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

<table>
<thead>
<tr>
<th>1</th>
<th>PARTICIPANTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>SEC Participants:</td>
</tr>
<tr>
<td>3</td>
<td>Jay Clayton, Commission Chair</td>
</tr>
<tr>
<td>4</td>
<td>Yue Ding</td>
</tr>
<tr>
<td>5</td>
<td>Mark Donohue</td>
</tr>
<tr>
<td>6</td>
<td>Dan Gray</td>
</tr>
<tr>
<td>7</td>
<td>Hans Heidle</td>
</tr>
<tr>
<td>8</td>
<td>Robert Jackson, Jr.</td>
</tr>
<tr>
<td>9</td>
<td>Hester Peirce</td>
</tr>
<tr>
<td>10</td>
<td>Brett Redfearn</td>
</tr>
<tr>
<td>11</td>
<td>John Roeser</td>
</tr>
<tr>
<td>12</td>
<td>Elad Roisman</td>
</tr>
<tr>
<td>13</td>
<td>David Shillman</td>
</tr>
<tr>
<td>14</td>
<td>Kara Stein</td>
</tr>
<tr>
<td>15</td>
<td>Panel Four:</td>
</tr>
<tr>
<td>16</td>
<td>Robert Bartlett</td>
</tr>
<tr>
<td>17</td>
<td>Michael Blaugrund</td>
</tr>
<tr>
<td>18</td>
<td>Isaac Chang</td>
</tr>
<tr>
<td>19</td>
<td>Adam Nunes</td>
</tr>
<tr>
<td>20</td>
<td>Paul O'Donnell</td>
</tr>
<tr>
<td>21</td>
<td>Dominick Paniscotti</td>
</tr>
<tr>
<td>22</td>
<td>Jarrod Yuster</td>
</tr>
</tbody>
</table>

### Page 3

<table>
<thead>
<tr>
<th>1</th>
<th>PARTICIPANTS(CONT.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Panel Five:</td>
</tr>
<tr>
<td>3</td>
<td>Kevin Cronin</td>
</tr>
<tr>
<td>4</td>
<td>Hubert de Jesus</td>
</tr>
<tr>
<td>5</td>
<td>Bryan Harkins</td>
</tr>
<tr>
<td>6</td>
<td>Emily Kasparov</td>
</tr>
<tr>
<td>7</td>
<td>Richard Ketchum</td>
</tr>
<tr>
<td>8</td>
<td>Michael Masone</td>
</tr>
<tr>
<td>9</td>
<td>John Ramsay</td>
</tr>
<tr>
<td>10</td>
<td>Panel Six:</td>
</tr>
<tr>
<td>11</td>
<td>Greg Babyak</td>
</tr>
<tr>
<td>12</td>
<td>Adrian Facini</td>
</tr>
<tr>
<td>13</td>
<td>Bradley Jonas</td>
</tr>
<tr>
<td>14</td>
<td>Marcy Pike</td>
</tr>
<tr>
<td>15</td>
<td>Brian Schell</td>
</tr>
<tr>
<td>16</td>
<td>Larry Tabb</td>
</tr>
<tr>
<td>17</td>
<td>John Yetter</td>
</tr>
</tbody>
</table>

### Page 4

<table>
<thead>
<tr>
<th>1</th>
<th>PARTICIPANTS(CONT.):</th>
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<tbody>
<tr>
<td>2</td>
<td>Panel Seven:</td>
</tr>
<tr>
<td>3</td>
<td>Kevin Carrai</td>
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<tr>
<td>4</td>
<td>Bill Conti</td>
</tr>
<tr>
<td>5</td>
<td>Jeff Davis</td>
</tr>
<tr>
<td>6</td>
<td>Tyler Gellasch</td>
</tr>
<tr>
<td>7</td>
<td>Melissa Hinmon</td>
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<tr>
<td>8</td>
<td>Anthony Masso</td>
</tr>
<tr>
<td>9</td>
<td>Rich Steiner</td>
</tr>
</tbody>
</table>

### Page 5

<table>
<thead>
<tr>
<th>1</th>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>PAGE</td>
</tr>
<tr>
<td>3</td>
<td>Welcome and Opening Remarks 6</td>
</tr>
<tr>
<td>4</td>
<td>Panel Four: Elements of the Core Data Infrastructure 9</td>
</tr>
<tr>
<td>5</td>
<td>Panel Five: Governance of Core Data Infrastructure 80</td>
</tr>
<tr>
<td>6</td>
<td>Panel Six: Funding of Core Data Infrastructure 153</td>
</tr>
<tr>
<td>7</td>
<td>Panel Seven: Public Transparency 225</td>
</tr>
<tr>
<td>8</td>
<td>Closing Remarks 283</td>
</tr>
</tbody>
</table>
Mr. Redfearn: So good morning, and welcome back to the Securities and Exchange Commission staff’s Roundtable on Market Data and Market Access. I’m Brett Redfearn, Director of the Division of Trading and Markets, and I’ll be moderating the first panel today.

I also want to introduce my colleagues and panel moderators here with me, alongside me. So Dave Shillman and John Rooser, both Associate Directors in the Office of Market Supervision within TM; Dan Gray and Yue Ding, both Senior Special Counsels, also in the Office of Market Supervision; Mark Donohue, Senior Policy Advisor in the Office of Analytics and Research; and Hans Heidle from the Division of Economic and Risk Analysis.

I would also like to welcome back the various Commissioners, who, if they’re not here and present, they are very likely watching by webcast and multi-tasking, or will certainly be catching up on all of this later.

So, before I start, I want to provide our standard disclaimer that the views that the staff and I express today are our own, and do not necessarily reflect the views of the Commission, the chairman, the Commissioners, or other members of the staff.

So, for those of you who are here, and those who participated as panelists yesterday, as well all of you here today, thank you very much for your engagement in this important discussion on U.S. equity markets. Yesterday we covered a lot of ground and many issues were raised, and we received a significant number of very constructive suggestions as to how we can potentially improve the core market data infrastructure in U.S. equity markets.

Today we intend to pick up on the issues and challenges raised, and explore potential policy solutions that might be warranted. Along those lines, our theme for today is TGIF, not just because we’re thankful it’s Friday, but because TGIF is the acronym we are using to categorize four substantive policy areas that we will be covering today.

T will be for transparency. Yesterday several panelists suggested that transparency is necessary for evaluating market data and market access fees as we continue to meet our statutory mandate of ensuring that these are fair, reasonable, and not unreasonably discriminatory. Today we would like to discuss where there could be additional public disclosure to help evaluate such fees.

G is for governance. Questions around SIP governance came up during yesterday’s discussion, including the voting structure of the NMS plans that run our core infrastructure today, which are the SIPs. Today we will discuss potential steps to improve the governance of core data infrastructure, which may include addressing conflicts of interest, confidentiality policies, use of executive sessions, and voting structure.

And, as a reminder, for today’s discussion, when we use the term "core data infrastructure," it’s intended to refer to the market data products and access services that market participants need to trade effectively in today’s market structure, which may go beyond the products and services currently offered by the SIPs.

I is for infrastructure. Yesterday several panelists provided their views on the content and latency differentials between SIP data and exchanged proprietary data. Today we will further explore what should constitute core data infrastructure and the potential steps to modernize core data infrastructure. And that will be our first panel in just a moment.

F is for funding. Several panelists provided views yesterday on how we should evaluate whether the price for market data and market access is fair, reasonable, and not unreasonably discriminatory. Today we would like to discuss potential steps to assure that a modernized core data infrastructure is appropriately funded, and that the associated fees satisfy the applicable regulatory standards. And that assessment may include a discussion about associated competitive forces, or the lack thereof.

So, with that, let’s kick off the first panel of the day. Panel four, again, will focus on potential steps to modernize the infrastructure for providing the market data products and market access services that market participants need to trade effectively in today’s market structure, which includes how we think about core data and core access.

So, I’m going to ask our panelists to briefly introduce themselves, their name, their organization, role. We’re not going to do long introductory remarks today, so keep it very short. And then we will move on to some of our specific questions and discussions.

So, Professor Bartlett, why don’t we start with you?  

Mr. Bartlett: Yes, I’m Professor Robert Bartlett at UC Berkeley. My research interests include capital markets and market microstructure.

Mr. Blaugrund: Good morning. Michael Blaugrund, head of transactions at NYSE.

Mr. Chang: Hi. Isaac Chang, managing director and co-head of trading at AQR Capital Management. AQR is
a systematic asset management firm. Manage roughly 225 billion in AUM, roughly half of which is traditional long only, and half which could be considered alternatives.

MR. NUNES: Adam Nunes, head of business development at Hudson River Trading, which is a market-making and proprietary trading firm.

MR. O’DONNELL: Paul O’Donnell, managing director in Morgan Stanley’s electronic trading group. As you probably know, Morgan Stanley is a large financial institution, and we service Main Street in a variety of ways. In my particular area, it’s through providing equity executions to both institutional and retail investors through our retail affiliate arm.

One note for my colleagues on the SIP operating committee: angry Paul stayed home; this is happy Paul today.

(Laughter.)

MR. PANISCOTTI: Dom Paniscotti, VP enterprise architecture at NASDAQ. Prior to that I ran -- I was head of infrastructure for a large market-maker, electronic market-maker. And so, hopefully, I bring a bit of perspective to the panel, as I’m probably one of the only panelists who’s actually gone to all of these data centers and pulled the fiber that Doug showed you yesterday on the dias.

MR. YUSTER: There we go. Thank you, Brett. It’s a pleasure to be here today.

My name is Jarrod Yuster. I’m the CEO and founder of PICO. We provide infrastructure hosting, exchanging network connectivity, and data services to our clients. Our clients include global banks, broker-dealers, systematic trading firms, exchanges, as well as other financial technology vendors. Our clients are -- include a wide variety of profiles for consuming data.

So it’s a pleasure to be here. Thank you.

MR. REDFEARN: Okay, thank you all very much, and thanks again for being here.

So today we’re going to have Yue Ding, who is a senior special counsel in the office of market supervision, provide a framework for the panel discussion, and just sort of outline some of the, you know, sort of content and latency differentials that we will be contemplating when we think about SIP data and exchanged proprietary data.

So, Yue, over to you.

MS. DING: Thank you, Brett. And welcome to our panelists. So this panel will be focused on core data infrastructure. And as Brett just mentioned, for purposes of this discussion, core data infrastructure would encompass the market data products and market access services that market participants feel that they need in order to effectively participate in today’s marketplace.

As we heard from yesterday’s panels, there is currently an array of latency and content differentials between SIP data and exchanged proprietary data. As discussed during yesterday’s session, one aspect of latency differential is the time it takes for each participant exchange to transmit data to the SIPs and for receiving data from the SIPs. And that’s because the SIP is physically located in just one place, while the various exchanges are located among several different data centers.

And as an example, for a data recipient located in Carteret, the information about quotes and trades on NASDAQ for NYSE-listed securities would have to travel from NASDAQ’s data center in Carteret to the tape A processor at Mahwah, and then back to the recipient in Carteret. And it was mentioned yesterday the Carteret-Mahwah geographic hop currently takes approximately 350 micro-seconds by fiber optic cable, which is used for SIP data transmission.

The processing of consolidated information and the calculation of the NBBO by the SIPs also takes time, although technology upgrades in recent years have significantly reduced SIP processing time. The average processing time is under 20 microseconds for tape C securities, which is the NASDAQ list of securities, and about 130 to 150 microseconds for NYSE and other exchange-listed securities. And so those are the tape A and tape B securities.

As the panelists discussed yesterday, another aspect of the latency differential between SIP data and exchanged proprietary data is associated with the various connectivity options. Exchanges currently offer various types of high-speed connectivity options that are used in the proprietary data space, but not used in the SIP space.

For example, exchanges offer fiber and wireless connectivity between data centers. And as we heard yesterday, wireless connections can be 40 to 50 percent faster than fiber connections, although fiber may be more reliable overall, and less susceptible to weather conditions.

As noted yesterday, data is transmitted to the SIPs through fiber. And even though fiber connectivity may be a more reliable option than wireless connectivity, a combination of fiber and wireless connectivity could be a faster alternative for transmitting SIP data.

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

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

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

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

As the panelists discussed yesterday, some of
this information could be necessary or very important to
market participants. As an example, there are many
occasions during which odd lots at the best bidder offer
on a direct feed and they represent a better best bidder
offer than the SIP NBBO, and this could be more often in
high-priced securities, where there is more frequently an
inside odd lot market that's not visible in the SIP data.

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

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

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

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

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

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

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

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

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

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

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

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

That was a nod to you, Paul.

(Laughter.)

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

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

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

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

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

The range of possible architectural changes to
consider -- we will talk about many today -- but at least
preliminarily, we think that multiple instances of the
existing processors may be the best alternative for a few
reasons.

First, as I said before, recipients would not
be required to make any changes to their existing
technology or procedures, unless they chose to do so.
Firms without sub-millisecond latency concerns could
simply continue to consume tape A and B data from SIAC in
Mahwah, and tape C data from NASDAQ in Carteret, while
those with geographic latency concerns could shift their
consumption to the nearest possible instance of each SIP.
For those that chose to migrate, it presumably would be
a very lightweight technology shift, in many cases
probably not requiring code changes at all.

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

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

And fourth, Reg NMS current requires that SIP
plans "shall provide for the dissemination of all
consolidated information for an individual NMS stock
through a single plan processor." Arguably, because SIAC
and NASDAQ UTP would still be the sole processors, albeit
with multiple installations, this change could be
implemented without a change to Reg NMS.

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

MR. RODEFEAR: Thank you, Michael.

Paul?

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

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

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

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

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

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

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

Secondly, you need a fast consolidation engine
proximate to where your trading system is -- next door,
in the same machine, you know, $189 cable length away, something like that.

And thirdly, you need a fast network between the exchange and the consolidator. And also, Michael had a good idea yesterday that -- he recommended that exchanges provide their direct feed over wireless into the SIP consolidators. That's a good idea, too.

MR. BLAUGRUND: Paul is pointing that out largely because it was his idea.

(Laughter.)

MR. O'DONNELL: Thank you. And CMDA, from a technical aspect, really incorporates all of those things. But those things aren't particularly different from a technical aspect than what Michael has already suggested.

I think that if we took, you know, a SIP with the characteristics of the UTP SIP, 16 microseconds is their median, 99.9 percentile is something like 50 microseconds. All of that is well inside the geographic latency. That is pretty compelling. I don't know exactly how it stacks up against all of the commercial offerings, but it's certainly in the right ballpark.

If you took a SIP like that and fed it with wireless feeds -- and there are a couple of different offers of wireless feeds -- and put that in Secaucus, that's pretty compelling. We could use that for a lot of our business. Maybe not all of it. Maybe Adam couldn't.

But certainly it starts to become a real choice at that point, and we'd be thinking hard about where we use that, versus where we don't.

The problem is now you've enshrined in the plan the current state of technology and the current state of which data centers happen to be competitive. So in a couple of years' time, maybe 16 microseconds isn't a benchmark any more. Maybe someone comes out with a fast chip, or maybe one of the microbe vendors moves their tower across the street, and now it's two micro-seconds faster between my wire and Carteret. Or maybe someone comes up with a better laser system, and it's a little bit more reliable in bad weather. I don't think either the Commission or the plan wants to be in the business of having to decide which is incrementally the next phase of technology that we need to decide. That's not a good use of any of those people's time.

A more dramatic example would be let's say a new exchange pops up and decides to open a new data center. Maybe they go back to Weehawken, or maybe -- another example, Michael runs an exchange which trades a certain number of ETFs in Chicago. Michael, it'd be great if you would ship those quotes over wireless from Chicago to New York. But it's not entirely clear to me that that's the right answer. Maybe it is, and maybe there's a case for that, and maybe it's not. But it's difficult to sit in this seat and make that decision.

So you really need a market to help make these decisions for you. So CMDAs are way off, trying to create a market solution for that. Having said that, recognize that in Reg NMS this was contemplated and rejected for a good reason, which is that if we have a market that -- such that exchanges sell their data at whatever price, and then consolidators pick it up, consolidate, and sell it, you basically end up where you are today, which is that there is not a lot of price control around the exchanges data, because everybody needs to buy it. So CMDA is a more incremental approach.

So let's start with a couple of assumptions.

Let's assume for now that the market data pool from the SIP is -- I don't know how much it is, because apparently we can't handle the truth. But let's say it's $400 million. And then some piece of that gets sliced off to pay the admin fees, to pay the processors, et cetera, et cetera. And that's a pool that actually runs the thing.

And then the rest of it gets allocated to the exchanges based on their data.

So let's assume for now that that's the right number. And I'm sure that the funding committee will come up with an answer as to whether it is or not. CMDA basically takes a slight variation of it. Let's carve a piece of that off -- 10 percent, 20 percent, maybe it's a hard number, maybe it's a number that comes up via some bidding process -- and let's call that pool sort of the operation and subscriber pool. The rest is a data pool that goes to exchanges, just as it does today.

The difference is, rather than taking that operations pool and giving it to processors who are appointed in perpetuity, let's have a series of competing consolidators. Each of them has to jump through a number of hurdles. They have to be Reg SUI-compliant, they have to make various standards. One of the jobs of the governing body -- this is the standards of how odd lot should be aggregated, this is the data that should be on the SIP, et cetera, et cetera. So everyone's at least looking at the same SIP data.

Once you've met that hurdle and you get a gold star from Brett that says you're now an authorized SIP provider, you can then run your SIP, and you get the data from the exchanges, so the exchanges would provide their data via direct feed to these things, just like they provide it to the plan today.

Then those SIP guys go out and start selling.
And they get -- for every subscriber they sign up, they get a piece of that operations pie. We call it the subscriber pool.

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

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

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

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

MR. NUNES: I kind of feel like I should just hand that name over to Paul, because I think my thinking is only incrementally different than his. And frankly, my notes are only incrementally different than his, which is a little weird. But I'm going to say them, anyway. So from my perspective, before we start discussing the various ideas for this, we need to define what goals we're trying to achieve. And to me, it comes down to do we want the SIP that is as fast as direct feeds, do we want an infrastructure that is flexible enough to evolve as technology evolves over the coming, you know, 10, 20 years, or are we happy with a SIP that is better, but just less worse than direct feeds, which I think kind of the distributed SIP would be. It would be better than it is now, but kind of structurally worse than a direct feed would be.

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

So the notion that I have would be the way to make the SIP data available would be similar to the way direct feeds are made available, where you call an exchange, order it, and they say, you know, here is where you -- you know, here's your port and IP to receive that data, but the SIP data could be delivered in the same framework. Instead of calling an exchange, you would call the administrator, and they would coordinate your access to the data. That would open up the data to whatever, you know, innovation and consolidation that, you know, that market participants and vendors want to do.

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

So I think that's a -- you know, an important point, but kind of relatively minor, compared to do we just want a SIP that is as fast as the direct feeds. And, you know, I felt, listening yesterday, there seemed to be a notion that we can't have that. And I think that's, you know, categorically false.

So the framework exists, we know what we need to do. You know, my, I guess, argument against the requirement to have the, like, SEI, you know, stamp of approval is that would remain, we would keep forcing the SIP data through a consolidator that they would then hand off to firms that then have to consolidate it themselves.

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

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

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

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

So maybe we will start with Professor Bartlett.

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

So, as I sort of see things and hear these proposals, I mean, I am reminded that in some sense we're
sort of here because of a policy decision, you know, with
Regulation NMS, not to have a consolidated limit order
book. If we had gone that road, we wouldn't be here
talking about this.

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

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

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

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

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

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

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

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

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

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

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

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

MR. REDFEARN: Great, thank you.

Isaac?

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

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

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

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

And I think one of the questions -- maybe a
variant on the question that Paul asked and Adam sort of
rephrased, which is what are we trying to solve, might be
who owns market data, right? And if you went down this
panel, I'm guessing that the representatives from the
exchanges say they own the market data. And if I were to
go to a broker, they'd say they own the market data. And

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to them, whether strictly speaking in regulation, or --
but -- or just in principle.
just let sort of market principles rule, free-market 
principles rule, and why bother with rules around the 
whole thing to begin with?
One thing I would underline is -- that 
Professor Bartlett brought up, that I think we have to 
keep in mind that -- and, you know, he wrote a very good 
paper on -- it was interestingly titled -- I think it was 
"Are Markets Rigged?" But -- and he -- his conclusion, 
actually, was not very much. But I think it illustrates 
the underlying point, that there is a fundamental concern 
and issue with investor confidence that we need to 
address. And at the end of the day, to me, that's what's 
really important here.

We can get -- I very much agree with -- you 
know, it was just early this week that, you know, I spent 
over an hour with one of our underlying fund 
distributors, talking to them about the implications of 
the U.S. equity market structure currently, and, you 
know, the different nuances which we go through to make 
sure that we can participate in an effective way. But 
it's a question that's really on people's minds, and it's 
much more than just an argument between brokers and 
exchanges, which some have sort of framed this argument 
as.
I very much agree with Paul, that whatever
underlying regulatory framework we get should not be 
tailored around the current state of technology. 
Because, just like when 2005 or 1970s or whenever various 
rules were written you couldn't have envisioned the state 
of technology today, you -- I would argue you probably 
can't envision what it will be in 2 years or 5 years or 
10 years, either, you know. We're talking about bouncing 
radio waves off the ionosphere, or maybe we're talking 
about Amazon putting an exchange in the cloud, in which 
case you actually don't know what your geographic 
latencies are.
I mean there's all sorts of different potential 
worlds that we have to plan for, and I would want to make 
-- and that's why, to me, the idea of having a market be 
able to decide this, rather than being prescriptive from a 
regulatory perspective, sounds very appealing.

Maybe with that I'll give someone else a 
chance. Thanks.

MR. REDFEARN: Thank you very much.
Dominick?

MR. PANISCOTTI: Yeah, thank you. And to 
Paul's point earlier, I think, as an engineer, the first 
thing they teach us in engineering school is to figure 
out the problem before you start looking for a solution.
And so I submit that the problem is actually

the creation of an NBBO. We keep throwing around this 
concept of there are multiple NBBOs, and I don't 
understand that, as a technologist. You know, I kind of 
think of national as one nation under God, so we have one 
actual BBO for the entire nation that is the same for the 
entire nation.
So really, much of what we're talking about 
here are solutions to a problem that has nothing to do 
with NBBOs, but rather has to do with regional BBOs, BBOs 
that exist, let's say, at some latitude, longitude, and 
alitude at a particular place on the sphere.
And so, really, distributed SIPs or multi-
consolidator SIPs, in terms of the solution space rather 
than the problem space, they don't create an NBBO. In 
fact, they kick the can down the line, right? So today 
we're talking about 300 microseconds of geographic 
latency; tomorrow we'll talk about 300 nanoseconds of 
geographic latency, right, if we just move them into the 
same data center. You know, a nanosecond is about this 
long, right? So if a computer is on the other side of 
this room, there are material latency deltas between 
where the consolidation occurs.
And to that end, kind of geographic lacies 
are a bit of a red herring in terms of that environment, 
right? So if you have all of these different regional
BBOs, people are already creating them, as you noted, and 
are already trading effectively, given those regional 
BBOs that they have created. Now, certainly, there are 
regulatory concerns that have to be addressed in that 
framework. But you see that it's already occurring in 
our industry.
So if we really care, I think, about Main 
Street and a national best bid and offer, really, I think 
what we ought to think about is taking the SIPs out of 
Wall Street data centers. Why don't we move it to where 
the people actually are? That is, in the cloud, 
somewhere in the cloud, where I can access the BBO, the 
national BBO, or last sale, via my laptop or my 
smartphone in a highly effective manner through a set of 
software APIs, and things of that nature.
And, in fact -- I think it was just noted -- I 
don't think we are too far away from exchanges moving 
thesemselves into the cloud, as well. And so some of the 
things we're talking about today are actually going to be 
amplified, over time.

MR. REDFEARN: Was the cloud suggestion -- when 
you're talking about iPhones, were you thinking about 
eyeballs or trading systems?

MR. PANISCOTTI: I think, ultimately, in the 
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. REDFERN: And just the 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 a different geography. And you
3 do the same kind of thing, possibly, in the cloud, using
4 technology.
5 MR. REDFERN: 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 where 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. REDFERN: So it's interesting, you know, the
18 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
of trust he's going to do his best and be a reasonable human being, because that's always how he's acted when I've talked with him. But he might not always be in that seat. And why allow for a conflict to exist, and perpetuate, and instead solve the problem of, oh, we'll reduce the conflict -- we'll reduce the scope of the conflict, rather than just removing the inherent conflict in the regulation?

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

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

MR. YUSTER: Terrific, thank you.

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

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

MR. YUSTER: I'm not proposing it. I'm just saying if you want to reduce the latencies, that is one way to do it.

