Deutsche Bank Technology Conference

Company Participants

- Colette Kress, EVP, CFO
- Unidentified Speaker, Analyst

Presentation

Unidentified Speaker

We have Colette Kress, the CFO of Nvidia on stage. No slides today, we're just going to go straight into Q&A. Again, if you have any questions, just raise your hand and we'll get a microphone over to you but please do wait for the microphone so that those on the webcast can hear the question. So Colette, first of all, thank you very much for coming out.

At the highest level, I think the question that I have is people still historically think of NVIDIA as being very much linked to the PC market, which at times in the past was a positive, but definitely now adds some headwinds.

The growth rate of the Company, though, kind of has shown that there's a breakdown of that relationship. Talk a little bit about the transformation that you've seen in the Company over the last couple years and how you think that transformation continues going forward.

Colette Kress {BIO 18297352 <GO>}

Great. Thank you. So correct, NVIDIA has definitely had a great presence in the overall PC industry for many years. But several years ago, our expansion into other unique platforms has really been our focus.

We right now concentrate on four key platforms as we move forward, still concentrated on one unique unified overall architecture or technology as our overall single focus on visual computing and the GPU is in the heart of what we do.

But we enter into four different markets, one of those being gaming, gaming for the PC, gaming for mobile. The second one being enterprise where we focus on design rendering and top-end applications within workstations and also virtualization of the GPU.

Our third market is high performance computing and cloud, a very key market where the GPU is used in an accelerated mode for many parallel applications or high performance computing.

And that our fourth one, our mobile GPU associated with automotive industry and bringing together both the infotainment systems within cars and also the future of ADAS.

So those are our four key markets. And what you've seen in this year is really a decoupling from the underlying PC market. The first half of the year, the PC market wasn't strong, actually quite a decline that we saw in between the Windows 98 upgrades and what we saw with Windows 10 coming out in the second half of the year.

But what we saw was our business continue to be extremely healthy over this. Overall, first half of the year, our revenue growth was about 5%. But if you concentrated just on those four key markets for our future, those four markets are growing more than 25%, with one of the key markets growing which would be gaming.

Now, the gaming that we do enter into is gaming for the overall PC. But it's a different kind of piece. It's actually a platform play. Our GPU is generally looked at as the underlying platform to take place in PC gaming where people are buying that GPU for the absolute experience that they want for their PC gaming.

PC gaming is a very healthy, exciting market right now. You've seen it move to an entertainment segment. You've seen it actually move almost to a sport. You see coliseums filled with overall gamers. And we have a very, very strong relationship with those gamers as we surround the GPU with the overall ecosystem of what we put together.

So we are working with game developers. We're working to understand better what the games want to put in there in terms of features. And that works seamlessly with the GPUs that we've come out.

So so far year to date through FY16, our overall gaming segment is growing more than 50%. Yes, still based on a PC underlying platform. But the overall growth is more than 50%.

Unidentified Speaker

So if I split the gaming segment just for reference just kind of 55%, 60% total revenues --

Colette Kress {BIO 18297352 <GO>}

That's correct.

Unidentified Speaker

-- for the Company. Then you have the OEM side as well, which is kind of the more traditionally linked part with PCs, which is down a bunch. But even if you put the two together, you're still up, by my math, kind of 8%, 10% year over year, at a time when PCs are down by about that same amount. So it's still netting out positive.

Between those two segments, how do you delineate between the gaming PC versus OEM?

Colette Kress {BIO 18297352 <GO>}

Yes. So I think it's an important thing to look at, of our GPUs that we sell into the market for gaming, that is mostly done by an adding card board. That isn't installed into general-purpose PCs.

There is even a case with many of the ones that go into gaming notebooks that they are marketed and they are put out there as a gaming overall notebook.

But what we can tell is we're not here just selling down to the OEMs. We have a complete community with our overall gamers. So we can see the gamers as they essentially use GeForce Experience to download the drivers. We can see the games that they are playing. And we can have that overall community effect with them, which has really allowed us to just to differentiate from both competition but also to really engage with the overall gamer in terms of what they want.

