:19 161:3
43:19 111:24	service 10:10	196:17 199:1	105:5 108:21	164:17 170:19
121:10 124:24	21:7,7,8 38:12	203:10,14	110:14,17	176:12 180:20
125:12 128:16	38:16 211:4	247:1 250:22	111:8 112:3	180:24 186:20
143:18 148:13	248:3 269:4	sets 51:25 52:1	114:10 127:4	200:18 203:5
150:19 153:2	281:20 285:2	139:12,15	127:21 128:24	204:23 217:8,9
215:17 244:16	services 1:6 8:9	140:19	131:15 132:11	217:9,10 218:2
251:19 280:7	8:11 9:8 11:5	setting 124:25	133:17 135:23	218:8,9 219:17
sensible 70:20	12:1 15:18	158:5 247:7,7	139:24 140:23	219:18 227:17
72:22 80:6	21:2 72:11	seven 4:3 5:16	142:17 143:25	230:24,25
152:23 250:7	85:19 154:14	97:10 268:19	144:10 146:7	231:4,6,12,14
sensitive 143:18	156:22 202:16	268:19,22	147:4 149:16	231:18 232:4
273:2,4	208:5 211:23	shapes 194:12	149:25 150:8	232:20,25
sent 14:7	212:6,6,10	share 89:6	150:11 153:3	233:16,17,18

233:18,20	211:1,2 283:6	40:25 43:8,9	181:8,24,25	158:11 173:16
235:4 239:8	simpler 56:9	43:11,18,22,24	182:6,21,25	174:7 177:3
242:9 267:7	simplest 17:16	43:25 44:14,16	184:5,9,10	196:2 199:16
280:16 282:9	107:23	45:1,4 47:11	185:24 187:4	200:8 229:10
sided 218:6	simplicity 43:16	47:17 49:10,18	189:2,9,24	232:14 239:16
sides 94:13,13	simplify 53:10	50:10,14 54:7	190:1,8,10	245:23 247:3
95:14 218:3,5	208:23 223:13	54:8,9,17 55:3	195:14,16,19	251:12 265:20
218:14 232:4	simplifying	55:18 56:2,9	195:20,25	273:8
232:15	45:12,15 52:14	57:11,15 58:15	196:5 198:24	sit 24:4 60:14
sideshow 247:6	53:17 219:7	58:21,22,24	200:13,18,21	183:22 194:20
SIFMA 82:23	223:7	59:11,11 63:1	200:23,25	248:9
82:25 91:22	simplicistic	65:4,7 66:21	204:18 211:22	sitting 55:24
122:12,17	146:19	67:20 72:18	212:1,3 220:9	92:3 115:10
129:1 154:19	simply 19:7	73:3,8,19 74:7	220:20 229:19	185:12 186:20
158:5,13 166:8	20:23 31:14	74:10,13,23	230:2,8 232:3	198:21 215:25
207:25 208:21	46:12 71:24	75:9,16 76:19	232:4,5,16,24	216:11
SIFMA's 106:5	79:5 174:17	81:24 82:3	233:16,20	situation 123:18
154:18	192:20 240:2	90:5 92:8,11	235:25 238:7	124:25 125:6
sift 194:8	simultaneously	92:14,17 93:3	238:12 239:2	132:18 159:12
sifting 193:20	17:22	93:4,16,17,19	241:4 243:17	191:4
sign 26:1 180:6	single 17:17	94:7 98:20	245:19,19,24	six 3:12 5:13
199:20	18:18 20:1	99:3,17 100:7	248:24 249:18	123:3
signed 238:24	38:15,16 43:8	100:8 101:23	251:6 252:12	sixth 153:20
239:5,6	43:9,16 45:20	103:16,21	252:14,14,19	size 66:20 67:2
significant 7:4	60:20 70:10	104:16 106:23	253:4,4,6,7,9	67:11,24,25
17:11 18:19	157:8 221:25	106:25 107:4,5	253:10,13,14	68:25 150:20
33:4 45:21	262:24,25	107:5,8,10,20	260:5 261:9	177:12 274:5
84:3 88:23	284:17	110:10,21	263:10,10	sizes 194:12
95:23 98:5	SIP 7:23 8:15	111:25 112:8	264:11,12,13	skipping 204:7
112:11 152:8	10:14 11:18	112:11 113:1,9	264:19 265:3,6	skirt 110:20
158:4 193:24	12:6,10,22	114:15 115:15	265:8,14 267:5	skyrocketing
194:15 196:21	13:1,8,12,24	115:16 116:7	268:12 274:20	174:1
198:12,12	14:16,20 15:2	116:19 117:12	274:24 275:2,5	slain 159:18
229:10 238:1	15:4,5,7,11,21	118:6 124:3,9	275:10,14	slash 182:19
significantly	16:9,24,24	126:7,18	276:7,12 277:3	183:14
13:1 65:1 88:6	17:14,19,23	127:15 129:6	277:9,15,23	slate 158:25
281:11	18:1,5,11,11	129:13 136:8	282:8 283:7,10	slice 127:25
silent 113:13,17	18:13,15,20	137:19,25	283:12 284:22	sliced 24:20
silos 201:14	19:10,14,23	153:1 157:4,7	288:7 289:3,25	slide 274:4
similar 27:24	20:14,22,24	157:12,17,19	290:15 293:3	slight 25:3 76:24
49:25 128:5	21:4,5,10,10	161:3,16 162:8	SIP's 17:11	151:25 206:1
162:18 272:20	21:21 22:7,16	163:23 164:13	SIPs 8:1,12 12:9	slightly 45:14
Similarly 131:6	22:17,23 24:18	168:15,15,18	12:10,24 13:21	48:1 53:5 66:3
Simon 62:22	25:17,18,20,21	168:19 173:13	15:23 36:12,13	136:23 137:3
274:1 293:11	25:25 27:10,13	173:25 174:3	37:9 44:11	163:21 262:11
simple 52:3	27:15,19,24	174:23 175:17	50:24 80:2	272:17 282:7
55:22 67:20	28:3,20 29:3	175:20 176:12	94:22,22 97:23	slippery 172:22
88:21 93:8	30:19,20 31:18	177:5,12,15,16	116:10 129:11	174:5
117:25 146:18	32:4 33:20	177:22 178:9	156:25 157:6	slope 172:23

174:5	solved 77:15	189:23 191:9	207:11,13,20	spread 32:9
slow 268:25	79:13 131:18	194:4,17 196:6	274:6	206:6,8,8
slower 230:13	solves 76:19	196:13 206:9	specialists	spreads 32:11
slowly 69:11	78:1	217:23 219:6	101:11	spreadsheet
small 52:7 68:17	solving 53:15	223:21 242:21	specially 69:23	216:1
228:7 245:8	somebody 78:23	259:20 261:4	specific 9:16	squarely 124:15
273:22 274:6	78:25 110:23	267:23 275:17	16:4 46:8 63:9	squeezing 231:9
274:10 279:10	125:5 197:23	280:14 282:14	140:10 144:7	SRO 84:1,1
280:11,24	197:25 207:22	287:12 288:15	147:19 157:16	118:18 119:2
281:19 289:8	211:10 218:20	288:17 289:14	214:25 229:6	133:13 177:24
small-sized	231:8 233:11	292:13	261:21 287:6	268:2,8