So -- but as a technology provider, my views are based on our clients. And so I did some initial preliminary discussions with our clients to get feedback. And in discussing these three proposals, first and foremost there has been critical negative feedback of keeping a single SIP provider. So the distribution of a single SIP provider we've not seen positive feedback, initially, on that. Our clients do want to see more exploration of the competitive SIP, or the European model and removing it entirely.

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

You know, the other thing I think is important to note is, looking at the SIP and making enhancements, you really need to look at Reg NMS, which, to a certain degree, is keeping the SIP afloat, right? So you can't really look at the SIP in isolation of the technology, and the regulations are really why people still have to use it for routing.

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

MR. REDFEARN: Thank you.

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

MR. REDFEARN: Interesting. There is -- that's helpful. And there are some aspects within Reg NMS, and this discussion has been had where we had -- you know, there was a discussion back then that was should we have competing SIPS or should we have a central consolidator.

And, as I mentioned in my opening remarks yesterday, a decision was made to have a -- you know, a consolidated tape, or -- you know, a consolidated SIP.

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

MR. YUSTER: If I could just make one more comment with regards to the European model, the initial feedback that I have received is -- there really are two camps. One camp is concern that if you remove the SIP then the exchanges have more carte blanche to raise prices. And the other camp feels that if you move the SIP, regulators will come in and regulate pricing more so and make it more palatable.

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

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

First, I think that, you know, the idea that there is no NBBO, or there are multiple NBBOs, I think everyone acknowledges that this is a simplifying assumption, right, that, based on where you are, you are going to receive information at slightly different times.

I would agree that, you know, it's simplifying, but valuable. And I think, particularly for retail, it's important to persist a consolidation. So I think the European model would certainly be a step in the wrong direction.

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

MR. REDFEARN: I'm guessing you would pick Mahwah?
MR. BLAUGRUND: Mahwah would be my recommendation.

MR. O'DONNELL: That and a couple of others.

MR. BLAUGRUND: But, you know, I think, you know, Paul, Adam, and Isaac, you know, raise a interesting idea. It certainly would be appealing -- and I can understand why it's appealing -- to think, well, we don't have to pick one specific implementation, like, we'll just figure it out because market forces will lead to better outcomes.

I worry that, you know, the market may optimize for simply speed, right, and forego resiliency. Or it may -- you know, it may optimize in some other fashion.

We can't predict. That may be acceptable, but I think that one of the benefits of the current processors is that they are extraordinarily reliable, they are extraordinarily resilient. And I would just caution that we ought not cast that away.

Again, I don't know that our recommendation is the best long-term solution. But it seems to me like it's the most achievable approach. You know, a lot of people seem interested in competing consolidators, in part, because I think there's an implication there that means they'll get to spend a lot less money. And I don't know that that's really accurate, right?

I think there is -- you know, as Paul was describing, you might have a pool that's apportioned to processors based on their subscribership. But I think they are independent questions, you know. The cost to produce the data is not the cost of the consolidator. So I think maybe people, when they realize that, they may find the competing consolidator model to be a little less attractive.

MR. YUSTER: Can I just make one comment on the -- with regards to what Michael said, that retail needs the SIP?

A few years ago NASDAQ came up with an offering, NASDAQ Basic as an equivalent. Wildly successful, where hundreds of thousands of users are using -- it's just the inside quote for their market, but clients -- and retail clients, particularly -- do not want to pay $12,000 a month for the SIP.

MR. REDFEARN: Paul, I know you wanted to respond to the resiliency issue.

MR. O'DONNELL: That and a couple of others.

Firstly, the NBBO. You know, to Dominick's point, NBBO is, I think, a defined term in Reg NMS, and that means a certain thing, which is great if you're a lawyer. But the reality is, as Michael pointed out, depending on where you are, the laws of physics -- you're going to perceive reality slightly differently. So if you're in Secaucus, your reality is a little bit different than if you're in Mahwah. We just -- we need to acknowledge that.

I think it's up to each firm. And under any of these models -- and even in reality today, it's up to us as -- we're required to have procedures and policies that -- by which we justify this is how I'm collecting market data and how I'm determining what my view of the market is. And that has to be a reasonable set of policies, and that's not going to go away. And maybe we need to redefine the word NBBO and call it just BBO. I don't know. But I think getting too high up on the national BBO as being this golden thing is probably not helpful.

Secondly, on resiliency, so I think it's a couple of points there. One is having different versions of this thing running on different tech stacks, it's probably the best way to get resiliency. So it's important to make sure that there are standards set, and that everybody calculates their version of the BBO the same way, and uses the same rules for odd lot aggregations so that you know for any given exchange that all those stocks do odd lot aggregation the same way, for example, that you know how many shares are available at the inside, all -- it's a myriad of details of how you do this -- which may be a plan or maybe something else -- is to set those rules. Once you set those rules, I'd much rather have two completely different tech stacks implementing it, in case someone has a bug and one of them goes down. So I think resiliency is probably enhanced by this model.

And I also challenge the notion -- carefully challenge the notion -- that SIP is as reliable as pointed out. It hasn't had a hard outage in a while, but it's not as -- if you're one of those enterprising advisory committee members who actually measure timestamps, it's also not as robust as might be led -- as everyone might be led to be believed (sic).

MR. NUNES: So I'll echo some of that. I think, you know, years ago I was randomly in D.C., and it seemed like the way most people here defined the SIP was the thing that broke a couple weeks ago that should never break. And I think we're now in a position where we have all of our eggs in one basket, so it better be resilient.

And, you know, with a more open and competitive model we wouldn't have that problem. So we -- you know, that would solve one of the big issues we currently have.

I think, you know, similar to Paul's point, we need to do this stuff.

So part of the job of the governing body for this -- which may be a plan or maybe something else -- is to set those rules. Once you set those rules, I'd much rather have two completely different tech stacks implementing it, in case someone has a bug and one of them goes down. So I think resiliency is probably enhanced by this model.

I think there is -- you know, as Paul was describing, you might have a pool that's apportioned to processors based on their subscribership. But I think they are independent questions, you know. The cost to produce the data is not the cost of the consolidator. So I think maybe people, when they realize that, they may find the competing consolidator model to be a little less attractive.
do have flexibility around what the NBBO is. It's kind
of built into NMS on routing. But there is an acceptance
that it's the firm's view of what the inside is. And, as
Paul said, you have procedures around how you do that.
You know, at my firm we have more than one view, based on
what data center we'd be trading from.

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

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

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

MR. NUNES: Thank you.

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

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

MR. O'DONNELL: Can I --

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

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

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

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

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

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

MR. REDFEARN: Dominick?

MR. PANISCOTTI: I just want to make a point.

The NBBO is quite a simplifying proposition at some
level, right? It goes to one location, it's distributed
from there. Everybody sees the exact same thing.

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

So every additional consolidator adds
additional complexity. All of those consolidators are
basically stochastic in some way. So there is randomness
in what they do because that's how computers work, right?

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

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

So I think if you come back to the point of a
national best bid and offer, it's extremely simplifying.
It's produced in one location, regardless of the
technology that uses it. And, by the way, national last
sale, as well. It's produced in one physical location,
it's one actual item, you know what the price of a given
security is at a given point in time. And that is the
information.

Now, high-speed traders, high-speed algorithmic
traders who need more rich information to do what they
need to do for competitive reasons, they have access to
that information today. They can consolidate locally, if
the regulations allow them to do so. And they can run
their businesses as effectively as they need to.

MR. REDFEARN: I think we have to go back to, I
think, the sort of dichotomy that was presented at the
beginning of this, which is, you know, is the SIP just
for eyeballs or is the SIP for trading systems. And to
the extent that the SIP is for trading systems, then
we're asking this basic question about does it meet the
needs of the core data infrastructure. And I think we've
heard fairly clearly that it doesn't, that whether there
is -- because of the latency differential and because of
the content differentials, that something needs to give
here.

And so, you know, so I'm not sure if -- is that
a suggestion, that you keep the SIP in one place, exactly
like it is today, and then --

MR. PANISCOTTI: I think the only point --
sorry to interrupt, but the only point I'm trying to make
is that the solutions that have been proposed only
complicate the problem.

So again, we should return to what is the
problem, so that we can actually generate an appropriate
solution. What we're trying to do right now is optimize
existing solutions that were built to problems from 15
years ago. So we should walk away from, oh, you know,
let's just build another SIP because we have a data
center in Secaucus or Carteret or Mahwah, actually
rethink what we need to do as an industry, and do that.

I think, you know, the path we're currently on
is just how do I optimize the existing system. And
really, that optimization problem, at least in the
proposals that have been put forth, create further
complexity.

MR. REDFEARN: Isaac?

MR. CHANG: I actually really like the question
that Dominick raised, which is we need to ask what
problem -- essentially, what problem we're trying to
solve for. And I would actually posit that someone from
our perspective as an institutional investor, as a client
of firms like Morgan Stanley and Paul and a participant
in the marketplace, whether it's SIP or not -- and let's
hold that aside, but maybe let's just talk about core
data more broadly -- and I don't know that -- I'm not a
lawyer, and I'll admit I started out in the market as a
simple bond trader, so much of what I've learned about
equities has actually come from a number of the folks
sitting on the dais with me over time.

But for me to be able to look my investors in
the eye and say I did a good job for them, I need more
than the SIP. I need more than just top-of-book at a
given point in time, at a given location. And I think
Professor Bartlett brought it out to begin with, you
know. For whatever historical reasons, that's just not
the world we live in today, and the one we live in is
pretty complicated.

Now, if we're saying that core data shouldn't
satisfy that, then we can have a SIP that is simpler,
that does something else. But I think that's a
fundamental underlying question that we need to answer.
And, you know, our -- certainly our preference and our
argument should be that core data should be as broadly
applicable as possible.

MR. REDFEARN: I mean the -- I guess a question
is -- and tell me if you heard this, but it seems like
it has been suggested that a majority of the volume in
the market has said that they feel it is necessary to buy
proprietary data with better connectivity, right? And
whether that's X number of firms or X number not, it --
did -- is that -- did we hear that?

Because if that's what we're hearing, and if
this is not serving -- because then you get to another
challenge which is then you have to buy this. And then,
if you have to buy that, then that raises another whole
set of questions that we have to explore, in terms of,
okay, people -- it's mandatory to buy all of these things
to participate in the marketplace in a core way, then
that uncovers another set of issues that are equally
challenging.

MR. BLAUGRUND: I don't know that I would
typify what we've heard that way, but nor would I
describe it the way Dom has, either.

I think what we're hearing is that -- at least
what I choose to hear -- is that we would like to see the
SIP improve such that it becomes a more viable substitute
for a broader set of industry requirements. You know,
and change the supply side, at least, of the economics of
market data.

And you know, whether it's distributed SIP or,
you know, competing consolidators, or the rhyming
alternative --

(Laughter.)

MR. BLAUGRUND: You know, all of those, I
think, are trying to introduce --

MR. NUNES: Isaac said you were reasonable.

(Laughter.)

MR. REDFEARN: It does sound good.

MR. BLAUGRUND: All those are trying to shift
the economics, and I think that's one of the important
goals. The second is the perception. And I think it's really important for investor confidence to be confident that what you see is the right price.

MR. REDFEARN: Right.

Professor Bartlett?

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

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

But there's no requirement, you know, that says you have to price and route trades based on the SIP. So there's widespread acknowledgment, as everyone has acknowledged that you have to buy direct feeds if you want to actually give best execution and route appropriately and avoid trade-throughs. So if you look at the market in that regard, it seems like people are trying really hard to get to the best price.

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

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

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

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

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

MR. REDFEARN: So let me just state what I have heard before, Professor Bartlett, about the sort of CMDA proposal was the idea that there might not be a single NBBO, but there might be a gold standard in Secaucus, and a gold standard in Mahwah, and a gold standard in Carteret, and somewhere else, so that while Secaucus might not be the same as Mahwah, Secaucus might be -- in that particular ecosystem, you might actually be able to create what there ultimately serves as, effectively, sort of the gold standard for that market, which will inevitably -- because of, you know, the space-time continuum -- will be different than what you have in Mahwah.

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

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

MR. DONOHUE: Could I jump in for a second?

Are you suggesting that trade reporting be altered to
include the NBBO that the trader traded at?

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

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

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

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

MR. REDFEARN: It's interesting. Yesterday Simon Emrich from Norges Bank investment management said that they actually need to buy prop data now at the data center where the people are trading, so that they can do accurate post-trade analysis. So he sort of said they can't use the SIP for their post-trade analysis, because they actually want to see the quotes in the location that they're doing it. So it was just an interesting sort of evolution of that.

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

So, yesterday one of the things that was suggested in terms of sort of core -- we think of within the scope of, you know -- within the scope of the whatever model it is, right, whether it's CMDA, one speed/one feed, you know, do we need to include -- so yesterday it seemed like we had some support for, in some cases, auctions, odd lots, you know, some said depth.

That wasn't universal.

And I just wanted to ask the panelists very closely, when we think about core data infrastructure, you know, what would you list as what should be included in that? Is it auctions and balance information? Does it include odd lots? Does it include depth? What do you think should be in the scope of that?

And maybe I'll start back at your end, Jarrod.

Do you have a thought on that?

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

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

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

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

MR. YUSTER: Okay.

(Laughter.)

MR. YUSTER: So -- but anyway --

MR. REDFEARN: I think that it has been looked...
competitive. Nobody is having any problems actually figuring out what the price of a security is to trade it. And so I think maybe it's time to think slightly different about whether or not it all needs to go into one feed. Maybe it shouldn't go into one feed. Maybe certain will be deprecated -- certain items will be depreciated over time, and some others will actually come into existence over time. And if we try to get ourselves into this how do I solve this problem with one kind of, you know, socialistic, if you will, feed, then I think we're going to not serve the marketplace effectively over time.

MR. REDFEARN: Paul?

MR. O'DONNELL: A few thoughts. One, I think the odd lot one has been done to death. We all know that, for high-price stocks, there is a market inside the NBBO. We need to deal with that. I mean I like Michael's solution yesterday of just putting all the stocks -- changing lot size works, putting odd lots on the SIP works. They're all viable solutions. But it's - - seems to be agreement on that.

Secondly --

MR. REDFEARN: Although that's kind of hard to make happen, right? Getting all the stocks to split?

MR. O'DONNELL: That's probably harder to make happen than changing the lot size. I don't know --

MR. REDFEARN: I don't know if that's an --

MR. O'DONNELL: I don't --

MR. REDFEARN: I don't know if that's a policy option that we have. So I'm not sure --

MR. BLAUGRUND: I think listed companies make that selection --

MR. REDFEARN: I think they do make that decision.

MR. O'DONNELL: Lot size, as well?

MR. REDFEARN: Well, no. I mean I think -- so the decision about splitting a stock is not a policy decision, an exchange decision, or a broker decision. That's an issuer decision on making that. And there seems -- it seems to be popular to keep prices higher.

So, notwithstanding that, what is your thought on odd lots?

MR. O'DONNELL: Well, I think they should be in the SIP, as is. But, you know, a very simple first step -- and I actually don't know who has the authority to do this, whether it's the listing market -- or just have a rule that says -- I think you suggested it yesterday. If your stock is over $100 have a lot size of 10, and if it's over $1,000 have a lot size of 1. That feels like an incremental step that's not even hard to accomplish. But I don't know who gets to do that. Is it

the listing market, Michael?

MR. BLAUGRUND: I think we have a role in that.

MR. O'DONNELL: All right, there you go.

MR. BLAUGRUND: Well, you know, in collaboration and communication with the various participants and investors, but --

MR. O'DONNELL: Sorry, I lost my train of thought.

Secondly, auction imbalance information is a good one. Auctions are becoming more important in the market. We have -- there's a lot of studies around there around how much volume is shifting into the auction. Where -- the number of Mr. and Mrs. Main Street directly that are going to be trading the auction less on an imbalance is probably small, but the number of institutions who care about that information as they're trading into -- I think is high. So that -- I would consider that core data.

And then lastly, let's talk about depth. And there's a few angles of depth. You could talk about how many levels of depth. We don't really even have one level of depth now. I don't know if people realize, but the size that's available on the NBBO is not the aggregate amount available at all of the markets. It's one of the markets, and we're having a little debate before. None of us could even put our finger on the algorithm around which market it is, but it's not a particularly useful number.

And I think there's an angle of that that didn't get discussed, and it's probably a rabbit hole we don't want to go too far down. But the regulatory requirement for not having excessive market impact is shifting from exchanges to brokers. We're seeing that, and that's happening slowly over years. Very difficult to know that an order you're sending to the market is not going to have excessive impact without knowing what the depth is at the inside, let alone two or three levels deep.

So I think it's not a stretch to say that in order to fulfill a lot of brokerage functions, you actually need to know a little bit more about how deep the market is that you're trading in.

MR. NUNES: So I think Isaac framed this question most appropriately. You know, we've basically taken the action years ago that, you know, some data is a public good, and we're going to treat it specially. And I think that, as we look at that, we should think in terms of, like, which data deserves that treatment and
which data doesn't.

So, you know, I think, certainly in the current state of affairs, odd lots fits into that. As a retail investor, you want to know, you know, if you're buying 1 or 10 shares of the high-priced stock, what the price is for 10 shares, what the price is for 100 shares.

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

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

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

MR. REDFEARN: Isaac?

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

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

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

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

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

One is that I think Dominick did raise a very good point. Simply because we have an opportunity to potentially update the definition now for the first time in 40 years or 50 years or whatever it is, is -- might be worth doing, regardless if it changes next week. It certainly brings us a little bit closer.

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

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

Michael?

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

MR. REDFEARN: Thank you.

Professor Bartlett?
If I could just respond briefly to the -- some effort.  
I think, as Adam said, like -- right now we're talking about, you know, trying to improve latencies, trying to improve performance. Adding a tremendous amount of new processing and data into the SIP, you know, that would be a new type of challenge, technologically.

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

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

MR. BLAUGRUND: I think that there are different ways that you could do it. I mean I think what we've proposed is that the SIP in its new incarnation would take order-by-order feeds and would provide, you know, processing to establish the BBO.

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

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

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

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

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

I guess maybe, since this discussion has evolved, perhaps the question is, you know, what -- is there something there that we should be thinking about as sort of core technology? Or, Paul, would you argue that the competitive market would solve that, and therefore people might be able to buy different things, depending on what their needs are?

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

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

I do want to sort of allay one slight misconception that's been mentioned a couple of times in the last couple of days about wireless and reliability and cost, et cetera.

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

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

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

MR. NUNES: Yeah, I guess I would add -- you know, I'd echo what Paul said. I think that there -- you know, during the transition point where early adapters are using things that I think is where, you know, people tend to be most agitated about them. But eventually --
and pretty quickly -- the competitive market solves that problem and we get commercially-available solutions.

I think the second part that I would say is if we start including fiber and microwaves between data centers as being core to what we do, then we should just move everything into one data center. Because at that point you've effectively kind of put under government control or supervision those connections. And we could do it much more reliably by just having it be equal fiber lengths than kind of arguing which microwaves, you know, are okay, and -- kind of mixed standard so that.

MR. PANISCOTTI: I think the good news is that the technology stack is innovating at a rate that you'd expect it to innovate at. And due to a lot of the innovative companies that list on NASDAQ, you know, certainly we love pulling in all of their technology into everything we do. Every day we're basically adding new technology to the stack. And I think you'll find that true in pretty much all the firms on Wall Street who are saying that they need to have data instantaneously. And so they will bring to bear what they need.

Again, today we'll talk about -- we may talk about wireless today, and it's 2018. If somebody cracks some quantum mechanics problem, we'll be talking about latencies that are truly instantaneous, or somebody figures out how to move neutrinos through the earth, and moves some information. Like, we should stop concerning ourselves, I think, generally speaking, as an industry, with what today's technology is and what's being used, and simply allow industry to competitively make use of what's available to them to actually get the best result that they need, or the best result for them.

MR. BLAUGRUND: I don't want to ever be on a panel again without Dom.

(Laughter.)

MR. REDFEARN: I'd like to address neutrinos.

(Laughter.)

MR. O'DONNELL: I think Adam's already solved that.

MR. REDFEARN: Are there any quantum physicists who can -- no? That being said, so we have --

MR. PANISCOTTI: Well, there are certainly quantum physicists at a lot of these firms, I could tell you that.

MR. REDFEARN: I'm sure there are. Okay. We have about one minute left.

Michael?

MR. BLAUGRUND: I would just briefly add that I think there is a range of different connectivity options that are available today. We've discussed it sort of ad nauseam yesterday.

I think that the SIPs currently do produce guidance, in terms of what the direct connectivity recommendation is, in terms of how much bandwidth you should expect if you're a direct subscriber. It seems sensible to me.

MR. REDFEARN: Very good. Well, we have pretty much exhausted our time. So before we say thank you to everybody, I wanted to just quickly state to the next panel if you could try to meet over in the green room, which is right where John Ramsay is going right now --

(Laughter.)

MR. REDFEARN: And with that, let me thank you all very much. This has been very helpful. Appreciate it.

(Applause.)

(A brief recess was taken.)

MR. SHILLMAN: Well, welcome back. We'll get started with the second panel of the day. And this panel, as you know, is going to be focused on potential steps that can be taken to improve the governance of the core market data infrastructure. And it's also, you know, the second letter in the TGIF acronym.

So I think what I want to do, just as with the past panel, on this one, since there is a lot of history on NMS plan governance -- and probably best to take that methodically, separately -- why don't we just start as in the last panel, with having each of the panelists, just in a minute or less, briefly introduce themselves.

So, Kevin, why don't we start with you?

MR. CRONIN: Thanks. Thanks for inviting me here to this important proceeding here today. I'm Kevin Cronin. I'm global head of equity -- or global head of all trading for Invesco. Invesco is a global diversified asset manager with right at $1 trillion under management. I look forward to the conversation.

MR. DE JESUS: So thank you for the opportunity to come and talk about this exciting topic. My name is Hubert de Jesus, and I am global head of market structure and electronic trading for Blackrock. In my capacity I also serve as an advisor to three different NMS plans, including the ones being discussed today. So hopefully I have some experience with advisory committees and NMS plans.

MR. HARKINS: Good morning. Bryan Harkins. I co-run the markets division at Cboe Global Markets. I oversee our equities options, futures, and foreign exchange business strategy. I can say that our foreign exchange market definitely does not have a SIP. So no perspectives there.
MS. KASPAROV: Good morning. I'm Emily Kasparov. Thank you for hosting this market roundtable. I'm currently the chair of the SIP operating committees, and have been since 2015, when I was initially elected. I'm also currently associate general counsel of the Chicago Stock Exchange, which is a division now of ICE, as it was recently acquired. Thank you. It's good to be here.

MR. KETCHUM: Good morning. I'm Rick Ketchum. Start off with former FINRA CEO, I do history well. But I'm very pleased to be here. I would note that I continue to have a variety of affiliations, from the standpoint of being a board member and doing some advisory work. But my thoughts today are strictly my own.

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

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

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

Following the Securities Act amendment of 1975, which directed the Commission to facilitate a national market system, the Commission approved three NMS plans filed by the SROs to manage the processing and distribution of core market data. These NMS plans were governed by an operating committee with one representative from each SRO, and each SRO having one vote. A unanimous vote was required for plan amendments and other significant actions.

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

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

And in 2005 the Commission adopted Regulation NMS, which, among other things, amended the NMS plans to establish non-voting advisory committees with at least one representative from a retail broker, an institutional broker, an ATS vendor, and an investor. It also allowed for individual exchanges to appoint nominees so that that advisory committee has now expanded to include, you know, buy side and others.

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

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

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

Questions continue to be raised about the efficiency of the plan's unanimous approval requirements, and the appropriateness of the one-vote-per-SRO governance structure. New issues also have been identified, including whether potential conflicts of interest faced by operating committee and advisory committee members have been appropriately addressed, and whether NMS plan confidentiality policies are interfering with the ability of advisory committee members to effectively communicate with their constituencies.

That's kind of the broad history of where we've gotten to relatively recently. I think within the last year or two the Commission's equity market structure advisory committee, the MSAC, had a subcommittee which looked at some of the issues. Rick happened to be the chairman of that subcommittee.

And to kind of bring us into focusing on what are the current issues of the day, maybe, Rick, you could summarize some of the recommendations of your subcommittee.

MR. KETCHUM: Sure.  I'll try to give a brief summary of them, recognizing that these were made two years ago and there has been shifts and developments from the standpoint of the operation of many of the plans since then.

Fundamentally, the recommendations focused on two things. One was generally focusing on the governance structure in a world in which there had been substantial consolidation of SROs participating in the plans. And secondly, focusing -- recognizing the important stakeholder role of the plan advisory committees, focusing on ways to expand, formalize, and make more uniform the operations there. And that basically came down to a few recommendations.

