



The Economic Club of New York

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Conference Call

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Introduction

Chairman Marie-Josée Kravis

Good afternoon everyone and welcome. I'm Marie-Josée Kravis, the Chairman of The Economic Club and a Senior Fellow at The Hudson Institute. And I'd like to extend a special welcome to the members of The Economic Club of Chicago and Washington, D.C. as well as those from the New York Women's Forum and British American Business who have been invited to join the call today. So welcome to all of you.

The Economic Club of New York is one of the nation's leading nonpartisan forums for discussions on economic, social and political issues and we feel we have a special responsibility in the context of what's happening in markets generally, in financial markets, in all markets and the coronavirus situation to bring our members the most relevant discussion topics. And we've all been watching the markets especially over the past few weeks and today we bring you our very special guest and club member, Stacey Cunningham. Stacey has been a great supporter of The Economic Club and I want to thank her for her steadfast support but also for taking the time today, while the markets are open, to meet with us.

Stacey is the President of the New York Stock Exchange Group which includes the New York Stock Exchange and a diverse range of equity and equity options exchanges, all

wholly owned subsidiaries of Intercontinental Exchange. She is the 67th President and the first woman to lead the New York Stock Exchange Group in its 228-year history.

So today's program will be a conversation which I'm fortunate to be moderating.

Questions that have been sent to the Club from members have been shared with me and I've tried to incorporate as many of them as possible. The call will end promptly at 3:15. And as a reminder, this conversation is on the record and we do have additional media on the line. So Stacey, if you're ready we'll begin.

Conversation with Stacey Cunningham

STACEY CUNNINGHAM: I am. Thank you so much Marie-Josée. And thank you to Barbara and the Club more broadly. Thanks for having me.

CHAIRMAN MARIE JOSÉE-KRAVIS: I'd like to discuss with you, Stacey, you know, current market conditions, what you're seeing, what it means. But before we jump into the heart of the subject, maybe if you'd comment, this has been your first week. On March 23, we saw the closing of the historic trading floor of the NYSE and you moved to all electronic trading. And I'm just wondering if you might tell us how it's working and how have the designated market makers or the brokers been operating now and has it at all affected their ability to participate fully in the markets? Just give us a quick wrap-

up of what you've seen this week.

STACEY CUNNINGHAM: Sure, sure. And first, before I even do that, I just want to start off by extending my deepest sympathies to all of those who have already been directly impacted by the rapid spread of COVID-19, and I'm sure many people on this call have a contact or friends or family who are directly impacted. And so, you know, as we all do, we share that sympathy. And also deepest gratitude for everyone who is fighting this pandemic on the front lines, especially our healthcare workers and certainly, you know, united we're confident we can battle it.

But I just wanted to start with that. So, yes, we moved the New York Stock Exchange to fully electronic trading on Monday. While we operate five different equity markets and two options markets, only one of those equity markets has a combination of both people and technology and our options markets both have a combination of a trading floor as well as electronic trading. And so for those three markets that were combined out of the total eight, we moved to 100% electronic trading in an effort to help battle the pandemic that we're seeing and limit the number of people that we're bringing together. It's been very, very smooth. It's a smooth transition.

It's not something that's new to us to operate electronic markets. We certainly do that and have done that for several years. You lose the benefit of the human judgment and

the human value that's combined with technology. So we do feel strongly that the combination of people and technology is much more powerful than either one of them on its own. We certainly can run electronic markets and that transition has been quite smooth.

So you mentioned the market makers and without getting too deep into it, every company that's listed on the New York Stock Exchange has a designated market maker. That's a human being that's assigned to overseeing trading in their stock and they do that every day from the trading floor. There are also a number of floor brokers on the floor each day and they're representing customer orders. They're not trading for their own accounts but they come onto the trading floor and represent their customers in that fashion.

So while those people are using algorithms to trade each day, they can adjust those algorithms by applying human judgment. So the fact that we've closed the floor doesn't eliminate all of that order flow that comes into the exchange. Those market makers are still trading algorithmically, they're just not doing it from 11 Wall Street, the 11 Wall Street trading floor. So they still participate and provide that value.

CHAIRMAN MARIE-JOSÉE KRAVIS: Just to elaborate on that, just last year in fact – I'd say it was a fortuitous decision – the New York Stock Exchange undertook a major

upgrade of its underlying platforms. I think your program is called Pillar. And that, as you mentioned, powers all of your equity and options exchanges. I mean that's something that you would have done with or without coronavirus. So talk to us a little bit about the technological challenges that occur in just your business activity irrespective of crises.