278:22	235:2	sorts 32:23	specifically	SROs 83:17,23
smaller 65:1	somewhat 71:1	33:24 35:12	84:12 88:7	85:20 87:5
215:14,15	124:9 158:14	39:10 187:6	113:4 173:25	88:25 89:1
274:5,12,15	215:16 284:6	191:6 210:6	208:12 216:24	119:3 129:7
280:15 281:4	son 78:11	264:7	222:6 238:12	135:5 147:16
281:14	sophisticated	sought 132:20	281:21,25	177:14 240:1
smart 60:2	51:2	sound 57:23	specified 94:25	STA 216:10
269:11,12	sorry 41:4 54:20	107:15	spectrum 99:24	stability 182:18
smartphone	59:22 63:6	sounds 35:16	213:14	194:22,24
37:14 39:11	68:9 136:2	99:15 134:22	speech 228:24	stable 182:5
socialistic 66:11	201:13 212:12	186:25 200:16	speeches 265:7	183:19,24
soft 77:9	246:13 254:7	source 274:11	speed 15:22	184:1,5 252:13
software 37:15	256:3 260:1	sources 18:15	16:15 27:1	stack 76:14
52:19 164:21	264:1 266:25	space 13:12,13	46:12 93:3	78:13,18
software/tech...	278:19 283:1,2	36:13,14	103:18,20,21	stacks 22:21
75:6	296:4	156:12 163:2	162:14 245:23	48:17 49:5
sole 20:2	sort 11:16,17	169:18 183:8	245:24	52:1
solution 24:7	16:12,17,18	203:1 204:11	speed/one 63:18	staff 6:20,23
35:24 36:13	17:5 25:6	211:5 212:9	spend 46:24	99:1 154:15
41:11 46:20	29:24 30:1,6	214:14,15	273:12 282:1	174:18,22
54:25 66:19	31:1,3,3,4	221:5 231:3	spending 168:10	223:20 226:25
77:20 150:16	32:20 33:9	274:9	168:11 223:5	256:24 265:17
280:4	34:1,23 42:9	space-time 61:3	spent 34:15	266:10 287:1
solutions 7:9	54:6 59:9 60:7	speak 52:17	119:4 127:5	staff's 6:3
36:8 54:21	60:19 61:1,16	65:12 71:5	sphere 36:11	staffing 208:7
55:1 66:21	62:25 63:3,6,9	106:18 108:6,6	spirited 134:5	staffs 196:21
78:2 90:3,6	63:15 71:5	190:17 220:1	spitting 136:10	stage 20:7
131:12 228:3	72:11,12 73:7	227:10 241:19	split 66:25 168:5	246:11
279:2	73:8 75:24	258:7 260:22	168:7 171:18	stagnation 131:4
solve 20:20,21	76:9,16,24	261:7 278:2	200:20	stake 92:13
33:10,22 39:17	79:25 108:1	speaking 17:13	splitting 67:13	stakeholder
39:17 42:5	114:16 116:11	33:6 79:3	176:16 178:6	87:7 239:20
49:24 55:15	121:13 125:8	129:1 154:19	210:5 211:15	stakes 136:12
66:10 76:11	126:2,22 127:3	218:25 239:4	spoke 189:4	stale 245:16
90:4 104:12	128:2 130:10	speaks 241:13	235:2	stamp 29:1
107:22 109:19	147:23 148:2	special 6:11	spoken 198:20	stand 123:11
150:15 182:4	176:17 177:12	11:14 70:13	spot 208:1 274:6	standard 6:20
210:8	178:9 186:24	207:9,9,9,10	spots 168:14	60:21,22,22

61:2 78:11 139:13,15 146:20 157:13 157:16 160:9 190:23 255:12 293:8,12 294:14,16,17 standardized 235:5,8 standards 9:2 25:14,15 48:19 153:24 157:23 268:7 294:10 standpoint 82:14 86:25 88:14 105:22 117:21,25 118:2,7,16,20 119:8,10,17 132:23 133:9 133:14 135:12 150:23,24 151:1 169:15 179:22 211:2,2 Stanley 10:9 16:11 55:17 112:23 239:7 Stanley's 10:8 star 25:20 start 6:19 9:17 16:3,20 20:16 21:11 24:16 25:25 27:7 29:19 32:14 35:24 64:3 78:4 81:2,5 82:11 90:1,11 100:1,17 101:5 102:4 127:18 129:4 140:23 140:24 144:21 147:21 151:6 151:14 158:16 158:22 176:9 177:25 178:8 217:15 224:4 224:11,19 243:22 244:3 245:22 249:9	250:5 252:11 257:10 262:18 279:18 284:2 290:8 started 55:21 80:19 90:16 144:24 149:20 151:10 154:6 155:13 156:6,7 178:17 211:22 213:10 220:3 226:16 232:5,8 232:9 starters 240:15 starting 99:23 129:22 192:19 193:21 216:22 248:17 249:14 256:10 257:24 starts 23:3 242:4 254:10 state 23:7,7 35:2 35:4 41:11 42:14 60:18 70:3 80:9 121:3 158:14 stated 171:20 176:20 statement 41:18 116:17 134:25 219:15 267:22 277:1 statements 165:10 180:6 196:2 states 1:1 117:16 215:20 226:25 stating 105:9 statistics 194:20 stats 233:8 status 272:4 statute 113:16 158:25,25 159:3 254:7,15 254:15,23,24 statutory 7:18 132:3 171:21 172:25 178:16 stay 50:23	199:24 221:8 296:10 stayed 10:15 116:19 185:9 233:11 staying 116:23 215:4 234:25 steady 174:1 stealing 130:4 Stein 2:15 Steiner 4:10 228:9,10 239:3 271:9,11 272:12,25 284:24 285:16 stem 260:21 step 45:18 52:3 67:20 68:1 72:23 92:7,20 101:5 103:1,6 109:12 150:10 160:11 162:15 199:6 220:11 223:4 232:7 292:10 steps 8:2,18,24 9:7 80:21 90:19,23 95:24 97:5 153:22 232:7 251:11 sterling 20:14 stick 150:17 291:19 stifle 72:8 stochastic 52:25 stock 19:25 67:13,24 70:5 82:6 101:10 119:5 124:12 215:11 293:8 stocks 48:23 52:4,5 66:17 66:20,25 274:7 274:10 stone 156:10 stop 29:22 79:2 89:8 94:17 131:13 190:12 237:15	storage 265:2 store 170:21 story 168:18 strategic 187:13 strategies 85:17 227:14 strategy 81:23 225:19 228:10 stream 185:6 268:5,11 270:8 streaming 195:20 252:3 streamlining 234:20 street 1:23 10:10 20:22,25 21:3 21:8 23:12 37:8,10 68:15 78:19 173:18 249:19 272:6 276:23 292:18 292:21,25 strengthened 85:24 stretch 69:16 125:17 153:16 153:18 stretches 156:15 strictly 33:6 82:15 89:25 strides 149:12 strike 99:18 strikes 70:10 72:22 100:22 strong 107:5,7 