First, to clarify the process for selecting advisory committee representatives, particularly -- not only to make it more transparent, but particularly to provide that once an advisory committee was set up, that the advisory committee should nominate its own replacement candidates as time went on.

Secondly, to expand and formalize the role of the advisory committee, giving it a clear right to a formal vote before any matter in which the operating committee votes.

And in the event that the matter is subject to a rule filing, that the -- providing that the operating committee should also summarize and explain the results of the advisory committee vote and rationale related to it.

And finally, that the advisory committee should be permitted to initiate its own recommendations to the operating committee, and the operating committee would have the obligation to formally respond to them.

Third, as you mentioned, David, a proposal to significantly narrow the use of executive sessions by NMS plans to -- specifically to only matters that present a clear conflict for advisory committee members, such as matters relating to regulatory compliance or matters subject to potential or ongoing litigation between the advisory committees and plan participants.

And also, while still acknowledging the value of working groups, recognizing the risks from a transparency standpoint of those, and ensure that there was both greater transparency and that regular updates -- and that all action of the working groups had to be formally handled by the operating committee at the end.

Fourth, that the planned limits substantially the plan provisions requiring a unanimous vote to -- both in some issues to two-thirds super-majority and some a simple majority vote for administrative or technical matters.

And, perhaps significant with respect to that, to make that meaningful, revisit the allocation of voting rights among SROs, given the consolidation and the number of exchange registrations that many of the SROs had, providing generally a rule of one vote per exchange registration -- moving from a one vote per exchange registration model to generally one vote per exchange family, but with provisions that exchanges with substantial market share would receive a second vote.

And I think that's probably a good place to stop.

I will, as I said, note that a number of the plans have responded to these recommendations informally, and I've seen a number of changes to how that's worked that I think are encouraging. Thank you.

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

So today we have, I think, a healthy tension between the plan advisory committees and the plan operating committee on governance issues. And it might be helpful to hear from Hubert, as member of the advisory committee, and then Emily as chair of the operating committee, just to talk about what issues -- what are -- if you think there's any progress recently in addressing improving governance, and what issues do you think remain to be addressed.

MR. DE JESUS:  So, as a disclaimer, while I'm representing some of the advisory committee issues, I do want to note that these views are strictly my own.
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<th>Page 90</th>
<th>Page 91</th>
<th>Page 92</th>
<th>Page 93</th>
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| I think it's really important to start by highlighting the importance of governance, overall. On the last panel we heard a lot about various solutions that we might see, in terms of technology, to solve issues around the SIP. But at the same time, these are very much point-in-time solutions addressing today's technology, addressing today's business models and conflicts of interest. Without appropriate governance, I think we're going to be here 5 or 10 years from now having this very same discussion. To start, I'd like to also acknowledge that there has been a lot of -- or some progress that's been made. In my tenure as an NMS plan advisor, the advisors and the participants have worked together to produce transparency around some of the market data revenue allocation, and we've also started to work on policies around such things such as limiting the use of executive sessions.

These are all positive steps towards transparency and being more inclusive in the governance of our NMS plans. But at the same time there is a lot of room for improvement, and there are some very concrete steps that we should take. I think the underlying thing about NMS plan governance is that there are inherent conflicts of interest which need to be managed. Exchanges, as self-regulatory organizations, have a disproportionate influence in both the design and the operation of our NMS plans. This authority originates from the 1975 amendments, and the whole concept of cooperative regulation, where the government and industry work together to regulate the various issues.

But exchanges don't represent the securities industry, as a whole. And that's a very important thing to understand. And, as for-profit entities, they make these potential conflicts between their economic interest in the management of their regulatory responsibilities. NMS plans would be much better informed and more impartially operated if governance was brought in to include a diverse range of market participants, such as broker-dealers, investors, issuers, vendors. Equitable voting representation should be given to such advisors so that they're adequately empowered to make decisions about the NMS plans. At a high level, I think this is a recommendation that various groups have endorsed. We've seen ICI and SIFMA put out recommendations to this effect. U.S. Department of Treasury issued a notice of this effect, as well. And in a recent white paper NASDAQ also agreed that advisors should get a vote. And I note that in 2015 the CEO of BATS, or the then-CEO of BATS was also quoted as saying that "having a broker and a buy-side representative sitting at the table voting on plan amendments, I think that's the appropriate structure." So this is something that we have a lot of consensus on, and I feel we should definitely act upon as the next step.

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

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

These private market data products did not exist when the market data plans were originally established. And today they directly compete with the SIP data feed. Public concerns about speed disparities and latencies due to SIP infrastructure and the public confidence in the two-tiered playing field for market data all arise from the fact that these two feeds co-exist with each other. Now, this is not a simple problem, as prop feeds carry information such as depth of book and auction imbalance feeds, as we've heard. But what we heard yesterday, as well, was that these feeds are so important to the operation of -- and investment operations that we should ask ourselves the critical question of why these aren't part of our public market data infrastructure.

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

Lastly, I would like to highlight two other concerns that have been brought by the advisory committees. One is the -- and they both affect the
efficacy of advisors in essentially providing advice. First is the use of executive sessions, and advisors are concerned that these sessions are not limited to those issues requiring confidential treatment and, as a principle, would, you know, prevent us from participating in discussions and in sessions that really have to do with valid and regular SIP activity. And the other issue is the scope of confidentiality agreements. At current there are no confidentiality policies in place, but the discussions around the confidentiality agreements seem to potentially limit an advisor's ability to both confer with their constituencies -- so buy sides talking to other buy sides -- or potentially prevent them from talking to representatives within their own firms. So those are potential concerns there. And I think that's probably a good place to stop.

MR. SHILLMAN: Great. Thanks, Hubert.

EMILY?

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

What the plan requires, in effect, is that plan participants, who operate competing markets, come together to operate and maintain the market data infrastructure under a framework chosen by you, the SEC. It is important to remember that this structure brings considerable expertise to this critical process that the SEC would otherwise be forced to commit to this effort. This expertise among the group of, in my opinion, some of the brightest, most knowledgeable individuals in the industry, has led to, among other things, an accomplishment of 100 percent up-time of the processors of market data on both the UTP and CTA sides this year.

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

During the last few years the operating committee has made significant enhancements to governance. Among the important steps we have taken are decreasing the length of the executive session, as has been mentioned previously. We've moved the vast majority of agenda items from the executive session to the general session, where advisors can participate and provide feedback. For example, the last executive session, which took place in September, lasted only 10 minutes.

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

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

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

In response to industry requests in 2016 for additional transparency of meetings, we summarized our general session meetings on the plan websites for public view for the first time in the existence of the plans for the last 40 years. Along with the general session summaries we've provided increased transparency of even executive sessions by publishing the agendas of the executive session meetings to the public. These are on the plan websites.

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

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

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

We have heard from our advisors that the SIPs were viewed as inaccessible. So we hired a communications firm to better communicate with the
industry and enhance public confidence. In the same
vein, we also began to publish revenues for the first
time ever.

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

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

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

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

person visit with the SEC staff. And subsequent visits
have continued in an effort to bolster communications and
the relationship between the SIP operating committee and
the SEC, which I fully support and encourage to continue.
All these governance changes have been
accomplished in the past few years under the current
constraints of the plans. While the plan structure
presents challenges at times, it is important to remember
that we are doing something very hard pretty well. UTP
and CTA, as I said earlier, have reported 100 percent up-
time for this year. We can always do better, and always
be ready to do so. But as we consider changes, first and
foremost we should do no harm.

I look forward to any questions you may have.

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

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

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

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

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

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

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

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

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

If you push the balloon on this side -- so
let's say that we expand the SIP and we allow it to have
more data fields, don't you know that the exchanges are
going to come out with enhanced data fields that will
probably further anger people like me, and certainly --
and maybe Hubert -- because it is giving advantage away
to opportunistic traders who have no obligation in the
marketplace. So I think I start with the fundamental
consideration, which is why did we allow that to begin
with?

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

So I'll give you an example. There has been
some conversation in the various panels about who owns
the market data. I submit to you we all own it, and we
all have very important interests and objectives that we
get out of it. And so, as we think about its public
utility and the value of it, it certainly would seem to
be a reasonable step forward to say we will govern it in
much more accordance with the people who are -- or
participants who are important components of this
ecosystem.

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

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

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

But at the end of the day there is an inherent
conflict that if you have two different products, and
those two different products are produced using different
technology, being distributed using, you know, faster
mechanisms or faster protocols, there is always
potentially going to be a difference between the two
different products.

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

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

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

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

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

MR. CRONIN: I think it gets to governance and
transparency of that governance, right? So my suggestion
would be that we reconsider the constituency of these
committees and make sure that important components of the
marketplace have real representation, not advisory
representation.

MR. SHILLMAN: Bryan?

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

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

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

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

So look, there's a lot of complicated stuff that's discussed. And really, how much -- I think it's amazing that, you know, really broadcasting it over the web to -- really, just -- there is nothing to hide. But at some point there has to be -- you have to move the ball forward, so to speak, given that there are so many different opinions in the room. Before I get to conflicts of interest, I just want to kind of address some of the higher-level -- how we view the -- you know, our business, our prior data business, also as the SIP. As some of the -- of my Cboe colleagues have mentioned, we make a lot more money on the SIP than we do

for proprietary data feeds. So, for example, in the second quarter of this year we made $9 million for our proprietary equities market data, and we made over $25 million for SIP revenue. Okay? So what that means to us is that the SIP, and having a strong SIP, is -- that is core to our business. We operate an exchange, we want healthy markets, we want a strong public quote. So just, really, commercially, we're incentivized to make the SIP -- and we can debate, you know, what is the best ways to make the SIP as strong as possible. And then, really, just to kind of address something that, Kevin, you mentioned about, really, kind of buying an advantage. It really comes down to what our customers are doing. So we have about 200 members. It may not sound like a lot for a large exchange, but, you know, the industry is fairly concentrated. And only less than half of them take our depth-of-book product. So I don't know what they're doing, but, you know, clearly half of our customers can do business on our platform by using this SIP. So the facts are the facts.

Now, getting to conflicts of interest, look, it's -- we're -- I think one of the best ways to solve it is just disclosure. You know, the simplest thing is when you see an analyst, you know, information about whether that analyst is -- you know, that -- his or her firm is -- have any sort of underwriting relationship, things of that nature.

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

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

MR. SHILLMAN: Thanks. And let me just follow up on a couple of things. I think you indicated that -- open to conflict of interest policies that require disclosure of conflicts. But let's say there was the example where the exchange rep actually was involved in the business of selling the competing top-of-book product, or somehow financially tied to that. Do you think disclosure would be enough? Or would you support walling off or prohibition of the exchange reps on the advisory committee having an economic or other interest in the success of the competing top-of-book products?

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

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

But with respect to things like access to data,
I mean, that's a no-brainer. We shouldn't be combing through data to help, you know, glean information that we can use to sell our proprietary data products. That's definitely a no-brainer.

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

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

MR. RAMSAY: Thank you.

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

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

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

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

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

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

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

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

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

(Laughter.)

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

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

And I would submit that we do have checks and balances because we don't always agree, right? We have competing viewpoints, but at the end of the day it's a good thing, right? We have a unanimity requirement for voting. Some say that that's a frustrating requirement.
Some say it makes governance inaccessible, governance is broken, you can't agree. But I would disagree with that because it is important that when we make a change to the plan, that -- in my opinion -- we all agree. That's one of the most important things that we do. And if we can come to agreement on how the plan should function, then that's how it should function. So these tensions, though sometimes they're frustrating, to me are beneficiary under the current structure.

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

MS. KASPAROV: Well, we've considered that, right? We've considered varying degrees of what conflicts really are. Is this really a big deal, right? We've operated for 40 years -- more than 40 years -- without a conflict of interest policy. They were considered in the 2004 Reg NMS adoptions. It's difficult to pin down the choice that the operating committee should make in that instance. But that said, this is where, you know, we operate under regulatory oversight. To the extent that the Commission feels that that's important, we welcome your input and in the rule-making realm, as well.

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

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

MR. REDFEARN: Just a quick -- so I would concur in some respect with what Bryan said, because it is known that you did bring these issues before the committee about -- you know, about other -- you know, expanding and voting at some point, so that's appreciated.

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

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

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

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

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

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

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

But I think I'd say a couple of things. One, disclosure should be simple, from the standpoint of
making it clear. My preference would be -- and I think this could be managed from the standpoint of how the exchanges compensate their employees -- that at least there should be balanced compensation from anybody who's on the operating committee so that the performance of the SIP is at least as important as operating products from a profitability standpoint.

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

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

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

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

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

And also, from the standpoint of articulating that the members have that responsibility as plan participants -- and I think most of them think they do already -- but I think it would be great to articulate.

And none of this is to in any way be derogatory on the terrific work that many industry people have done and many exchange people have done with respect to the plans.

MS. KASPAROV: If I could just interject really quick, that is true. There is no current fiduciary responsibility of the participants or the advisors to the plans.

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

(Laughter.)

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

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

MR. KETCHUM: Anything I can do to help.

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

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

(Laughter.)

MR. MASONE: -- who have been looking at this for so many years, it's really difficult to really add too much more than the work that's been done in this particular area for the course of a couple of decades now.

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

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

I thought Isaac Chang did an excellent job of framing this on the last panel, when he pointed to Michael Blaugrund on his right. All of us are in agreement that the people in these seats mean the best, that they mean well, they're doing the best that they can. It's just that they're in an awkward position, and it's awkward not only for them, but for the entire industry.
So what can we do to resolve that? I think this, of all the panels that we're discussing at this time, is probably the lowest-hanging fruit. You know, I think there has been a litany of support for some reform, modernization of the governance structure. Hubert ticked them off. I would just add a couple. You know, I think there is obviously the MSAC recommendations that Rick's subcommittee made, there is U.S. Treasury and their capital markets report. There is the advisory committee and their recent recommendations. Certainly SIFMA and Citi have made recommendations to this end, as well, for many years now. There's Hal Scott's committee on capital markets. Even NASDAQ has made, you know, some tip of the hat, a nod to the fact that there needs to be some reform to the process. Though not everybody has gone as far as SIFMA and Citi, but I want to make it unequivocally clear that, short of actual voting representation on the operating committee, we don't think we are addressing this issue. And it is not, well, you're chair of the operating committee, because I'm wholly confident that you're doing the best job that you can. What I worry about is the future, and the future that you, our kids, the markets that our kids inherit.

And it exists in this NMS plan, and it certainly exists in other NMS plans. Look no further than the consolidated audit trail which, six years post its adoption by the SEC, has still not implemented for many of the same types of reasons. I think the -- PARTICIPANT: Just off limits for -- PARTICIPANT: Yeah, please, please. MR. MASONE: So there are a number of things that I think we could probably do in short order that would at least get this house in order. Because, otherwise, I don't believe it could stand. MR. RAMSAY: So I would echo that last point, the point about the folks on the committee. I mean I count Emily as a friend, other good people. I think there are conflicts of interest that can overwhelm the best interests of -- best intentions and efforts of good people to deal with them. And I think we have that situation. I -- from being on the committee for two years now, I have seen tangible cases where conflicts of interest have impacted the work of the committee, I think, in ways that undermine the public good that Isaac was talking about, and that we think that the plans are - that should be the objectives of the plan. So those play out in a whole host of ways.
unanimous vote and a change to the plan. That's a
position that seems to me more a sort of question of
convenience than it is a matter of legal principle. But
I think that's another case where there is a real -- and
then fourth, just transparency in terms of various
things.

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

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

So I really do think that these issues sort of
permeate all aspects of the plan governance. And without
some basic, fundamental change in terms of the
composition of the committee, the voting committee, and
the constituencies that are represented on it, I think,
again, they will continue to defeat the best efforts of
good people to sort of deal with these questions.

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

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

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

MR. RAMSAY: Thank you.

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

MR. RAMSAY: I am one of those advocates. I
don't -- I mean I think there is a lot of different ways
that you could slice it. I think that the -- I should
say -- I think a vote to the advisory committee -- I
think that -- I mean I would create a balanced board sort
of structure of the type that is already in place for the
exchanges themselves and for FINRA for a long time, in
order to deal with similar kinds of conflicts of
interest.

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

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

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

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

And I think, to the same extent that we trust the people in the chairs now, and the integrity of those people -- would appreciate the same in term. You know, that's not the goal here. The goal is not to obstruct progress, or obstruct the ability for the operating committee to get anything done. The goal is to add a level of transparency and inclusion to the process itself.

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

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

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

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

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

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

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

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

So I think all those things should happen, and I think with the constriction of the executive committee, that it would, without more, work quite well.

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

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

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

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

Adding a vote of the advisors, we can discuss that, we're open to do that. I think it is a falsity
that the advisors have no say. We run everything past
the advisors. We talk with them. They are part of
bringing the ideas to us, in many cases. They are part
of the subcommittees where we address them. We have
spirited conversations about how to move forward in the
best way possible. We don't do anything before we run it
through the advisors.

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

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

But again, going back to my initial statement,

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

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

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

That's all for now.

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

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

I will be brief --

MS. KASPAROV: Sorry.

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

But I'm -- there's one thing that's missing.

Emily talks about the obligations that the exchanges
have. We're not an operator of the SIP. But everything
that we do as an exchange, the byproduct, the downstream
byproduct, is spitting out our data that the public and
the investment community relies on. And, yeah, we --
it's -- the stakes are high when we have a failure.

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

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

Well, we need a vote because advisors don't have enough
of a voice in the governance of the NMS plans. We can
raise issues, as has been properly kind of highlighted.
But the exchanges can actually table those discussions
for future meetings, or they can choose to address those
issues in a slightly different way. The conflicts of
interest policy that was discussed, for instance, doesn't
go far enough, from the perspective of advisors, right?
MR. CRONIN: I largely agree with that. I think maybe I would add -- first of all, I wanted to answer your question. Yes, it's a conflict of interest. And yes, it should be addressed. See, that wasn't that hard, was it?

(Laughter.)

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

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

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

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

So, for example, what should be part of core market data, right? So we've heard a lot of conversation around that. I think there should be a group of people who are responsible for saying -- maybe it's the SEC -- this is core data. These are the things that investors need today and most certainly in the future.

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

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

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

MR. SHILLMAN: Okay, thanks, Kevin. So why don't we shift to executive sessions, which is, you know, as has been discussed, the advisory committee has full rights to access and participate in operating committee meeting, except when a majority calls an executive session for matters that they deem require confidential treatment. And that's kind of a broad term.

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

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

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

MR. RAMSAY: I had my light on first.

MR. SHILLMAN: Or we can start in the middle.

Let's start with Emily and we'll go left and then --

MR. RAMSAY: Okay.

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

To the industry guys, we have heard you, right?

We have really looked at how we use our executive sessions. And yeah, they were probably at a time being overused, right? So we've really limited it. We've brought a lot of transparency around it.

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

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

That said, we do have a policy that has been passed around, and I actually -- pending any changes that any participant might decide to make -- I actually think it's pretty close to being passed before the committee.

That greatly narrows and describes in what circumstances we would use executive sessions. And I think that would be helpful.
In practice, I think we do a pretty good job. But as Mike said earlier, right, that's during this time of the reign of the chair, which is up for vote in February. I don't know. So who knows how long that's going to be?

MR. MASON: Emily, if you gave brokers a vote, I would vote for you.

(Laughter.)

MS. KASPAROV: All right.

MR. RAMSAY: Two.

MS. KASPAROV: All right. Now I've lost my train of thought. But like I said, you know, I think they are needed, but this is kind of what Mike said. This is low-hanging fruit. This is something that we can kind of, hopefully, put down to writing about the limits that we can put on these executive sessions.

MR. SHILLMAN: Just to be clear, the policies that you're talking about, does that limit executive sessions to audit findings and litigation, or is it broader than that?

MS. KASPAROV: Gosh, I didn't bring it with me, but it was pretty descriptive of the uses that the plan participants have, and I believe the SEC has those policies, those draft policies, as well.

MR. RAMSAY: I think I have an answer to the question.

MS. KASPAROV: Okay, great, please. They're probably not good enough --

MR. RAMSAY: I haven't committed it to mind, but I think the problem is that the policies that have been talked about always leave the big carve-out at the end, right? You know, executive session will be limited to audit findings, regulatory matters where there is actual ongoing litigation, where you need a confidential discussion, or other matters that the committee determines require confidential treatment. And at least in the past -- and I will give the committee credit in recent months for limiting the ways in which that happens -- but the committee has not obligated themselves to continue limiting it in that way, going forward.

And I think there -- I have witnessed cases where matters end up in executive session because they're sensitive, in the sense that the committee members might come under criticism from folks in the industry, rather than it's really so much a direct conflict of the type that really should require executive session. That's my perspective.

MS. KASPAROV: Maybe we're not quite as close as I thought.

MR. SHILLMAN: Bryan, do you have any views?
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<tr>
<th>Page 146</th>
<th>Page 148</th>
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<td>negotiations, which were -- you know, there was a meeting</td>
<td>14 current votes? Adding to any issues that don’t require unanimity, you know, sort of -- what do you really gain?</td>
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<td>schedule set out in the actual contract and the process</td>
<td>So I'm not sure that you could get enough voting blocks. So I guess the long-winded point is it should be by exchange operator, not the number of exchanges that they had within. And I think that would make the calculus much more palatable to actually making sure that any issues that truly weren’t in the best interests of the industry and were more self-motivated by the exchanges, any of that activity could be halted or overturned.</td>
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<td>that we ran during that time, whereby the executive committee met. But since then, I'm not aware of a meeting that has occurred without the advisors being aware of it.</td>
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<td>MR. SHILLMAN: Mike, did you want to add anything to that?</td>
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<td>MR. MASONE: I would -- I mean, as I listen to this, just think to myself that, as regards voting, I'm having a hard time trying to think back through history of a time where expanding the vote and enfranchising other groups was ever a bad thing. I just can't really think of an example, especially among reasonable market participants in an industry that is supposed to be self-regulatory. I just feel like we're on the wrong side of history here, and it's a pretty simple -- you know, it's a pretty -- it's an overly simplistic view of it, but when you think about the standard to which our regulators need to hold this segment of the market, fair and reasonable, not unreasonably discriminatory, you know, it comes back to transparency. It comes -- and the ability to determine whether something is fair and reasonable or not unreasonably discriminatory is dependent upon</td>
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<td>actually having the full panoply of facts in front of you. And unless you're really part of a decision-making process, you don't.</td>
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<td>MR. SHILLMAN: Thanks. I think, for what will likely be out last topic, assuming -- you know, putting aside should advisory committee members be given a vote, is the current voting structure we have for the participants the right one? You know, as was discussed, that was done in a very different age with, you know, mutual member-owned exchanges, dominant markets, not the same level of competition, no prop data feeds. Now we have a world where we have three large exchange groups with multiple votes, depending on the number of exchange licenses they hold. Should exchange licenses really be the way that voting power is divided up among the SROs that have the regulatory responsibility? And again, Rick's subcommittee had some specific recommendations on this, but it would be interesting to hear other views. I know -- Kevin, do you want to start on your end?</td>
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<td>MR. CRONIN: So I think, if you're going to add additional members, it's sort of -- and I heard this suggestion maybe two, an asset manager and a broker-dealer -- if I understood the math right, with -- was it</td>
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<th>Page 147</th>
<th>Page 149</th>
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<td>MS. KASPAROV: I think the current construct works. I think it's important, if we do change it, you know, if the Commission determines to do that, we're happy to have that discussion. But I think that it's important to remember when we do consider changing the allocation of votes, that we do protect minority rights, right? I've been a member participant at CHX, which had one vote. That vote was important to us. It made a big deal, you know. And it made a difference in the plans in some circumstances where unanimity was required. And we were able to make some good changes and good strides to come to agreement with our vote. So I think that's important. I would like to correct. I believe it is 16 votes, actually, that the participants have of the plans.</td>
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<td>MR. SHILLMAN: And Emily, you raise an interesting point, because we've heard on the unanimity - - we heard criticism of unanimity as being -- creating inefficiencies. But it does protect -- particularly when you look at the three exchange groups, if we started going more to majority, super-majority, you could essentially disenfranchise IEX or FINRA or some of the entities with just one vote.</td>
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<td>MS. KASPAROV: Correct.</td>
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<td>MR. SHILLMAN: So it's a balance on that.</td>
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MS. KASPAROV: And, you know, this is my opinion as a chair. I think it's important to protect those minority views, because they are important. And as I said earlier, if you're doing a plan amendment, this is the plan that we all operate under. It is important that we agree to the extent that we make those changes ourselves.

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

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

MR. SHILLMAN: Yeah, sure.