STACEY CUNNINGHAM: Yes, I mean I think we just need; it would be helpful maybe to take a step back and think about, you know, the technology that we use at the Exchange every day needs to be ready for whatever market conditions may come at any point in time. And so, you know, while we're here to talk about the markets and talk about what we're seeing from market activity, it's really important to recognize that people are behind the markets.

So markets are a reflection of public sentiment. So for very good reasons right now, people have a high level of anxiety. And it's very traumatic for a person who is worried about their personal safety and health and that of their family and friends and there's a lot of that happening right now. It's also traumatic for a person who is worried about their personal financial stability and the ability to provide for their families. And we're seeing a lot of that right now too.

So as we battle this pandemic, there are so many people that are simultaneously worried about both of those things and that anxiety is being reflected in the market. It's a

well-known fact that markets are much more volatile during periods of uncertainty, and this is an unprecedented period of uncertainty. We have so many questions we don't have answers to, right? We don't know yet when we're going to see the peak number of cases of COVID-19 as it continues to spread. We don't know what the short-term and long-term impacts of the protective measures, you know, we have already put in place, we don't know what their impact is going to be on the economy. We don't know what the impact of the stimulus packages we just developed will be. We don't know when people are going to return to work or when they're going to go back to normal activities which means restaurants will be able to reopen.

So because we have so many questions that we don't have answers, you know, you're seeing that being reflected in the market. And so we're seeing so much market volatility. And we'll talk a little bit about that, the fact that we've triggered market-wide circuit breakers four times in just this past couple of weeks.

CHAIRMAN MARIE-JOSÉE KRAVIS: You've had record moves, when we think of volatility, you've had record moves. I think, what, eight cases of trading 4% up or down. So how are you handling? Do you feel that your technology, your markets are performing well and handling...?

STACEY CUNNINGHAM: Yes, absolutely. So what's really, just like the markets react

to uncertainty, and they do that in both directions, you know as they feel like they understand better what's going to happen, we see markets rebound. And that's what we've been seeing over the past couple of days. And so, I would urge people to be focused on the long term because over the long term, you know, markets can move back quickly as soon as we do get things under control.

But you're right, over the past month, month of March, we've seen not only major market moves, we've seen major market volumes. And that means that our systems need to process three times perhaps what the average daily volume is and even more so when you look at the number of messages that a system processes.

CHAIRMAN MARIE-JOSÉE KRAVIS: Tell us a little bit about the message traffic because we hear a lot about volume, but I'm not sure that everyone understands the intensity and the amount of message traffic that you get. Could you just elaborate on that...?

STACEY CUNNINGHAM: Yes, some of the peak days recently we have processed 330 billion messages in a single day. And that is three times, more than three times what a normal day might look like.

CHAIRMAN MARIE-JOSÉE KRAVIS: Well, on a normal day you would nevertheless

process about 100 billion messages.

STACEY CUNNINGHAM: Yes, that's every new order, every new order to buy, new order to sell, new price point, all those are getting processed by the exchanges all the time. And exchanges need to be ready at any point in time to have an increased number of messages as market conditions change. And the industry as a whole has done very, very well during this crisis.

Now I understand that markets have been exceptionally volatile so I don't mean to downplay that from a market price level. We might not like the prices, but certainly from a market performance standard, the industry has really risen to the occasion. We have not seen delays in messaging and getting responses back. And that's important because I think it would be helpful to understand market dynamics a little bit, and market makers provide liquidity into the market. So that means that they're buyers when everyone else is selling and they're sellers when everyone else is buying. And they're there to always ensure that there's a price where an investor can buy or sell.

It's really a very sophisticated risk management exercise. The more effectively they can manage that risk, the more liquidity they can provide which means better prices for investors. So that becomes even more complicated when prices are moving really quickly as we've seen over the past few weeks, and they're moving dramatically from

minute to minute. For market makers, that's critical even at the micro-second level because they can give investors better prices if they can manage that risk better. So there are a number of things that we focus on to ensure that they're able to manage that risk as effectively as possible and that's why our technology matters so much.

