Bank of America Merrill Lynch 2020 Global Technology Virtual Conference

Company Participants

- Colette Kress, Exec VP, CFO
- Vivek Arya, Analyst

Presentation

Vivek Arya {BIO 6781604 <GO>}

Hello. Good morning, good afternoon and good evening. This is Vivek Arya from the Bank of America Semiconductor team. Hope everyone is doing well.

We are absolutely honored and delighted to have Colette Kress, Chief Financial Officer of NVIDIA join us this morning to discuss recent business trends, just fresh off a very strong quarter, where NVIDIA announced a number of new products.

So maybe Colette, as a start -- first, welcome. And then maybe as a start, if you could just give us some quick highlights on the number of new product announcements that NVIDIA made recently.

Colette Kress {BIO 18297352 <GO>}

Great. Thanks, Vivek. And thanks so much for having us for your conference. We've had a busy quarter and definitely a busy couple of weeks as well.

Let me kind of talk through some of the really high level things that we announced over the last couple of weeks.

First, we finished our Q1 of fiscal year '21 results. Our results were strong, led by our growth in terms of data center and gaming. What we're seeing across the board is cloud computing and AI continue to fuel our growth in terms of the business. Gaming is continuing to reach a broader and broader audience, which is aiding our overall revenue growth.

We also saw record levels in terms of our data center revenue, which for the first time passed the $1 billion mark for the quarter, and we also had record gross margins.

Additionally, before we announced earnings a week prior, we announced our new Ampere architecture. We announced the architecture from our kitchen and talked about it as the fastest ramp in history of what we produced. It is the largest performance leap, our Ampere architecture. It is 20x improvement over our prior

generation of the A100. It is also the biggest chip on 7-nanometer. It is the highest performance of anything in the world.

Unifying, training and inferencing was our goal with the Ampere architecture, which allows for multiple inference GPU that allows an elastic overall data center build. We also produced significant software innovations, including our CUDA 11 that launched as well as software packages for Jarvis, Merlin and Spark, which focus on conversational AI, recommendators as well as the large industry of data analytics and data science.

And then lastly, probably noted at the earnings is that we closed our Mellanox acquisition after 13 months since its announcement. Mellanox and NVIDIA are now one.

But we have the optionality now to redefine the overall modern data center architecture with the combination of the two companies.

The modern data center architecture really focuses not only on accelerated computing, but accelerated networking, which can go hand-in-hand. It also allows us the ability to accelerate for some of the areas of disaggregated infrastructure as we move forward.

So the overall Mellanox acquisition is expected to be accretive to both non-GAAP gross margins, non-GAAP EPS as well as our free cash flow.

So those are some of the big things that we've announced over the next -- over the last three weeks or so closing out our quarter.

Questions And Answers

A - Vivek Arya {BIO 6781604 <GO>}

Great. Yes. It was good to see NVIDIA bringing U.S. semiconductor manufacturing back to Jensen's kitchen. That was very impressive to see.

So Colette, maybe what I'll do is I'll -- let's -- you started talking about different product and growth drivers. Maybe let's stick with that theme, and then we can come back to some of the more near-term issues.

So starting with gaming, your largest business, what we have seen historically is whenever there are new game consoles that are launched, they often jump-start a new gaming cycle, and we had one start seven years ago. And in the second half of this year, there are expectations for new game console launches.

How should we think about that in terms of driving your GeForce user base to upgrade to your newer graphics cards?

A - Colette Kress {BIO 18297352 <GO>}

Sure.

So the way we look at the overall gaming market and even what we have seen over the last couple of quarters is overall gamers in the overall market are excited because of the games that come to market. Looking for the platform that allows them that experience and to achieve the performance that they need to play some of those great high end types of games is really we're focused on.

Over the last five to ten years, you've really seen a huge shift of overall gaming to really be an overall entertainment sport. An entertainment sport that brings together friends in a social setting to play games, watch others play games and really use it as a full entertainment sport. Now what we've seen even in the last quarter is even more bringing people online to focus on being together as they've been challenged to entertain even outside of the home.

But when we look at the next upcoming holiday season and the expected arrival of the new overall consoles, what we've seen historically during these times is the PC platform is still a great platform that gives them both the optionality, but also the ability to do any types of games and enter into that market at any different type of price point.