MR. DE JESUS: In terms of minority views, if you just held votes by exchange group, you would actually increase the voting representation of minority exchanges. So if that's what we're looking to try to solve for, I think that might be a better solution.

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

I would say that a part of this, and a protection from the standpoint of different views is whatever decision is made on a vote from the standpoint of the industry side shouldn't eliminate the advisory committee, both from an expertise standpoint and also the key arbiter here is a clear articulation of different views to the Commission, where before there wasn't as clear an articulation of the Commission. And I think advisory committee is an important part of that.

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

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

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

I think, again, rational actors operating under a construct that rewards that, it rewards it in the form of another vote on these operating committees, it rewards in the form of another share of market data revenue.

Let's -- one way to address that is by consolidating the votes among exchange families with a nod to, you know, a view that, if someone controls a significant portion of market share, then they probably ought to have more than just one vote.

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

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

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

Those certainly drive fragmentation.

But there is no sensible reason why having multiple -- you know, people should collect kind of dormant exchanges as chits to increase their voting representation on the SIP committee. It just makes no sense. So, yeah, so I would favor that.

MR. SHILLMAN: Well, great. I think we've exhausted our time. I want to thank the panel. I think it's been a very interesting panel. I think we've made some progress moving towards the center on a few issues.

So I want to thank all of you.

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

So again, thank you for the -- (Applause.)

(A brief recess was taken.)

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

The topic for the sixth panel is funding of the core data infrastructure, and we're particularly going to focus on potential steps to assure that a modernized core data infrastructure is appropriately funded, and that the associated fees satisfy regulatory standards. We're fortunate to have a great group of
extremely knowledgeable panelists, and we want to get to
t heir discussion of funding as quickly as possible. But
first, as we did with our earlier panels today, if each
of you would just take a minute and quickly introduce
yourself, that would be great.

Greg, do you want to get us started?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Turning to exchanged proprietary fees, although
they are subject to the same regulatory standards to be
fair, reasonable, and not unreasonably discriminatory,
the Commission historically has taken a different
approach to reviewing proprietary fees. In particular, it has allowed exchanges to use a market-based approach under which an exchange bears the burden of proving that it was subject to significant competitive forces in setting the fees. In its SIFMA decision from just last week, the Commission held that exchanges had not met this burden in supporting two proprietary data fees, and set those fees aside.

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

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

MR. BABYAK: Happy to. First of all, the -- as you have articulated, there is -- we're not operating off a blank slate here. We have a statute, a statute that is intended to promote greater transparency and access to this data. And we have both the Commission and the courts having rendered interpretations on that statute.

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

I would say that, coming out of the net coalition holding and the order of last week, that you're in a not dissimilar situation with proprietary feeds.

Then that coalition holding basically said you need to have either indices -- indicia of competition, or you default back to trying to look at cost data to ensure that monopoly rents aren't being extracted.

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

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

MR. GRAY: Thanks, Greg.

Adrian?

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

So that being said, it is a monopoly product.

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

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

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

MR. GRAY: Thanks, Brad?

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

You know, I've been chuckling the last two days, and heard it again this morning, with CNBC as I was getting ready to come over here, that, oh, these brokers make so much money, this is such an inconsequential portion of their revenues. But yet, as a publicly-traded company, I would imagine that NASDAQ or any other exchange -- if they felt like a vendor was over-charging them, they would damn well do something about it to
You know, exchanges, at our most basic level, are providing price discovery by the aggregate and dissemination of the quote and the trade data. Again, contributing to a healthy and high-quality market. You know, the matching of the transaction process and the dissemination of that data are so related -- joint products, some may call it. They're inextricably linked. And, you know, as a highly regulated exchange, you know, the financial and regulatory burden of both the transaction process itself and the collecting and producing of the market data is borne by the individual markets, not just the SIP. I personally would not know how to accurately or fairly disaggregate those costs related only to market data versus those only related to the transaction processing side.

An inventory of some of those costs to consider -- and Marcy actually identified those -- all of the technology-related costs for the matching engine, the software development, the improvements, the hardware costs, the continued work on the efficiency, and the innovations. The data center costs, both primary and secondary. The occupant, the personnel, the regulatory surveillance, rule enforcement, compliance requirements, examinations and filings. And the required redundancy. And let’s not forget customer support. All, again, to support and promote the integrity of the exchange and, therefore, the U.S. equity markets.

On a related note, transparency has been a key theme not -- obviously, introduced already today -- but also throughout all of the panels. And actually, all of the exchange-related costs are actually filed annually through audited financial statements to the SEC. So those are exchange-specific, and they’re filed every year.

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

And if we looked at the other regulated
industries, I suggest -- as an alternative -- is that we know that there is some evidence that say public utility commissions have all but abandoned attempts to try and allocate some of these costs of related products. With respect to a prescriptive approach, which we can talk about more fully in the panel versus making all the points now, we think that's going to have its challenges. And we know that SIFMA, for example, in one of its comment letters -- and one my colleagues raised earlier in one of its comments letters back in 2016 is that there is definitely some issues with some of the disclosures and the changes that would be required in that process. With respect to the proprietary data -- and this is where I know has drawn a lot of attention and a lot of discussion, also -- I would challenge the notion - - this, I guess, all depends on how you define monopoly. I would say that's essentially didn't exist -- which is obviously -- predecessor, as we were acquired by Cboe -- didn't exist 15 years ago. Someone would have thought that we had two monopolies going on. So I will challenge you that market forces do continue to exist in today's world. It was a different approach, different business model to generate the market share.

So I would challenge the notion of monopolies. And I think you've heard that on various interviews that have happened from various exchange leaders, that we fight for market share every day, and there are competitive choices. A lot of the proprietary products that we see exist have been driven by commercial choices firms make, and we've provided those choices to continue to innovate. And yes, there is a financial incentive. We are a public company and we do have a shareholder base, as well. But I will argue that disenfranchising our customers is not in the best interest of our long-term interest of our shareholders. And I will say we also have data that suggests, as we're examining now, is that as our market share declines in our U.S. equities markets, we've seen a fall-off of sales of our market data. Any time we've raised access fees on various items that we have, we've seen declines in usage. So I will tell you that if one of your definitions of monopoly means that you do not see a fall-off, or you see perfect price elasticity, it doesn't exist. We see price elasticity on our products and/or call it a market share decline. With that, I'll turn it over.

MR. TABB: Thanks, Dan. Thanks, you know, Director Redfearn. I'm kind of in the fortunate or unfortunate seat of not actually buying market data or not producing market data. So it's hard for me to kind of opine where the baby should be split. And I think, you know, I would actually say to you that seems to be what this panel is about, trying to figure out how to split the market data baby, and how to allocate things. So what I did do is I went through the 10Ks and Qs and tried to, you know, line up market data spending and different line item spending that the exchanges produce and I submitted that to the panel.

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

That seemed to be going up about 8 percent a year since 2010. And really, I think the big battle around this is that I'm not sure that the investment managers, you know -- if you look at brokerage commissions, you look at investment manager fees, you look at proprietary trading firms, you know, profits -- I'm sure they would, you know -- they would love to have seen eight percent growth over the last eight years. And I think that's really this battle.

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

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

People have talked about getting rid of OPR, you know, the order protection rule, to say, okay, well, you know, if we don't have order protection, we may not necessarily decide to trade on Cboe any more, we can go trade elsewhere. I'm not sure that's really the case for
agency traders or agency brokers or folks that have
fiduciary obligation for best execution. I think whether
you keep OPR or get rid of OPR, I don't think that
changes.

So what do you guys do? I think -- you know, I
think, like Brian -- you know, you get to better measure
this stuff. You know, you got to measure -- better
measure and get better understanding, whether you decide
to make that data public or not. Certainly, if we're
going to make a decision on how you're allocating market
data fees and costs, you need a better set of data than
you can get over the 10Ks and 10Qs, because it's really
difficult to look at how that gets parsed out.

Licensing practices I tried to mention before. You
know, some of the licensing practices at the
exchanges are forcing folks to buy the same data two,
three, four, five times. You know, if you have -- some
firms are charging -- if I have a -- you know, a market
maker, they buy the data. An agency side, they buy the
data. And ATS has to buy the same data. If I want to
store it and use it for analytics, I got to buy the data
again. And then you're -- you know, and I think, to a
large extent, maybe that's where a lot of this comes. So
look over the licensing models. I think that would be a
very beneficial thing.

The other issue is you've got to be really
careful, you know. Our markets are, again, the world.
We do a really good job in terms of price discovery. You
know, we really -- you know, I wrote a piece a couple of
years ago called the "Market Data Death Match," and I
kind of ended saying, look, you know, this has to be
resolved equitably because you don't want to mess up
price discovery because that's not -- just -- it doesn't
just impact the people in this table and the people in
this room, it impacts virtually every public company and
every investor, you know, not just in the U.S., but
probably around the world. So you don't want to screw it
up.

That said, I don't envy you guys. You got to
figure out how to cut up the baby, and I don't want to
wield that sword at all.

MR. REDFEARN: Larry, just one point of
clarification. I don't think the intent here is to split
up a baby or to figure out who gets what. I think what
we've stated many times over the course of this event is
that we have a statutory obligation to review these fees
and make sure that they're fair, reasonable, and not
unreasonably discriminatory. And so we're trying to
figure out how to do that, not to allocate between
different parties.
skyrocketing, they're steady and, therefore, falling.

But, you know, people talk about disclosing the
costs of the SIP, and you know, there has been
resistance. And I think the resistance is because of a
fear that it is a slippery slope and that people will
then say, "Aha, therefore that is the rate base," and
these SIPs don't serve any other purposes. But I think
over the years they've been recognized to serve many
purposes through their revenue structure, you know, going
back many years. And, obviously, the Commission has
recognized that they help defray the regulatory costs of
exchanges, as well as all the other many, many, many
costs that Brian listed in his presentation just now.

And, you know, the exchanges do regulate. We
often hear that it's all been outsourced to FINRA, and
the exchanges don't do anything, and FINRA does it all,
and that is simply not true, you know. We've got an
extensive regulatory staff for real-time regulation, and
regulation of our listed companies, and we're actually in
the process of taking more and more back, because we feel
we can do it better than FINRA. And so we're bulking out
our regulatory staff.

You know, in addition, the SIP fees have also
been recognized at the Commission to serve the function
of promoting quotes. That's the whole point of the

To the bottom of the rate base, whatever that may be, then it would no longer serve that purpose. You're not encouraging -- and you know, of our proposals in all of this has been to try to enhance that, not by, you know, increasing the quoting share, but by increasing the link between quotes that lead to actual executions and the revenue associated with them. So not just putting up a quote and having it fade, but having it be real, getting more of an allocation.

And then finally, I think it should be recognized that these revenues serve a pro-competitive purpose. But, you know, there is always this tension between how much exchange competition is enough, you know. Do we have too much fragmentation? Do we not have enough competition? And just -- the pendulum always seems to swing back and forth. But because of the SIP, an exchange like BATS, like IEX, can set up shop, and very quickly it's getting revenue. And that is a pro-competitive purpose of the SIP, we would submit.

You know, with regard to prop data, I do have some remarks I want to deliver about economic theory in that regard, and two-sided markets, and platform theory.

And I'm going to reserve that, because I think I'm going to get more time to do that later.

So I would just suffice it to say for now that,
you know, some of the commissioners did have questions
about that, and what they said in connection with that
decision, and we think that is certainly worth the
Commission's consideration, going forward.

MR. GRAY: Thank you, John. And thank you, all
the panelists. I mean there was some -- I think some
really, really interesting points among all of you. So I
think we have a lot of room for discussion as we start to
play down on the different areas that you all raised.

I think the first thing that we would like to
drill down on is on the SIP side of the equation, where
we have at least some established basic view from the
Commission that there should be a reasonable relation to
cost. And I think, Greg, you said some, not perfect, and
then we have some reference to splitting the baby. So I
think one of the issues we'd sort of like to explore a
little bit is where there is room for agreement or ways
to think about how you can achieve that objective, which
the Commission has stated on many occasions, and
particularly in the context of a monopoly product, you
know, how you decide what's too low or too high.

And in that regard, I thought it might be
helpful, since it's been mentioned a few times in
previous panels, this mysterious $400 million figure, to

just say I think what everyone has been referring to is
the fact that -- which you can see now, based on the fact
that the SIPs are disclosing their annual revenue that's
actually distributed to market participants, you can see
what the SIP -- those revenues are, and they were $392
million in 2010, across all 3 networks, tape A, B, and C.
They dropped to $342 million in 2014, but they've come
back up to $387 million in 2017. So, essentially, as
Larry said, they've been pretty flat over recent years.

And I think people round it to $400 million and
say it's the 400 million. So that's what the -- that's
sort of the size of the SIP pie. That is the pie that's
actually distributed to market participants, or to the
SROs -- participants in the plan.

What isn't disclosed right now in the SIP
disclosures is the expenses of the SIP, which would
include the processor expenses and the administrative
expenses. But the Commission has disclosed that
periodically in its releases over the years. The last
time was a number of years ago, but was -- it was in a
2010 concept release on market structure. And it found
at that point the expenses at the SIP level were less
than five percent of the revenue that was distributed to
the SRO participants.

So I think what we wanted to start off with was
<table>
<thead>
<tr>
<th>Page 178</th>
<th>Page 180</th>
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<td>maybe dig a little further into an issue that a number of</td>
<td>I'm going to do -- and not charge any market data or any</td>
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<td>you raised about how we should think about both the costs</td>
<td>other access fees or any other fixed fees, or I can do</td>
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<td>that are relevant in determining whether the 400 million,</td>
<td>just the opposite to try and cover those costs in that</td>
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<td>give or take, is too high or too low, and, you know, are</td>
<td>model.</td>
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<td>there ways to think about allocating them that doesn't</td>
<td>And as I said, as I -- as reflected in our</td>
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<td>require splitting the baby or the full-fledged rate-</td>
<td>statements that, as a CFO, I have to personally sign off</td>
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<td>making approach.</td>
<td>on, the way we manage the business, we don't manage the</td>
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<td>So maybe start off with Brian on that issue.</td>
<td>business from a cost allocation business of -- approach.</td>
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<td>Sort of beyond these direct SIP expenses that are</td>
<td>Now, again, I know that your requirement is</td>
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<td>deducted, how should we think about what costs are</td>
<td>more cost-related versus cost-plus, which I think is the</td>
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<td>relevant and what -- how we might approach that</td>
<td>worst of all, because I think that's a disincentive to be</td>
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<td>allocation issue?</td>
<td>efficient, because if it's just cost-plus, there is no</td>
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<td>MR. SCHELL: So in my kind of introductory</td>
<td>incentive to be efficient in that process, and I don't</td>
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<td>remarks I think it's a great question, and it is a</td>
<td>think anybody wants to end up in that model, honestly.</td>
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<td>challenge. I would echo the challenge of what the</td>
<td>But how you extract the enhancements we're</td>
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<td>statutory obligation that -- you know, that -- when we</td>
<td>making around the matching engine to improve our market</td>
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<td>first started talking about it, what you were trying to</td>
<td>share, to improve the client experience, to improve</td>
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<td>accomplish. And it is a challenge because you actually</td>
<td>market quality, and then the resulting output of data</td>
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<td>have a group of exchanges who -- and it could be not just</td>
<td>because of what we're able to do on that side, is that a</td>
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<td>exchange operators, but by exchange, particularly, that</td>
<td>-- we've not made a determination that was 50/50. We may</td>
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<td>may have a very different business model as to how</td>
<td>be pricing that data lower, say at only -- maybe</td>
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<td>they're trying to grow.</td>
<td>capturing 10 percent of that, versus 90 percent of it.</td>
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<td>So -- and I could look over the life cycle of</td>
<td>Or maybe it's 90 percent of the transaction side and 10</td>
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<td>BATS, or I can look at maybe where IEX is right now -- is</td>
<td>percent of the market.</td>
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<th>Page 179</th>
<th>Page 181</th>
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<td>commercial reason with a higher-level goal of making</td>
<td>So it's -- at any one point in time the</td>
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<td>markets better or providing an alternative of what's</td>
<td>challenge that the Commission would have on that is -- or</td>
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<td>existing with, let's say, with more established</td>
<td>anybody would have on that is that then do you make it</td>
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<td>exchanges. If we review the history of the BATS model,</td>
<td>unique to the business model that any exchange may be</td>
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<td>it was we're going to try to grow share, become critical</td>
<td>implementing at any one point in time? And I don't know</td>
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<td>against two very large, dominant players through great</td>
<td>how you do that. And all of those systems is, well, I</td>
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<td>technology and very low cost to try and incent. And we</td>
<td>had a Reg SEI just on that exchange. Oh, they were also</td>
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<td>had a consortium that was, you know, helping support</td>
<td>worried about my dissemination to the SIP. And those</td>
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<td>that, but they still had a best ex requirement, so that's</td>
<td>costs were maybe different, and how that network was</td>
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<td>not a -- they were just throwing us flow because they</td>
<td>built out.</td>
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<td>were owners. I mean they -- it was legitimate.</td>
<td>So they are so tied, and one is the result of</td>
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<td>So -- but we did, through pricing, through</td>
<td>the other and built up over time that I, frankly, don't</td>
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<td>attracting that liquidity. And at one point we went</td>
<td>have a recommendation, unless it's an arbitrary</td>
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<td>inverted on transaction pricing. And we didn't charge</td>
<td>percentage. Because the costs are there. We know what</td>
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<td>for market data. And that was -- again, was a commercial</td>
<td>the costs are, and we can tell you what they are within</td>
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<td>decision we made with a long-term perspective of how are</td>
<td>each exchange. But again, I -- because I don't think the</td>
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<td>we going to make this market better, and how are we going</td>
<td>business is designed to do it by product, that's the</td>
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<td>to -- at least in our view -- and how do we make a return</td>
<td>challenge.</td>
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<td>for our investors who had faith and confidence in -- to</td>
<td>MR. GRAY: Thanks, Brian.</td>
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<td>do that with us.</td>
<td>John, you want to pitch in with another</td>
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<td>So the -- what I'm kind of winding up to is</td>
<td>exchange perspective before we get to the rest of the</td>
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<td>that we chose, from a revenue standpoint -- and, like I</td>
<td>panel on that question?</td>
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<td>said, enterprises can choose this -- I'm going to choose</td>
<td>MR. YETTER: Sure. And to be clear, we're</td>
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<td>either a really high transaction fee and be way priced</td>
<td>focusing still on the SIP, right?</td>
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<td>higher than anybody else on a per-transaction basis, or</td>
<td>MR. GRAY: Yes, yes, the SIP.</td>
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MR. YETTER: All right. I mean -- yeah. I mean I think I'd just reiterate what I said earlier about -- the cost of what the processor and the administrator are -- traditionally, they serve several purposes. One is to defray costs of operation that actually generate the data at the exchange that regulate the markets to make sure that that data is, you know, of high quality.

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

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

MS. PIKE: Yeah, I guess --

MR. GRAY: Marcy?

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

And so I'm just curious to -- if any of you...
the infrastructure of the exchanges, providing that data, also. So there are more than just raw computer chip prices that may be falling. But like many of those organizations, they're - also have new innovations, which are not the same price as what they were the year before. So the fact that technology costs are falling - I think the productivity is increasing, but I'm not sure that I would argue, looking at our own numbers - and I would argue that we are one of the more efficient organizations -- that it actually is falling. And so I think we have seen improvements, and I'm not sure I would agree that it's -- that -- I agree that it is a worthy goal to continue to try and improve, absolutely. We do that within our own business, and it shouldn't just be for that one core product up here that we would ignore. So I think poor market data and too high prices are bad for everyone. I would absolutely agree, whatever side of the fence you're sitting on, because that's for - the long-term goal is to have very, very healthy and robust U.S. equity markets. We all win.

MR. GRAY: So I thought I'd maybe follow up on sort of your perspective from inside an exchange. It sounds like you have a -- from your view, a pretty big ball of fixed cost, and you have a number of ways to try and recoup the cost, or to maximize your margin. How do you think about those issues in terms of transaction fees versus, you know, SIP data revenues or prop data revenues, in terms of, you know, where to raise, where to lower, all those sorts of issues?

MR. SCHELL: Honestly, it's a -- it's both a long-term perspective, as well as -- I'll call it -- and you go to -- all have a quarterly cycle as well as an annual cycle, right? Everybody -- most organizations go through an annual budgeting cycle of what do we want to accomplish. And obviously, in the context, hopefully, of a strategic plan, of longer term -- here is what we want to achieve and here is what our -- some of our high-level targets of what we want to get to. And how do we envision ourselves getting there? And, gosh, if I didn't have competition, it would be a whole lot easier to get there. But unfortunately, someone will do something that we weren't expecting here or there, and that's the wonderful thing about an incredibly competitive market, is hopefully the users of those markets are benefiting from that. But I'll be honest. It varies. So if we're focused on just the U.S. equities markets, it has changed and evolved. And if we look at the legacy BATS model of where we were and where that pricing was, and what that looks like, and where we're going to invest in the technology, it was all about growing relevance and growing critical mass. And pricing was made a little bit less relevant, as far as what we were doing, as far as looking at that approach.

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

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

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

And for the non-exchange panelists, you know, what would you like to see, in terms of transparency of exchange costs or their operations that you think would be helpful, at least to you, and might be helpful to the Commission in making this judgement of whether the SIP fees are reasonably related to cost? Anybody want to --

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. SCHELL: In the revenue line item.

MR. REDFEARN: Yeah.

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

And honestly, we are leveraging our international operations, as well. So we're actually going to new markets as part of that growth. So our biggest subscriber growth has actually been Asia and
increase in January of this year, another one was a 100 percent increase here. Another one talks about thousands of percent of increase, or whatever, over periods of time. We're trying to sort through all that.

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

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

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

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

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

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

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

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

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

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

Most large brokerage firms or asset managers that are consuming this data have significant staffs that are counting and reporting the usage of this data. Even the way we report it back to the exchanges is under antiquated processes. You know, we can either go direct to an exchange, or we can use a consolidator to report that stuff back, and then we get stuck in the trap of, you know, did the data make it to them okay, and was it accurate, and do they believe it was accurate. There is a whole group of folks that have entered into the industry to help facilitate audits for the exchanges, third parties that they will, in some cases, hire to help them with the auditing process. I think it would be very fascinating to just try to do a little bit of analysis on what the overall administration is costing the industry, because my guess is it's pretty substantial. It's something that, you know, as industry groups like FISD -- as we met in conference, we -- as consumer firms, we're really employing the industry to rethink how we do this, because it's incredibly wasteful.

And if the end game here is to get data out to Mr. and Mrs. 401(k), to the individual investor, I really think we should be rethinking, the whole administration, on what it takes for firms to be able to deliver that data. Fidelity delivers data to our retail customers. We give it to customers and we pay for that data, whether they're professional, their deemed professional users -- somebody touched upon that in an early panel. The rules under which you are able to classify somebody as a non-professional versus a professional are
changing and can be quite opaque and are not, you know, transparent to an end customer when they're trying to declare themselves. And Fidelity feels so strongly that it's important for our retail customers to have access to that data, that whether they declare themselves as a professional and it's costing us, you know, $50 a month, or they declare themselves as a non-professional and it's costing $1 a month, we still pay for that data, because we think it's so important for the retail investor to have in their hands. But that cost of administrating that for us is a significant burden. It's a significant burden on the industry. And it's definitely something we should look at changing.

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

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

MS. PIKE: Yeah.

MR. JONAS: -- you kind of brought that on.

And we definitely encourage something like that.

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

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

And, by the way, the policies can change at any moment in time, and we're responsible for checking the websites of the exchanges to stay up to date on what policies may have changed. So I think it does go back to governance. And it's another place where I think if there were more representation by the consumers that are using and managing to these policies, we might have, you know, a bit of a chance to change the dynamic here, and change the landscape.

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

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

So I think it's -- it can be split up. I do think that an exchange and a SIP operator can actually delineate what the costs are to operate whatever entity it is, whether it's an exchange or the SIP itself. You could look at what it costs to actually offer physical connectivity within your system or within the SIP itself, or logical connectivity, you know, like how many different servers you need to offer that, the people that are associated with that, the servers, switches. Like, there's a whole host of different things that went to those costs. But I do believe you can allocate the cost to each one of those different areas.

