Q4 2019 Earnings Call

Company Participants

- Daniel Durn, Chief Financial Officer, Senior Vice President
- Gary E. Dickerson, President and Chief Executive Officer
- Michael Sullivan, Vice President, Investor Relations

Other Participants

- Atif Malik, Analyst
- C.J. Muse, Analyst
- Harlan Sur, Analyst
- John Pitzer, Analyst
- Krish Sankar, Analyst
- Patrick Ho, Analyst
- Pierre Ferragu, Analyst
- Quinn Bolton, Analyst
- Tim Arcuri, Analyst
- Toshiya Hari, Analyst
- Vivek Arya, Analyst

Presentation

Operator

Welcome to the Applied Materials Earnings Conference Call. During the presentation, all participants will be in a listen-only mode. Afterwards, you will be invited to participate in a question-and-answer session.

I would now like to turn the conference over to Michael Sullivan, Corporate Vice President. Please go ahead, sir.

Michael Sullivan {BIO 16341622 <GO>}

Good afternoon and thank you for joining Applied's fourth quarter of fiscal 2019 earnings call, which is being recorded. Joining me are Gary Dickerson, our President and CEO; and Dan Durn, our Chief Financial Officer.

Before we begin, I'd like to remind you that today's call contains forward-looking statements, which are subject to risks and uncertainties that could cause our actual results to differ. Information concerning the risks and uncertainties is contained in Applied's Form

10-Q and 8-K filings with the SEC. Today's call also includes non-GAAP financial measures. Reconciliations to GAAP measures are found in today's earnings press release and in our reconciliation slides, which are available on the IR page of our website at appliedmaterials.com.

And now, I'd like to turn the call over to Gary Dickerson.

Gary E. Dickerson {BIO 2135669 <GO>}

Thanks, Mike. I'm pleased to report our results for the quarter were at the top end of guidance, driven by a healthy uptick in demand for semiconductor equipment combined with strong execution across the Company. This rounds out a solid year of performance in a challenging environment as we navigated downcycles in both memory and display. These results would not be possible without the hard work and dedication of Applied Materials' employees around the world. I would like to thank them for the passion they bring to work every day and congratulate them on their accomplishments this year.

As this is our year-end call, I'll begin with a brief recap of the past 12 months before providing our perspective on the current market environment. I'll then talk about the broader context for the industry, including the major growth drivers and inflections that will shape our markets over the next several years. I'll conclude by summarizing the key elements of our strategy and outlining the investments we're making to put Applied in the best position for the tremendous opportunities ahead.

Applied's fiscal 2019 was shaped by the first significant pullback in customer investments since 2013. However, this provides a good illustration of how the semiconductor industry is evolving. As I have highlighted before, the market for semi equipment and services is now significantly larger and less volatile than it was in the past.

If the second calendar quarter of 2019 prove to be the low point of the spending cycle, then the downturn lasted four quarters and our quarterly revenue at the trough was approximately 20% lower than at the peak. In contrast, during the industry cycles that took place between 2000 and 2013, our average peak to trough revenue drop was more than twice that magnitude. This cycle was different in large part due to the growth and diversification of demand drivers, spanning consumer and enterprise end markets. It's also important to note that the fundamental dynamics of the memory market are healthier through this cycle. The memory makers are highly focused making disciplined investments in capacity and continuing to drive their technology roadmaps forward.

As well as a more robust core market, Applied is a more resilient company that's balanced across different areas of the market and can perform well in a variety of conditions. Thanks to the breadth of our portfolio, our semi equipment business is outperforming both the wafer fab equipment market and our direct peers this year. Fiscal 2019 was also a record year for Applied Global Services. In fact, we're growing our services revenue significantly faster than underlying equipment businesses. Over the past 12 months, we've grown our installed base of semi and display equipment by about 2,000 systems to almost 43,000.

We have also increased the number of installed base tools covered by long-term service agreement, which generate subscription style revenues by around 30% since 2017.

Overall, 45% of our FY '19 revenues came from sources other than new 300-millimeter equipment sales. This is up from 41% just two years ago. In terms of our near-term outlook, while I don't want to speculate about the exact shape or timing of the market recovery, I can characterize what we currently see with three observations.

First, strong investment by foundry logic customers driven by demand in key geographies, and acceleration of the 5G roadmap and commitment to advance the leading edge. Second, early signs of a recovery in NAND investments. And third, positive progression of the ongoing inventory correction in DRAM.

Because of the strengths seen in recent months, we're revising our estimates for 2019 wafer fab equipment upwards. We now believe 2019 spending levels, could be similar to 2017. Based on the visibility we have today, we're optimistic about 2020 with an expectation of sustained strength and foundry logic and a step up in memory investments during the year with NAND recovering ahead of DRAM.

In display, as anticipated FY '19 revenues were down a third relative to FY '18. At this point, we expect FY '20 revenues to be at similar levels as we bounce along the bottom of this market cycle. In this environment, our display business remains profitable, even as we fund R&D for next generation products. We still believe the display market provides good long-term growth opportunities for Applied as the industry becomes increasingly technology intensive. We remain focused on working closely with customers to drive their technology roadmaps forward, and ensuring, we have the right portfolio of products in place to outperform the market when investment levels pick up.

Looking beyond the cycle at the broader context for the electronics industry, it's important to recognize that we are in a period of transition as major new growth drivers emerge in the form of IoT, Big Data, and Artificial Intelligence. Over the next decade, we expect hundreds of billions of edge devices to be deployed, an explosion of data generation, and new approaches to computing to sustainably process and create value from all the data that's available.

