NVIDIA Corp at Nasdaq Investor Conference

Company Participants

- Colette M. Kress, Executive VP & CFO

Other Participants

- Unidentified Participant, Analyst, Unknown

Presentation

Unidentified Participant

Okay. All right. Great. So I think we're very excited to have Colette Kress, who is the CFO of NVIDIA, for a fireside chat. I'm going to -- I have a bunch of questions that I want to go through. And I'm going to hope to leave a couple of minutes at the end to see -- in the event that there's questions from the audience.

So Colette has been with the company for six years as the CFO and previously at Cisco, Microsoft and Texas Instruments. So Colette, do you want to start off with any introductory comments or do you want me to just start asking you about China right away?

Colette M. Kress {BIO 18297352 <GO>}

So let me set the stage a little bit more than just maybe 1 country and let's talk about -- a little bit more. So listen, we've got a really broad portfolio. A lot of things exciting are happening outside of the overall financial markets.

In terms of we're busy working, our gaming business, the start of overall ray tracing is definitely taking off. We can talk about that a little bit more. Our data center business, although still a little bit cloudy outside, we're making great progress in terms of inferencing as well in terms of some of the next phases of our overall AI focused on conversational AI and we can talk about that. And our automotive engagements couldn't be stronger in terms of the work that we're doing, everything from their simulation, their development from Level 2 all the way to Level 5. But we can talk about...

Questions And Answers

Q - Unidentified Participant

Excellent. We're going to talk about all of those things. But to start off, I've had probably 20-some meetings this week and the first question for me is what's going

on in China? How should we manage the risk? What is your -- I know you're getting that question too. So what do you tell investors on that question? What's your exposure, how to think about it?

A - Colette M. Kress {BIO 18297352 <GO>}

Yes. To think about -- I wouldn't look at it as our exposure. China is -- what I look at is a very important customer for us. We have been -- with many of the regions of the world, have a great share of the overall gaming market and China is probably about 1/3 of our overall business in the Asia-Pac area. And when we think about our overall data center, we've indicated that we work across the globe with all of the different hyperscales. Some of those hyperscales are also in China. Our hyperscales in the U.S. are definitely larger overall checkbooks in terms of their CapEx and their overall purchasing. But China, again, is important person in terms of the work that they do there. Other parts of our business, not so much in terms of in automotive, maybe in terms of in the future. But the other ones also have some piece of it.

Q - Unidentified Participant

Okay. Fair enough. I think you guys have taken a particularly strategic approach to the industry and I want to kind of touch on some of those strategies. One of them is this idea of being a platform company versus a chip company. And I think a lot of people are starting to understand that software is a larger part of your value proposition. Can you -- but more recently, you've been kind of expanding and it seems like you're kind of delivering a whole system solution. So could you maybe tease this out a little bit, how to think about NVIDIA as a platform versus a chip company? What percentage of your revenues are just purely from chips versus chips and software and systems?

A - Colette M. Kress {BIO 18297352 <GO>}

Yes. So definitely over the last 5 to 10 years, we have worked on that transformation, thinking of the full -- both board approach in terms of what we're doing. But now much more considerably on the full systems. Systems require thinking about all the other different components and the overall computing architecture. But a key part of that is software. In our overall gaming business, software is still a very important piece. We sell the overall boards that go in terms of in desktops. We work in terms of the chip designs within the notebooks with the overall OEMs. But the software is very key in terms of developing the ecosystem and developing the content that they play the games with.

But then if you move towards what we're doing in the enterprise, starting with overall Quadro line focusing both on RTX and focusing on the next generation of rendering, software has become a very, very key component. We have taken that business not just focused on Quadro desktops. But the mobility capability, adding ray tracing. Now you also see ray tracing servers, rendering servers that will also be available later this year.

Moving to the data center. This is where we have such a significant amount of work in terms of leveraging our software platform that we've been working on for more than 10 years and focused on CUDA and it branched off in terms of being able for

the many to create the overall AI frameworks that are so important to the AI wave that we see. But our systems are becoming very material part of our overall business, focusing on DGXs. But also focusing with the OEMs as they design out their servers, not just a slot for the overall GPU. But thinking about all of the different components and how they're linked together. You can even think about our acquisition of the future with overall Mellanox and the importance of that driving more of the compute architecture and what can be done exclusively with the nodes. But also looking at the interconnects and how important that networking layer to accelerated computing will be in the future.

Q - Unidentified Participant

And so on the topic of Mellanox, can you just remind everybody where we are in the approval process and what needs to happen in order to get that deal closed?

A - Colette M. Kress {BIO 18297352 <GO>}

Sure. We are progressing through the overall approval process. We do have regulatory approval in the U.S. We have completed our filing within China. We have a couple of small other regulatory approval areas. And we are still on track to believe we'll be able to close this deal by the end of December.