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

I do think it's an achievable task, and I do think that it is a commercial decision by the exchanges on how they want to recoup those costs. We personally -- we do not recruit the physical connectivity, logical connectivity on market data, but we get that back through what we charge on transaction fees. And the other exchanges have chosen to make the transaction fees more competitive to attract order flow, so that the other fees can be increased over time, as people basically become...
<table>
<thead>
<tr>
<th>Page 202</th>
<th>Page 204</th>
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<td>captive to their market.</td>
<td>sequencing them, matching them, and all the other</td>
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<td>So I do think that this can -- there can be</td>
<td>features that we had within the matching system. They</td>
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<td>transparency around this. It can be data that's given to</td>
<td>all basically aggregate to produce that cost, as well.</td>
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<td>the market about how these different fees are -- or how</td>
<td>And, you know, there is also all the personnel</td>
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<td>these different costs are actually calculated within the</td>
<td>that goes on top of that. The legal, regulatory</td>
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<td>exchanges themselves.</td>
<td>operations, product, all of that basically goes into this</td>
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<td>MR. GRAY: To follow up on that point, has IEX</td>
<td>-- oh, there is some -- I'm skipping right now, but if</td>
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<td>-- does it have -- could you maybe shed maybe a little</td>
<td>you put that together you basically get what that cost is</td>
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<td>more detail on what that -- how you at least think about</td>
<td>for that particular area, and you can just -- you could</td>
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<td>doing that allocation in what would be considered a</td>
<td>divide it by some number that really represents your</td>
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<td>reasonable way?</td>
<td>capacity within that space.</td>
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<td>I mean the way I understand you actually</td>
<td>So that's where I think that the fees don't</td>
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<td>recover your cost, you've made a choice to get them</td>
<td>necessarily go back to what the costs are. Like, I don't</td>
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<td>through transaction fees. But you've also said you have</td>
<td>understand what the fee or what the additional cost is to</td>
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<td>-- you've thought about this issue of how you would</td>
<td>the exchange for another person on a Bloomberg terminal</td>
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<td>reasonably allocate costs from the different services.</td>
<td>to look at market data. There really isn't any. But</td>
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<td>So you want to --</td>
<td>there's still a fee that goes back from Bloomberg to a</td>
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<td>MR. FACINI: Definitely.</td>
<td>SIP operator, an exchange, because they look at that. Or</td>
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<td>MR. GRAY: -- that a little bit?</td>
<td>if Quantlab has another server that is consuming market</td>
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<td>MR. FACINI: Yeah, sure. So from a physical</td>
<td>data, there is really not an additional load on the</td>
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<td>connectivity perspective, we looked at the switches, the</td>
<td>exchange itself. From a transmission perspective, yes,</td>
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<td>infrastructure that basically resides within -- that</td>
<td>but not from the perspective where they're just consuming</td>
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<td>everyone connects to. They use that for sending in order</td>
<td>market data. Why add additional fees on the NASDAQ side</td>
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<td>flow or for receiving market data from us. So we said</td>
<td>per machine that's connected? So in those areas I don't</td>
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<td>those network switches, the patch panels, all of that,</td>
<td>think the fees necessarily relate back to the cost.</td>
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<th>Page 203</th>
<th>Page 205</th>
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<td>the net -- the data center space, the operators of that -</td>
<td>MS. PIKE: I would agree with that, and that's</td>
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<td>- so the personnel who are associated with actually</td>
<td>what I meant in the opening comments, when I said it</td>
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<td>maintaining that, installing it, that's all in physical</td>
<td>feels like the fees that are getting charged are tied</td>
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<td>connectivity.</td>
<td>more to the exchange's perceived value of the data, and</td>
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<td>On the logical connectivity side, there is</td>
<td>how we're using it, as opposed to the cost of actually</td>
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<td>servers that run our client gateways, there is switching</td>
<td>producing the data.</td>
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<td>infrastructure that basically hooks that all together</td>
<td>And I'd also argue that if we were able to look</td>
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<td>with the rest of the trading system.</td>
<td>at the cost in light of the way Adrian was expressing,</td>
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<td>And back to the physical connectivity portion</td>
<td>then there would be a vested interest, I would think, as</td>
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<td>of the system, we set limits -- so in terms of, like, the</td>
<td>well, to try to drive down the cost, right? So some of</td>
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<td>cost allocation itself, once you figured out how much it</td>
<td>the earlier panels were talking about technology, and we</td>
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<td>costs to run the physical connectivity, or the logical</td>
<td>don't know where it's going to go, and it's advancing at</td>
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<td>connectivity, there is a maximum number that you can</td>
<td>such a rapid pace, right? So if you're really looking at</td>
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<td>support within whatever you've set up. And you can</td>
<td>the discreet costs associated with the dissemination of</td>
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<td>distribute the cost amongst the -- what you physically</td>
<td>that data, you'll have a vested interest to try to</td>
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<td>have there. So there's a per-port cost you can figure</td>
<td>improve the technology and use lower-cost technologies</td>
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<td>out for the physical connectivity.</td>
<td>over time to drive down the cost of being able to produce</td>
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<td>On the logical connectivities, again, they're</td>
<td>that product.</td>
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<td>logical ports, but they're still ports. We still have a</td>
<td>MR. FACINI: But we still have Reg SEI</td>
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<td>maximum number that we choose to support, you know, from</td>
<td>responsibilities, so we'll make sure that it's a</td>
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<td>a resiliency perspective within each one of the client</td>
<td>resilient --</td>
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<td>gateways that we operate. So we have a maximum number,</td>
<td>MS. PIKE: Yes, yes, and we want you to do</td>
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<td>based on the servers that we have in our data center.</td>
<td>that, yes.</td>
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<td>And from a matching perspective, there is the whole rest</td>
<td>MR. YETTER: Yeah, I just want to jump in here</td>
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<td>of the system that basically takes care of taking orders,</td>
<td>and note that all the costs that people are describing</td>
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are fixed costs, or fixed costs with slight variation,
that they're not marginal costs.

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

MR. BABYAK: I'd hard --

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

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

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

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

MR. BABYAK: Do you --

MR. YETTER: -- you're regulated differently
than we are, so --

MR. BABYAK: Well, why would that be, that we
would be regulated differently, since we're a private
company and you're an exchange?

MR. YETTER: I understand. But --

MR. BABYAK: Well, but no, you -- this has been
a theme throughout, where -- look, you -- exchanges have
special -- they receive special protections, special --
in this case -- monopolies, special abilities in
exchange for discharging special obligations. And to
look and say, well, that widget manufacturer or you don't
aren't discharging the special obligations of an
exchange is a total non sequitur. I mean it's just not a
serious argument.

MR. YETTER: It's just at many points we come
into direct competition, as you know.

MR. SCHELL: And it's not like so much is
granted, the -- and I don't like even using the word --
the special monopolies that was there -- I mean, to some
extent, that was earned some commercial way. So
obviously, somebody was getting some benefit for what was
being done, so it wasn't just bestowed on a group.

And even their own -- if you look -- again, I
pull back the SIFMA comment letter that was -- that

addressed -- and some of the points here are spot on, but
had a different point of view -- this was about the
enhancing transparency of operations of ATSs, about
granular disclosures. It would be difficult to keep up
to date and give the way products and services may evolve
and the way the internal operations, reporting lines,
organizational changes, and staffing may change. Public
disclosure, proprietary, confidential information could
pose unintended consequences. So broadened scope or
detail -- it has to be impractical or unhelpful.

The point is that it is not going to be the
same across. You know, he has a view of -- specifically,
of how he's looking at those expenses. They may be
completely different and very commercially -- reasons why
other exchange groups may look at them completely
differently. And it could convey some cost negotiation
or contracts that we've been able to negotiate. Maybe
they're lower, maybe they're higher than others.

So there may be some unintended consequences,
like I said. And that language that I just read was
actually from a SIFMA letter back to the SEC. So this is
not new information.

MR. REDFEARN: So let me just try to simplify
this a little bit. I think one of the things that we've
heard in the course of today and yesterday is a number of
market participants who say, you know, if I want to
participate in U.S. equity markets, I need to buy this
data, and I need to connect to this market. And just
hands down, I can't -- if I'm not connected to these
markets and I'm not buying this market data, I can't
participate in the marketplace.

So we have that, which we're trying to
reconcile in a context where we do see fee filings that
come in that are, you know, in some cases, a 50 percent
increase from what they just were. And so we're just
trying to -- we -- again, we need to figure this out.

There has to be some basis of determining fair,
reasonable, and not discriminatory in this context
because it is different about -- it's not necessarily a
product you can say, oh, I want to participate in.

But people couldn't not buy, you know, the Cboe
markets data, or the Cboe -- or connect -- maybe they
could change the number of ports or the level of ports,
but they still need to connect. And probably the virtues
in the top 50 firms or whatever it is need to buy, you
know, the fast stuff.

So that's -- again, it's that context, where
we're seeing that, and we hear, you know, from earnings
calls, some of the growth that we're seeing. We just
need to figure out how to reconcile that again.
There are reasonable and not unreasonable discriminatory -- we need just as -- I know it's tough. We have a tough challenge ahead of us, as well, that we need to figure out without, you know, going down -- we don't want to get into, you know, splitting babies or rate-making, or all those sorts of things. Those are very undesirable things. But we do have a predicament that we're trying to solve.

MR. SCHELL: So just one minor point that John made earlier that I want to emphasize again is just that I think if you take a longer-term perspective of those changes over time, I think it will be a much better picture versus any one point in time of a change to it. And I understand, Brett, your request and the challenge ahead, because you've told us now three times, and I think we're getting it. But so I get it. And -- but I do think that longer-term perspective, which I think maybe came out more subtly, but taking a -- looking over longer term will, I think, help create that perspective, as well, again, because of commercial changes in decisions and where that goes. So --

MR. GRAY: Larry?

MR. TABB: I think we're locked into this battle. I think that we're trying to, you know, look into an opaque ball and try and discern different costs and things. And, you know, it seems to me, from a simple standpoint, or -- simple standpoint, you either need to make it competitive, where there are -- other people can compete for the same service, which is very challenging in this space, or you really need a really good understanding of cost structures.

One that these guys may not want to make public, but maybe make it, you know, privately available to you guys so that they can be aggregated and then somebody needs to make a determination as to is this fair or reasonable or not unreasonably discriminatory. Otherwise, I think we're just in a -- you know, we're just yelling at each other.

MR. REDFEARN: There's no yelling, Larry. There's no yelling. So splitting babies; no yelling.

MR. YETTER: That was angry Chris who was yelling. This is happy Brett.

MR. SCHELL: I've heard Chris yell. He wasn't yelling yesterday.

MR. GRAY: So I think Brett's comments might provide a good segue to -- we've been primarily talking about the SIP, but some -- we started to move, I think, into the proprietary data fees and access services. And one of the things we've been talking about today is not just to -- at all the panels is not just to assume that exchanges, I think, worked to lobby to get consolidated volume added to those products, because it would make those products more marketable for them.

So, when it was in their, you know, interest to be able to sell these new products, they were right at the table to help with improving the data that was available for those products. And then we watched over time as there was competition amongst the three exchanges, and the key word there being competition. The price points for those products started to drive down over time, as well. So that's why we would be a believer that competition is our friend in this landscape, and it's worked to our advantage.

In the opposite end of the spectrum, we've seen exchanges, I think, wanted to talk in this panel about the funding of the proprietary data and connectivity services, and the fees for those services. So maybe I'll open up the question. I think it's been touched on, but just as a general question for the panel, do you think competitive forces in the proprietary space are helping to discipline the fees for these services?

Marcy --

MS. PIKE: I'm sorry, I kind of jumped in there. I do -- I have -- seen some conditions where competitive forces, I think, have helped with the fees for proprietary -- and I'll talk about proprietary data products.

All of the exchanges talked about their alternative fee products, you know, whether it's Cboe 1 or NASDAQ Basic -- NYSE has their version of it. And when we saw those products first come into the marketplace, they were priced a certain way by some of the early entrants. The products were missing some things that we needed. So an example of one of the things that they needed when they were first launched by some of the exchanges was consolidated volume. The SIP products are core products, but to think in terms of where we are today, or other core, you know, types of products that people really need that are not the SIP.

So we also wanted to talk in this panel about the funding of the proprietary data and connectivity services.
marketplace, we have also seen a ridiculous increase in
price for those products, as well.

MR. BABYAK: I’d jump in and say again this is
not a case of first impression. The impression before
the court in their coalition was -- or is the
competition, as it related to, at that point, the NYSE
and the NASDAQ direct level 2.

And there are actual tests that one uses to add
-- to ascertain whether products are substitutable and,

hence, whether they’re competitive forces at play. And
the court came back, as the Commission had subsequently,

and said no, there were not, both as to the lack of
substitutable products, and also as to the lack of the
undisputed competition in the order flow space having any
capacity to constrain costs in the market data space.

So again, this is not being raised here as an
initial matter, this has been something that has been the
subject of litigation going back to 2008.

MR. JONAS: So yes, for the prop kind of, you
know, top fees, absolutely, competition has really made a
big difference, I think.

When it comes to the depth feeds, you know, as
Greg said, absolutely, clear as day, no competition,
whichever. And it’s not just fees that increase, it’s
new products that are aimed at very specific target
markets that the exchanges seem to know won’t be able to
say no, because once one participant takes them, everyone
is kind of forced to for -- you know, as we talked about
yesterday, best ex purposes, as well as just staying
competitive.

One of the things that I struggle with is --
you know, yesterday Chairman Clayton told us about how
the rest of the world is following our every move, and
we’re the envy of the global markets. Yet I just cannot
get my head around the fact that someone like the London
Stock Exchange -- I’m sure you compete with them, but
they’re presumably a monopoly, as well -- I pay one tenth
of the market data cost that I pay in NASDAQ. Sure,
smaller volume market. If you look at somewhere like
Toronto, a much smaller market, of course, but it’s 16
percent. Also somewhat of a monopoly. It just -- I -- it
doesn’t make sense to me.

MR. BABYAK: I can help you. In Europe the
competition authorities aren’t precluded from reviewing
these products. Here in the States there’s a doctrine
where if an -- if regulatory agency, the expert agency,
occupies the field, that generally keeps the competition
authorities -- I wouldn’t be surprised if that has
something to do with that.

MR. JONAS: And, I mean, you know, I’m sitting
here, looking at the spreadsheet, going over new products
and increases. And, for the most part, some of these new
products -- and don’t get me wrong, they’re very
innovative and exchanges have invested a lot of money in
them, and they should be compensated for that -- but I
don’t necessarily know if they had asked all of the
industry, that they would have even wanted them in the
first place.

And so, obviously, exchange is in it to make
money. But I was laughing, I was at dinner at STA a
couple weeks ago, and I was sitting across from my NASDAQ
rep, and he was explaining how his wife had just upgraded
her iPhone, and that, you know, how she just had to pay
for it for two years, and then she owned it, she was
done. And I said, “Well, why doesn’t it work that way
with my FPGA feed?”

(Laughter.)

MR. JONAS: You know, I’ve more than paid it
off at this point. And it’s not just the FPGA, it’s Dom
time and his team’s time, and they’ve done a great job.
But at some point it just feels ridiculous.

MR. GRAY: Okay, we’re starting to run short of
time. And one thing we definitely wanted to pick up on --
I think, John, you raised it specifically in your
opening remarks -- is platform theory. So I want to --
time for you to talk about that, and also to see whether
some of the other panelists have a response.

MR. YETTER: Okay, good, thank you. Yeah. I
mean we don’t believe you can actually divide the
exchange up into little pieces and allocate costs and
assess, you know, the fairness of fees in that way,
because exchanges are, in fact, two-sided platform
markets, and there is trading on one side and data on the
other side. And the value of one side of the platform
depends on the number of participants on the other side.

So data becomes more invaluable, the higher
your trading volume. If your trading volume falls off
because you’re not competitive in that respect, you know,
at some point people start to say, “Maybe I don’t need
that.” And, you know, even those who do need it, they
don’t need quite as much. They -- you know, there are
variations that people can make about how much they buy
of a product, even if they feel it is very important to
their business model.

And the U.S. Supreme Court recently, you know,
recognized this economic theory in a case American
Express v Ohio. And I just wanted to sort of read a few
quotes from that case, which -- because I think they’re
illuminating.
They said that the fact the two-sided platforms charge one side a price that is below or above cost reflects differences, and the two sides demand elasticity, not market power or anti-competitive pricing. Accordingly, evaluating both sides of a two-sided transaction platform is necessary to accurately assess competition. Competition cannot be accurately assessed by looking at only one side of the platform in isolation. And evidence of a price increase on one side of a two-sided transaction platform cannot by itself demonstrate an anti-competitive exercise of market power. To the contrary, to demonstrate pricing above competitive levels, it is necessary to evaluate the platform's pricing on both sides of the transaction platform.

So, you know, we've got a world where there is this fierce competition for order flow. And you know, we can't exist without it. The people who provide it to us call us all the time to give feedback about things we've said. Somebody, you know, misspoke on this panel, you'll probably get a phone call. And there may be shifts in order flow. And we have to be responsive to that. And -- but you also have to look at the market as a whole, and whether, you know, actually competitive value is being delivered to customers, broadly speaking.

not just, you know, looking at one thing and saying, "Well, the cost is -- this, you know, box of cable is $89, and they charge something else, and so that can't be fair." You have to look at the whole package.

MR. REDFEARN: So Brad or Marcy -- I don't know who would be best to answer this -- I guess the sort of - - tell me if I'm simplifying this properly, but it would -- the notion is that if a market data fee increased that you didn't like, then you would -- could conceivably -- could or would trade less with that particular venue. Think about that, in terms of both principal flow and customer flow.

MS. PIKE: I've just -- I've never seen that practice in any of the firms I've worked at, including my current firm. So that statement is just really foreign to me, to think that those things are so inexplicably linked together like that, that the behavior on one side of the house is affecting the behavior on the other side of the house. I don't see that happening. I don't know about you, Brad.

MR. JONAS: Yeah, when I think -- if a change in the data feed is not really going to -- you know, we don't have a knob where we just say, oh, let's punish NASDAQ. It's based on what's happening in the market. The more market activity we see, the more we trade.

And just, you know, to speak to this platform model, I totally agree. And actually, when I first started looking at it years ago, I would say to my NASDAQ rep, "Why can't you guys just look at our overall cost holistically?" Because I pay for a cross connect that's high in cost, or in price. I pay for access fees, session fees, dedicated gateways, ports, transaction fees, then the market data fee, and then you're getting the SIP revenue back on it.

It's just -- it's like I'm getting hit every step of the way. And there's got to be some kind of happy medium. But obviously, what I was told was the Commission doesn't allow looking at pricing in a holistic manner like that.

MR. YETTER: Well, and what I'm saying, though, is that you have to look at the cost to execute trades, because that's part of the picture, too. And that's extremely low, right? And in some cases, negative -- many cases, negative.

You have to look at, you know, how much SIP revenues flowing back to people through their reporting of trades to dark pools, which is another form of competition against exchanges. Nevertheless, we, you know, effectively encourage that by -- because the demands from the industry are that we share that revenue.

So you kind of have to look at it all together and not just say, well, this cost seems high; what about the costs that are extremely low or negative?

MR. FACINI: Isn't that a commercial choice that the exchanges make to be competitive in that space?

And now you've basically pushed that decision back on your customers to continually increase the cost of the other products that they do need to stay competitive?

MR. YETTER: No. I mean we have to cover our fixed costs. And if we were charging marginal costs or negative pricing for everything, we would not be in business.

MR. FACINI: Definitely not for everything.

MR. YETTER: So there is --

MR. FACINI: You could recoup them somehow.

MR. YETTER: You -- yes.

MR. FACINI: But more reasonably.

MR. YETTER: You charge an --

MR. FACINI: Fairly and reasonably, actually.

MR. YETTER: You charge an extremely high transaction cost, so you have a different business model.

MR. FACINI: Sure.

MR. YETTER: And that's competition.

MR. FACINI: I think Brad pays more in his transaction fee costs on a single transaction on your
MR. GRAY: So we're almost out of time. So maybe for just one last question that's probably pretty related to the platform theory -- was just to ask specifically with respect to at least some of the proprietary data products and services.

Do you have an alternative if, you know, you thought that the price was too high for these products? Is there, in effect, an alternative that you could move to and provide some price discipline?

MR. JONAS: Looking at just the market data, potentially but looking at the platform, overall, I -- and this is probably not even allowed and also way too burdensome, but it almost comes down to each individual participant.

And, you know, I think yesterday someone mentioned that one of the -- you know, most of their participants were getting everything paid for in rebates, anyway, that they weren't paying anything to the exchange. Not in my case.

So I don't know that there is a one-size-fits-all model there. I think that, for the exchange's sake, as well as ours, if you do a proper business case before releasing some product -- meaning check with the market, to be here.

MR. GRAY: So we're going to take a 15-minute break, and we will start again at 3:00 for our last panel.

(A brief recess was taken.)

MR. GRAY: It's just amazing how quickly that works here. Say, "Take your seats," and everybody gets quiet very quickly. I was saying a lot of industry events that usually takes a little bit longer. So should we start early? Then maybe we can end early.

(Laughter.)

PARTICIPANT: It's Friday, Brett, that's how that works.

MR. GRAY: Is that a good idea?

(Applause.)

MR. GRAY: Let me just say, first of all, because I know people may start running out of here at some point, thank you all so much for joining us, thank you to all of our panelists from throughout the course of the two days. It's been really helpful discussions, really great participation. And I know I'm front-running that a little bit on this particular panel, so -- but I'll just say in advance, that's -- it's been really helpful, and we appreciated all of you all being here.

And again, we're very enthusiastic about having continued engagement. Also, as follow-up on the common file and elsewhere, because these things obviously don't get figured out in a day or two days.

So, with that, let me turn it over to Mark Donohue, who is going to lead us through the last panel.

MR. DONOHUE: So welcome back. I'm -- trust you all are here. And thanks to you guys for coming up here. We've saved the best for last, of course. This final panel is about transparency.

Obviously, market data and transparency go hand in hand. So let's begin to be transparent about our panelists. So can each of you please introduce yourselves?

MR. CARRAI: Good afternoon. My name is Kevin Cbo, I held roles at BATS, Direct Edge, and also NASDAQ.

I would like to thank the Commission for inviting me to participate on today's panel, and I look forward to the discussion.

MR. DONOHUE: Bill?
MR. CONTI: Bill Conti. I have been working at Goldman Sachs for the last 14 years managing market data. I've been managing market data for over 30 years. That's all I've done. And for the last two years plus I've been an advisor on the CTA-UTP operating committee as an institutional representative. And also I'd like to thank Brett and the Commission and everyone, panelists and everybody, for this roundtable.

MR. DONOHUE: Thank you, panelists. Earlier and Europe, across multiple asset classes. Our customers have been a while since I've been there, but there are a lot of familiar faces here. So thank you very much for the opportunity.

MR. GELLASCH: Hello. I'm Tyler Gellasch, the executive director of Healthy Markets Association. And prior to launching that with a couple of colleagues in 2015 I served here as counsel for a commissioner. I was also in the United States Senate staff. And I'm thrilled to be here today and thank you for hosting the event.

But contrary to what some of -- we heard yesterday about there being an absence of non-profits, we actually are a non-profit and are investors. And frankly, we might not be here if there were more non-profits in the world.

But I want to begin by thanking you very much and I look forward to the remarks.

MS. HINMON: Hello. I would like to thank the Commission for the opportunity to speak this afternoon on transparency. My name is Melissa Hinmon. I'm currently director of equity trading at Glenmede Investment Management. Glenmede runs a variety of liquid alts, fixed income, and equity strategies primarily for institutional investors. I have 32 years of business in the industry on various capacities, both the buy and the sell side. In addition to other industry responsibilities I do serve as NYSE ARCA's participant selection for the UTP CTA advisory committee.

The opinions I share today are mine alone, and they are not that of Glenmede Investment Management, nor are they that of the advisory committee.

MR. MASSO: Good afternoon. Thank you. I'd like to thank the Commission for inviting me today. My name is Anthony Masso. I'm the co-founder and president of Succession Systems. Succession is a technology firm that offers market access compliance technology. Our solutions currently include pre-trade risk, real-time portfolio management, surveillance, and post-trade compliance reporting. We operate in the U.S., Canada, and Europe, across multiple asset classes. Our customers include large banks, buy-side firms, small broker-dealers, and clearing firms.

MR. STEINER: Good afternoon. I'm Rich Steiner. I'm responsible for electronic trading strategy at RBC Capital Markets, where I've worked for the past nine years. At RBC one of the areas we focus on is improving trading outcomes for institutional investors, which gives us a good perspective to opine on these topics. We are also active participants in Washington, meeting with policy makers and regulators to advocate for more efficient, more transparent, less conflicted markets.

And today I'd like to thank the chairman, the commissioners, and the division of trading and markets for having us here today. We look forward to our conversation.