You mentioned NYSE Pillar, that's the technology platform that we rolled out last year, last summer at NYSE. And what's most important about that is not how fast it is, but how consistent it is. So that every time a market maker or any one of our clients sends us a message, it takes the same amount of time to get that message back so that they know, they can manage their risk better if they know that the system is operating the way it's expected to, and they're able to price that in. And so that's a really important part of the equation so it's really critical that our systems perform well. And what we've seen under this enormous amount of strain, we have not seen a degradation of that performance.

Our systems have continued to perform, you know it's the same idea of somebody answering the phone when you're calling your broker dealer, right? You want them to pick up the phone right away, and that's what the exchange is doing. We're just doing it with 330 billion messages in a day. And so that's why it's so important, because it does ultimately lead to better prices for investors at the end of the day.

CHAIRMAN MARIE-JOSÉE KRAVIS: So you don't feel that you need to revisit protocols to further protect markets as some have suggested?

STACEY CUNNINGHAM: Yes, so I think that there's a couple of different things. One is how are markets functioning and working, and they're functioning well. There is a lot of talk about should the markets stop, right? Should we stop trading entirely? Should we be, you know, putting a pause on the market overall? And I think the fact that we have the market-wide circuit breakers is by design. That was a pre-planned response to extreme market volatility. And the reason why it's important is because it introduces certainty. And, as I mentioned, anytime we can have more certainty in the equation, we can better manage risk for investors.

So even discussing closing markets can actually increase that level of uncertainty. If people feel like they're going to perhaps be stuck with a market close and they won't have access to their money, and they don't want to be in that situation, it can actually put selling pressure on the markets already. And we saw that in 1987 after the crash of '87. As soon as it was discussed that perhaps markets could close, we saw additional selling pressure on the market.

In response to the crash of 1987, the Brady Commission implemented market-wide circuit breakers. Now, I've spoken to Secretary Brady, former Treasury Secretary Brady,

a number of times over the past week or so because he's seeing that creation, those market-wide circuit breakers live in action now and also feels strongly that the reasons they were introduced still apply and that giving investors an opportunity to take a step back, take a deep breath, understand what's happening in the market, provide an opportunity for the other side of the market to show up and slow things down a little bit, but not actually removing the right to trade, you know, to have access to your money, is a really important part of, you know, keeping the markets is really important.

And I think we can't overstate how important it is because investors, one, the markets are a reflection of public sentiment. And that's useful information for everyone who is making decisions around, our government, our legislators that are making decisions around actions to take. Seeing how severely people are responding is really important information to have. If you close the markets, you also don't eliminate any of those underlying concerns that exist that are driving markets down.

CHAIRMAN MARIE-JOSÉE KRAVIS: Right, you're just...

STACEY CUNNINGHAM: Yes, you're going to pent it up, right? And you're more likely to see even more volatility once you reopen. And third, and frankly most importantly, you're denying people access to their money. And in this time of need when there are more people who may need to go access their money even if they don't like the prices,

we can't take that away from them.

So if you're talking about a long-term market stoppage, that would be a long time that you're saying, hey, you can't have access to your funds. And that's certainly not something that we would do. And all the conversations that I've had with other exchanges, with our regulators, with our government, no one is suggesting that they're even considering closing the markets.

CHAIRMAN MARIE-JOSÉE KRAVIS: Wouldn't you argue that it's at moments like this, moments like this really highlight the importance of capital markets?

STACEY CUNNINGHAM: Absolutely. I mean you still have companies looking to, you know they need money so they can do, to take action. And this is really a time when the capital markets are even more important to so many of those companies.

And I look at the companies that are listed on the New York Stock Exchange, we started over a week or so ago starting to keep track of all the actions that they're taking to help contribute to the solution for this outbreak. There are hundreds of actions we've started to track and that's not a comprehensive list. You know whether it's 3M and GE...

CHAIRMAN MARIE-JOSÉE KRAVIS: Could you share some of those without breaching

privacy?

STACEY CUNNINGHAM: Ford, GE, 3M all focusing on protective gear and introducing new N95 masks to protect our healthcare workers. Merck, similar, doing the same thing. Johnson & Johnson working on vaccines and having the ability to help provide medicines to offset this. So many of the technology companies that we have, like Slack who provides workplace agility as so many people are moving to work from home. Companies like PagerDuty, Box, Salesforce, they're all offering their services for free to small businesses that might be struggling or, you know, trying to give them tools that they can use during this time. You know, Unilever is providing all sorts of sanitizers and soap. I mean I could go on and on.