Q - Unidentified Participant

Okay. Fair enough. And if you look at the profitability of NVIDIA over the last five years or so, it really has improved markedly. Would you attribute that to the systems approach that you're taking?

A - Colette M. Kress {BIO 18297352 <GO>}

There are so many different reasons for the overall growth and profitability over this. The advancements that we have done in terms of looking at just different platforms within the computing world to apply the overall GPU technology. The overall GPU technology, beginning in the overall PC, transforming that to be leveraged in the data center and then balancing our work in the data center to be able to provide that to edge computing as well as we think about the importance of autonomous driving has been such a large importance. But the key thing is each of those expansions and platforms, we have maintained a consistent overall software across each and every single one of our overall designs that we have.

So essentially, the software package is universal across. There are different libraries, different components for the different markets that we're doing but the software is consistent. We're agnostic to any of the different types of components in these platforms. Whether it be different operating systems, different OEMs, different ODMs, different parts of the world, we've been able to use our GPU universal in that manner.

All of these have really driven our overall expansion as well as the importance of the software because it's one thing to have a leadership position in the technology and the overall hardware of the GPU from both the performance and performance efficiency standpoint but the software allows the expansion of the use cases, the

different workloads throughout gaming, throughout the overall design in terms of the enterprise as well as what we're seeing in the data center.

Q - Unidentified Participant

Right. It seems to me that, that approach makes your products stickier with your clients. Is that fair?

A - Colette M. Kress {BIO 18297352 <GO>}

Stickier, absolutely. It's a decision that they make when they choose to use NVIDIA, that they know that the help is there from an overall programming. If it is not available in the market or if it is a new type of workload, they know it is very easy to both use overall CUDA to advance with all of the different libraries that we've created as well as just the help that NVIDIA will provide them along the way in terms of building out the workloads or new types of works that they want to do.

Q - Unidentified Participant

I want to touch on the online -- your online gaming strategy. You -- I think most investors and gamers think of you as the high-end PC gaming platform. But it seems like we're starting to grow the market on the online gaming side. And your GeForce NOW solution, it seems like there's a different business model than what investors are normally used to where you are perhaps sharing in the CapEx and sharing on the revenue size. So can you clarify the model on GeForce NOW? How should we think about that?

A - Colette M. Kress {BIO 18297352 <GO>}

Sure. The overall expansion of the gaming market has been phenomenal in the last five years. You've really seen gaming move to an entertainment overall sport, a overall socialization platform for people to stay connected with their friends. What that has evolved is yes, we still are the king of the overall high-end overall gaming on the most popular platform, which is the PC platform. We have advanced from the desktop in terms of a mobile capability also with the notebooks. But now we are also addressing what we see is the future of possibly streaming overall market for games.

Now it's a different type of business model. It's a different type of overall capability that we need to provide to the overall gamer. There will still always be that high-end desktop configuration. It's important to the AAA games. It's important to the overall -- top overall gamers in the world. But the streaming allows us to expand the market, expand to gamers that either have chosen not to have a dedicated machine for gaming or haven't actually been able to do high-end gaming because they chose a suboptimal PC.

Likewise, thinking about our overall Mac users, a lot of games aren't readily available for the overall Mac and now streaming gets on the option. So we're approaching the market in multiple ways. But one of the first ways is focused on the telcos. The telcos have a great access to many of those overall consumers and have the overall ability to bundle the overall streaming gaming with many of the other services that they provide their overall customers.

Now the business model in this case is we're helping them develop their overall data center, which they are readying for overall 5G and putting in overall data center capabilities using GPUs and then working in terms of a share model with what they will provide to the overall streamers. A great model. We have this currently on track with overall Softbank and LGU+. So we're really excited about that, with many others lined up in the overall pipeline for us to consider.

Our GeForce NOW is a great option for what we think about the overall game developers that develop the content. It is important that we both work on key innovations to drive this market. We've worked on building and adding ray tracing, adding now the overall capability of streaming. But allowing them to maintain the revenue that they well deserve for the games that they're bringing into market. So this is essentially renting an overall PC in the cloud. It's not about taking that overall game revenue away from the overall game builders. So we're really excited about both of these options and the increasing expansion of the overall gaming market to the many out there that just maybe have not had the chance to realize the fun of it.

Q - Unidentified Participant

So just to be clear, you are of the view this expands the market, it does not cannibalize your existing market?

A - Colette M. Kress {BIO 18297352 <GO>}

Definitely in the near term, it is an absolute expansion of the market. There are many people that would just like the opportunity to continue gaming anywhere and there's a large amount of them that have not had access to gaming at all.