MR. DONOHUE: Thank you, panelists. Earlier this year in a speech announcing our roundtable, Chairman Clayton laid out a principled approach to equity market structure. One of the guiding principles is facilitating transparency. He said, "Regulations that promote public access to material information can empower investors and can also energize the competitive forces that benefit investors. In this way, transparency can substantially reduce the need for overly specific and prescriptive restrictions on conduct that can impede competitive forces and in an evolving complex system, can become outdated, ineffective, and counter-productive."

Over the years, the SIPs have made significant progress to improving transparency. Their websites contain metrics regarding latency, capacity, volume, and subscribers. They recently added disclosures for revenues and distributions and a plain English description of the revenue allocation formula. They also publish summaries of the quarterly operating committee meetings.

Our rule filing process also provides transparency into market data, both for the SIP data, proprietary market data, and access fees. But concerns have been raised that the existing disclosures are inadequate and do not provide enough information for the market participants to make informed comments and for Commission to make findings.

As we're nearing the end of the day, let's jump...
right in. To organize our discussion, let's begin with transparency related to SIP process, and then move on to rule filings. And then, if there's time left over, we can discuss our weekend plans.

(Laughter.)

MR. DONOHUE: So, Bill and Melissa, you're both on the advisory committee. Can you talk to us about issues related to the transparency of the SIP process to begin the panel?

MR. CONTI: Sure. So first, as I said before, I've been in market data, as a lot of folks here have, for a few decades. You know, back in the 80's and 90's we saw technology evolve at a slower pace, right? Green screens, video switches -- remember video switches? You know, LANS. I think we're at a point now where technology is moving at a pace almost faster than time itself, it feels like sometimes. It's hard to keep up with. And that's for everybody, I think, making policies in a time when things are moving so rapidly. It's difficult. It's difficult to keep up with making those policies to address today's technology, no less looking forward to the technologies in the future.

You know, we've heard a lot of talk here about the overall cost to trade, the transaction side versus the market data side, you know, and it's real apparent that -- and actually, it was just said on the last panel, which I find surprising, that to be competitive in the transaction space, exchanges are willing to take losses on that side of the margin. So where are they making up those revenues? They're making up the revenues on the market data side. I think that's what everybody here has been saying and been pointing to.

So again, somebody mentioned the balloon effect, as you're squeezing the transaction revenues. They're looking to get it somewhere else where there is not -- where there is a monopoly, okay? So it's competitive on the transaction side. That's why fees have come down. It is not competitive on the -- especially on the proprietary data side, where we have not seen fees come down. We have really only seen them come up.

You know, we realize, again, on the consumer side, how much cost and manpower it takes to collect, process, disseminate -- you know, a lot of talk about cross-connects, connectivity fees. Again, the exchanges are dealing also with third parties. I think people here on the East Coast are familiar with Local 3, the International Brotherhood of Electrician Workers. No, cross-connects, unfortunately, are kind of expensive down that road.

What we would like to see, though, is transparency, full transparency. And I know you're talking about the SIP, but I think we need transparency on both sides, the SIP and the prop side.

We applaud that the SIP has started to make revenues public, some revenue data. We think it's a big step. We think that there are steps that have been progress. But we started from a black hole, right? So we started from not knowing anything.

Some of the data that's been -- revenue information that's been released, while applauded, does not show the whole picture. And I think that we need full transparency. We're advocating for full transparency 100 percent, not just from the SIPs, but from the proprietary sides, as well. Again, Cboe has said that their SIP revenue is, you know, two or three times more than what their proprietary revenues are for market data. I don't think NASDAQ and NYSE will have the same view on that. I think that their -- we perceive that their revenues on the prop side are pretty deep and pretty wide.

To get to what we'd like to see, a cost base model, which we do think it should be, we need that full transparency of all revenues from SIP and from the prop side. And we're talking, yeah, by product line, too.

right? Pro, non-pro, level one, open book, ARC book, total view, connectivity fees, access fees, internal distributor fees, external distribution fees, per query.

We should -- and look, if some of this is confidential and shouldn't be released to the public, it should at least be given to the Commission. One hundred percent disclosure is how we feel we can get there.

We've heard a real lot of stats and numbers go back and forth: 3,000 percent increase, 1,110 percent. We've heard, you know, the revenues are flat. We've heard the fees have stayed flat. We heard somebody in the last panel say that non-display fees have come down. I haven't seen them come down.

I think the only way we're going to get to the end game and real transparency is 100 percent disclosure by the exchanges, SIP and prop side. And that is, again, granular on the revenue side, granular on the expense side. The expense side for all those things I just listed: direct expenses, indirect expenses, shared expenses between the SIP and the prop side. I don't think the Commission can really make a rational, justified decision on the reasonableness and fairness of fees unless they have all of the information. And probably not all of the information, just current. Probably an analysis over the last 5 or 10 years or so.
Again, we hear that certain fees, you know --
maybe be open book or total view fee hasn't changed in
five years. But the -- you know, the access fees went
up, or the non-display fees went up, or one of the other.
And it's a cute game, you'll alternate them every year
so that a fee hasn't gone up in five years. But every
year there are new fees or increased fees that are being
introduced.

You know, since Reg NMS and since the exchanges
have become for profit, they have a -- you know, a
consolidated, acquired other exchanges, right? NYSE was
four exchanges, Cboe four exchange. NASDAQ has swallowed
up a few things. They used to be different data centers,
different -- completely different operating units.

There are synergies that the exchanges have
been able to take -- and again, for profit, you want to
do the right thing for your shareholders, I can
appreciate that, and you want to show the bottom line.
You're going to acquire assets, you're going to build
your revenues. You are, however, also streamlining your
functions. There's overlapping functions, there was
overlapping people. Systems converged. There were a lot
of efficiencies and savings, I'm sure, that the larger
parent group enjoyed, and none of those savings or even
fees staying flat were passed down to the customer. So
we recognize that, as well.

To the point of -- somebody had spoke about
administrative burden. Another thing we would advocate
for and like to see is on the administrative side we
would like to see the policies standardized, harmonized.
You know, just to go back to transparency,
though, we would also like to see transparency delivered
in a standardized and consistent way, full transparency.

This way we can compare apples to apples, where we want
oranges to oranges, where we want -- we'd like to see
that across all of the exchanges, the same granular --
and it can be done. The auditors certainly know. I mean
they know all the details. They come in and they audit
us. They know exactly how many users of every one of
these servers and what the revenue coming in is.

Back to the administrative burden of
administering all of this, if you look at the fee
policies for the exchanges here, all the exchanges, and
even globally, every fee schedule, it's just the fee
schedules. They're 20, 30 pages long, dozens of
footnotes. They're very complicated. They are not even
consistent within an exchange, a lot of these policies.
It gets very, very difficult to administrate.

You know, even within NASDAQ, for an example,
non-display, the SIP is a separate UTP. They have
categories. NASDAQ, for depth of book, they are counting
servers, and they put them in tiers, and you pay for a
tier. For BX and PSX you're counting servers. They're
charged as a users. For NASDAQ for the OMEX stuff, I
think, there's a different policy. Very difficult to
administrate, very difficult to have all of these rules
in our systems. An auditor's dream, right? Because
there's so many different rules.

Are we enforcing them correctly? And when
we're not, they jump all over that. And with regards to
transparency, we think audit -- the audit numbers should
be included in that transparency of the revenues, because
that is a business line now. It shouldn't be, but that
has become a business line, auditing. And it's quite
burdensome to us to put all that information together.

So again, we feel -- and there's been a lot of
numbers and a lot of distractions thrown around. And
Brad from -- said the other day, we just want to see that
full transparency, at least to the Commission. As much
as can be made transparent to the public should be put
out there. But there should at least be 100 percent full
transparency on all revenues and all expenses to the
Commission, so that they can make rational, justified
determinations on the reasonableness and fairness of the

data.

The -- and Cboe does a little bit better of a
job of reporting on that stuff in the quarterly reports.
We'd like to see more. We'd certainly like to see a lot
more from the other exchanges that's public. If it can't
all be made public, it should 100 percent be made
available to the Commission.

The reluctance of exchanges to do that 100
percent can -- it perpetuates our suspicion that the
market data fees are just egregious and too high. Maybe
they're not. They might not be. They might be
justified, they might be fair and reasonable. We won't
know until we have all the information to make -- or at
least the Commission won't know until they have all of
that information to make those determinations.

I think maybe I'll stop right there for now.

MR. DONOHUE: Thanks, Bill.
(Laughter.)

MR. DONOHUE: Did he leave anything for you,
Melissa?
(Laughter.)

MR. CONTI: I have more. I'll give you some of
my notes.

MS. HINMON: All right. I'll just turn back to
you, then.

All right. I -- as a institutional equity
trader, I believe exchanges do offer significant value proposition, play a very important role in integrity of our markets. But because they are so important, full disclosure allows us to be better consumers of data. It might help dispel any misunderstandings, especially how committed the exchanges are to allocating resources to enhance the competitiveness of the SIP versus how resources are being allocated to enhance their proprietary products.

A few discreet examples of how transparency could be further improved include fees, infrastructure, and basic -- more specifically. Disclosure of SIP direct admin costs and framework around how fee-setting is tied to those costs and/or market share. Details around the accountability for performance, for performance monitoring, public disclosure of outages and latency. And I think it would be good to know about any potential conflicts of interest and how these are mitigated or dealt with, including -- though not limited -- of the executive sessions and, of course, voting rights, to name a few.

MR. DONOHUE: Thanks, Melissa.

Rich, your firm, RBC, was one of the many capital market participants which signed the petition for rule-making concerning market data fees. Can you walk through some of that that's relevant here, and give us your thoughts on SIP process transparency?

MR. STEINER: Sure. Thank you, Mark. So the petition you're speaking of was submitted to the SEC last December, last year. It was signed by 24 firms. In addition to our firm, RBC Capital Markets, Citadel signed it, Bloomberg, Morgan Stanley, UBS, eTrade, and on the buy side we had Fidelity, T. Rowe Price, MFS, and Vanguard, to name a few.

So regarding the actual proposals, there were a few asks. We proposed a rule requiring disclosure of certain information on equity market data fees.

We proposed the SEC remove section 608(b)(3)(1) from section -- from SEC rule 608. And this is around immediate effectiveness. So the rule amendment would preclude SIPs market data fee filings from becoming immediately effective. And we would require a public notice and comment period prior to the SEC's approval or disapproval of any fee changes, thereby allowing transparency and stakeholder input.

And third, we proposed the SEC study equity market data fees. So we suggest the SEC review -- consider the development of a more robust and transparent framework for assessing market data fee filings. In particular, the SEC may want to enhance its economic analysis or require the SROs to provide a more enhanced analysis that includes not simply the direct impact of a fee increase, but also the indirect impacts on distribution and usage channels, including whether the data contribute or detract from market efficiency and competition.

So, you know, ultimately, this comes down to transparency and disclosure. And granted, after Bill and Melissa's 15 minutes or so touching on those, I think they hit on quite a few. But what you're seeing here is the fact that it's challenging for market participants to have an idea of what -- if what we're paying is reasonable, because we have nothing to compare it against, right?

For starters, it's been made quite clear over the last couple days -- say, you know, some will debate it's competition, right? We have to provide -- we have to go -- you know, take in proprietary market data feeds from the exchanges.

We've heard folks up here -- again, over the last couple days -- say, you know, some will debate it's commercial enterprise, or a commercial decision, that they need to take in proprietary data feeds, perform at electronic trading platform. Our firm does, we need to, but I would posit that that is not a commercial decision. That is a decision that we look at providing best ex and our best ex obligations. And so there is -- while technically the SIP provides for best ex from a regulatory perspective, there is a better best ex in getting faster feeds and faster connectivity. And so our clients demand that of us. They look at that as part of their best ex obligation and their fiduciary obligation, as do we.

So, to have no competition in that environment, a pay for play kind of mentality, is troubling. And again, that's one of the key things that I think this proposal speaks to.

MR. DONOHUE: Thanks, Rich.

Anthony, you come from a reg tech vendor. You have a different perspective. Can you tell us what concerns or -- you have about transparency, or whether you feel like we're in the right balance right now?

MR. MASSO: Sure. I can speak on behalf of the clients that I deal with. I mean in my business, basically, we deal with a lot of these costs. We help them through the costs that they have to subscribe to market data. And I can tell you that many of them are just -- I think the confusion comes from there's not enough transparency around, like, the entitlements. How
do they determine, you know, some of these definitions?

People feel like they’re paying for things two
and three times, that they’re very arbitrary. And I
think that’s a big frustration. And it starts to feel
like, you know, you’re being ripped off, even if you’re
not, because you just -- you don’t understand the whole
process.

And I think also they kind of live in fear, as
a result of that. Because on the other side of that is,
you know, the exchange that -- you know, we’ve heard from
the other panelists on the prior panel that, you know,
they’ve kind of built -- these firms have built, like, a
whole division around just keeping track of entitlements,
keeping track of the number of users, the number of
servers. You know, non-display fees are particularly
troubling for people to wrap their heads around for some
reason. And maybe it just needs, you know, more hand-
holding by the exchanges.

Maybe they can, you know, kind of come in
earlier in the process when someone is subscribing to
data and sort of explain it to them. Right now it’s --
the process is not -- isn’t managed very well, I think.

You know, you subscribe to a data center, let’s say, to
- or a company to pull the data. And right away, if
they’re distributing that data to you, they point you in
the direction of the number of exchanges that you need to
subscribe -- you know, that you’re going to take the data
to fill out these entitlement forms.

But there is not much help around there,
there’s not much conversation. You go to a website, you
fill out a form, you describe how you’re going to be
doing it. And you just don’t get any feedback. And I
think that’s part of the problem for a lot of firms.

MR. DONOHUE: Thanks, Anthony.

Tyler, you’ve had some comments in our common -
- which we appreciate, and we encourage everybody --
(Laughter.)

MR. DONOHUE: So perhaps you’d just jump right
in.

MR. GELLASCH: Yeah.

MR. DONOHUE: And tell us what you think about
SIP transparency and processes.

MR. GELLASCH: So I’m going to try to be brief
with my comments, but you all know I struggle with that.
So I generally think it’s usually the 168th footnote
that is the one that’s really going to persuade people.

But, you know, as we start the discussion,
we’ve heard a lot of discussion, particularly yesterday
and today, about how much the exchanges make on market
data. And we’ve also seen a lot of interplay of -- are
you paying for trading by subsidizing with market data
was just heard earlier.

Frankly, I’ll start with something that might
be shocking. I don’t care how much the exchanges make on
market data. I just don’t. The Exchange Act doesn’t
care on how much the exchanges make on market data.
Although I do appreciate how much the CTA and the UTP and
the distributed revenues and the enhanced transparency
there.

The Exchange Act, actually, the law cares
about how the exchanges make their money. And when the
SEC adopted Reg ATS and expressly authorized the
demutualization of exchanges, it dedicated about one
paragraph to the whole discussion of what that might mean
to the regulatory framework. There wasn’t a whole lot of
discussion at the time, and it makes sense because people
wouldn’t think how is this going to impact the markets in
ways that people couldn’t imagine.

We’re going to see -- thank you -- but we --
you couldn’t imagine there would suddenly be dozens of
complex order types. You couldn’t imagine that there
would be hundreds and hundreds of pricing tiers. And you
couldn’t possibly imagine that there would be all these
new market data offerings. And I’ll use as an example
one.

You know, 2012 connectivity, just for an
example, at one particular exchange was $2,500 for a 10
gig connection. Then it goes to 4,000, then to 6,000,
then to 7,000, then to 7,500 this summer. At what point
have we boiled the frog? Each of these things is about
how the exchanges make their money, and that’s how I
worry about it.

So I worry about how can a small firm compete
when it costs $50,000 per month to get NYSE integrated
and NYSE American and NYSE Arca, connect them all, and
that’s before sending a trade. That’s before connecting
to the other exchanges. I worry about how a buy-side
firm is going to be measuring its best execution quality
-- and apparently we’ve had some discussions about that
over the last couple of days -- when they’re comparing
their executions to stale prices.

So I think we are talking about transparency,
but I do think we have two different buckets. First,
what should we get from the SIP? And, obviously, the SIP
isn’t enough information, we’ve heard that a lot. And it
isn’t fast enough. We’ve heard that a lot.

So we’ll start with the conclusion. I don’t
understand why it can’t be at the same speed as the SIPs
-- the SIP can’t be at the same speed as the prop feeds.
I also don’t understand why it can’t include depth of
book information, auctions, and odd lots.

As for the costs, we need to know them, for the
reasons articulated many, many, many times. Distributed
revenues are nice, but we need to know the costs. And
it's a public utility, it should be regulated like one.
That's not me saying that, that's the government saying
that. Congress said that in 1975.

And by the way, you know, as we look forward,
we have to think, you know, what did we see yesterday? I
was stunned yesterday when we saw a regulator ask a
regulated entity on stage, "Could you provide us with
some information about things?" And the regulated entity
said, "Nah, this isn't an earnings call. Sorry, we're
not going to do that." We have a lot of regulated
entities here in the room. I don't know many who would
get that by their general counsels, right, who would say,
"Yeah, no, we think in a public forum it's a good idea to
do that to your regulator."

And by the way, with respect to Bill here, and
I appreciate his thoughts about maybe just give it to the
SEC, I would argue not good enough. Because I don't have
confidence that the SEC has the resources dedicated to
understanding these things. I don't think that they have
the economists. They have some economists, but frankly,
not enough dedicated to this.

So the second set of questions I want to talk
about also addresses the first, which is what should
exchanges and the SIPs plans be filing? What should the
contents be? We've heard a lot of talk about
reasonability of fees. I think that that's a little bit
of a sideshow, as well, and I think it does run the risk
of getting into rate setting and cost setting
conversations. I agree that we need to know that
information, but I'd also say the Exchange Act is really
clear, what the expectations are. It has to be a
reasonable fee. It has to be equitably allocated. We
don't seem to see a lot of discussion about that.

You know, it's gone as premise today that some
firms are paying a whole lot more for trading and data
than others. That's been a discussion that we've all
talked about. Well, why is that? And who are those
firms? So is that really equitable?

Same thing with discriminatory. These filings
have to be non-discriminatory. And one of the things I
find really interesting about the filing is, well, if I
were to think about how do I determine if something is
discriminatory, it's hard to know that, unless you know
who gets it, who doesn't, and what it is. And if you
read any of these filings, you don't know that. You
don't know who is actually buying the thing, who is not
buying it, and what the impact of them is.

And then, on competition, what's the
competitive value of the service they're offering? Is it
really something that's going to make them materially
more competitive? We heard it over and over and over
again over the last several panels, that you need to buy
the fastest information and the most comprehensive data
feeds.

So as I sit here and think about it, how do we
know if it's going to be affecting a competitive burden
if we don't know who gets it and what it is. And the
only people with that information are the exchanges
themselves and they have not provided that in nearly any
of their filings.

So I want to say -- I want to thank the
Commission, frankly, for, over the last year and a half,
really starting to dig in. And we've seen it in a number
of filings, and we saw it last week, and trying to
enforce compliance with the Exchange Act.

But there's a lot more to this than just the
reasonability of fees. And frankly, that's what I am
concerned about, is that the discussion will be what's
the profit margin, what should be the profit margin on
SIP? Is it 10 percent? Is it 90 percent? The last time
it was disclosed it was 89 percent. That was two decades
Clayton, when he said that the process of becoming and operating as a publicly operating company tends to make companies healthier. And that is definitely true of NASDAQ.

I also want to start by saying, you know, we have heard what the industry has been saying for the last two days. We have heard, you know, sensible and immediate ways for NASDAQ to improve the firm’s experience with market data. We hear it right now. The contract administration, the billing administration, I -- you know, we can commit to improving on those things. Frankly, any publicly operated company should make it a priority to make it easier for their customers to use their services. And I unhesitatingly commit that we will work to improve those things, and we have heard those loud and clear.

Now, with respect to non-core data, for us it is a question about the role of government. We are hard pressed to find a public policy rationale for more intrusive government regulation here. The Commission has often said that producing and purchasing proprietary data is voluntary. And the pricing can be set by market forces, provided that the market is competitive, and we believe it is.

I will tell you that at NASDAQ we do not feel like we are a monopoly. We have, you know, roughly 19 percent market share. I don’t think there’s a major operating exchange that has more than 25 percent market share. And the last time I looked, 19 percent market share does not make you a monopoly.

The SIP, on the other hand, is -- I think we can all agree is a public good, and we share the industry's view on that, that transparency and SEC oversight should be extensive and, you know, we think they are now. I don’t think I can say any better than Emily did on panel five all the steps that have been taken to improve transparency at the SIPS. So I won’t repeat that. But I will say that we support building on the improvements that have been made over the past three, four, five years.

So in our written comments you will see that NASDAQ has committed to support adding an advisor vote on the operating committee. This has been the subject of a lot of debate. We sense, like Bill was saying, that it is really borne out of mistrust. And we think that having an advisor vote on the operating committee and, frankly, go to the executive sessions -- I mean provided all the privilege and other, you know, conflict information can be worked out, which I’m sure it can -- we think it’ll go a long way to dispelling that trust.
know, fully as we possibly can or, you know, frankly, we are at risk of enforcement actions. So, you know, I don't know, you know -- I don't know that people were aware of that or not.

Just to a couple of points, and then I'll wrap up that, you know, people were talking about earlier. The statute. The Exchange Act. I mean, you know, sorry, I'm a lawyer. What happens at the Commission and what happens at the markets and what happens for all of us who are a part of this ecosystem starts with the Exchange Act of 1934.

The Exchange Act of 1934 says that exchange filings in certain categories are immediately effective, right? That includes fee filings. It's right there in the statute. The statute was amended in 2010. The category of fee filings was explicitly changed to include market data fee filings because Congress, not the Commission – Congress decided that they were of such a character that they should be immediately effective.

Now, they are also subject to notice and comment rule-making. But, you know, if you want to talk about immediately effective filings, it is a big, big issue.

To the -- again, to the statute, the idea about non-discriminatory, that is not quite what the statute says. And it's not quite what the rule says. The rule

says not unfairly discriminatory. And there is a lot of history around what that means. And, you know, we were happy to talk about the details. Not unfairly discriminatory has generally been interpreted to mean differentiation is allowed if it is justified.

And so we have a lot of differentiation in the rules that has been there for a long, long time. We differentiate between professionals and non-professionals, between display and non-display, between distribution and usage. We differentiate based on volume. You know, you give your highest volume users the biggest discounts. Standard practices in every industry out there and 100 percent consistent with the Exchange Act.

I mean we're happy to talk about, you know, what should be in the rule filings. Frankly, we think we do put a lot in the rule filings to explain why we're differentiating and what the basis is. We don't think anybody wants us to say -- and I don't think you meant -- you were saying this, Tyler -- we don't think anybody wants us to say who is exactly buying those products, you know, don't think the firms would appreciate it very much. We would -- you know, we're happy to do that, if people want. But --

MR. GELLASCH: I'd like to point out, by the way, I was --

MR. DAVIS: Yeah, I was just about finished.

I'm sorry, Tyler.

If I could, so, you know, I think -- you know, just to wrap up, I mean, we get the points about, you know, best execution and there needing to be some clarity. We get the points about Reg ATS and, you know, and promoting competition. We're happy to talk about those. But I think we -- you know, we have to go back to the starting point, which is what is the public policy rationale for further government intrusion?

MR. DONOHUE: Tyler, before you go, I want to give Kevin an opportunity.

MR. CARRAI: Please, just for a few minutes, and I promise I'll be short.

Look, I think it's important, again, to note that, you know, the exchanges are, by far, the most transparent part of the life of an order in today's equities market. Virtually everything we do as an exchange is outlined in our rule book and readily available for anyone online. The manner in which we book, display, and execute orders is an -- entirely transparent. And then, like most of these, our fees must be submitted to the SEC staff for review, and they are published in the Federal Register for public comment.

From the products we offer to the fees we charge, all the information is publicly available, scrutinized by the Commission, and implemented with their review or approval.

As we know, there has been an argument, clearly, for greater exchange transparency, and we welcome that opportunity. There is more work to be done in transparency.

But I also -- and Mark, you alluded to that at the start of our meeting -- there has been a lot of work that we've done already. We've increased the number of advisors. We have built, I think, excellent relationships with our advisors, and we've made meaningful changes through collaboration with our advisors and our participants on some changes that definitely have moved the ball forward. And I think that we can do more.