There's literally hundreds of examples of steps that companies are taking to help solve the crisis. And I think that's really important because we are a united nation and we're all coming together to put our best efforts. You know, Hanes turned over their clothing manufacturers to turn it into, to be able to manufacture face masks as well. So I think all of those things we're seeing, and the capital markets are giving people the ability to continue to have access to money so they can do those things.

CHAIRMAN MARIE-JOSÉE KRAVIS: Now, you were a once a floor trader. In fact, I think that's where you started at the exchange, as a floor trader. And I'm wondering if,

you know, you'd share from, not only the vantage point of the head of the NYSE, but also from your past experience, what are you seeing? What do you think it means? What are the macro trends that you think will be longer lasting?

STACEY CUNNINGHAM: Yes, you know, I think, I'll touch on the floor trader aspects for a moment because this is a challenging period for the floor traders because they're a very patriotic group and feel strongly about the value of our capital markets in fighting anything that comes our way as a nation. And part of the way they fight is by functioning, making sure the markets are functioning well and dampening volatility and coming to work.

So whether it was 9/11 or historic events that are endless, those traders always showed up at work to make sure that the markets kept functioning. So being asked to do that from the sidelines is tough for them because there's just a want to help and so that's a bit of an adjustment. I do think that markets move more quickly. You know we've seen a lot of shifts in market trends over the past few weeks. And they move more quickly, we're seeing that reflected. But the anxiety is also unprecedented. So I don't think this is just about algorithmic trading. This is about unprecedented levels of concern and you're seeing that in the market. But markets respond very quickly.

So when you see good news too, they will respond to that also. So that's why I feel like

it's very important for investors to not be trying to trade this market. Because if they can just take a step back and wait for us to get some certainty around what the solutions are and where we need to go, I do think that we have the ability to recover from this. And everyone is focused on finding the solution, whether it's the stimulus package that's put together or the Fed actions that they've taken to address some of the illiquidity that we've seen in pockets in the market, people are focused on solutions. And I'm confident that we will get through this and we will get to the other side. It's just unclear exactly how long that's going to be.

CHAIRMAN MARIE-JOSÉE KRAVIS: Well, in fact, many commentators are now saying that we're not only living through a pandemic, but we're living through the globalization of a panic or the globalization of anxiety. And, in fact, that's been amplified also by the 24/7 media coverage. And you're seeing that in your markets.

STACEY CUNNINGHAM: Right. Every single time there's a new case in your local community you hear about it which you wouldn't have heard about that quite as rapidly historically.

CHAIRMAN MARIE-JOSÉE KRAVIS: So let's talk a little bit about the Intercontinental Exchange. I mean the New York Stock Exchange is part of ICE. And across the ICE markets, how are other asset classes performing or reacting?

STACEY CUNNINGHAM: Broadly, markets are functioning well. Certainly on the futures side at ICE, we operate, you know, our futures trading has been very smooth. We have had plenty of liquidity there. In the bond market we have seen some difficulty with liquidity. That's already been dramatically improved over the past few days with the substantial actions that the Fed has taken to address it.

Even, you know, I think one thing you see people talking a lot about also is the impact of passive investment and ETFs. And we operate the largest ETF market with 75% of ETF assets under management. And so we very closely watch this and you'll see some commentary pointing to the fact that ETFs might be discounted from their actual value. And really what we've seen is that ETFs are becoming a price discovery mechanism on their own. So as we've come into the markets in the morning, very often the futures have been in a limit state. So those market-wide circuit breakers that we've touched on, they're triggered by a 7% downward move in the S&P 500 index. But that S&P 500 index enters a stoppage of trading, a limit state, well, not a stoppage of trading but it's not allowed to decline more than 5%, a circuit breaker that they have.

So it's hard, when you're coming in, in the morning, when the futures are on a down 5% limit state to know, are we actually going to trigger that 7%? You've seen the ETFs that are actively trading in the pre-market really become that price discovery so that people get a sense of where would the market be down. So now people are also looking at

where's SPY trading at 9:25 to get a sense of are we going to trigger a market-wide circuit breaker? And it's actually done a very effective job of predicting where the market was going to open and what those prices were, particularly in the...I'm sorry...

CHAIRMAN MARIE-JOSÉE KRAVIS: No, go ahead.

STACEY CUNNINGHAM: I was going to say, you know, I mentioned some of the liquidity issues that there were in the bond market. In the fixed income space, ETFs have actually been a helpful price discovery tool where the bonds were not trading liquidly. And there were some bonds that, for several days, they weren't traded yet the ETFs were still liquidity and price discovery.