Q - Unidentified Participant

Fair enough. And last strategy question here. On the earnings call, Jensen said that NVIDIA is not an accelerator company, it's an accelerated computing company. What's the message for us there? What does that mean?

A - Colette M. Kress {BIO 18297352 <GO>}

Yes. So an accelerator is necessary, given the overall end of Moore's law. We're looking at how are we going to expand computing efficiently in the future given the slowdown of Moore's law. The use of an accelerator has always been an option in this case and have been around for some time. We still own a significant percentage of the accelerator overall market. And accelerated means something that is added on top of the general purpose overall compute. But often an accelerator is limiting. An accelerator rarely has the overall programming capabilities, rarely has the overall software stack in order to enhance other types of components in the underlying platform.

When you think about where we're focused on with our overall GPUs and overall future Mellanox acquisition, we're thinking about the entire compute platform. We're thinking about how accelerating all levels of what we can do in that platform from the networking level as well as all of the intersects that may happen between the

software, the networking, the CPU. So the accelerated computing has to think about all of these things jointly together in terms of what we're adding.

Q - Unidentified Participant

Okay. That's helpful. So let's go through some of the opportunities you originally were talking about. On the gaming side. So this last quarter, the gaming increased by 11% sequentially, declined 39% year-over-year. To what extent is that 39% decline on a year-over-year basis crypto versus inventories and pure gaming cards? And since we're -- you're now -- you bounce sequentially up, does that mean that we're -- the inventory issues are behind us?

A - Colette M. Kress {BIO 18297352 <GO>}

Sure. So we do have the growth sequentially. We believe we're back on to a sequential growth and we do think this will continue throughout the year. Our prior year definitely was influenced by the availability of overall crypto, the possibility of using overall GPU cards. So essentially, it was just a very difficult comp for us to overcome. The inventory -- excess inventory, we believe, for the most part is pretty much behind us. We believe we're now able to concentrate on our full stack of Turing that is now available in the market, focus on the great capabilities of ray tracing that, that begins. And we believe our hopes of normalization of our overall business will be occurring somewhere between Q2 and Q3.

Q - Unidentified Participant

Okay. Excellent. Gaming notebooks have been growing. And you talked about your Max-Q gaming notebooks. What is Max-Q? What is the opportunity here?

A - Colette M. Kress {BIO 18297352 <GO>}

Yes. Max-Q is a great design that we worked with, with our overall OEMs worldwide because we realized that gamers wanted to be mobile. But they were not willing to go backwards and give up their thin and light. They wanted thin and light and they wanted high performance at the same time. And so we worked with the design with the OEMs incorporating, which we call Max-Q. We have now launched since CES probably more than 120 different laptops of high-end gaming capabilities. But also bringing ray tracing both to the consumer, the prosumer as well as the enterprise capabilities. These are important leading-edge, very great gaming notebooks at just the same great performance that you would see in our high-end desktops as well.

Q - Unidentified Participant

Okay. Then the other opportunity seems to be ray tracing. Where are -- how important is ray tracing? Where are we in the -- on the games that are available? And I saw a press release from you guys on this topic this week, I think. So bring us up to speed on ray tracing.

A - Colette M. Kress {BIO 18297352 <GO>}

Yes. Ray tracing, we believe, will be essential for the next generation of gaming. It is a distinguished piece of architecture and capabilities that allows things to look near

real, no longer simulating the capabilities of ray tracing and the physics behind it but actually doing it in real time. All of our Turing cards starting well into about the $300 price point or lower can absolutely use overall ray tracing.

We announced many new games starting back in the late fall. But even in this last 1.5 weeks through Computex, through E3, we probably have nearly half a dozen new games, including Call of Duty, Cyberpunk and a couple other really great games coming out. We have the endorsement of the ecosystem, all the game engines that are out there, that are building as well as the APIs for Microsoft and others to begin the entire ecosystem focused on ray tracing. We are the hardware platform now that is only focused on overall ray tracing. So we're really pleased about the ongoing excitement that has been brought with ray tracing.

Q - Unidentified Participant

Okay. Let's shift over to the data center, declined by 10% year-over-year, by 7% sequentially. I think every company that sells into the data center saw great growth last year and more recently, some declines. And I think most companies believe that there's a digestion period that's going on in the data center. Can you talk about what is the visibility like today in the data center? And can you describe the order process or the forecasting process for data center? Are your customers pinging you? Are they asking about lead times? Do they give you visibility into programs that they're going to have in the back half of the year? Can you just shine a little light on that process for us?