Look, we've talked about executive session policies, which we believe that we can add to. We've talked about conflict of interest policies, which I think are possible, potentially, through an amendment to the plan, that if we work together -- if we work together and again, collaborate and come together from our corners, we can create something that's a good starting point for us. And we can build upon that. So I do think that there is
work that can be done there.
And once we implement those conflict of
interest policies, then you have the confidentiality
policies. So I think the confidentiality policies is
also really, really important to make it free and open
among the advisors and the participants to be able to
speak without having a fear that the next day, you know,
a -- just a, you know, a completely thought-out item or
proposal will be in the paper next day for you to have to
address.
So I think that we can get there. I think it's going to take some time. I think it requires
13 collaboration, it requires compromise. But I definitely
believe that it's possible.
One of the things that I want to mention here
is, you know, we talked a little bit about -- Bill has
talked a little bit about the way in which the policy
aspect and the reporting aspect works with regard to
market data. What the operating committee has done to
try to help that along in terms of what we call audits,
or market data audits, is to develop a system -- CTA has
developed it, it's called UCert, where you can provide
information on your customers and get a report back that
shows you whether or not that individual could be a professional. And that's very helpful, because you

know, we are certainly not interested in the gotchas.
We're not -- you know, everyone might talk about, oh, wow, look how much they made in revenue recoveries.
But the fact is, if we had no recoveries, it would be great, because that means that people -- the -- those are taking our data and reporting the usage, or reporting the most accurate usage possible. They themselves want to make sure that they've got the
appropriate categories. Because again, you know, if it's the case that they're charging their customers for
professional use, they don't have an opportunity to go back and say, oh, by the way, you know I should have charged you for a year's worth of your usage, right?
Here's the thing. We only have one firm that's using it. Only one. So why is that? Why is it that we only have one firm? We've got a system available to help them manage their usage, but yet we have one firm that's taking advantage of it. We need more to do that.
And I don't know if it's that it's a trust factor, you know, it's sort of like, oh, geez, I give you my data and all the sudden you're going to then hit me up with an audit, or something. We got to get past that,
because I know that we can help our customers do a better job in making sure they're doing the reporting and paying their fees accordingly.

MR. DONOHUE: Sorry, I appreciate that. I'd like to flip the question. So instead of what should be transparent, what should not be transparent? What confidentiality -- what information must remain confidential? And let's think about it from the SIP perspective, especially as we consider doing a WebEx of the operating committee meeting.
But so, if I could go back to Kevin and Jeff
and think about what issues are just critical that they are -- they remain non-public --
MS. HINMON: Mark, can I jump in real quick?
MR. DONOHUE: You can.
MS. HINMON: I just wanted to jump in front of Tyler first. But more than anything, going back to the WebEx -- and I really appreciate that NYSE has said, "Hey, let's put everything out in WebEx," and that you're holding hands with NYSE on that one, but I think that if we do go to -- besides beyond mind-numbingly bored during the time that the WebEx is cast, I think that if we do go to WebExing the sessions, I really believe that it will stem a lot of productivity in the meetings. I think people will be less incentivized to speak, I think, public forums -- maybe including yourselves.
And I think that's very important, that maybe
an alternative to WebEx would be a release of the
minutes, rather than the current watered-down version and the summary that's there. Just a thought.
MR. CARRAI: I tend to agree with you. I think, again, sort of my thoughts on making sure that there is free and open discussion, that it's confidential among the entire community, including the advisors, will give everyone a feeling of comfort that they can speak openly and freely and, again, collaborate on what's best, what's best for the SIP.
MR. DONOHUE: So why don't we continue on this thread, just for a minute, and we'll go back to my earlier question.
So WebEx -- so in helping transparency, WebEx versus increased detail in minutes, as opposed to summaries, what's the panel's thoughts?
MR. DAVIS: You know, from my perspective, I think that the number of items that are in the executive sessions where, you know, a lot of this mistrust has been born, has been limited to legal actions, and has been limited to, you know, collection actions or disputes that involve specific firms.
And, you know, so at least as far as the executive sessions go, I think if we can work out a way to keep those kinds of discussions confidential, everything else has been in the general sessions.
And I think we're agnostic between detailed
minutes and the recordings. You know, I agree with
Kevin, whatever promotes the most, you know, free
discussion and will make the advisors and the industry
trust what is happening there a little bit more.

MR. DONOHUE: Tyler?

MR. GELLASCH: I don't think any of it matters.
Frankly, I think it's a better view at a train wreck
that's already happened. I don't really care about the
outcome. So whether or not I get to read about it or
whether or not I get to watch it in a slightly more --
I'll call it held-back version of folks who may feel less
comfortable opening up on a WebEx, or they may be more
comfortable with a -- being typed up and polished
minutes, I think the discussion of more thorough and
thoughtful minutes is always a useful one. Just having
been a lawyer long enough, I've seen that minutes that
maybe start very good have a tendency to get diluted over
time, anyways.

But again, I think until you focus on the
fundamental structure of who has rights to vote, what
those rights are, I don't necessarily think transparency
into it,

And go to the point of having a single advisor,
or having a single vote here, I think the point was
raised several times earlier. Just being outvoted and
losing doesn't really change the outcomes.

So, you know, I would just offer as one of the
very few people who would probably watch the WebEx and
read the minutes, if there is both, I'd love to. I would
just say I don't think that actually fundamentally
changes any of the issues we're talking about.

MR. DONOHUE: So let's go back to my prior
question. And maybe, Jeff, you may have already answered
it. But what information about SIP processing, about SIP
systems, all this stuff, what must remain confidential?

MR. DAVIS: I think I did, you know, answer
that. I think it is very, very limited to, you know,
what is necessary to protect the legal privileges, what
is necessary to protect some of the firms', you know,
individual rights, you know, proprietary rights or
privacy rights, however you think about them.

You know, if I could just, you know, revisit
the earlier point about full transparency to the
regulators, I -- you know, I think we would invite, you
know, some inquiry, you know, by the regulators into, you
know, costs that you are interested in knowing. We are
very, very open to that. You know, I think it is just a
really, really complicated thing, when you go down the
path towards rate-making.

And I'm sorry, you know, you can't have
government-set cost formulas without, you know,
government intrusion and rate-making. You can't have,
you know, a cost-based system without rate-making. And
rate-making involves really serious -- I think Tyler said
it best, you know. You need the economists, you need all
different sorts of expertise to do that. And I think it is, you
know, a complex process.

And I think at the end of the day we would all
be better off just having some guidance about what -- you
know, what is the real purpose of the SIP? What is the
purpose of the revenue from the SIP? You know, what are
the logical and proper uses for the revenue for the SIP?
And then we can talk about whether, you know, the
revenues are, you know, reasonably tied to that or being
used properly for that. And that would be, you know, a
path to moving the conversation forward.

MR. GELLASCH: I actually want to touch on
something you mentioned earlier about the uses of SIP
revenues. I will encourage you to -- our comment letter,
it's 208 pages. And I believe it is attachment 1, which
begins on page 43. And it is the -- it was the filing we
submitted for this roundtable. And it is the original
CTA plan.

And one of the things you will find in that --

and, by the way, it's not -- it wasn't available online
anywhere, we had to go through offsite storage to dig it
out -- but it's actually not true that the SIP was
originally envisioned as a way to compensate for
regulatory purposes or for trading purposes at all. It
was never mentioned in the creation of the SIP, never
mentioned in any of the several speeches in 1972, when
the SIP idea was originally thought of. It was not
mentioned in 1974, when it was originally constructed,
much less 1975, in the Act. In fact, if you read the
original plan, it -- the whole purpose was, in fact, to
provide real-time essential data.

So I just want to go back and say you talked
about the purpose of the SIP being to use those revenues
for other purposes. No, no, no, no, not originally.
And there has subsequently been a discussion by some
staff to say, hey, we'll -- those extra profits -- there
was a concern in 1999, and I'm sure that's what you were
referencing, that said, hey, in 1999 there was a concern
that if you run the SIPs at cost, the exchange, who are
now going to be for-profit, will all of the sudden have
concerns with how are they going to fund their regulatory
oversight functions. That's one paragraph, and I do
appreciate that paragraph, and good of you to find it, but
that was in 1999, not 1972, '74, or '75.
I'll also point out that doesn't mean that we can't agree that that may be something that's worthwhile to have. I think that that's also a separate discussion that this Commission would be worthy of engaging in, is what's the appropriate regulatory function.

I also want to point out to something you mentioned a little bit ago, which was the SEC and the immediately effective rule filing. So in 2010 I actually had the unlucky misfortune of working in the Senate staff and working on the Dodd Frank Act, and, frankly, being involved in this provision.

And one of the things I would say is it deliberately did not -- and, in fact, was contemplated to not relieve the Commission of the burden to review and pass judgment on regulatory filings. The concept of immediately effective did not say that the Commission is now relieved and, in fact, expressly does not relieve the Commission of the burden of finding that these things are compliant with the Exchange Act, including the discriminatory and undue burden on competition.

So I just want to clarify a couple of things you mentioned earlier. I appreciate that. I'll let it go.

Oh, one last part, sorry. Justification. We mentioned that things have to be justified, and I agree that the filings do have to be justified. I'll ask you a question, because it isn't your exchange. So bear with me for a moment, and I'll ask Kevin, as well.

Outside of the SIP, if we were talking about exchange filings, and we were talking about the reasonability -- and let's talk about the prop side for a minute, and maybe some connectivity filings -- what would be the rational justification, a pro-market justification, or a pro-competitive justification, a non-discriminatory justification for a fee for connectivity for the exact same connectivity offering to go from 2,500 to 4, to 6, to 7, to 7,500?

And if so, what would you want to know? What would be the information you think the Commission should have to evaluate that as being a competitive -- what would be the information you think the Commission should have at its disposal to understand that that's compliant with the Exchange Act?

MR. CARRAL: So let me first go back to your comments about filing the -- by the SEC. But so the SEC did, in its Reg NMS ruling, make a statement that I think is pretty important, and I'm going to mention it and sort of paraphrase: "Yet the entire financial burden of collecting and producing market data is born by the individual markets, not by the networks. If, for example, an SRO system breaks down on a high-volume trading day, and it can no longer provide its data to the networks, investors would suffer the consequences of a defective data stream, regardless of whether the networks were able to continue operating."

Also, it said, "We must maintain high standards of SRO performance. Without the data they produce, it would be worth very little."

So this is coming from Reg NMS, so that means our costs are used to create a quality data stream that goes to the SIP in order for our investors to have the best prices and best quotes possible.

So let me then go -- let me talk, then, for a second about fee filings, right? So let's talk about a connectivity fee, physical port fee. So right now we charge $2,500 for a 1 gig physical port connection, $7,500 for a 10 gig. That gives you the ability to access seven of our exchanges, okay? That's seven exchanges with one port. So obviously, there is a lot of value there for you to be able to gain by using that one port to access seven exchanges.

I don't want to use that port. What am I going to do? Well, you have an extranet provider. Oh, well, that provider is very slow. But you know what? The extranet providers have gotten a lot faster because they realize that they've had to compete.

Number two, you can use what we call a managed service provider. This is an organization -- and Jarrod knows, because he's one of them, Jarrod Yuster -- this is an organization that supports customers in the facility, just a cross-connect, and they can access the market. They can -- yes, they have to pay the 2,500 or 7,500, but they can support multiple customers over that same circuit.

Smart order router. I don't even have to use that. I can get a very fast smart order router and route my orders through the exchange.

So you know what? There are alternatives to this physical connection. And to say that they have to buy it is absolutely wrong.

MR. CONTI: That's still, though, a value-based model and not a cost-based model. What does it cost you to maintain that one port, because you're selling that port to multitudes of people? So we're just looking for some transparency to get closer to a cost-based model.

The reason we want to do that is it will -- that, plus full transparency to the SEC, once we get to a baseline of rationalized, justified fees, that's when we could move forward. And they should be cost-based for
the dissemination of the market data.

MR. CARRAI: As the happy Chris and the angry Chris both said, you know, the -- look, the cost of a port is not really just the cost of a port, right?

You're talking about the entire infrastructure and the entire capacity --

MR. CONTI: So show all of it. So let's see that whole stream.

MR. CARRAI: Okay, all right. So the one thing I would say is that, as everyone knows, we're operating in a highly competitive marketplace, multiple exchanges competing together. And that means that we've got infrastructure that's proprietary and confidential, and then certainly certain public disclosures, I would think, would cause a concern from a security perspective, just because we want to make sure that we are operating within the national market system appropriately, and not potentially or negatively affecting our customers.

We would be open to looking at providing confidential information to the SEC, based on the request, but we are not open to publicly disclosing, you know, our proprietary information, everything about -- everything that's -- what we consider to be confidential about our infrastructure.

MR. GELLASCH: Then how can we evaluate it and determine it and make comments?

MR. CARRAI: It is the SEC's obligation to be able to take in that data and evaluate it to determine whether or not they believe that it's appropriate. So it's the SEC's obligation.

MR. GELLASCH: So --

MR. DONOHUE: Let me give Rich an opportunity -

MR. STEINER: Can I --

MR. DONOHUE: He's been down in the corner --

MR. STEINER: I can appreciate that it's complicated. I think everybody in here can. We can also appreciate the legalese and the technical nomenclature. But in laymen's terms, if anybody is still actually watching us at 4:00 p.m. on a Friday, maybe someone can touch on some of these things.

As far as market data being competitive, your clients have been here for two days, traveled from where they do their business down to Washington to talk about that. And it seems to me that we feel, collectively, that market data isn't competitive. No one here, though, is suggesting government rate-making. Rather, we want to better understand how the fees being charged are reasonable and non-discriminatory.

Our clients demand an exceptional amount of detail and transparency about our trading platform and how it operates. But when we go downstream, it is quite challenging, indeed.

So if we maintain the status quo, how do you propose member firms like ours, operating on behalf of institutional and Main Street investors, get a better understanding of how market data products are being developed, and how the fees are justified?

MR. DONOHUE: I don't think that was a question for me.

(Laughter.)

MR. STEINER: It wasn't.

MR. DONOHUE: Do either -- anybody want to respond on the panel?

(No response.)

MR. DONOHUE: So let me take this and ask a different question, slightly different question.

MR. REDFEARN: I want to see if we can get an answer to that one. I mean does anybody have -- because we actually have a similar challenge, and I'm hearing a little bit about the -- you know, the -- more information could potentially be provided to us, which I think would be helpful. But I am wondering if you have an answer to that.

MR. STEINER: Thanks, Brett. Real quick, I mean, that's kind of what I'm getting at.

I'm sensitive -- and Mark, you asked the question before I did, but I had that down here -- I'm trying to understand what could be so sensitive regarding how the market data is developed and processed that could be so incredibly important and proprietary, no less in a system that has, effectively, no competition, like the SIPS, that the regulators can see it, but folks like us can't. And I don't know how, if -- in the absence of that, we can say this is reasonable and justified.

And at the end of the day you run into a couple of problems. One, our platform, when we spend the millions of dollars we do on market data, has less to invest in other things that could actually help our clients. And two, as Joe Wald said and many other firms who are not here -- feel that it's an incredibly high barrier to entry. And so you get less competitive, to which Melissa and I were discussing.

I don't know if, Melissa, you want to touch on that a little bit, but how that affects, potentially, the wider ecosystem.

MS. HINMON: Oh, are you referring to small or mid-tier brokers and the ability for them not to compete in the marketplace with the bigger people? Yeah, that came up a couple times. I think Matt maybe brought it up.
and Simon and a couple other people and Joe Wald. His
product’s been pretty good for that group of brokers.

But one thing that has to be -- if the cost of
data is so expensive, and as you slide down the scale in
the size of a broker-dealer, often times smaller brokers,
mid-tier brokers, they have a special sweet spot in small
cap and micro-cap stocks through various relationships
with them.

For active managers who are in the space of
micro-cap and small cap stocks, they are a really good
source of liquidity, amongst other things. And I fear
that if it becomes too expensive for these smaller
brokers to participate on a level footing in the
marketplace, that we’re going to lose that ability for
capital formation for smaller companies. And investors,
the asset managers, the asset owners themselves won’t
have an opportunity to invest in those companies.

MR. DAVIS: If I could --

MR. DONOHUE: I’m not sure exactly where we are
in the conversation between SIP and prop, but we have
blown through.

MR. DAVIS: Yes. Yes, we have. So if I could
just make one more point to follow up on Kevin’s about
the SIP, and then maybe take a shot at some of these
questions about prop data, we mentioned earlier on one of
the panels that we feel like there is a pro-competitive
use of the SIP revenues, right, in addition to paying for
the administration and the technology and supporting the
regulatory function needed to generate, you know, high-
quality quotes that make up the SIP feeds.

There is also a pro-competitive use of the
funds. And there is actually a couple of them, right?
One is it promotes entry by new and competing exchanges.
I think the number came out before that in their first
year of operation IEX gathered $9 million of SIP revenue.
And you know, we compete hard against them, and the
reason that they are -- you know, one of the reasons
they’re an effective competitor is because they had ready
access to the SIP revenue. And that -- there is a long
history of that.

I mean, as Tyler said, you know, the -- since
Reg ATS was adopted in 1998, there has been sort of a
shift, you know, in the competitive environment. And
basically, what Reg ATS said was, you know, all ATSs are
essentially, effectively, exchanges, but they’re exempt
from some of the requirements, like registration. But
they can choose to operate as, you know, ATSs with
broker-dealers, or as exchanges, right?

So in the 20 years since Reg ATS was adopted --
and there have been, you know, 100 or more ATSs -- how
many have actually done that? Four: IEX, ARCA, BATS,
and Direct Edge. Four out of over a hundred.

And why is that? I mean if it is so easy to be
an exchange, and it is so lucrative to be an exchange,
why is it that only four have become exchanges, when they
have all had the opportunity to? The reason is it's hard
work and it is expensive work. And the SIP revenue, as
I’ve said, is, at least in part, designed to help
compensate exchanges for doing that work, in addition to
all the other regulatory work that they do.

Secondly -- and you’ll see this in our written
comments -- the purpose of the SIP revenue, in our view,
is to incentivize certain good behaviors for the market.
And this, again, comes from Reg NMS, where, you know,
for a long time the revenue was allocated according to --
100 percent according to trades, where they occurred.
And then the Commission decided that it wanted to
incentivize conduct that created better quotes, better
price discovery, and they shifted the formula to 50/50
quotes and trades.

And, you know, so some of that money is used
directly that way, to promote quotes that, you know, help
form a better BBO and help Main Street investors. But
there’s other uses for that money, too. You know, and
Tom Wittman from NASDAQ mentioned it yesterday, it's in
our written statement. NASDAQ takes 83 percent of the
money from its TRF revenue -- and the TRF gets revenue
from trades that are reported to the SIP -- we take 83
percent of that revenue and we share it back to the firms
that report those trades.

Our fee schedule is fully transparent, it's up
on the website. At the highest tier -- and again, we
differentiate according to volume -- 98 percent of the
revenue attributable to trades that go to the SIP are
shared back to the firms.

And, you know, we thought, again, you know,
that there is some misperception out there that, you
know, we're just raking in all this money. But, you
know, over the last five years we did receive $272
million from SIP revenue attributable to the TRF, but we
shared $232 million of that back to the firms. So NASDAQ
kept 40 and the firms got 232.

And you know, I think we wonder that when, you
know, firms are talking to their institutions, and
they're talking about TCA analysis, are they sharing the
fact that this revenue goes back to them, or are they
just sharing the fact they pay X amount for prop data,
they pay X amount for -- or X amount for SIP data? Do
they also mention that they're getting, you know, $232
million back from the trades that they report?
MR. DONOHUE: So I want to give Anthony a chance to speak, but I want to follow up on that one point, because that's additional transparency that we didn't have before yesterday. And I think it's very helpful, as we think through our market structure and how things work.

How do we figure out that that TRF money that you're earning is a fair and reasonable amount of money for the fee? If you're changing the fee, how do you figure that out? What do we need in the -- what transparency do we need in a fee filing? What transparency must be public? And, now that we've teed this up, what transparency should we have so that we can evaluate that issue?

MR. DAVIS: Yeah, and I think you have --
MR. REDFEARN: Were we turning it over to Anthony on that --
MR. DONOHUE: I was going to get right --
MR. DAVIS: Sorry.
MR. MASSO: No worries, no worries. So I just wanted to quickly follow up on Melissa's point about the medium and small-sized brokers. I think the same can be said for technology companies, as well. As market data has increased, you know, looking over the past five years, I just see many, many problems that these firms have.

You know, there are solutions, I think, to those problems. But you know, these reg tech companies are not trading with that data. They're using it for other purposes. And no one is asking the questions. You know, the exchanges are not asking us the questions, okay, what are you using this data for. Arguably, you know, compliance systems are -- you know, we should want to promote that policy, we should want many firms to be able to use it, small and large. And, you know, the increase in market data has, you know, really increased the costs associated with compliance.

And, you know, if your model of -- you know, is really heavy into analyzing data, if that's what your compliance system is doing, the cost to -- you know, it's such a bar to -- a barrier to basically get into that, because there's no way to ease into it. The minute you start taking that data, they're charging you 100 percent. You know, maybe there is some things we can do. Because perhaps, you know, it's only in the exchange's interest to, you know, kind of give a little bit of an on-ramp to a company that will ultimately end up being their customer.

So I think that's a reasonable solution to a problem of increasing data. But, you know, you have to look at why the companies are using --

MR. DAVIS: That makes a lot of sense to me, Anthony. I have to say, a pro-regulatory policy like that.

MR. GELLASCH: Yeah -- no, that's all right. The same point on small brokers. One of the things I want to weave together, two points that were just made about something that Jeff had mentioned as well as Melissa, and now Anthony has sort of launched into is the competitiveness of smaller brokers. And, you know, we clearly need the diversity of that, and the buy side is very committed to that.

But when we think about market data, market data is a cost that essentially is a tax of having to do business. And we're now hearing that there is a competitive aspect to that. So the tax revenues that are collected from market data may be redistributed elsewhere.

Okay. Well, if you're a small broker, you're going to be paying that tax. So that's a competitive burden on you that may be disproportionately falling on you, as opposed to a larger firm. Now you go to trade.

Well, the revenues from the market data may be subsidizing the trading. Well, if you're a smaller broker, you probably don't have nearly as good a pricing tier.

So now you're getting hit twice. You're having a disproportionately harder -- higher tax on you, on a -- per basis for -- on the market data. At the same time, the revenues that are promoting trading are more likely to be going to your larger competitors with significantly larger volumes. So you have two interconnected things. One, the market data, but, two, the pricing tier on the other end, both of which are hurting the smaller broker.

MR. CARRAI: I just want to mention one thing. So for Cboe, you know, we had, just as other exchanges have, non-display fees. When we introduced our non-display fees, the one thing that we were very concerned about was the small broker-dealer, particularly those who are managed through managed service providers. So we specifically exempted those broker-dealers from receiving a non-display fee. Again, because we knew that they -- that would prevent them from getting our data and, frankly, they would choose not to get our data.

So we specifically exempted them because we
knew that it would be too much for them to spend. So we
-- you know, we do take a look at who it is that would be
getting -- taking our data, and whether or not it -- the
-- we believe the price would be too high for them to
accept, and therefore not take it all.

MR. DONOHUE: So let me go back to the question
I just asked, and I'll re-frame it slightly.

The next SIP fee filing. So it could go up, it
could go down. The same evaluation from our side has got
to happen. What do we need in that fee filing? And what
do you need in that fee filing in order to be able to
effectively comment on it?

MR. DAVIS: There's been a theme throughout the
last couple days that I think this sort of touches on.
As a regulated entity, we would love more clarity around
that, right? I hate to flip it back, but I will say --

PARTICIPANT: Well done, well done.

MR. DAVIS: On best execution --
(Laughter.)

MR. DAVIS: -- on what is required for costs
and filings, we would love to know that, right? I think
it would help a lot of people in this room.

PARTICIPANT: I have suggestions.

MR. DAVIS: If the Commission --

PARTICIPANT: Absolutely, and part of it is --

MR. DAVIS: Sorry, can I --

PARTICIPANT: Sure, sorry.

MR. DAVIS: It would help a lot of people in
this room -- exchanges, institutions, brokers, non-
profits -- for the Commission to give us clear guidance
on what best execution means to them. Plain and simple.
Prop feeds, SIP feeds, something else? We think there
is a lot of uncertainty and a lot of misinformation out
there. We would all benefit from more clarity.

On the SIP filing from not too long ago that
was abrogated, my understanding is we asked for some
clear and written guidance on what is required for SIP
filings, and we really -- I think we really mean it. If
you tell us what is required or, you know, what you would
like, we will put it in there, whether it's public or
confidential. You know, whether it's for you or for the
whole industry. You know, we can talk about it.

But in a lot of ways, as a regulated entity, we
can relate to what a lot of people have been saying the
last two days, that more clarity would definitely help.

MR. DONOHUE: So I'll just return it right back
to you. What do you think we should have, though? I
think we can come back to you at some point, but I think
that's the real question.

MR. GELLASCH: So --

MR. REDFEARN: There is -- something probably
needs to have some explanatory power to it. Let's start
with that.