107:10 stronger 115:9 strongly 132:14 198:3 struck 138:8 145:5 structurally 27:16 structure 7:25 8:5,10 9:10 34:18 40:12 60:10 81:14 83:7,14,18 86:5,14 87:4	92:4 95:7 99:7 100:24 102:10 113:20 114:9 121:16 122:6 128:3 131:5 133:22 145:8 147:7 151:12 152:14 174:9 177:21 229:1 262:21 278:5 292:8 structures 98:16 211:6 struggle 215:6 243:19 struggling 70:21 stuck 197:1 studies 68:13 study 239:21 stuff 49:1 106:13 170:7 197:1 209:21 236:4 237:2 263:11 stunned 246:10 sub-millisecond 19:6 subcommittee 16:24 17:2 20:15 86:15,17 86:21 98:15,20 122:9 132:1 140:10 147:18 154:18 290:16 290:17,18 291:15 292:8 subcommittees 134:4 290:15 290:19,23 subject 87:21 88:10 111:4 130:8 157:23 158:4 214:18 251:18 254:20 submit 35:25 85:6 96:11 102:13,22 113:21 138:10 175:20
---	---	---	--	--

submitted 168:12 239:4 256:24 264:23	suddenly 244:20 suffer 268:4 suffering 31:4 suffice 176:1 sufficient 21:21 133:22 159:24	144:4 163:2 165:2,3 179:8 203:14,20 251:13,17 252:2 253:14 269:9 292:7	164:25 228:4 susceptible 13:18 suspect 20:8 132:11 190:16 suspicion 30:17 31:2 59:16 61:16 237:8	T 5:1,1 7:15 239:8 Tabb 3:18 156:4 156:4,5 167:25 172:7,9 184:4 210:23 table 29:15 92:3 127:18 128:23 134:13 136:21 171:9 213:6 287:5 tactically 42:14 tail 71:5 tailored 35:2 take 20:16 33:5 39:11,20 42:10 53:5 65:4 74:13,23 75:3 81:1 90:23 103:6 107:17 118:10 119:7 137:22 140:8 154:4 158:17 178:4 185:24 210:11 223:3 224:3,8 231:3 234:16 240:19 240:24 243:2 258:12 271:3 272:16 274:24 277:3 282:2,5 290:18 292:10 295:6,16 takeaway 169:9 taken 69:22 80:17,21 95:24 97:5,15 153:14 157:5,25 224:6 251:12 295:2 takes 12:8,20,24 25:3 197:19 201:9,10,11 203:25 215:2 224:10 231:18 277:1 talk 16:9 18:24 32:22 36:17 55:19 60:15 68:21,22 78:22
subscribe 241:22 242:23 243:2	suggest 138:14 145:8 166:1 239:22 suggested 7:16 22:15 31:20 51:5 56:17 63:15 67:23 118:22 130:11 295:15 suggesting 61:25 84:7 85:23 98:9 104:10 271:22 292:3 suggestion 37:21 54:17 104:25 147:24 suggestions 7:5 70:20 282:23 290:2 291:23 suggests 167:14 SUI 19:20 SUI-compliant 25:13 summaries 96:25 229:16 261:15 summarize 86:20 87:23 summarized 96:21 summary 86:23 261:2 summer 245:4 super-majority 88:20 149:21 supervision 6:10 6:12 11:15 78:8 supply 26:13 57:13 support 63:19 98:11 99:4 109:4 122:5	supporting 158:7 275:3 supportive 134:23 supports 269:6 supposed 113:12 146:15 196:7 Supreme 217:21 sure 25:1 29:20 31:6 34:20 48:19 54:16 59:12 67:6 77:10,18 79:20 86:22 100:22 103:19 104:20 105:2 109:17 111:25 117:9 128:20 148:4,9 150:11 168:25 169:4,25 171:22 181:23 182:22 183:5 184:13 186:8 186:13 198:21 198:22 202:20 205:20 215:11 215:13 221:22 223:1 230:10 234:23 239:3 241:19 251:24 259:8,24 261:4 265:18 270:16 274:19 283:2 289:6 surprised 215:23 surprising 231:2 surprisingly 98:16 152:11 surrounding 145:24 surveillance	swallowed 234:12 sweep 64:13 sweet 274:6 swing 175:17 switch 14:6,7 188:19 switches 14:1 201:3 202:21 202:25 230:14 230:14 switching 203:6 sword 171:16 sympathetic 71:1 synergies 234:15 system 19:20 20:10 21:25 23:14 38:10,11 38:13,19 55:7 62:7 83:16,22 120:18 121:12 200:25 201:10 203:8,10,25 204:2 229:8 258:21 259:16 264:4 268:2 270:17 273:7 279:15 system's 19:16 systematic 10:1 11:7 systemically 151:15 systems 17:20 37:23 54:8,9 181:6 228:1 234:22 236:7 263:11 279:8	
subscribed 152:21				
subscriber 25:7 26:1,3 80:5 192:15,21,25 193:11,17				
subscribers 188:10 229:13				
subscribership 47:3				
subscribing 242:20				
subsequent 99:1				
subsequently 159:25 214:11 265:16				
subsidize 185:6				
subsidizing 244:1 281:4				
substantial 87:4 89:6 197:11 206:24				
substantially 88:18 117:18 229:5				
substantive 7:13				
substitutable 159:22 214:9 214:13				
substitute 39:6 57:11				
substitution 195:23				
subtly 210:18				
success 109:7 112:8				
successful 47:14				
Succession 228:1,1				
successors 128:14				
sudden 259:21 265:21				

78:22 81:13	tape 12:17 13:2	79:4 85:16	157:2 171:3	198:16 252:4
83:9 89:19	13:5,6 19:7,8	90:4,7 103:25	172:21 173:19	thanking 227:7
101:19 105:21	44:14 177:6	105:19 112:11	173:22 187:3,5	thanks 11:12
108:9 111:16	tapes 17:25	169:15 179:7	188:24 189:17	20:13,13 26:19
120:10 134:2	51:23	183:21 185:16	189:22 190:2	29:20,20 32:17
134:21,23	tapes' 18:17	185:19 186:7	195:1,15 196:7	35:18 81:6,6
137:22 141:14	target 214:25	188:4 189:8	196:10,12	83:11 89:13
151:20 166:6	targets 187:15	205:11,16	203:10 212:1	94:18 99:15
174:2 184:12	tariff 173:8	228:1,2 230:13	219:11 258:20	100:18 108:21
212:4,15 217:1	task 158:19	230:16,21	271:14 287:12	127:4 139:24
230:7,23	201:17	252:18 275:3	291:24 293:7	147:4 160:14
231:19 247:1,4	tax 280:19,21,25	278:23	terrific 42:18	161:14 167:25
254:21 255:3	281:8	technology-rel...	119:22	167:25 172:12