So over this period of time, you'll see the ecosystem build games for upcoming overall hardware that will enter that market. That's a great opportunity for us to continue to attract gamers to the PC gaming platform, and we'll likely see that continue as we move into this overall holiday season.

What is going to be different is we've got two years working, building the overall ray tracing, which is attracting the ecosystem to right games, to deliver high-end ray tracing.

So our use of not only great overall hardware but also our work to develop software that enables the best agreed overall real-time ray tracing will be a great attraction point for the overall gamers into the market.

So it's an area that we continue to see the importance of building great games, being innovative in terms of better and better graphics. And I think that will be very beneficial as we turn the corner to the holiday seasons.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. Now I recall that in the last few analyst days, you had given some quantification of unit and ASP trends in your gaming business, a very strong double-digit kind of growth rates that we saw both in terms of units and ASP or essentially your content. As we look at the next two to five years, Colette, what is the right way that investors should think about both the unit growth and the content growth aspect in your gaming business?

A - Colette Kress {BIO 18297352 <GO>}

Yes. So our gaming business, even in the last couple of years versus historical, has really added quite a few different form factors in terms of how people can experience overall gaming. We have been the kings of the overall desktop add-in card overall market.

But as you've seen over the last couple of years, we've also introduced the overall laptop and not just laptops that include a GPU, but include a high-performance overall GPU. We are now running to incorporate Turing and the high-end parts of Turing all the way up to 2080 supers in our overall laptop line.

Additionally, we have created a studio line, a studio line that bridges between high-end overall gamers as well as what we refer to as the creatives and the independent creatives that may be out there. We have the overall consoles as well in terms of our work that we do with Nintendo.

So it's really shifted in terms of how people absorb overall gaming, but it also allows us both the increase in terms of the units and the deployment to the overall gamers as we've seen otherwise, the increase in overall ASPs that we've received over this group as well.

What we mean by that is to partake in the higher end of gamings, we provide overall cards with that great performance and that overall great experience. We continue to be average overall ASPs that are still within or lower than what you would receive if you had to purchase a full overall console unit.

So as we work forward, we see there's an opportunity to expand overall gaming to a larger and larger universe of gamers, increasing our overall units, but also the ability to upsell to higher and higher GPUs that can accomplish the real-time ray tracing and can meet the overall experience that some of our best gamers are considering.

So I think this is a trend that we've seen over the last couple of years, but there's nothing stopping from that to continue as we go forward. Long term, gamers and the number of gamers that will probably be gaming around the world will still be a very important part of overall entertainment and their ability to find different types of offerings at every different price point allow us the overall ASP uplift as we go forward.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. You mentioned ray tracing, and NVIDIA was very early in the ray tracing feature.

Sometimes it's good to be early, sometimes it's a little tougher to be early. Give us a sense of what is the latest in terms of ray tracing adoption by game publishers? Because as I look at some of the announced features of the new consoles, they definitely are talking about ray tracing being one of those features.

So how is it helping NVIDIA to be early in terms of rolling that technology? And what have you seen so far in terms of game developer and game publisher adoption of that technology. Just how important is ray tracing to catalyzing faster growth in your gaming business over the next handful of years?

A - Colette Kress {BIO 18297352 <GO>}

Yes. Really good question. As we look at the importance of overall real-time ray tracing going forward, it has been a feature or an overall experience that probably wasn't expected for more than ten years out and something that we brought in with our last architecture. We had signaled in terms of bringing it together with Microsoft and the development of their API and really worked with the full ecosystem in developing the capabilities for real-time ray tracing.

That early arrival was super important -- super important for us in terms of bringing that innovation to the overall world of gaming, and we have now aligned almost with every single major publisher, major engine that is out there. And you will see now that ray tracing has become a household world. That people use the word to signal, this is the next generation of gaming.

We were able to get in with many of the games that were in the initial stages of being built and being able to think about their strategy of how they used ray tracing for that. And we're very pleased with the number of overall games that are out there.

But also that the industry is all now moving to overall ray tracing. You see the overall console signaling that they will have their first generation consoles using ray tracing out by the overall holidays.

But our two years of working is enabling not only the overall hardware, but also enabling software techniques that influence the overall ray tracing experience. Ray tracing requires a lot of high-performance overall compute to make the overall frame rates special to those that are experiencing ray tracing.