So you saw disconnected prices between ETFs and their mutual fund NAVs. And those mutual funds were using a fair value process, not pricing exactly what the bonds could be traded for in the dealer market. So the ETFs actually helped to show real time valuations of the market without the actual bonds trading. So as we go through the post-mortem on this market period, we'll look at where are there things we can benefit from going forward to provide some more transparency to investors and better manage risks in the future.

CHAIRMAN MARIE-JOSÉE KRAVIS: Besides ETFs and the role that they've played in

this recent turbulence, are there other areas that you're looking at, in fact, in the long term in doing your post-mortem to improve transparency in market conditions?

STACEY CUNNINGHAM: Yes, I do think we'll have a retrospective look on the interaction between futures and the circuit breakers because, you know, as I mentioned the futures were in a limit state and the market-wide circuit breakers are triggered. I think every time there's a major market event, the industry comes together and very constructively looks for lessons learned and how can we improve resilience. And we have done a very good job of introducing more resiliency throughout the years. You don't actually get to see the results of that work until the major market event. And, you know, I suppose that's a good thing. But you want to see where you can fine-tune it.

So we definitely come together and work really hard to look for ways to improve and we've done that. I mean when the market-wide circuit breakers were first introduced in 1988, they were based on the Dow and they were point-based. It was a good opportunity to modernize those by moving to percentage based and focusing on the broader S&P 500 index. We'll go through that exercise of looking at lessons learned and putting in additional protections in the overall market that we can benefit from. Just like we're going to change everyday behavior and I imagine that coming out of this pandemic people will be better about washing their hands and using sanitizer and I think we'll see the same kind of steps that we've taken in the market.

CHAIRMAN MARIE-JOSÉE KRAVIS: You mentioned the liquidity issues in the bond market but there's another aspect to liquidity. There's been just so much liquidity injected into the economy and into markets and I'm wondering how you think that will evolve going forward. Will that accrue to companies, to stocks? Will that be a trigger for inflation? Have you, I don't know if you have any thoughts on that?

STACEY CUNNINGHAM: Yes, I mean I think really, we could take a step back and look at what's been happening and the actions that the Fed has been taking and the actions of the stimulus package. I think they're all pointing to the fact that we're going to focus our energy on where it's needed most. And we certainly saw a strength in the bond market and already we're seeing improvement there. And, you know, it'll certainly be studied for weeks to come.

CHAIRMAN MARIE-JOSÉE KRAVIS: Do you think, if you're looking ahead, one of the questions, one of our members was asking the question of whether you thought there would be a pent-up demand for IPOs going forward, if you look a little bit beyond the crisis. No one wants to say a time, whether it's the second half of the year or next year, but do you think that there's this buildup in demand for IPOs that might appear?

STACEY CUNNINGHAM: Yes, I think there are a lot of good quality companies out there. Many of them are taking actions right now to continue to help and support their

communities and communities more broadly. And when markets become more stable, I think we'll continue to see them look to access the capital markets. There still are companies that are considering it even during these turbulent times. Just three weeks ago we had an IPO that raised \$2 billion in light of the massive market moves. And they're a Canadian company called GFL, and they provide sustainable waste management and they successfully launched during significant market volatility.

So I don't think, you know, certainly there are many companies that are putting off their timeline and they're likely looking to later in the year. But capital markets are still going to be an avenue for some companies even as they are evolving to the changing conditions. And it varies how much the outbreak impacts their business model themselves as well.

CHAIRMAN MARIE-JOSÉE KRAVIS: So what are you worried most about; I mean short-term? And then we'll talk maybe about the medium and longer term what you're most excited about.

STACEY CUNNINGHAM: Yes, I think short-term, I'm most concerned about how rapidly we can get money to those who need it. So, you know, I just think about my local restaurant laying off 70 people, you know, right away because they didn't have a choice. And I think this is about, you know, helping to find ways to get money into people's

pockets as quickly as possible. And I think if we do that really effectively, you know, we can help limit some of the long-term damage, but it means we have to move fast. And from my conversations that I've had with our government and others, people are very focused on taking those actions. We just need to make the right ones quickly, get it done quickly.

CHAIRMAN MARIE-JOSÉE KRAVIS: So you're concerned about getting money into the hands of people who obviously are furloughed or let go and so on and so forth, but there's also the worry about keeping going, I mean growing concerns going. Because after this if those restaurants or the small businesses or the dry cleaner or what have you have disappeared, there won't be jobs for people to return to.