255:15 256:8	TCA 277:20	164:20	test 145:13	181:19 225:9
259:2 264:14	teach 35:23	tee 127:10	testimony	237:16 238:22
267:7 268:14	team 108:8	teed 278:12	297:13	241:14 243:9
268:15 271:19	team's 216:20	telephone 38:23	tests 214:8	249:6 272:25
283:17	tech 48:17 49:5	televised 126:8	Texas 155:3	theme 7:10
talked 31:9 42:3	52:1 241:15	tell 26:25 56:16	TGIF 7:11,12	165:6 207:8
64:11 113:6	279:3	62:11 79:18	80:23 295:13	282:13 295:11
143:6 169:21	technical 22:12	167:19 181:15	thank 7:1 11:1	themes 144:2
212:17 215:3	22:14 88:21	184:13 199:20	11:10,11,21	then-CEO 92:1
247:16 257:18	98:22 271:13	219:7 241:16	16:2,21 20:11	theorem 101:21
257:20 258:16	technically	241:23 243:16	22:11 31:23	theory 159:23
258:17 265:13	241:4	250:25 283:14	32:15,17 35:19	175:22,23
279:20 286:6	technological	template 191:9	35:21 42:18	216:25 217:22
talking 16:12	100:9	tend 77:25 261:3	44:5 51:3	222:5
29:10 30:4	technologically	tendency 262:18	72:15,24 80:8	thereof 9:4
33:20 34:17	74:8	tends 250:2	80:13 81:12	they'd 33:14
35:7,8 36:7,16	technologies	tension 89:14	82:2,7 89:12	184:11 185:14
37:19,22 64:17	40:8 77:16	175:13	94:20 110:16	thing 20:18
72:10 74:4	169:16 205:16	tensions 112:19	127:20 153:4,7	24:22 34:3,4
78:24 94:13,14	230:22	114:8	153:12 154:8,8	35:23 39:3
103:15 113:4	technologist	tenth 215:12	156:18,19	40:4,16 43:21
120:3 123:23	36:3 65:11	tenure 90:13	161:15 162:16	47:23 48:14,17
142:18 144:12	technologists	term 8:7 47:22	172:14,14	49:19 51:17
178:17 196:14	38:18 39:17	130:22 140:5	176:6,6 217:3	52:16 60:5,7
199:5 200:13	technology 11:8	156:25 187:14	223:15,16	65:13 70:25
205:11 211:21	12:25 19:5,12	188:15 210:19	224:20,20	90:24 91:9
211:24 232:3	19:22 21:17,17	terminal 204:15	225:22 226:7	99:25 102:8
232:25 245:17	23:7,18 26:9	terms 15:21	226:19 227:1,9	104:4 107:23
254:6 263:7	27:12 29:6	36:13,24 38:14	227:23,24	111:9 113:24
267:5,6 270:5	35:2,5 38:17	57:1 58:17	228:19,23	115:5 118:8
277:19,20	39:4,23 43:3	63:15 69:25	239:3 244:19	132:19 136:6
279:20 287:4	43:25 50:17,19	74:14 75:22	248:15 249:5	146:13 170:25
290:23	50:20 51:15	80:3,4 90:4	295:22,23,24	176:11 187:21
talks 136:7	53:19 75:22	125:13 126:5	296:1,13	188:8 193:19
194:2	76:9,14 77:9	126:11,24	thankful 7:11	195:11 200:6
tangible 123:20	78:13,16,18	150:12 152:18	thankfully	216:23 219:1

223:7 234:17	273:14 274:11	73:23 74:4,9	138:20,25	200:13,20,21
235:3 247:18	278:6 279:19	74:20,22 75:16	139:15,20	201:17,18
247:25 259:14	280:11 281:12	75:16 76:14,18	140:8 141:21	202:2,9 204:12
263:24 270:9	286:23 287:12	77:9,22,24	141:24 142:1	204:25 205:9
274:3 281:15	287:17 288:12	78:3,12,18	142:12,25	206:14,14,23
281:18 284:17	288:13 290:23	79:3,13,24	143:5,16 144:1	208:24 210:11
287:6 289:5	291:24 294:12	80:2,24 86:13	144:8,8,14,25	210:12,16,17
294:5 296:4	295:10,19	89:7,12,14,20	145:3,12,23	210:18,19,23
things 16:6	think 9:10 11:18	89:21 90:1,9	146:10,11,14	210:24 211:12
21:19 22:13,13	16:15 17:14	90:24 91:20	146:20 147:4	211:20,22
25:23 29:9,24	18:25 21:16,19	92:4 93:20	147:22 148:7	212:1,7,8,14
32:23 37:15,19	22:16 23:15	94:17 96:15	149:1,2,5,13	213:1 214:21
40:6 57:2	27:3,15,19	100:5,13,19	150:2,16,18,20	216:24 217:24
60:13 63:8,13	28:10,18,22	101:3,18 102:4	151:4,7,8,24	219:11,16,21
63:14 76:12	29:5,10,14,15	102:8,24 103:5	152:2,12,13,15	221:24 222:1
77:24 83:4	30:8,14,18	103:10,13,13	153:3,4,5	222:17,23
84:23 87:3	31:9,12,16,20	104:5,9,11,20	158:19 160:23	223:8,17,19,23
90:17 95:13	32:10 33:8,22	104:24 105:14	161:5,9 162:3	230:15,18
101:14 103:5	33:24 34:5,7,9	105:20 106:14	162:15 163:6	231:6,21 232:3
103:14 105:23	35:22 36:4	107:22 108:3	163:22 166:7	232:6,7,12,18
106:3 108:1,22	37:7,8,9,16,17	108:12,22	167:2 168:5,24	232:19,23
109:25 114:5	37:24 38:9,17	109:3,8,12,15	169:6,7,10,11	233:14,21
115:19 116:6,7	38:19 39:14,25	110:19 111:15	169:19 170:2,3	236:5,11
117:9,21,24	40:20,21 42:22	111:23 115:17	170:5,6,22,24	237:15 238:17
123:8 126:6,12	43:13,21 44:3	117:5,9,13,24	171:18,19	240:9 241:12
130:15 132:24	44:17,21 45:10	118:1,9,9,11	172:20,24	241:24 242:4,8
136:14 139:2	45:11,16,17,22	118:21,22,24	173:1,12 174:4	242:22 243:8
144:8 152:17	46:4,7,14,23	119:11,12,19	174:7 175:11	243:16,20
152:21 165:15	47:1,3,6,22	119:19,20	175:24 176:4,7	244:17 245:17
168:8,21	48:5,13,15	120:7,13,15,18	176:9,11,15,17	245:18 246:9
182:17,23	49:7,17,20,25	122:1,4,8,20	176:19 177:1	246:17,23
183:14,23,24	51:1,2,23 52:8	123:5,9,15,18	177:10,25	247:5,6,21
184:1 191:6	53:12,16 54:5	123:22,23	178:2,5,10,14	248:9 249:2,3
194:14 200:12	54:6,11,19	124:2 125:13	180:11,12,15	249:4,14 251:2
201:4 208:24	55:6 56:3,10	126:4,9,15,19	181:16 182:2,3	251:6,9,10,20
210:6,7 211:1	57:9,20,25	126:21,22	182:4,5,7,11	251:25 252:7
211:24 212:23	58:1,13,20	127:1,13,13,16	182:12 183:2	253:22 255:16