A - Colette M. Kress {BIO 18297352 <GO>}

Sure. So at the latter half of 2018, there was a significant amount of purchase, worldwide hyperscales and others associated with the overall data center. Probably what I would refer to is a little bit too much. So what we saw, once we turned that corner into 2019, saw the first month of January, we feel there was a lot of replanning that was occurring across the world in terms of how much will they be purchasing in terms of this year. That replanning took a good portion of the First Quarter. And so as we've moved into now the Second Quarter, still a little cloudy in terms of what we see into the data center. But we do believe the second half will be a stronger second half as they will return to overall purchasing.

Our confidence relies on our overall engagement at the engineering level. We have several ongoing engagements at all times across the board, whether that be with hyperscales, whether that be with consumer Internet companies or several enterprises as they think about the use of GPUs on a broad possible uses, from training to inferencing, in terms of machine learning with our overall data science. So a significant amount of work is there that leaves us with the overall confidence. We don't have a case where the order processing is a PO. But we're going to use those engagements at the engineering as they have proven to be very timely in terms of when we think about the ordering that will happen with the customers.

Q - Unidentified Participant

The inference market was a bright spot for you in data center. It was up sequentially. It was up year-over-year. And you talked about your T4 product here. What is -- how

big is inferencing? And what's the opportunity?

A - Colette M. Kress {BIO 18297352 <GO>}

So the inferencing is an enormous opportunity worldwide. It's generally been a CPU industry for quite some time. And however, what we're seeing is the overall inferencing workload changed quite a bit. It is much more advanced, many more different types of algorithms that transpired during that inferencing process. You are seeing inferencing at the edge. You are seeing inferencing at the enterprise levels to even think about the overall machine learning.

So what we are working on is continuing to establish the overall GPUs that are engineered specifically for inferencing. You saw our release of our overall T4. It went to Google's cloud first. It is now getting broadly adopted and becoming an important part of our data center business. It has now moved into the teens or the double-digit levels as a percentage of our overall data center business. So we're very confident that our position in here will continue to grow as we go forward and we're very pleased with the overall acceptance that we've seen so far.

Q - Unidentified Participant

And just last question on the data center side -- actually on the inferencing. One of the things that Jensen said was driven by -- the inferencing opportunities, driven by advancements in conversational AI. What is conversational AI? And where do we see this right now?

A - Colette M. Kress {BIO 18297352 <GO>}

Yes. Conversational AI is a great new thing. We demonstrated a bit of it a couple of months ago at our GTC. And what we're talking about here is a discussion with your computing platform, whether that be your phone, whether that be your PC. And a response back in a simulated speech. So what that is, is both understanding natural language processing, speech recognition and synthesizing back in voice. This can be everything from recommendation engines as well as just (catering) for overall answers with just a normal conversation type of look.

A lot of this started in its early stages with the release of Google in BERT. BERT is their natural language processing model and many of the hyperscales are working to adopt something similar. So yes, we're in the early stages. But this is yet again another super important evolution of AI, AI training and the overall neural nets that will be needed to support this type of feature.

Q - Unidentified Participant

Then the -- on the -- you also talked about the RTX Server to target rendering remote workstations, cloud gaming and that Disney and Pixar have embraced this solution as customers. What is the implication of RTX Server? What is it?

A - Colette M. Kress {BIO 18297352 <GO>}

Sure. RTX Server as well as our RTX overall Quadro workstations are super important for this piece of rendering that happens in the enterprise. Very popular in the film industry and the overall design industry. They spend hours of building frame by frame what they need for many of the special effects that we see in all these great movies. And what that usually takes is overnight work sending out the overall data forms for them to overall render that, for them to come back, look at the overall work and continue to make tweaks.

We are now able to do that rendering in real time with our overall capabilities with our ray trace overall GPUs. So our GPUs availability within Quadro. And we have more than 10 different OEMs that have built the RTX Servers that will also be able to transform the amount of time. That's generally, again, a CPU market. There's probably about 1.5 million overall CPUs installed. And over the next several years, we hope to refresh those with GPU offerings that allow them to speed up the entire rendering process.

Q - Unidentified Participant

Okay. We have about 2 minutes left and I do want to have an opportunity for anyone from the floor to ask a question. Do we have a question from the audience?

On the Mellanox transaction, is there any concentration of that sort of 2 big suppliers getting together, particularly in China, obviously, given the background of...

A - Colette M. Kress {BIO 18297352 <GO>}

In the case of NVIDIA and Mellanox, as we had discussed at the announcement of the deal, what is unique about this is there really is absolutely no overlap in terms of the work that we do. We each provide unique pieces within the data center in terms of the capabilities. I think our work is complementary and we will continue to provide both our products as well as their products as we move forward. The goal of this is the strategic opportunities as we move forward, what can we now build together long term in order to help improve and advance this overall industry. But no other feedback that we've received.

Q - Unidentified Participant

And that will have to be the last word. Colette, thank you very much for joining us today.

A - Colette M. Kress {BIO 18297352 <GO>}

Thank you.

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