STACEY CUNNINGHAM: Yes, absolutely. I mean I do think that that's why the faster we can get a handle on how to have protective tools to protect people in a way that they can go back to work. I mean I think about it even for our own business, right? We fully intend to reopen the trading floor. We're not going to do that until we can keep people safe. But that doesn't mean that has to happen after the virus is completely eradicated because that's not realistic, right?

I think much before that point we're going to get a sense of how can we test people for antibodies, how can we test people to see if they are carriers. You know I think all of

those tools we'll have available to us at some point, and I'm encouraged by all the work that the private and public sector is doing to get to that point more quickly. And I think that's when we can start getting people back out to living in closer proximity and to limit some of the social distancing that we've put in place.

CHAIRMAN MARIE-JOSÉE KRAVIS: So you think the ability to test and to measure will be probably the determining factor to allow businesses to reopen?

STACEY CUNNINGHAM: I think it's going to play a big role. I think if we can give a level of confidence that we're not exacerbating the pandemic and that we can get to, you know, there are sort of two steps to it. One is wanting to actually limit the negative impact. If we know that we're not enhancing any negative impact, that's one thing. And also just addressing people's anxiety. So there's the combination of can we keep people safe? And will people feel safe? And those are two related but different things and we need to be able to do both of those things and I think testing is going to play a big part in that.

CHAIRMAN MARIE-JOSÉE KRAVIS: And so what are you most – assuming that we, I don't want to say resolve but that we're able to manage this problem and that we're able to come back to – and I hate to say the word normal – but to a functioning economy, what are you most excited about?

STACEY CUNNINGHAM: Well, I think that this is absolutely a crisis but how we respond during crises truly defines us, and we will get through this. You know people feel helpless but we are not helpless. You can control the precautions that you take. You can control how we behave. And we can also control how we support each other. And so I'm optimistic by the fact that people will rise to this occasion and be constructive and work closely with each other to help their local communities. And we are already seeing that everywhere. There are GoFundMe campaigns. There are so many funds being put together because people are trying to help. And I think any time we can challenge ourselves to be the absolute best versions of ourselves is a good thing and we grow from that too.

CHAIRMAN MARIE-JOSÉE KRAVIS: Where do you see the New York Stock Exchange let's say in two or three years assuming no other surprises?

STACEY CUNNINGHAM: Well, I think we'll continue to have sanitization stations all over the trading floor like we have introduced. And, you know, we took a number of precautions but, you know, it's really reflective of how rapidly this has been unfolding. It was only just four or five weeks ago. Maybe three and a half weeks ago, I was out at a conference across the United States and not thinking about getting on an airplane. And within a week after that, we were sending people home and having them not come into the buildings. We first went through limiting the number of people in the building. Then

we were limiting, we sent 700 employees home two weeks ago so that they could work from home and not be in the building. And then we closed the trading floor this week. So I think we've seen how quickly everything has rapidly evolved and we'll continue to see that. So I think some of those measures...

CHAIRMAN MARIE-JOSÉE KRAVIS: You had to do an outstanding job also testing all your systems to make sure that they'd operate electronically with the floor closed.

STACEY CUNNINGHAM: Well, I'll tell you, we didn't do that, that wasn't something we had to do over the past few weeks because we do that all the time. So we don't get to predict when something might happen in the market. No one gives us a heads-up that, hey, you might, in the first quarter we're going to see some major market activity. So we have to always be ready for that. So we did the most of that work as we're constantly operating our systems. So, as I mentioned, the technology migration we did over the summer, that was when we were doing a lot of testing about how the systems would perform. Even testing remotely to be able to trade without the brokers and without our market makers in the building, we test that every quarter.

CHAIRMAN MARIE-JOSÉE KRAVIS: So that's regular business practice for you.

STACEY CUNNINGHAM: It is. It is. And so we didn't make any changes with respect to

our systems in advance of moving to fully electronic on Monday. And that's an important part of how we think about business continuity so that people could, you know, so our customers aren't, we're not asking our customers to make changes as they're coming into the market and they're also dealing with many of their own challenges as so many of them have moved to split work forces and working from home. Where we did see, as many other companies also saw, a bit of a scramble was just making sure our employees could effectively work from home.