212:24 215:6	59:10,11 61:15	127:24,25	185:12,18,18	255:18,19,20
218:19 219:16	63:12,15,23	128:1,2,7,12	186:7,12,18	255:22 256:4,9
225:4 230:19	64:2,25 65:10	128:22 129:22	187:3 188:9,14	256:16 257:12
233:18 234:13	65:12,14,14,17	130:20 131:5	188:25 189:4,8	257:16,20,25
241:12 242:2	65:23 66:3,3	131:12,20,21	189:19,22	258:4,11,11,12
245:5 246:12	66:11,15 67:7	132:1,7,15,24	190:4,5,19	260:5,9,17,19
246:23 247:19	67:9,12,19,23	132:25 133:6	191:3,4,14	260:21,22,24
249:13 250:11	68:4,19 69:6	133:10,12,15	193:19 194:5	261:4,17,23
250:15 258:15	69:16,20,24,24	133:22,25	194:13,21	262:1,7,8,15
264:25 266:12	70:2,9,12,20	134:19,20	196:4,9,14	262:20,22,25
266:19,22	71:12,14,15,23	135:16 137:8	197:8,18 198:9	263:6,12,13,17
267:1 271:16	72:7 73:5,6,22	137:10 138:2,7	199:25 200:1	263:20,23

264:5,7,9	143:24 166:20	time 12:8,24	176:24 210:15	230:21 256:18
266:3 267:15	176:23 186:23	13:1,2 19:15	232:17 242:3	told 210:15
267:17,22	202:15 222:9	23:9,19 29:13	246:3 263:1	215:7 220:12
270:14 271:12	261:2 265:8	37:20 38:22,22	273:25 274:5	Tom 276:25
272:9,22	277:11	38:24,25 39:1	timestamps	tomorrow 36:17
273:25 275:9	thought-out	41:1 44:21	49:14	ton 163:9
277:18 278:4,5	258:8	53:22 55:24	tiny 156:1,1	tone 38:24
278:15,22	thoughtful	56:3 59:25	tip 122:15	tons 53:2
279:2 280:4,18	262:16	61:9 62:3,14	title 17:1	top 59:25 60:17
282:14,21	thoughts 30:13	62:17 64:16	titled 34:7	193:2 204:5
283:7,13,22,23	42:17 66:15	65:1 66:3,8,9	TM 6:10	209:20 214:20
283:23 284:7	71:22 82:15	66:13 71:25	TMX 199:5	top- 30:6
285:8,13,20	104:23 120:13	73:10 75:3,21	to-Mahwah	top-of-book
287:2,8,11,21	199:12 239:2	80:8 87:16	12:20	56:2 60:5 75:8
287:23,25	246:20 261:4	90:5,21 94:21	today 6:6,21 7:1	100:3 109:2,7
288:2,5,10,11	261:15 291:21	96:23 98:3,23	7:8,11,14,20	topic 64:18
288:13,21	thousands 47:14	99:11 112:17	8:1,1,16,23	81:13 144:25
289:12,15,20	194:2 289:9	112:21 115:19	9:15 10:16	147:5 153:20
290:9,17,21,22	thread 261:11	119:4 121:4	11:2,13 15:16	199:15
291:1,10,13,23	three 18:17	128:4 135:21	16:2 17:13	topics 63:9 83:8
292:12,16,23	21:19 43:6	141:5 142:2	18:24 24:13	83:8 97:16
292:25 293:2	51:23 69:14	146:3,11,12	25:8,24 35:5	228:15
293:15,16	77:5 81:16	153:4 156:15	36:15 37:19	Toronto 215:15
294:5,14,16,23	83:22 100:4	167:17 169:17	40:25 42:12	total 189:22
295:9,11,12,15	117:10,13	175:25 177:20	48:6 50:21	207:14 233:2
thinking 23:4	119:6 129:9	181:1,5,12	51:9 54:2,18	234:2
27:3 37:22	147:13 149:20	182:19 194:4	56:6 65:21	totally 59:6 62:5
75:14 76:8	162:11 170:17	194:23 195:4,8	71:12 75:5,16	220:2
77:16 106:1	210:15 213:8	199:23 201:25	77:20 78:22,23	touch 264:18
116:24 129:2	223:9,9 232:16	205:17 210:12	79:25 81:7,17	271:16 273:19
190:2 200:12	242:3 251:14	210:13 213:8	82:15 83:9,16	touched 197:23
249:4	threshold 20:17	213:11 216:20	89:14 93:2	212:7
thinks 139:4	thrilled 226:25	216:20,23	102:9 105:21	touches 282:14
third 19:18 88:5	throw 41:12,14	217:1 218:19	133:23 134:23	touching 240:9
118:8 183:12	throwing 36:1	222:3 223:25	138:12 139:3	tough 109:8
197:6 231:21	179:10	230:3,16,19	139:23 144:3	127:6 210:2,3
239:21	thrown 29:14	244:16 248:24	154:3,18	tower 23:12
third-party	236:17	249:8 251:4	155:12 158:18	156:7
213:22	thunder 130:4	253:6 255:7	163:10 165:6	track 115:21
thirdly 22:3	ticked 122:6	258:12 260:19	172:15 191:18	242:13,14
thorough 262:15	tie 290:11	262:19 276:15	208:25 211:24	trade 8:9 9:9
thoroughly	tied 109:3	281:9 287:13	212:2 227:1,20	17:23 18:6
252:7	157:12 181:11	295:2	227:24 228:19	19:15 30:23,25
thought 31:18	205:3 238:13	timeframe	228:21 243:24	32:12 39:12
32:19 58:22	264:15 291:22	185:22	247:13 295:11	59:19 60:17
64:4 67:17	tier 236:3 277:7	times 45:14	today's 8:6,10	61:25 62:6,9
68:10 83:13	281:6,13	76:25 99:8	9:9 12:2 15:19	62:12,18,20
115:16 121:18	tiers 236:2	100:19 162:5	79:4 90:6,7	66:2 73:4,10
127:5 142:12	244:22	170:17 171:20	166:23 225:23	164:4 169:8,24

169:25 184:9	179:14,24	227:11 229:2,5	tried 115:12	73:8 74:5,5
184:15 219:10	180:24 187:3	229:11,19	165:20 168:10	103:15,16
219:25 230:24	191:22 201:22	230:2,8 232:2	170:14	110:20 121:15
245:11 281:2	201:23 202:14	232:2,3,13,14	trillion 81:10	146:11 159:15
trade-throughs	218:6,10,14	232:24 233:15	triple 193:16	168:7 171:23
59:3	220:7 221:21	235:6,7,8	trouble 124:14	172:1,5,11,23
traded 62:1	221:25,25	236:11,12,19	135:6	173:4,14,15
trader 39:9,11	230:24 231:3,9	236:22 238:10	troubling	178:17,22
55:22 62:1	231:12	239:2,20 240:8	241:11 242:16	190:25 194:4
238:1	transactional	241:17,25	true 78:19	198:2 199:7
traders 39:10	165:22	243:17 244:8	119:25 131:10	209:7,11 210:8
53:24,25 102:3	transactions	245:17 249:15	174:17 250:3	210:24 248:18
170:1	9:23 191:21	249:19,22,25	252:19 265:3	273:4 294:25
trades 12:15	192:4	251:8,12	297:11 298:4	turn 16:1 42:16