But with our DLSS software, for the first time, brings overall AI to gaming and brings it to ray tracing to improve the overall and enhance the performance using software and AI. Essentially, what you're doing is filling in, in between the pixels with AI and inferring what those pixels will be rather than waiting for the time for real-time ray tracing to compute.

So we're excited about what we brought to the market and being that first-mover because we knew that the work with the ecosystem would be essential. We've got two years working on this and so much information and learning through that of what the overall gamers will need and working with overall game developers to make their games overall top notch.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. Maybe let's move to data center, your fastest growing business. And interestingly, about to become your largest segment for the first time in the coming

quarter.

Give us the puts and takes on the data center and especially the visibility around growth for the next handful of quarters. Because you mentioned in the introduction earlier that you have the Ampere product rolling out.

So that's great. But at the same time, we also have a number of the cloud customers who have been talking about buying a lot in the first half, but maybe digesting that capacity in the second half.

So give us the puts and takes and just your overall visibility in the data center segment.

A - Colette Kress {BIO 18297352 <GO>}

Sure. So our Q1 results for data center were just great. For the first time, we exceeded $1 billion. As we had articulated at the beginning of the quarter, we had good visibility into that quarter, and we were able to see that overall demand finish for the quarter. We had more than 80% growth year-over-year as well as very strong sequential growth of more than 18%. Across the board, we saw strength in our overall hyperscale and overall cloud purchases. We also had great results in terms of our vertical industries, and therefore, our enterprises adoption as well.

Currently, at this time, we have our hyperscales that are a little less than 50% of our business, our overall verticals that are more than 50% of our business. Within that, we also serve not only training, but also in terms of our adoption of overall inferencing.

Inferencing adoption continues to go quite well. This quarter, we still have reached where inferencing is in the double-digit percent of our overall data center business. Importantly, it doubled year-over-year in terms of its revenue and its growth of using a GPU for many of the overall inferencing workloads that are out there.

But most importantly for the quarter, was the quarter incorporated our overall Ampere and our A100 shipments.

So even though we found the right opportunity to launch it, even after our overall quarter, within the quarter, it contributed to a meaningful percentage of our overall data center revenue for the quarter. A great feat from us in terms of launching just an outstanding overall architecture and the overall demand for A100 is still quite strong. We expect as we move from Q1 to Q2 that we will continue to have good visibility into Q2. We think Q2 from a year-over-year will accelerate growth from what we've seen in terms of Q1.

As we had highlighted with our overall earnings, it is something that we do of essentially providing guidance quarter-by-quarter and provided that quarter for Q2.

As we look in terms of H2, we'll come back to kind of give some highlights in terms of what we expect to see in the second half of the year.

As we look into Q2, Q2 will be a quarter of continuing overall Ampere, but we're also continuing to see strength in our V100 as well as our T4 overall product offerings. You will likely see us continue to ship all three types of architectures within the data center for some time.

Our Q2 overall guidance also includes a full quarter of Mellanox. Mellanox, if you've watched over the last year since the announcement has been doing quite well. Even in this last quarter, it had overall record growth as it saw more than 40% growth in that overall March quarter.

We expect Mellanox to represent in our second quarter in the low teens as a percentage of the overall data center business. We're excited for us to work together as we work with overall customers. They have a lot of similarities in terms of the overall customers that they serve. As you know, they are a leader in most of the overall interconnects that influences high-performance computing and overall supercomputing.

So there's a great match as we work together to create the overall modern data center.

So a very, very important quarter for data center, both in terms of launch of Ampere as well as bringing on Mellanox, and we're excited in terms of how the quarter panned out.

A - Vivek Arya {BIO 6781604 <GO>}

Good. When we look at the kind of growth rates, Colette, that NVIDIA is putting up in the data center, they are very impressive. And certainly, in semiconductor, we are not used to seeing these kind of growth rates.

So as -- from a CFO perspective, how do you make sure that what you're shipping that there is adequate level of utilization so you can model growth going forward just because the level of growth that you're reporting is so strong and so impressive?

How do you make sure that there is an excess capacity being built up at your customers because we saw there was a year where there was capacity digestion among your data center customers? What things are you putting in place to make sure you have a good read on the capacity utilization of your new products?

A - Colette Kress {BIO 18297352 <GO>}

Yes. So our data center business probably wouldn't be referred to as a semiconductor business. It's definitely referred to more as systems and an overall platform put together.