So a lot of it is focused on the full value that you are getting with the GPU. You can have a great gaming experience at possibly $99, $100 in terms of buying a GPU. But you can also even have an exciting experience in terms of gaming with some of our higher end GPUs that can go up into the $800 to $1,000.

Unidentified Speaker

And if there's the high-end gaming boxes that the OEMs make themselves, the Alienwares, et cetera, how is that categorized? Does that go in --

Colette Kress {BIO 18297352 <GO>}

That would definitely be a gaming --

Unidentified Speaker

Okay. So you put it in the gaming side.

Colette Kress {BIO 18297352 <GO>}

-- gaming GPU, yes.

Unidentified Speaker

How do you look at -- you've talked about the gaming experience, these big gaming events where there's millions of people watching, it becomes like bigger than watching a sporting event or a launch of a new movie.

How do you view the gaming TAM growing versus the success you've had coming from market share? How do we think about the TAM versus the share?

Colette Kress {BIO 18297352 <GO>}

A great question. It's actually still quite a large expanding TAM because it associates with not just the GPU but all of the community around it in terms of the games that are there.

We've done a great job in terms of expanding our overall share. But we've had a good percentage of that share for some time.

But what we're working on is adding new gamers because it becomes a social experience. It becomes that your online games are with a group of your friends, they are key strategy games that you are playing together. And so what happens is the addition of new gamers really just come from being part of that social platform.

We're also looking at areas where broadband experience, to play games, you need broadband experience, which is not necessarily available everybody, everywhere in the world equally.

So we see new parts of the world coming online to do PC gaming as well. That has also been a key expansion for us.

Then we also see the expansion as the performance desire that is fueled by the great games that are coming to market need a better, higher value GPU as well.

So right now, if we think about just the GPU market from a discrete, you can look at a TAM of overall $4 billion. But if you think about overall gaming, the need for mobility, the need for cloud for the gaming experiences of the future, easily that could be higher than $50 billion, higher than $100 billion in terms of the amount of gaming that's actually occurring.

Unidentified Speaker

And a question I often get is where does this actually occur around the world, kind of the geographic dispersion of it. And part of that also comes in because I think China will be part of the answer, with consoles now being supported in China, what sort of impact -- so the first is the geo. Then the second is, what sort of impact on whatever percentage you give to China will consoles being adopted there potentially have?

Colette Kress {BIO 18297352 <GO>}

Yes. We actually have a very strong market in almost every regional area around the world. So what we've seen for at least the last eight quarters is each one of those regions be strong. That means the North American market, the European market, the Asia-Pacific. And China market.

So where normally you may have one or two key actual regions, all three of our regions are quite strong and a good representative of our overall revenue.

But each market is actually different because there's quite a bit of cultural differences around the world. In the U.S., we game on just about anything because we have so many capable different products that we do.

But PC gaming is still one of the best experiences that they will have. And we have a very strong presence and, therefore, very strong growth.

Now, in China, the overall PC platform is the heart of the home. It became the piece that not just was used for gaming but used for general purpose within the home.

You also had iCafes to be a very big social experience in China where people actually go to meet their friends and play hour by hour in terms of games there.

So we just have a unique installed base in China that we have established over many, many years through there.

The emergence of consoles, although, yes, new in terms of legally in some or parts of the world such as China, not necessarily new to Chinese people. So the PC experience is still so ingrained in such a large installed base and is such a better experience and the content of what is available for PC gaming has just kept it extremely alive in China, even with the legalization of the console.

Unidentified Speaker

Two last questions on the gaming side and the PC aspect of it. I guess the first one would be that OEM side, the part that's not the focus of the Company. And it's somewhere around 10%-ish of sales, roughly, maybe a little bit less. What's the expectation for that going forward?

Colette Kress {BIO 18297352 <GO>}

Yes. So what he's referring to is when you look at our gaming GPUs, we can tell, again, by how they are using those GPUs that it is primarily for gaming. We will still and continue to sell into a general purpose enterprise PC or a general purpose consumer PC. And in the discrete.