23:23 58:24	transcript	253:16,18,19	truly 17:12	167:24 225:6
156:10 220:16	297:11 298:4,5	253:24 257:6,8	78:25 148:9	237:23 293:14
220:22 276:16	298:10	261:13 262:22	160:22,23	turning 157:22
276:20 277:3,5	transcription	263:19 269:21	161:6	278:16
277:9,25	297:11	269:23 272:1	trust 41:21,21	twelve 82:18
trading 6:5 9:25	transition 77:23	278:3,11,12,13	41:22 42:1	twice 281:7
10:5,6,8 11:7	transmission	285:25 290:3,5	130:20 144:6	two 17:2 23:12
14:13 21:25	12:22 204:21	291:15,23	225:8 251:25	44:25 49:5
26:22 37:2,23	transmit 12:9	292:24 295:14	259:19 262:5	51:23,25 52:1
39:7,15 50:6	transmitted	transparent	truth 24:19 40:9	52:1 69:14
54:8,9 62:24	13:20	84:10 87:13	130:19	82:20,24 86:14
68:16,19 69:19	transmitting	198:2 225:13	try 42:15 66:9	86:23 87:3
71:20 81:9,15	13:24 74:18	228:17 236:20	75:20 80:10	93:6,23 103:23
82:23 85:17	transparency	239:23 249:17	86:22 99:20	103:24 104:2,6
124:4 154:24	5:16 7:15,16	249:21,21,24	103:19 111:17	104:6 112:16
155:4 163:6,7	30:24 61:17	256:18,23	111:20 118:10	117:9 123:19
163:8 169:3	88:14,15 90:15	260:3,3 277:6	124:8 125:14	125:14 129:11
184:6,10 203:8	90:20 95:20	285:7,8	125:21 127:6	129:13 130:3
217:8,13,13	96:21,25 97:17	trap 197:1	138:11 145:9	130:11 142:10
227:12 228:10	98:5,10 102:16	travel 12:16	150:15 166:3	147:24 151:22
228:13,20	102:16,17	18:3	175:5 179:5,7	153:19 158:7
240:25 244:1	104:25 105:20	traveled 271:18	180:3 186:14	161:18 162:6
247:14 265:5	106:2,6,9	Treasury 91:23	187:1 188:11	166:21 168:14
268:3 272:1	126:5,12,20	122:10 156:17	188:11 194:10	170:16 179:6
279:4 281:4,10	130:2 131:1	treat 69:23	197:9 205:10	190:18 195:9
traditional 10:2	141:7 144:7,22	treated 71:19	205:15 208:23	216:14 218:3
190:20	145:4,6 146:23	treatment 69:25	210:25 243:18	223:8,9 224:22
traditionally	159:1 161:3,5	85:13 94:4	258:20 288:17	225:5 226:4
182:21 183:3	161:16 162:2	140:5 143:11	294:10	232:16 240:16
traffic 14:4	162:19,23	trees 159:18	trying 20:20,21	242:2 245:18
trail 123:3	165:5 185:4	tremendous	21:1 24:6 27:9	248:25 250:7
train 68:9	188:22,24	74:6	32:2 33:10,22	269:3 271:18
142:12 262:8	190:3 194:5	trend 172:21	54:20,25 55:14	273:15 280:12
transaction	202:3 208:3	TRF 277:2,2,15	57:20,24 59:5	281:12,13
164:6,11,16	225:11,12	278:7	62:12 70:9,23	283:20 292:12

294:2,9 295:7	unable 286:20	211:6 246:23	146:22,25	71:10 73:5
two- 218:5	unacceptable	272:7 283:11	157:3,24	124:3,9 128:8
two-day 122:3	32:10	understood	158:21 161:13	163:24 262:16
two-sided	unanimity	147:25 190:22	171:23 211:11	useless 62:8
175:23 217:7	113:24 124:20	190:23	unsettled 158:14	user 289:4
218:1,10	132:19,23	undertake 20:5	unwise 172:25	users 47:14
two-thirds 88:20	148:2 149:11	underwriting	up- 99:10	73:24 187:23
two-tiered 20:10	149:17,18	108:1	up-limit 15:9	197:22 235:14
93:5	unanimous 84:2	undesirable	18:10	236:4 242:14
Tyler 4:7 226:21	86:3 88:19	210:7	up-time 95:13	255:11 285:12
243:10 249:6	126:1	undisputed	update 71:25	288:6,7,8
255:20 256:3	uncertainties	214:14	updates 17:23	uses 48:21 53:19
256:12 260:14	39:5	undue 266:20	88:15	142:22 214:8
262:6 264:5	uncertainty	284:20	upgraded	264:13,19
275:16 295:15	30:10,17 31:1	unequivocally	216:12	276:24
type 28:12 52:4	59:16 61:11,22	122:18	upgrades 12:25	usually 224:10
52:4 74:8	283:8	unfair 101:12	upgrading	243:20
108:10 128:3	uncovers 57:4	unfairly 161:7	195:22	utility 102:25
143:20 157:13	underestimat...	255:1,3	usable 31:18	124:24 166:2
284:11	185:19	unfortunate	usage 167:19	168:18 200:14
typed 262:14	underline 34:4	168:2	196:22 240:4	246:5 289:7
types 13:11	underlying	unfortunately	255:10 259:6,7	UTP 17:20 20:2
14:11 123:5	32:20 33:23	187:20 231:24	259:13,17	22:17 52:3
129:20 162:4	34:10,16 35:1	293:16	use 8:4,7 21:4,10	95:14 99:9
184:13 212:2	41:16 42:13	unhelpful	23:1,4,18 26:9	200:7 226:17
223:9,10	56:11 90:24	106:12 208:10	27:22 32:4	227:19 235:25
244:21 284:15	undermine	unhesitatingly	41:3 43:14	244:7 290:13
284:16	123:22	250:14	44:2 51:11	
typically 65:3	undermining	uniform 87:9	62:12 63:1	V
typify 57:7	111:21	unintended	77:12 79:5	v 217:23
	underneath	208:9,19 286:4	85:25 88:6	valid 58:14 59:6
U	26:16	unique 108:11	90:17 94:2	92:16 94:7
U.S 1:22 7:2,7	undersigned	181:4	110:3 118:12	131:23
34:18 91:23	297:10	United 1:1	130:8 140:8	validate 162:24
122:10 155:6	understand 32:1	226:25	141:4,24 158:2	valuable 45:16
156:17 163:25	36:3 38:5 46:7	units 234:14	161:11 163:13	294:17
165:4,17,18	91:10 112:2	universal 63:21	170:21 182:25	value 60:12,13
167:16 171:11	138:10 198:23	universally	183:20 184:15	88:12 97:4
186:22 187:25	200:10 202:12	151:7	195:18,23	102:25 111:3
193:1,6 209:2	204:14 207:6	unlucky 266:9	196:19,25	134:20 139:21
217:21 226:14	210:14 242:6	unnecessarily	198:18 202:23	162:21 184:13