Our overall systems and platforms are here to support overall accelerated computing and some of the most important breakthroughs in accelerated computing as it relates to overall artificial intelligence.

So much of the work that we do in that full stack and software together with the most high-performance overall processors that are out there are to really support the next generation of the data center.

The next generation that needs a different solution to support the overall compute that will happen in data centers now that overall Moore's Law is aimed at. And so we see a surge of people purchasing into overall AI, purchasing into using overall acceleration. The overall A100 is an important architecture, an important architecture that now bridges an overall system or solution that allows you the ability to do high-end overall AI training and use of overall training models, but also taking it to complete overall inferencing and overall inferencing workloads. Of course, it is also well engineered for overall high-performance computing, just like our overall V100.

So it serves a lot of different markets, which is the overall goal of our overall architectures.

We continue to look at a universal system and solution that enables software specific for those overall ecosystems.

So even more with the overall A100, you have the ability to use it for a lot of different workloads and improve the overall efficiency of the overall instances that we create or just a pure system as a whole.

Our ability to work with overall customers on the solutions and the projects that they have has continued to advance over the last three years that we have been working with them since our last architecture. We know that they are interested in purchasing four projects -- purchasing four workloads. Ampere allows that flexibility for the workloads that they may do that will ease the overall deployment and the quick overall utilization, whether they be doing that for internal use or creating overall cloud instances.

We don't have the perfect insight at all the times in terms of their projects and their build, but we do know that since three years in the launch of overall V100, more and more use of the cloud and the cloud as a first test to determine if they will stay in the cloud for those workloads or bring that in-house to their own systems in their data center. It has also branched a significant amount of work in the edge as not all overall accelerated computing will occur in a centralized data center, and edge computing and having an edge overall system and architecture is also very clear for us.

So in these times, we know that we are well aligned to the priorities of hyperscales, enterprises as well as high-performance computing that is out there. And that is what

is key in terms of driving the overall growth that you see in our overall data center that we expect to continue.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. How important is this 5G and edge computing opportunity? Do you need to form new kinds of products, new kinds of alliances with telcos, for example? Or do you think you are adequately positioned for 5G and edge compute?

Because going into the telecom market, at least the perception from the outsiders is that it's a relatively new opportunity. And here we are at the start of the 5G cycle.

So how important is 5G for NVIDIA? How much focus do you have on that from a product and go-to-market perspective?

A - Colette Kress {BIO 18297352 <GO>}

Yes. So if you've watched our overall launch of all the specific verticals that we continue to enable and enable for overall acceleration, it begins to start to understand the overall applications and their use and some of the challenges that they have with their overall computing and the inefficiencies.

Often a great time to actually enter those vertical industries as they are moving to some new transformation. The transformation to 5G allowed us to discuss with a lot of the telcos and others, the challenges that they see in terms of that adoption of 5G and what we could do in terms of accelerating that process. And also, decoupling the overall hardware from the overall software and compute.

If we could enable the acceleration with the overall software that we could stitch together for 5G realm, we now have the ability to improve their overall deployment of processes with 5G. Nothing different than any other of our overall vertical integrations that we are trying to do. We're choosing large markets, large markets that we know that are challenged in the new world of overall compute to be accelerated. And we are stitching that together, whether it be warehouses, factories, considering how they do their supply and demand planning or what we see in terms of storefronts looking for visual computing to determine how those stores run more efficiently as well.

So there's many different opportunities for us to assist at the overall edge, 5G was one of them, but you'll probably see more and more of that develop from us.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. Talk to us about Mellanox. It seems like a very important acquisition for NVIDIA. How is it expanding your growth opportunity? And when do you think we will start to see some revenue synergies, perhaps from the combination?

A - Colette Kress {BIO 18297352 <GO>}

Yes. So you've seen our focus in terms of accelerated computing over the last ten to 12 years and focusing on overall GPU acceleration and focusing on the overall compute.

There's another super important part of acceleration, which is accelerating the whole data center. And from the time that the overall data is determined to the time that the data is computed as well as the data in terms of flowing out of that system. The overall interconnect, the overall networking layer is another area that can be overall accelerated to improve every stage of acceleration in that data center.

So our work in terms of Mellanox and our partnership over the last several years has been integral in terms of understanding that space and understanding interconnects.