You mentioned we're part of ICE, with 6,000 employees moving a workforce that's largely an in-the-office workforce to pretty much 100% work-from-home is a shift. Now, we always had the ability to work remotely, but when you put everybody on a work-from-home system at the same time that so many other businesses are locally doing the same thing, making sure that we can work effectively and having enough bandwidth and the technology resources to do that when the entire city is doing the same thing was certainly a large feat. And I give a huge shout-out to our IT team who really did a fantastic job of getting this company, you know, remote access at large scale.

CHAIRMAN MARIE-JOSÉE KRAVIS: You mentioned that you intend to reopen the trading floor. Is that the big differentiator that defines the New York Stock Exchange, having a trading floor?

STACEY CUNNINGHAM: When you look at how we trade stocks, we trade them electronically and we layer human judgment on top of that. So what we've seen when we moved to electronic trading is, you know, as a result, that combination leads to less volatility in our stocks. So people step in and they offset volatility. There are tons of examples over the past few weeks where those people looked at what was happening and very effectively stepped in to provide more liquidity.

And I'll give you one example. Two weeks ago when the President announced, as we were going into the market close, that he was going to fill the oil reserves, that was very, you know, there was a lot of buying interest in oil stocks right at the end of the day. And we saw our market makers slow that down and able to, you know, find the other side of that trade and dampen volatility which worked very, very effectively. So our stocks trade with less volatility. When we moved to fully electronic, they still trade with less volatility because we have market makers that are assigned to, you know, there are certain obligations. And so those obligations, they still are meeting, even though they are fully electronic. But, you know, it's not quite as good as when they were live.

So we see that sell-off. It's better than fully electronic markets without market makers, but it's not quite as good as when you have people staying on the floor. So that's why we would go back to that methodology. Certainly the level of human involvement is even more significant during times of stress. So volatility in the markets, IPOs, any time

there's a really complex situation, there's more human involvement. When it's not complex, they're automating a lot of that work and they're using algorithms to trade. So, yes, we can do that, but we will want the full service operating as soon as we can.

CHAIRMAN MARIE-JOSÉE KRAVIS: I'm glad that you mentioned oil markets because we talked very much about COVID-19, but at the same time, and maybe not to the same extent, there has been this tension in oil markets with the Saudi-Russian tensions and an overall sharp decline in demand. So I wonder if you'd comment on oil markets and how that's affected the market conditions?

STACEY CUNNINGHAM: Yes, and we have a front row seat to that because of the oil futures trading that we do. And we've seen, that actually has worked pretty effectively. A lot of the commercial market participants that we work very closely with on the ICE side feel like there is, you know, they're effectively getting the risk management that they need with that. So, you know, certainly that sector is under strain and it's very inopportune timing to have the pandemic happening at the same time that there's this oil battle. So, you know, I think that timing is unfortunate, but companies are managing through it. We've been working with, you know, so many of them are listed on the New York Stock Exchange, we sort of see that from the corporate side as well as being the futures exchange that helps them hedge their risk. So the markets are operating very well.

CHAIRMAN MARIE-JOSÉE KRAVIS: Are you seeing that as a more demand-driven, I mean we talk a lot about the Saudi-Russia battle but now with the world seemingly in recession on a global basis, do you think that this whole turmoil in oil markets is more demand-driven than it is this political tension?

STACEY CUNNINGHAM: I don't know. It's hard to say. I think it's probably a combination. I'm not sure that it's driven, certainly political tension is playing into it at least to some extent.

CHAIRMAN MARIE-JOSÉE KRAVIS: And what about other commodities? Are there other commodities that you feel are red flags right now?

STACEY CUNNINGHAM: No, I mean we've seen, you know we've seen movement in the gold markets. But I think right now what we're seeing is there's a lot of quick reaction to conditions and I really think you're going to see things normalize as soon as people have some color. And that doesn't mean go back to where they were. I just think you'll see more stability. And as we answer a lot of the questions that are outstanding, there's going to be a higher degree of confidence in what parts of the economy are really going to be impacted and where can we recover.

I mean certainly the airline stocks are under tremendous pressure. If you look at all the

different parts of the economy and where there's a challenge, that's going to be one.

And this isn't like the financial crisis where there was, you know, actions that were taken that sort of contributed to the challenges, but what we're seeing is this is no fault of their own, right, I mean this is a global pandemic that impacted them across the board.

CHAIRMAN MARIE-JOSÉE KRAVIS: It's not in anyone's control.