MR. GELLASCH: So we offered the -- an
objection to that abrogated filing. And so I feel
somewhat comfortable in having gone through this process.
And essentially, what we did, and what I think the
Commission would be wise to do, and what I hope we could
work together on ahead is looking at the Exchange Act and
saying, "Here is each of these elements," as an economist
would do, and say, "Look, what are the -- what's the type
of information that we would need to know whether or not
this filing is discriminatory?"

Again, I go back to I don't see how you do that
without identifying the types of firms that get it, the
types of firms that don't, and what it is. I -- so for
every single thing, for competition, I don't understand
how you could effectively evaluate or the Commission
could effectively evaluate whether or not something is an
undue burden on competition without seeing who gets it,
who doesn't, and what the value of it is, vis-a-vis
themselves, separately from vis-a-vis SIP versus the prop
feeds of any individual exchange or exchange family.

MR. STEINER: I would just say that if we had
our way, we would -- you know, we would like to see a
disclosure of all revenues and costs, itemized by product
and service, associated with the collection and
dissemination of market data, as well as the number of
clients that use these products. That would be helpful
to us, and our clients.

MR. CONTI: Yeah, a granular -- a more granular
view. I appreciate you -- that -- you being transparent,
but I think it's not transparent at the granular level
that is now needed to make the right decisions.

MR. CARRAI: This is -- and here is the
problem. The problem is that then you get down to the
level of identifying which firms have how many users, and
that's not something that, you know, I don't think that
we would feel is something that we should disseminate
publicly.

MR. STEINER: Can't we obfuscate that? I mean
we have --

MR. CARRAI: You know what? I don't --

MR. GELLASCH: To be clear, if there is
something that's only used by one firm, I actually think
that's relevant for the discussion of whether or not
it's a fair or non-discriminatory or anti-competitive.

MR. CONTI: And again, that's something that
could be just given to the SEC, and not made public. But
giving granular transparency by product --
MR. CARRAI: I don't have a problem with private disclosure to the SEC. I do have a problem with it being public disclosure that everyone then sees and, you know, could create some unintended consequences. Because at the end of the day -- so we -- we've all talked about the individual investor in both of these days. You know, we want to create a price that promotes the most use from the individual investor, the retail investor. And that should be our objective, you know? And so our pricing should reflect that. And it -- in some -- you know, if the cap -- if that's what we need in order to be able to do that, then we should be able to do that.

Again, I don't have a problem with providing confidential information, but as long as we all understand that's what the objective is.

MR. GELLASCH: How many economists is the SEC going to hire in order to evaluate the confidential information? Because the entire rest of the world would be unable to view that information.

MR. REDFEARN: We have a lot of economists here. There's quite a few. I mean they're working on a lot of different things.

MR. GELLASCH: I appreciate, Edwin, you and a few others, but I would encourage -- I would question whether or not the staff is appropriately equipped to --

MR. REDFEARN: I mean I think that -- I feel like this is a productive discussion, and I like the direction it's moving in, because we are talking about bringing more information to the table. And it could be on a specific thing, and it could be in a big-picture way. But more information and more detail certainly helps us to do what we need to do. I think that we might have less detail than, you know, some might imagine in certain circumstances. And so more would be helpful.

I think we have -- you know, we have bigger-picture things we need to look at in terms of the sort of the pool, and how it's evolved over time, because there's a lot of misunderstanding about, you know, was it for -- I mean I remember when there was -- it's paying for regulation, that's what it's for. Is it paying for other things? I didn't realize that in, you know, in 1934 or whatever -- I didn't do -- maybe haven't read your page - -

MR. GELLASCH: Page 43, 1974, first version --

MR. REDFEARN: I got to, like, 41, I think.

(Laughter.)

MR. REDFEARN: But, you know, I think that that would be probably worth knowing. We have -- you know, I think when non-display fee filings initially came in,

there was an articulation that it would be revenue-neutral, right? And I think, you know, it's probably worth drilling down on that and how that has worked a little bit, historically.

I think there is a question about if competing products were created that actually took users away from the SIP, so it didn't compete and it lost users, there is a question of, if you lose users, do you lose revenue or do you find other ways of allocating it to other people?

I think that's probably a relevant question that we should ask, as well, when we think about, you know, how things have evolved a little bit.

So I think there is a lot of things that we need to look at, but the more information that we have, and as we're -- obviously, we're very serious about sort of drilling down into these questions. You know, we look forward to working with all of you to sort of try to figure that out better.

MR. DONOHUE: If I could just ask Kevin a follow-up question on the -- the information that you think is appropriate for the Commission only versus the public, is that really limited just to firm-identifying information?

MR. CARRAI: Yeah, it would be firm-identifying information and the quantities, because --
committee to do on Monday. We've got plenty to do on
Monday, but some directions or suggestions for them to
consider. And let's focus on the transparency issue,
because that's what the panel is about.

So there is a discussion of full transparency,
and there is a discussion of what should remain
confidential. Where is the middle ground that the
operating committee should start considering on Monday?

MR. CONTI: So I think that's something we need
to discuss and get to.

You know, just to echo some -- and to tie that
into some sentiments that were echoed by Kevin before,
and Emily, you know, within the CTA UTP operating
committee, we have carved out in the last year and a half
or so some subcommittees, the distributed SIP
subcommittee. Kevin and I are on the market data
administration subcommittee. I think that's something we
would take back to a subcommittee and discuss, because
these subcommittees actually have been very informal,
very collaborative, very open, very productive.

As Kevin said before, I think we're actually
very proud of it. I think this construct of the
subcommittees and talking these things through and having
them ready for the quarterly meetings for a vote, and
having it all discussed through, hashed out, and ready to
bring to the committee is a good construct. And I think
it works.

And, you know, I want everybody to know that,
you know, there seems to be a lot of contention and a lot
of combustiveness, but there really is a lot of working
together with the exchanges and the advisors. The
advisors, we are plugged into the consumer constituency
groups, very much so. So we're acting with a lot of
input from them.

And I think the way forward, even on something
like that, would be us -- without revealing the
confidential information -- discussing what should be
public, what shouldn't be public. I think it could be
handled in those forums.

MR. DONOHUE: A transparency subcommittee?
MR. CONTI: Yeah, possibly we could call it
that, or --

MR. DONOHUE: Got to come up with a name, if
it's going to stick.

MR. CONTI: They got to --

MR. DONOHUE: Other thoughts?

MR. DAVIS: Mine are not as directly tied to
transparency. I think we have made a few suggestions for
moving things forward, you know, in terms of adding a
vote for the advisory committee to dispel some of the
mistrust that has existed and maybe grown.

We are holding hands with the NYSE, and
suggesting that we WebEx or maybe just cut back to
minutes. Again --

PARTICIPANT: CSPAN.

MR. DAVIS: Put it on CSPAN?

So I -- we do -- you know, we do support the
subcommittee structure. There's a lot of good work
getting done.

But if I could just take a step back, I mean,
you know, we have participated actively in the
discussions for the last two days. And you know, I think
this panel sort of highlights it. There is a lot of
consensus that exists in the industry. It is not all
just contention.

I think, you know, there is a
consensus, you know, as the Chairman said, that we are
here to protect Main Street investors, and that, you
know, by and large, we're doing that very well.

You know, we've heard a lot of evidence that
Main Street investors get the data that they need, that
they get it at a low cost, that it is very reliable. And
you know, we don't think that there has been any evidence
that these issues about transparency or any of the rest
has done any harm to Main Street investors. So I think
we are very encouraged by that.

I think -- you know, we have heard, you know, a
general consensus that the SIP has, you know, certain
value in creating that data. It may not be equal value
for everybody.

Some people may need more. But there --
you know, there is some value in terms of having a
nationwide standard for what is the price of a stock, and
you know, where does that fit into best ex. Maybe people
differ a little bit, but really not very much.

We even heard from, you know, Simon at Norges
Bank that it is, you know, a standard that is recognized
worldwide, recognized and admired. And we have also
heard consensus that nobody wants to turn the Commission
into a writ-making agency. You know, I think,
unfortunately, we think some of the proposals push down
the path to that, and, you know, we feel compelled to
push back, that that is a failed public policy. It is a
really bad idea. It does more harm to consumers than
good.

And so, you know, we are reluctant about that.

But, you know, we do want to work with the Commission,
and we want to work with the committees to do what we can
to dispel this mistrust and get some of the information
out there that people feel like they need.
So we look forward to being a part of that  
conversation. We really appreciate the last two days of 
discussions.

MR. GELLASCH: I echo the appreciation. The  
only thing I would say is, I think for us going forward,  
is it would be really helpful for us -- and to echo  
Jeff's remarks -- for the Commission and perhaps in  
consultation with many of the folks that have been up  
here on panels over the last two days, and many in the 
audience, to try to develop and articulate standards for  
reviewing the filings.

At the end of the day, these things come into  
the Commission in 1,500 filings a year. And articulating  
a standard -- and I don't think the Commission has  
necessarily always clearly held all of the filings up to  
the standard of the Exchange Act -- I think it would be  
really, really valuable to articulate a standard, here is  
what the Exchange Act requires for each of these  
elements, and then taking that and applying it so that  
they know what to do when they're making our filing, we'd  
have the information we need to comment on it, and you  
have the information you need to decide it.

MR. REDFEARN: I think that is an apropos way  
to wrap up. I want to just echo a few of the sentiments  
that have been made here. And I'm trying to move the mic  
around so I can finally look back a little bit at all of  
you who have taken so much time and committed to being 
here and sharing your ideas and participating in this  
discussion with us.

This is an extremely important issue  
for us. It's something we take very seriously. We  
dedicated two days to it, as all of you have, and I won't  
say it could have gone longer, but I feel like we've made  
alot of progress, and we intend to really think about  
these things and to follow up.

I think our theme, again, for today, when we  
think about policy-making -- not just because it's  
Friday, but it is TGIF. So we are looking at the area of  
transparency, governance, infrastructure, and financing.  
And I think that, you know, as Tyler suggested and  
others have here, we do intend to take very seriously, as  
we have in the past, the -- this issue of, you know,  
fair, reasonable, non-discriminatory, and all of the  
other things that we have to do under the Act. And so  
these kind of conversations help us do that, and help us  
to move the ball forward.

So I just want to thank, again, this panel for  
a great discussion. Thank you for your openness, for  
being here, for participating, and also thank all the  
audience for being here and participating in this event.
REPORTER'S CERTIFICATE

I, Kevin Carr, reporter, hereby certify that the foregoing transcript is a complete, true and accurate transcript of the matter indicated, held on __10/26/2018__________, at Washington, D.C., in the matter of:

ROUNDTABLE ON MARKET DATA & MARKET RESEARCH.

I further certify that this proceeding was recorded by me, and that the foregoing transcript has been prepared under my direction.

Date: 10/26/2018

Official Reporter: Kevin Carr
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beginning
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becoming
bears
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BBOs
18:19
114:9
170:8,11
173:14 174:21
179:2,17
189:11 210:12
237:1 238:4
241:5 251:10
259:23 262:8
264:10 271:23
272:6 276:18
276:18,23
288:18 289:14
beyond
8:11
60:8,11,15
97:8 178:9
260:18
bid
14:17 37:8
38:20 40:24
50:15 53:17
125:5,9 189:7
189:12,14
bidding
25:6
bids
30:7
bifurcate
101:19
big
49:24 75:17
100:4 108:8
113:6 114:20
143:6 149:9
168:24 186:25
214:21 232:6
242:4 249:3
254:22,22
big-picture
287:6
bigger
137:10
188:14 273:24
bigger-
287:11
biggest
28:11
192:25 255:12
Bill
4:5 225:25
226:1 230:6
237:16 240:8
246:19 251:19
253:15 258:16
Bill’s
249:23
billing
250:10
billion
10:2
Billy
132:13
bit
10:22 16:12
23:15 36:24
41:22 48:2
63:8 64:10,18
69:18 70:8
72:3 77:17
106:7 109:11
155:11 176:18
188:5,20
194:20 195:13
197:9 200:4
202:19 208:24
224:10,24
237:1 247:5
258:16,17
262:5 266:7
272:21 273:20
280:2 288:4,12
293:10 295:1
black
232:8
Blackrock
81:15
blanche
45:2
blank
158:25
Blaugrund
2:19
Bloomberg
219
Boyce
297:9
Brad
155:1
160:17 161:14
162:16 219:5
219:20 221:24
223:15 236:18
Bradley
3:15
break
49:20
224:4
breaks
268:2
breeds
253:23
Brett
2:11 6:4
11:1,21,23
16:1 25:20
210:14 211:17
223:20 224:14
226:7 272:25
Brett’s
211:20
<table>
<thead>
<tr>
<th>Word</th>
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<tbody>
<tr>
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<td>111:22 138:23</td>
<td></td>
</tr>
<tr>
<td>139:2 153:21</td>
<td></td>
</tr>
<tr>
<td>153:22 159:6</td>
<td></td>
</tr>
<tr>
<td>186:16 212:1, 2</td>
<td>249:15</td>
</tr>
<tr>
<td>corner</td>
<td>271:10</td>
</tr>
<tr>
<td>corners</td>
<td>257:23</td>
</tr>
<tr>
<td>corporate</td>
<td>213:18, 23</td>
</tr>
<tr>
<td>correct</td>
<td>112:20</td>
</tr>
<tr>
<td>149:14, 24</td>
<td></td>
</tr>
<tr>
<td>correctly</td>
<td>236:9</td>
</tr>
<tr>
<td>Correlating</td>
<td>60:12</td>
</tr>
<tr>
<td>cost</td>
<td>17:12</td>
</tr>
<tr>
<td>10:20 50:9, 16</td>
<td></td>
</tr>
<tr>
<td>50:20 51:7, 17</td>
<td></td>
</tr>
<tr>
<td>137:20 160:12</td>
<td></td>
</tr>
<tr>
<td>162:20 163:7</td>
<td></td>
</tr>
<tr>
<td>164:15, 18, 20</td>
<td></td>
</tr>
<tr>
<td>164:22, 23</td>
<td></td>
</tr>
<tr>
<td>165:8 166:4</td>
<td></td>
</tr>
<tr>
<td>169:17 170:11</td>
<td></td>
</tr>
<tr>
<td>173:5, 6 174:3</td>
<td></td>
</tr>
<tr>
<td>174:11, 13</td>
<td></td>
</tr>
<tr>
<td>178:2, 10 180:3</td>
<td></td>
</tr>
<tr>
<td>181:9, 14, 15</td>
<td></td>
</tr>
<tr>
<td>182:5, 20 183:4</td>
<td></td>
</tr>
<tr>
<td>183:15, 19, 21</td>
<td></td>
</tr>
<tr>
<td>185:22, 186:7</td>
<td></td>
</tr>
<tr>
<td>188:25 189:20</td>
<td></td>
</tr>
<tr>
<td>191:13 196:5, 5</td>
<td></td>
</tr>
<tr>
<td>196:12 200:15</td>
<td></td>
</tr>
<tr>
<td>200:17, 22, 24</td>
<td></td>
</tr>
<tr>
<td>201:5, 13, 19</td>
<td></td>
</tr>
<tr>
<td>202:5, 16</td>
<td></td>
</tr>
<tr>
<td>203:12 204:13</td>
<td></td>
</tr>
<tr>
<td>205:14, 25</td>
<td></td>
</tr>
<tr>
<td>206:11, 1, 2, 5</td>
<td></td>
</tr>
<tr>
<td>206:21, 23</td>
<td></td>
</tr>
<tr>
<td>210:25 214:15</td>
<td></td>
</tr>
<tr>
<td>217:5 221:3, 10</td>
<td></td>
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<td>221:10, 25</td>
<td></td>
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<tr>
<td>223:14 238:13</td>
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<td>238:14 241:21</td>
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<tr>
<td>241:22 245:9</td>
<td></td>
</tr>
<tr>
<td>246:2, 4 252:18</td>
<td></td>
</tr>
<tr>
<td>252:24 253:1</td>
<td></td>
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<tr>
<td>263:22 268:11</td>
<td></td>
</tr>
<tr>
<td>279:12 282:20</td>
<td></td>
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<tr>
<td>285:1</td>
<td></td>
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<tr>
<td>cottage</td>
<td>196:16</td>
</tr>
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<td>counsel</td>
<td>11:14</td>
</tr>
<tr>
<td>82:5, 19 156:14</td>
<td></td>
</tr>
<tr>
<td>226:10, 24</td>
<td></td>
</tr>
<tr>
<td>counsel's</td>
<td>156:17</td>
</tr>
<tr>
<td>counsels</td>
<td>6:11</td>
</tr>
<tr>
<td>246:16</td>
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<tr>
<td>count</td>
<td>123:14</td>
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<tr>
<td>counter-prod...</td>
<td>229:9</td>
</tr>
<tr>
<td>counting</td>
<td>196:22</td>
</tr>
<tr>
<td>236:1, 3</td>
<td></td>
</tr>
<tr>
<td>coupled</td>
<td>22:24</td>
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<td>23:9 24:16</td>
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<td>47:20 48:16</td>
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<td>49:19 63:13</td>
<td></td>
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<tr>
<td>71:21 76:25</td>
<td></td>
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<tr>
<td>77:1, 10 109:1</td>
<td></td>
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<tr>
<td>108:22 117:24</td>
<td></td>
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<td>121:1 122:7</td>
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<td>135:9 171:4</td>
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<td>254:5 266:22</td>
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<td>273:11, 25</td>
<td></td>
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<td>274:1 275:7</td>
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<td>282:14</td>
<td></td>
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<tr>
<td>coupled</td>
<td>160:3</td>
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<tr>
<td>course</td>
<td>71:6</td>
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<tr>
<td>104:12 121:1</td>
<td></td>
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<tr>
<td>171:20 206:3</td>
<td></td>
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<td>208:25 215:15</td>
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<td>224:1 225:10</td>
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<td>238:20</td>
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<tr>
<td>court</td>
<td>159:17, 20</td>
</tr>
<tr>
<td>214:5, 11</td>
<td></td>
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<td>217:21</td>
<td></td>
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<td>courts</td>
<td>159:3</td>
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<td>cover</td>
<td>180:3</td>
</tr>
<tr>
<td>206:5 221:9</td>
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<tr>
<td>covered</td>
<td>7:3</td>
</tr>
<tr>
<td>82:21</td>
<td></td>
</tr>
<tr>
<td>covering</td>
<td>7:14</td>
</tr>
</tbody>
</table>
Page 343

205:21
resistance 174:4
174:4
resolve 98:19
99:19 122:1
129:15
resolved 171:7
resources 238:6
238:8 246:22
respect 30:15
58:10 65:16
88:23 101:2
105:11,25
109:25 115:24
117:14 119:3
119:14,23
132:20 133:10
133:11 163:11
166:5,14 196:2
217:14 222:6
246:19 250:17

respects 172:19
respond 47:19
74:2 88:4
194:19 272:14
responded 89:10
response 96:20
97:18 151:20
217:2 272:15

responsibilities 91:12 119:8
131:25 205:20
227:18
responsibility 19:19 33:5
110:11,11
118:11 119:12
119:18 120:1
125:19 128:15
133:9 147:17

responsible
118:18 137:25
139:1 199:23
228:10

responsive
218:22
rest 24:23 25:7
101:14 181:21
190:13 203:8

203:24 215:8
286:19 292:24
restore 42:13
restricted 86:1
restrictions 229:7
result 18:2
73:21 79:6,7
98:16 181:11
242:9
resulted 105:17
resulting 180:19
results 87:23
189:17
retail 10:12,13
45:16 47:10,16
70:3 71:12,13
84:25 97:11
128:21 139:6
197:20 198:4,9
252:15 286:8
rethink 55:5
197:14
rethinking 197:18
return 54:23
173:7 179:18
283:21
revealing 291:11
revenue 90:15
97:18,20 107:4
152:5 165:23
165:24 169:9
174:9 175:1,8
175:19 177:3
177:23 179:22
184:5 185:6
189:22 191:22
192:4,12
195:25 220:9
220:25 229:15
232:6,10,16
233:17 235:15
252:14,23,25
253:5,7,13
259:3 264:12
264:13 275:10
275:14 276:7
276:12,15

277:2,2,4,9,15
277:21 288:8
revenue- 288:1
revenues 98:2
116:17,19,23
137:20,23
161:22 168:15
175:1,12 177:5
182:18,21,25
187:4,5 190:8
192:8 193:10
220:21 229:14
231:5,5,9
232:6,17,20,24
233:10 234:20
236:12,22
244:8 246:4
252:12 264:15
264:20 265:14
275:2 280:21
281:3,10 285:1
289:17
review 158:15
171:21 179:4
191:8 239:22
256:24 257:4
266:15
reviewed 97:14
reviewing 157:6
158:1 215:19
294:11
revisit 88:24
263:18
revolving 70:25
rewards 152:3,3
152:4
RFX 193:7
rhyming 57:16
rich 4:10 53:25
228:9 238:23
241:14 271:7
Richard 3:8
Rick 82:9,19
86:16,19 89:13
117:7 132:11
150:8
Rick's 120:12
122:9 132:1
140:9 147:18

rid 169:21 170:3
ridiculous 138:16 214:1
216:21
rigged 34:8 58:8
right 16:21
22:22 24:2,25
32:7,13 33:11
36:15,18,20,25
38:2 39:9,25
40:22,23 42:23
43:24 45:13
46:12,25 50:16
52:15,19 53:1
53:13 54:25
56:19 58:3,4
58:14 60:8
62:7,9 63:12
63:17 65:24
66:25 68:5
72:8 74:4 75:7
75:24 80:11,11
81:10 85:5
87:18 101:13
101:18 104:10
104:25 109:12
110:14 112:14
113:5,22,24
114:19,20
116:18 120:21
121:20 129:12
131:8 135:1,7
136:17,25
137:19 138:12
138:24 139:8
139:14 141:3,6
141:8 142:2,9
142:11 143:7
144:12 147:8
147:25 149:7
151:24 177:15
178:24 181:24
182:1 183:20
187:10 191:21
191:22 193:24
198:22 199:13
199:18,19,19
204:7 205:10
205:13 213:5
220:18 223:4
230:1,13 232:8
233:1 234:11
234:17 236:7
237:15,23,25
240:14,18
241:18,18
242:21,24
243:13 246:16
250:9 252:9
254:14,14
259:13 268:15
268:16 270:4,9
275:2,7,23
278:18 280:10
282:16,21
283:21 285:9
288:2 289:7,8

rightfully 121:9
rights 85:24
88:25 115:19
129:19 130:6
137:8 140:2
149:7 238:20
262:21,22
263:16,16,17

tipped 242:5
time 100:3
risk 6:14 45:22
137:14 228:3
247:6 254:2
risks 88:13
River 10:5
road 30:3
231:25
rob 42:10,11
Robert 2:9,18
9:19
robust 17:12
49:14 186:22
239:23
Roeser 2:12 6:9
Roisman 2:13
296:5
role 9:14 68:4
73:8 85:24
87:7,17 124:23
135:14 138:15
238:2 250:18
<table>
<thead>
<tr>
<th>174:5</th>
<th>182:5</th>
<th>206:25</th>
<th>207:11,13,20</th>
<th>246:11</th>
</tr>
</thead>
<tbody>
<tr>
<td>solve 77:15</td>
<td>solved 77:15</td>
<td>slow 268:25</td>
<td>spread 32:9</td>
<td>208:1</td>
</tr>
<tr>
<td>solves 76:19</td>
<td>78:1</td>
<td>slowly 69:11</td>
<td>spreadsheets 216:1</td>
<td>specialists 101:11</td>
</tr>
<tr>
<td>235:2</td>
<td>296:4</td>
<td>sometime 71:1</td>
<td>sources 18:15</td>
<td>spending 168:10</td>
</tr>
<tr>
<td>215:16 284:6</td>
<td>16:12,17,18</td>
<td>space-time 61:3</td>
<td>36:13,14</td>
<td>spent 34:15</td>
</tr>
<tr>
<td>sophisticated 51:2</td>
<td>29:24 30:1,6</td>
<td>56:2 99:2</td>
<td>169:18 183:8</td>
<td>special 34:15</td>
</tr>
<tr>
<td>31:1,3,3,4</td>
<td>32:20 33:9</td>
<td>34:123 42:9</td>
<td>203:1 204:11</td>
<td>sphere 36:11</td>
</tr>
<tr>
<td>sources 18:15</td>
<td>186:25 200:16</td>
<td>speak 52:17</td>
<td>56:12 71:5</td>
<td>special 34:15</td>
</tr>
<tr>
<td>speed 15:22</td>
<td>16:15 27:1</td>
<td>46:12 93:3</td>
<td>103:18,20,21</td>
<td>separation 136:10</td>
</tr>
</tbody>
</table>