We have been working together even from announcements of the overall deal coming together as one company. We've been focusing on what is that next generation of data centers and how can we use those interconnects. You've seen us incorporate Mellanox in our DGX, in our EGX, and you'll probably see more and more system works together that we can partner together essentially in the same overall box and system.

But as we move forward, you will likely see us also produce products together that best serve some of the key vertical industries that we are focused on. High-performance computing is near and dear to both companies. And now as a whole, you will likely see us really focus on improving the high-performance computing area as well.

So the synergy is more about focusing on products together in the future. We already have very similar customer sets today. We have very similar overall distribution channels.

So I think from a good standpoint, we believe the overall demand will remain the same in the short term so that we can focus on meeting the overall needs as customers in the future with product sets.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. Gross margins, you highlighted earlier, one of the strong points of the quarter you just reported. Despite some of the cost pressure from rollout of Ampere and 7-nanometer, how should we think about the longer-term trajectory of gross margins?

I imagine as the systems part of your business grows, that perhaps puts a little bit of pressure, but the software aspects and just the move into data center helps.

So just give us some puts and takes on gross margins from here.

A - Colette Kress {BIO 18297352 <GO>}

Sure. When we look at our overall Q1 gross margins, Q1 gross margins also was a record quarter for our gross margins. Q2 is what we guided in terms of non-GAAP as 66% would also be our overall record. Influencing these record levels really is a focus in terms of on mix across our overall platforms. We sell platforms and our platforms incorporate a significant amount of software. That software work is important in terms of differentiating ourselves from a standard overall chip company, but it is also integral in terms of creating the overall ecosystem alignment that we have, but also in terms of creating full overall platforms and products that the customers need in terms of accelerated computing.

Because of that significant software, that software build is down in our overall OpEx with our overall software engineers that are building that, that enables us to have better overall gross margins when we think about the overall manufacturing process.

As we discussed in terms of our Q1 results, the launch of overall A100 is in the early stages. It is in full production, but it's in the first couple of months of production versus an overall architecture such as V100 and many of our Turing overall architectures that have been in market for a couple of years. That will enable us the time to improve the overall yields as we go forward and also look in terms of areas of overall value engineering over the life cycle of the overall architecture.

So from time to time, you'll see that slowly, probably shift up. And we'll continue to look at mix overall in terms of improving our gross margins.

Our gross margins improvement over the last ten years is quite phenomenal in terms of what we've seen, in terms of that gross margin improvement. Our gross margins are getting quite solid in terms of in the 60% and higher.

So we think going forward, we'll continue to concentrate on gross margins.

But we're probably not going to have the speed of growth in gross margins that we've seen in the last 10 years as we look forward.

But the mix is an important piece. Our mix is influenced by selling boards and selling overall systems. As you pointed out, we create systems such as full DGXs, and we have other components in there outside of the overall GPUs that influence our overall gross margin of the system. We also sell consoles, we sell overall modules into automotive as well.

So quite a different array of different gross margins, but the better and the more influence that software has in terms of our platforms, the better our gross margin will be going forward.

A - Vivek Arya {BIO 6781604 <GO>}

Got it. And just in the last 60 seconds or so that we have available, right.

So we went through all the positives and all the growth drivers and the strong execution that NVIDIA has had. What worries you? What are the risk factors that you have on your dashboard that you think are important for investors to know about?

A - Colette Kress {BIO 18297352 <GO>}

Well, it certainly has been a volatile several months. I think we are blessed as a company to be able to be running so effectively and efficiently from a work-from-home across the company as a whole. And supporting the company through this period is one thing, but we also have the work to do to support our supply chain, to support our overall partners in this market.

So every day is a new turn of unique things that are happening in the economies around the world, given overall COVID-19.

So our choice of businesses that we chose and our overall priorities with many of the enterprises and/or the gamers that are out there has been well positioned. And we just hope as we move forward that the challenges that are out there, we are being able to work through just as effectively as we did in Q1.

A - Vivek Arya {BIO 6781604 <GO>}

Great. With that, we are at the end of our allotted time. Thank you so much, Colette, for joining us and sharing your views, really appreciate it.

Thank you to the investors who joined this call. For any follow-up questions, please feel free to contact me.

Thank you all. Have a great day and stay safe.

Thank you, Colette.

A - Colette Kress {BIO 18297352 <GO>}

Great. Thank you.