STACEY CUNNINGHAM: Not in anyone's control, right? I mean that's why I think we really need to focus on what we can control because some things you can't control, right? And so let's set those aside but let's focus on the things that we can absolutely control ourselves. And so that's where I think people will be focused. And then also where can we give support? And so we've seen the government already indicating that they'll help the airlines and those sectors where they need to be supported.

CHAIRMAN MARIE-JOSÉE KRAVIS: I'll ask you one final question. What's your bet? We've had a stimulus bill passed, in fact today. Do you think that's enough or will there be another one in the next couple of weeks? I heard that Speaker Pelosi said there could be more.

STACEY CUNNINGHAM: I would not be surprised to see further actions taken as we have more clarity around where help is needed.

CHAIRMAN MARIE-JOSÉE KRAVIS: And where would you see if you had to, you know, give your priorities – and I know that it's a complicated situation – but where would you see, where would you like to see more intervention?

STACEY CUNNINGHAM: I'm really encouraged by the early steps so far. I think once we see how quickly we can actually get those implemented; we'll have a better sense of what needs to be done. And I really wouldn't want to say just now because I feel like every single day this is changing so quickly and we get more color as to what's happening and where. And I think if you look at the next week, it's going to be very different from where we are today. It was hard to get testing a few weeks ago. People are being tested now. I think we'll continue to see how businesses are impacted longer term over the next few days even and that will give us a better sense of where do we need to spend more. I'm very encouraged by the initial stimulus package though.

CHAIRMAN MARIE-JOSÉE KRAVIS: And I'm sure you're speaking to exchange CEOs all over the world. Are you hearing similar reactions to their government actions? Do you feel that we're showing leadership or are they also taking effective actions?

STACEY CUNNINGHAM: Yes, I think globally we weren't quite as prepared for this as we could have been, right? I mean I think that's no surprise. If you just look at how quickly things evolved, I don't think we were prepared.

Everyone is still trying to understand what the long-term impact is and so I think people are, there's going to be a lot of analysis that happens over what were the right steps to take and there'll be some second-guessing. But frankly, my personal opinion is there will be plenty of time for lessons learned down the road. We need to stay constructive and positive right now so that we can determine how we can get people back on their feet as quickly as possible. And this is the time for us to be united and to put politics aside and to not think about, you know, what could have been done in the first couple of weeks. I think we really need to be focused on what we want to do right now.

CHAIRMAN MARIE-JOSÉE KRAVIS: Well, I think you've been very wise in saying already early on in this conversation that there'll have to be a post-mortem. And when we have a post-mortem, we'll have a chance to examine, you know, the lessons learned and what went wrong and what worked. And I think that's how you handle these situations.

STACEY CUNNINGHAM: I mean that's how we run our business, right? We run very sophisticated technology platforms. When you have an issue with your technology, you focus on fixing it and then you set your post-mortem for later. And so I think you want to make sure you're putting all of your energy into a solution and then with clear heads think about a response.

And I think there's a very important distinction between reacting and responding. And we need to respond thoughtfully and carefully and those responses carry you through crises for years to come. And so we have a whole toolkit of responses for market conditions and we've been using all of them. It's not just market-wide circuit breakers. There are a number of things that we've been using across the exchanges to dampen volatility and address some of the concerns. And I know that there are plenty of people that feel like the markets have been selling off dramatically and we should just stop the pain. There's a reason that one's not in the toolkit.

CHAIRMAN MARIE-JOSÉE KRAVIS: Yes, we need well-functioning capital markets. And I'm glad that you're at the helm of one of the most important exchanges and you've taken the time – I think we've run out of, we've exhausted our time – but you've taken the time and, as I said at the opening, you've taken time while the markets were open to speak to us. So we deeply appreciate that and wish you continued success and I can't say less volatility because that's something that's beyond our control. But at least continued effectiveness and efficiency of your systems. Thank you, Stacey.

STACEY CUNNINGHAM: Thank you Marie-Josée. Thank you, Barbara. Thanks to everyone. I wish everyone a safe and well rest of the week.

CHAIRMAN MARIE-JOSÉE KRAVIS: We're all be vigilant and everybody should be

prudent. So thank you very much. And we will convene again – to our members and those that are on the line – we will be in touch with you shortly. We hope to have some more of these conversations and we hope to do them as regularly as possible. So, Barbara and the team, I thank you for all your work and all your efforts in putting this together, and we will put more of them together. So thank you very much and be safe.