We'll compete against others in the market. There's a lot of different options in terms of a general purpose PC. It has amounted to probably less than 10% of our business right now as a whole of the Company, where even if you had looked as short as maybe two to two and a half years ago it was substantially a much bigger piece of our business.

So our transformation related [ph] to that and establishing to these key markets have been key.

Where it goes, it's hard to say. I think there's still a question of does the overall PC start to stabilize -- stabilize around zero growth without the declines that we have seen?

We'll still compete in that market. It's not to say that it's not our strategy. Of course, we see it as a viable business. But we're looking at it as let's make sure we see the profit that we need from that business.

Unidentified Speaker

And I guess the last question is more a kind of a nearer-term business question.

But in your last quarter, which was July, you had guided business to be weaker, which really didn't surprise people too much given what was going on in PCs. But lo and behold you actually came out and were flat instead of down, say 10% or 12% sequentially. And the gaming segment was what made up the difference.

What surprised you in that? Because that was going to be conservative. But that's a pretty wide delta from the beginning to the end of the quarter.

Colette Kress {BIO 18297352 <GO>}

Yes. So when we had started the quarter guidance back in May, we saw what everybody else saw, not necessarily focused on the PCs. But we focused a lot on where the macro environments were.

If you recall at that time, the European market had seen such a quick rise regarding the FX exchange rates. That really changed the overall buying behavior in that region. And not necessarily understanding how those markets would react to the things that we had seen, we had heard and were watching quite carefully. A lot of concern in terms of the slowdown of the economy and particularly in some parts of China to say how would that affect our overall businesses?

So we still believed our overall gaming market was healthy and very strong and our overall presence in there. But we really were thoughtful in terms of thinking about some of these macro conditions.

So what happened? So when we actually finished the quarter, yes, the gaming market was healthy. But it was a lot healthier than when we had expected, even with those market conditions around there.

The gamers wanted to game. There were some great exciting new games. There were some great things coming on the horizon. They saw the great infrastructure and innovation that we had put out there in terms of the new GPUs with our Maxwell lines that we had launched.

They had started testing the upcoming Virtual Reality that is going to be right around the carter [ph] in Q4 and Q1. And they gamed.

So we were very excited with the performance. Everything else was about where we had expected. The gaming was just tremendously more stronger than we thought, which really, really demonstrated, yes, that transformation had worked. Really being an end-to-end player on that gaming experience has allowed us to really decouple from the overall PC market.

Unidentified Speaker

So why don't we take a chance and move outside the PC area or the gaming side to the enterprise side, which I think is about, depending on your quarter, 15% to 20% of sales. That's where Quadro resides and I believe GRID --

Colette Kress {BIO 18297352 <GO>}

GRID.

Unidentified Speaker

-- will be there as well. It's been a little bit weaker year over year of late. I think it's mainly enterprise spending-related. But talk a little bit about what's been going on in that business now and some of the growth vectors that you see going forward for enterprise.

Colette Kress {BIO 18297352 <GO>}

Yes. So our enterprise business was definitely in line with what we had expected. It has had good solid growth following a lot of the enterprise manufacturing side and design side for many years.

But some of the macro conditions that we saw at the very first half of the year put it not in a grow-ish situation. Still holding on to some tremendous share, we still have very strong applications that we work with and are really the go-to GPU for a lot of the designers and high-end design that takes place.

So it was a slight decline, very common in terms of what we saw with the capital purchasing that was going on around the world and some of the holds that were done on that.

But we've launched a new set of boards for the overall enterprise market. Those have come out and we're really focused on design works and really taking the overall design industry to the new era, the new era where rendering and prototyping on your screen such that it is nearly real, real with the overall materials that you may be using such that you may no longer need an actual prototype in real material. You can't even tell in terms of what you're seeing in terms of on the screen.

So we're very excited in terms of all the new things that we're bringing to the market to really improve how designers actually leverage the overall GPU.

Our GRID business also in there growing. But, again, it's coming from a much overall smaller base.

You saw are tremendous presence with VMware at VMworld where we are lockstep with them and really demonstrating GRID, which is our virtualized GPU that sits in the data center and enabling a cloud experience that you have access to a GPU.