228:5	245:23,25	100:22,25	205:16 213:23	184:21 205:4
UBS 239:7	249:24 267:18	unprecedented	244:24 250:13	217:9 218:25
UC 9:20	271:23 273:4	97:5	259:11 265:14	238:1 248:3
UCert 258:22	284:17 286:16	unprone 102:14	268:23 269:3	268:21 284:21
ultimately 37:24	289:14	unreasonable	269:11 275:2,6	293:4,4,7
61:1 137:5	understanding	210:1	279:10 285:4	value-based
139:16 206:16	138:21 144:23	unreasonably	286:8	269:17
240:7 280:3	170:8 200:8	7:19 8:23	useful 32:6 69:5	values 249:16

Vanguard 239:9	164:16 166:6	violating 200:11	votes 87:20	107:6,7 110:24
variant 33:9	180:11,23	virtually 171:10	109:11 129:7	117:6 122:18
variation 25:3	187:4 188:10	184:8 256:19	129:10,24	132:12 136:13
206:1	197:25 210:13	virtues 209:19	136:5 147:14	139:4 146:7
variations	230:24 238:7	vis-a-vis 76:15	148:1 149:6,15	147:21 150:9
217:18	261:14 284:22	284:21,22	150:13 152:7	153:4,7 154:1
varies 187:24	288:21	visibility 144:21	voting 7:25 8:5	154:6 170:20
variety 10:10	vested 111:24	visible 15:4	84:14 85:24	171:7,12,15
11:9 82:13	205:9,15	visit 99:1	88:24 91:17	175:22 181:20
117:22 118:15	veteran 155:10	visits 99:1	92:3 104:21	187:12,14,16
227:13	viable 57:11	voice 136:19	113:25 115:19	188:15 189:3
various 6:15	66:21	138:11	116:2 118:25	201:19 202:17
12:12 13:9,10	vice 83:1 154:16	voices 102:19	122:19 126:25	205:22,24
14:11 15:14	225:17 226:9	139:22	128:15,15	209:1,15 210:5
16:7,18 25:14	video 230:14,14	volume 56:17	129:3,18 130:6	210:10 211:7
27:8 35:3 68:7	view 28:12 48:9	68:14 212:25	131:4 132:18	216:25 223:1
90:3 91:7,21	50:3,5 51:2	213:2 215:14	137:8,12	223:15,16
100:20 102:21	73:3,7 83:7	217:13,13	146:10 147:7	227:7 234:16
126:5 134:11	96:23 106:22	229:12 255:11	147:16 148:5	234:18 235:9
167:2,3,18	110:24 111:5	255:11 277:8	148:25 150:14	235:10 236:18
172:3 227:16	112:7 117:1	volumes 281:12	152:25 238:20	239:25 247:1
274:7	130:7 146:19	voluntary	VP 10:18	248:15,15
varying 114:19	148:25 152:8	250:22		250:5 254:21
vast 96:1	152:12 163:22	vote 84:2,2	W	255:24 256:12
vehicle 199:13	176:13 179:18	87:19,24 88:19	Wait 150:10	258:15 259:8
vein 98:2	186:25 208:2	88:21 89:2,3,4	waiting 182:13	264:18 265:13
vendor 85:1	208:12 232:19	89:6 91:25	Wald 273:15	266:6,22
128:19 155:14	233:2 234:2	96:12,13,19	274:1	267:14 268:23
161:24 189:10	251:8 262:8	109:18,21	walk 16:14 55:2	269:22 270:16
241:15	276:12 285:7	110:8 118:15	119:5 238:25	271:22 272:13
vendors 11:8	286:20	118:16 124:17	Wall 37:10	272:18 273:19
23:11 28:8,15	viewed 97:24	126:1 127:8,12	78:19	278:1,2 279:8
84:19 91:16	118:24	128:1 131:19	walling 109:4	279:9 280:12
92:12 141:10	viewers 44:4	131:21 132:22	want 6:7,19 16:3	281:15 286:7
213:22	viewing 126:9	133:4,6,24	20:16,16 21:9	289:5,10,12
venue 219:10	viewpoints	134:16,16,21	21:12 26:5,6,6	291:3 293:22
venues 30:6	112:24 113:23	135:7 136:16	27:10,11,19	293:23 294:24
151:13	views 6:20,22	136:17,18	28:8,13,16,20	295:22 296:3
version 48:20	8:14,21 15:17	137:9 141:16	29:15 31:24	wanted 41:9
50:12,14 97:20	15:20 43:3	142:3,6,7	32:7 35:13	47:18 63:22
212:19 261:1	85:6 89:25	145:1 146:12	41:5 43:1,10	64:18 80:9
262:12 287:20	100:12 105:9	147:6 148:20	47:17 50:13,20	105:7 115:6
versions 48:16	110:18 133:19	149:8,8,13,23	51:19 52:13	135:9 137:4
versus 19:20	133:21 143:25	150:19,24	58:8 59:2 60:9	138:2 177:25
23:5 40:4	144:12 145:10	151:17 152:4	63:2,5,5,8 69:8	194:18 195:11
64:16 77:8	147:20 150:3	152:10 251:17	70:4 71:4 72:7	196:3,13 212:4
101:4 103:21	150:12,23	251:21 262:21	76:24 77:11	216:7,23
126:18 138:19	151:3	262:25 290:24	79:8 80:24	217:23 260:13
144:3 152:14	VIG 139:13	291:25	89:25 106:21	276:17 278:21

wants 23:16 40:5 180:15 255:19,21 293:14 296:10	179:24 180:7 182:8,10,23 183:23 184:2 193:16 194:11 196:6,16,23 199:22 200:14 202:11,12 205:8 207:21 208:5,6 212:21 216:15 217:6 220:11 222:14 223:19 229:5 233:14 235:8,9 246:8,19 251:25 253:2 256:1 258:17 259:12 261:23 265:1,4 276:22 279:17 284:25 287:7 291:10 294:23	39:25 40:22,25 48:7 49:20 53:13 54:10,25 55:6,14 56:8 56:22 57:9 61:15 64:17 65:23 66:12 69:2,10,23 71:5 72:10 74:4 75:14,20 77:16 78:17 83:8 90:9 98:6 105:20 107:8 107:22 108:18 109:9,15 110:23 111:24 115:13,15 116:6 118:25 119:1 121:15 122:2 128:25 130:5 132:6 133:25 136:8 137:22 143:23 145:4 146:17 149:3 150:15 151:21 153:21 153:25 156:5 158:24 164:2,2 167:15 170:9 171:23 172:2,5 174:19,21 179:5 180:16 180:20 181:23 182:13 183:23 183:24 184:25 185:15 187:24 188:3,8 190:25 192:19,20,23 193:20,23 194:4,17 197:13 199:23 200:16 205:5 206:12 207:4 209:7,10,23,24 210:8,16,23,24 211:12,12 215:9 216:22 222:3 223:16 223:22 224:3	225:2 229:25 230:15 232:13 232:25 233:14 236:10 240:12 241:18 244:19 246:13 255:15 255:17,23 256:8 259:2 262:1 263:7 269:20 270:10 274:14 277:13 280:20 288:15 288:15 289:23 290:21 291:8 292:19	257:19 259:16 270:12 278:12 286:5 290:1 292:20 295:8 weather 13:18 23:15 weave 280:12 web 106:16 webcast 6:17 webcasting 98:9 WebEx 260:6,15 260:16,19,25 261:13,13 262:13 263:4 292:3 WebExing 260:20 website 193:22 195:20 243:5 277:7 websites 50:22 96:22 97:3,22 199:24 229:11 Weehawken 23:22 26:6 week 34:15 72:2 158:6,9 159:4 159:11,20 172:16 248:18 week's 191:10 weekend 230:4 296:11 weeks 49:19 216:11 weighing 29:23 weird 27:6 40:2 welcome 5:5 6:2 6:15 11:21 80:18 115:3 153:15 225:8 257:7 296:12 well-regulated 253:11 went 33:11 44:16 64:18 87:16 168:9 179:13 195:6 201:4 234:3,4 weren't 58:8