You see so much moving applications to a cloud environment. And that's extremely important as we think about the future. But one of the challenges that had not been solved was that user experience on the inside. You're looking for a user experience that feels just the GPU is with you in terms of the latency that is taken care of and the overall screen doesn't have the overall stuttering with a lot of the applications that are very intensive in terms of visual display.

So we've been working with VMware to continue to grow out that business all the way around the world where people see this as a very, very need in terms of collaborating within the workforce. Using workstation or using applications that are directly installed in terms of on your PC or workstation isn't good for overall collaborating when it comes to 3D types of designs and some of these things.

The overall virtualization experiences allow everybody access to that cloud and can see the same thing, whether that be an architect on the job site, whether that be somebody else who's designing a certain part of the car in another part of the world.

So really expanding the universe in terms of those that will now have those same visual effects of what a workstation owner would have is what we see. So that is growing.

Our trials have reached over the thousands and we keep working on closing many of those deals, not just from a trial. But to a key project to a full installment in many large companies.

Unidentified Speaker

So for that enterprise sector as a whole, if enterprise spending, not just for NVIDIA. But if it stays kind of muted as it is now economically, what sort of growth rate do you think NVIDIA can drive in that over a multiyear period with some of the refreshes you have going on in Quadro and with GRID kicking in?

Colette Kress {BIO 18297352 <GO>}

I still think it's there's an opportunity for the GRID to really manage to grow the overall business as a whole if it was muted. I still believe you will always face periods of where capital may be constrained.

But it will come time where the refresh is important. These are critical parts of their jobs that the engineers are doing in terms of design. They will need to keep up. They'll need that additional performance in terms of the GPU.

It's just a little hard to determine how fast that GRID business will grow to really kind of catch up with the size that the Quadro business is.

Unidentified Speaker

But is it fair to say that you have an enterprise spending assumption macro-wise. And then on top of that there's is company-specifics, GRID and the --

Colette Kress {BIO 18297352 <GO>}

Agreed.

Unidentified Speaker

-- refresh that should help almost --

Colette Kress {BIO 18297352 <GO>}

I agree --

Unidentified Speaker

-- regardless of where the base level is?

Colette Kress {BIO 18297352 <GO>}

(inaudible)

Unidentified Speaker

So again, if you have any questions in the audience, please raise your hand and just wait for the microphone.

Why don't we transition from the enterprise side over to some of the growthier, even faster growing areas like HPC and cloud? I think it's kind of 5% to 10% of sales depending upon the quarter that you're choosing.

Talk a little bit about what drove than up 50% last year. And I think it's a pretty lumpy business inherently because this year looks a little more flattish. Over two years that's still better performance than the vast majority of the semiconductor companies I follow.

But just talk about the dynamics that are driving that over the two-year period.

Colette Kress {BIO 18297352 <GO>}

That sounds good. So high performance computing and cloud, this is our Tesla business. It refers to many years in terms of providing parallel computing, acceleration in terms within the data center with some of those key workloads, where really the performance of the GPU is not now being used obviously for visual computing. But really general purpose compute, taking a lot of the work off of the overall CPU.

The performance and the parallel computing capability of the GPU is key in terms of improving the time necessary to complete several of these jobs.

As you saw back in the fall of last year, we won two of the key architectures for the future with the Department of Energy with the largest supercomputers in the world.

And why that is so important is a very locked-in understanding of how the architecture between the CPU and the GPU is going to be very key in these supercomputers.

So we've seen the underlying high performance computing continue to grow as more and more workloads and more expansion using parallel computing is there.

But we've also seen a couple new segments enter. And that would be on the side of deep learning with Internet service providers. Most of information traveling through the network, whether that be video, whether that be images, whether that be voice, the key thing that the Internet service providers are looking for is applications that better serve those overall consumers.

What we're looking for is the ability to image detection, voice translation, voice recognition, for them to instantaneously recognize all of those pieces, essentially training the application of these images for recognition.

So we've seen Internet service providers continue to expand using GPUs. Why? GPUs, their performance, bar none, is one of the fastest to get this work done in the artificial intelligence phase.

But also for the ability for them to continue to recode, continue to reassess the overall algorithm to have nearly perfect identification. That has driven such a great growth rate and a part of that 50% growth rate that we had seen last year.

It can be lumpy in terms of the business because we're talking about large projects with the Internet service providers and their buying behavior in terms of what they've done.

But we continue to see this entity expansion. And why is it expanding? Top researchers, higher education, the amount of research papers that is occurring in terms of the use of GPUs and how they are leveraging them to drive the acceleration in the data center continues every single day in those pieces.

We now teach CUDA at more than 800 different places around the world. And using that acceleration in the data center as a key thing as you move forward. How is that data center going to really expand its computing capability if acceleration isn't there?

So we see the horizon of a large and unique opportunity for the data center just as we had seen for the PC environment 10 to 15 years ago.

Unidentified Speaker

And you mentioned the word acceleration or accelerator a bunch of times. Talk a little bit about the inherent advantage, from your perspective, of a GPU-based accelerator versus an FPGA and how the competitive landscape changes, if at all, with Intel intending to buy Altera.

Colette Kress {BIO 18297352 <GO>}

So with anything when it's starting up there's many different ways to skin the cat in terms of doing those acceleration.

FPGAs have been around for quite some time, 20-plus years as a form factor to do. It's a little -- it's a different of a approach. Some have tried and do work with FPGAs.

The GPU in terms of its overall performance capability, bar none, is one of the strongest ways to really release the ability in the data center to get the job done. But an FPGA could be an option for some at a much lower work level.

The challenge that you have it its programmability. The GPU, you're generally programming at the software level, things that are very familiar, used to. With an FPGA, a little bit more challenging in terms of that programming ability.

As we look forward, again, it's a wide and vast arena in terms of the data center and the needs for acceleration. But we're very pleased with our ability to serve so many very important workloads right now for the data center.

Unidentified Speaker

Great. Again, if you have any questions, just raise your hand. We'll get a mic over to you.

Why don't we transition over to automotive? Probably again, about the same size as HPC cloud, at least as of today as a percentage of sales in the kind of mid-single digits and maybe even moving to the upper.

Talk a little bit about what's driven the success there. I know you have some marquee design wins with the likes of Tesla Motors, not Tesla your chip.

But just talk about what NVIDIA's bringing to that market that's allowed the success today until today. And then looking forward how NVIDIA fits into things like ADAS and against competing architectures, potentially competing architectures like Mobile-I, et cetera.

Colette Kress {BIO 18297352 <GO>}

That's right. So our automotive business, we are not new to the automotive industry. We've been working probably for eight to ten years inside the automotive OEMs.

We've established a very strong presence in many of the top cars that you see on the road in terms of their infotainment systems. That can be the center console. That can also be the dashboard where they're looking for a user interface and really centering all the digital displays that you see for the drivers.

You'll see us in Audis, BMWs, Volkswagen Golfs, Hondas, Teslas. And the few Lamborghinis. And all of the other super, super high ends. We've got eight million cars on the road today.

But what is also unique is we have a pipeline of more than 25 million cars that will hit the road based on designs that we have already won for those future infotainment systems and those car manufacturers.

Our focus has been with those OEMs and working through the entire ecosystem of the automotive manufacturing place. They have their tier ones. We've established a great understanding of the quality that's necessary, the testing that is. And they keep coming back for additional overall designs.

So we can see the growth in our automotive as we have seen the overall designs that we win. And that is going to take us several years out in terms of the future. So that's where we are today.

That's also established us to create the relationships for what we know is coming upon us in terms of the future. And that is both assisted driving that is here today and autonomous driving or self-driving cars in terms of the future.

Very exciting in terms of hot market of people getting very excited of thinking about that major transformation from where we were just 10 years ago.

Technology is becoming a key part of the car. But our focus really wants to think about that center computing platform inside of the car. It is very, very similar to the problems that we solve in terms of in the data center.