warn 106:7 warrant 145:14 warranted 7:10 92:20 Washington 1:24 228:15 271:19 296:11 297:7 298:6 wasn't 63:21 134:15 138:4 151:3 207:23 211:18 244:15 265:1 272:12 wasteful 197:15 watch 38:22 262:11 263:4 watched 213:7 watching 6:17 271:15 watered-down 261:1 waves 35:8 way 24:6 26:12 27:23,24 28:16 29:6 30:20 31:24 32:12 33:23 34:20 40:2,3 42:19 43:2 48:18,21 48:23 49:18 50:25 52:8,25 53:19 57:3,7,8 62:9 72:13 75:13 109:18 110:12 111:2 111:13,14,17 116:20 118:24 119:21 127:10 127:19 133:7 134:6 136:23 137:6 138:19 143:15 144:16 147:15 151:24 151:24 152:6 162:23 165:21	ways 10:11 15:6 58:10 74:21 77:13 87:8 95:17 107:9,22 117:23 121:11 123:22,25 127:24 131:3 132:14 143:13 151:16 176:18 178:5 187:1 244:18 250:8 283:18 288:9 we'll 36:17 40:6 40:15 42:5,6 46:9 61:22 78:22,24 80:18 140:24 188:19 205:20 245:22 261:11 265:17 we're 7:11 9:14 11:13 16:3,8 16:17 20:19,21 21:1 27:9 29:10,25 30:16 31:4 32:5,13 32:24 33:20,21 33:23 35:7,8 36:7,16 37:19	we've 43:9 54:11 57:7 69:21 73:14 74:22 79:25 86:12 90:16 91:21 93:10 96:1,25 100:19 103:14 112:21,22,24 112:24 113:2,5 114:18,19,21 119:2 130:11 130:13,14,15 138:12,24 141:6,6,8 144:8 149:17 152:15 153:3,5 159:17 162:5 167:8,16,17,18 171:20 174:17 180:21 182:14 189:19 192:11 201:7,8 208:17 208:24 211:21 211:24 213:14 218:16,19 225:10 230:23 231:16 233:8 233:10,10 240:21 242:10 243:23,25 245:14,20,21 247:4,15 248:17 257:11 257:11,13,18		

182:1 183:1 189:13 194:18 205:24 206:12 206:22 207:1,6 207:16 211:16 217:3 220:15 221:9,14,16,18 221:20,23 York 24:1 101:10 119:5 124:12 young 101:9 Yue 2:5 6:10 11:13,20 16:2 18:18 76:1 Yuster 2:24 11:1 11:3 42:18,25 44:6,23 47:9 64:5,22,24 65:3 269:5	100 1:23 67:24 70:6 95:13 99:10 191:1 194:1 232:14 233:15 236:21 237:5,7 253:16 255:13 275:25 276:16 279:18 10K 165:14 193:4 10Ks 168:9 170:12 10Q 165:14 193:4 10Qs 170:12 11 97:11 12 129:8,10 160:3 12,000 47:17 13 121:7 129:7,8 130 13:4 14 129:7,7,23 148:1 226:2 15 53:12,14 55:1 138:13 166:20 240:9 15- 154:14 15-minute 224:3 150 13:4 153 5:13 16 22:17 23:9 129:24 149:14 215:15 168th 243:20 189 22:1 19 251:1,4 1934 254:11,12 287:17 1970s 35:3 1972 265:7,25 1974 40:23 265:9 287:20 1975 83:20 91:4 246:7 265:10 1990s 84:4 1998 275:17 1999 84:11 252:24 265:18 265:19,25	<hr/> 2 <hr/> 2 35:6 129:10 214:7 2,500 245:2 267:12 268:17 269:8 20 13:2 25:4 27:13 76:4 235:20 275:24 200 107:14 116:15 2000 226:11 2000s 84:4 2001 84:17 154:12 2003 156:6 2004 114:23 2005 35:3 84:22 2006 154:17 2008 214:18 2010 155:7 168:16,24 177:6,21 252:22 254:15 266:8 2012 245:1 2014 177:7 2015 82:4 92:1 97:7 154:11,12 226:24 2016 96:20 166:10 2017 177:8 2018 1:12 78:23 297:6 208 264:21 225 5:16 10:1 232 277:16,17 277:24 24 239:5 24th 73:16 25 107:3 251:3 26 1:12 297:6 272 277:14 283 5:18	<hr/> 3,000 233:9 3:00 224:4 30 155:22 226:3 235:20 30-year 155:10 300 36:16,17 213:19 32 227:15 342 177:7 350 12:21 387 177:8 392 177:5	<hr/> 4 <hr/> 4 267:13 4,000 245:3 4:00 271:15 4:15 296:10 4:31 296:14 40 13:16 14:3 33:3 72:1 96:24 114:21 114:21 151:12 195:6 277:17 400 24:19 51:12 158:10 176:25 177:10,11 178:3 189:23 190:8 401(k) 162:7,10 197:17 41 287:21 43 121:4 264:22 287:20 480 168:16	<hr/> 6 <hr/> 6 5:5 267:13 6,000 245:3 605 32:8 608 239:14 608(b)(3)(1) 239:13
<hr/> Z <hr/> Z 151:20 zero 199:6				<hr/> 7 <hr/> 7 267:13 7,000 245:4 7,500 245:4 267:13 268:18 269:8 74 265:25 75 185:4 265:25	
<hr/> 0 <hr/> <hr/> 1 <hr/> 1 67:25 70:4 81:10 198:8 212:18 264:21 268:17 1,000 67:25 1,110 233:9 1,500 294:13 1:15 153:9 10 25:4 27:13 35:7 51:7,8 65:21 67:24 70:5,6 76:4 90:9 96:5 138:13 155:19 180:23,24 185:13,14 233:25 245:2 248:24 268:18 10-plus 116:9 10/26/2018 298:6,14 10:30 75:20			<hr/> 8 <hr/> 8 129:9 168:23 80 5:10 18:22 80s 230:12 83 277:1,3 85 43:14 89 219:3 248:25		
				<hr/> 9 <hr/> 9 5:7 107:2 275:10 9:00 1:13 9:30 296:10 90 180:23,24 248:24 90s 230:12 95 50:11 249:3 98 277:8 99 40:14 99.9 22:18	
		<hr/> 3 <hr/> 3 116:16 177:6 231:22	<hr/> 5 <hr/> 5 35:6 90:9 138:13 233:25 50 13:16 22:18 72:1 191:2 193:25 198:6 209:9,20 50-50 137:11 50-plus 155:5 50,000 245:9 50/50 180:21 276:19 500 53:14		