The data center is very complex, structured/unstructured data sets. A car, talking about all of the information that is around it that is collected via images, collected versus radar, sensors, all of the different pieces that needs to be processed in a parallel position.

Then there has to be a set of coding that says what do you want to do with that instruction? It's not necessarily just identifying what's around the car, it is coming up with the set of algorithms in terms of how you want to the car to function as we go forward.

There will be continued milestones along the way to get to autonomous driving. But our focus has been what type of computing platform do you need that will be with us for multiple years that is a plug-and-play type of form and help autonomous driving as we go forward.

We're excited in terms of this platform we call DRIVE that we have now worked with more than 50 different tier one manufacturers, OEM manufacturers and researchers in the industry demonstrating the capabilities of that platform. And soon we'll be talking about the designs that we have in that area too.

Unidentified Speaker

So who do you see as the primary competition in the automotive market?

Colette Kress {BIO 18297352 <GO>}

The automotive market, even today, if you look inside of a car, more than 50 or more different processors. So there's been competition in the car, all looking for different things.

I think our approach in terms of the automotive industry is very different than any of these different competitors. There may be a processor focused on antilock brakes, not necessary what we're focused on.

We're focused on where we can leverage what we do best, both on that visual computing side. But also that center really deep processing power and being able to

put that together for the future.

So there's not necessarily anybody competing in the exact same manner that we are. I think they're all looking at it as a different approach. And that is a different approach in terms of a type of chip they are using or how and where they're actually solving the overall computer problem. But there are many incumbents that have been in the car for many years.

Unidentified Speaker

So why don't we take the chance to move over to some more financial questions in the last couple minutes we have here.

One of them that I get asked repeatedly is on the licensing side, not only the existing one with Intel and the potential duration of that. But also the importance of defending IP with some of the lawsuits that you have against both Samsung and Qualcomm.

Talk a little bit about the role of defending your IP in NVIDIA's mind and strategically and how you expect both the Intel side and the other two to be reflected in the business model going forward.

Colette Kress {BIO 18297352 <GO>}

Yes. We actually look at them together. I think it's an important piece to keep in mind. We are currently with a licensing structure with Intel. It is our second agreement with Intel over the period that we've been around. And that does expire, its capture period ends in our First Quarter of FY18.

At the same time, we had discussed a couple years ago in terms of the importance in terms of defending the overall business strategy related to our overall IP. We have a very strong and very deep patent portfolio with more than 7,000 patents overall and probably more than 700 of them focused on graphics alone. So we do believe we have probably a very big lion share of a lot of those important patents.

But the overall monetization of it across the mobile arena hasn't necessarily been seen. We had been in discussions for several years with Samsung regarding our IP and that piece. And to our note, we said it probably was going to take the legal courts to actually solve that.

So about a year ago we went to the, ITC against Samsung and Qualcomm for infringement. We've gone through the initial hearing. We are waiting right now for the judge that will come out in the first part of October to give them his feedback on the case. It will likely move from there to the overall commission. But they will also give a determination of the court.

We will then see past there in terms of what the next steps are. But that's a likely path that will be.

So when we think about Intel, when we think about the ITC, I think they're all together. I think there are a lot of people looking at this case, the importance of this case. And looking at our IP, determining what will be the next steps in terms of graphics architecture licensing.

Unidentified Speaker

So we should have a lot more color one way or the other by early January?

Colette Kress {BIO 18297352 <GO>}

We'll get an initial piece in the beginning of October. I think it's going to be more towards the later part of January, beginning of February in terms of when we may see the next step.

Unidentified Speaker

And is that -- the finding that -- whichever direction it turns out in whomever's favor, is that something that there's an appeals process, a next step beyond that or --?

Colette Kress {BIO 18297352 <GO>}

There is, yes. I think with most cases with the law there is different parts of appeal on both sides. So it is a very important case. We'll watch this carefully in terms of what those next steps will be along the way.

Unidentified Speaker

Great. Well Colette, thank you very much for walking through a detailed lineup of your businesses. And we appreciate you coming to Las Vegas for our conference.

Colette Kress {BIO 18297352 <GO>}

Great. Thank you.