AI and Big Data have the potential to transform every area of the economy and our lives. These inflections will also have a profound impact on the semiconductor industry. As we move from the age of general purpose computing to demand specific approaches, new system architectures and new types of semiconductor devices are needed in the data center and at the edge. A major factor in the adoption rate of AI will be how quickly we can realize improvements in the power, performance, area and cost or PPAC of the foundational semiconductor technologies. However, at a time when PPAC improvements are on the critical path, classic Moore's law scaling is slowing. To drive the PPAC roadmap in the future, a new playbook for semiconductor design and manufacturing is needed. This playbook has five main elements, new architectures, new devices and 3D structures, new materials, new ways to shrink the feature geometries, and new ways to connect chips together.

Then to accelerate implementation of this new playbook, I strongly believe the ecosystem needs to work together differently by breaking down traditional industry silos. At Applied, we've aligned our strategy and investments around this vision of the future. While we are carefully managing all non-R&D spending, we're investing more than ever in new capabilities and products to accelerate the new playbook. We recently announced the official opening of our META Center in New York. This state of the art facility enables us to work with customers and partners in new ways, accelerating the transfer of novel technologies from lab to fab.

I'm equally excited about how our future product pipeline is shaping up. In addition to our traditional unit process equipment, which spans deposition, removal, modification, and analysis of materials, we're developing entirely new categories of products that we call Integrated Materials Solutions.

The applications for these IMS products include co-optimization of deposition, removal and analysis, all the way to creating, shaping, modifying, and analyzing new structures and devices. We'll share more details as we bring new products to market in 2020 and 2021.

For the time being, let me highlight a few examples of how we are defending our leadership positions, winning new applications, and expanding our available market in the near term. In DRAM customers are introducing advanced transistors and interconnects to improve performance and low power. These technologies, where Applied has long-held leadership, were originally developed for logic applications and are now migrating to memory. Growing demand for specialty nodes that serve the IoT, communications, automotive, power, and image sensor markets is also driving robust investments in capacity and new technology.

PPAC improvements are equally important for these applications and we're finding new ways to migrate our leading-edge technologies into the specialty markets. Advanced patterning is a critical enabler for shrinking feature geometries, which translates to a large growing opportunity in foundry logic and DRAM. The patterning roadmap is increasingly enabled by new materials as well as co-optimization of materials deposition and removal. As a result, we are expanding our positions in memory and winning new applications at foundry logic customers. And in markets where we have plenty of room to grow, we're also building momentum. In optical wafer inspection, we're winning new positions at foundry logic customers, and in etch we have recently won multiple critical applications in NAND as well as in foundry logic where we delivered record etch revenues for the year.

Before I hand the call over to Dan, let me quickly summarize. First, we are seeing a strong finish to 2019, driven by a healthy uptick in foundry logic spending. Although it's still too early to call the shape and timing of the recovery in memory, we are encouraged by the signs we're seeing. Second, we have a strong positive point of view about the opportunities the AI - Big Data era will create for the industry and Applied. While we're tightly controlling non-R&D related spending, we are investing more than ever in new products and capabilities that put us in winning positions for the future. Third, the technical collaboration between Applied and our customers has never been stronger.

And we're working with a broader set of customers and partners to accelerate the time to market for new game-changing technologies.

Now, I'll turn the call over to Dan.

Daniel Durn {BIO 17483115 <GO>}

Thanks, Gary. Applied delivered another solid quarter in Q4 with revenue, margins, and earnings in the upper end of our guidance range. I like the way we ended our fiscal year, and I particularly like the way we're set up for the year ahead. On today's call, I'll summarize our fiscal 2019, give you my sense of the business entering fiscal 2020, and share our outlook for Q1.

In 2019, our end markets were softer across semi, display, and the transactional portion of our services business. Despite that, we delivered revenue of $14.6 billion and our quarterly revenue and earnings were stable, which demonstrates the resilience of our broad portfolio, even in a memory correction year. In fact, we earn significantly more in every quarter in fiscal 2019 than we did in all of fiscal 2013, which is the most recent year that included a significant equipment correction. I also like our relative performance. In calendar 2019, we expect to significantly outperform our core market and our most direct peers. Specifically, while the equipment market will be down by mid-teen percentage, we expect semi equipment plus AGS to be down in the mid-single digits year-over-year.

Looking ahead into 2020 and beyond, we have high confidence in the future growth of our markets, and the unique opportunities Applied has to enable our customers' roadmaps. As a result, we invested a record amount in R&D this year while reducing our spending in SG&A. We delivered over $3 in non-GAAP earnings per share and generated nearly $3.25 billion of cash from operations. Our capital return strategy is to fully fund our profitable growth opportunities, maintain a strong balance sheet and deliver attractive cash returns to our shareholders through dividends and dividend growth along with opportunistic share buyback.

In 2019, we returned nearly $3.2 billion to shareholders, equivalent to 113% of free cash flow. We returned nearly $800 million in dividends, raised the dividend by 5% and took advantage of market volatility to repurchase 60 million shares of our stock at an average price of $39.86. As a reminder, we're working to complete the acquisition of Kokusai Electric. Upon close, we plan to direct, most of our free cash flow towards repaying the term loan we're using to help fund the transaction.

Now I'll share my thoughts on the business environment. On our previous earnings call, I talked about positive leading indicators of future growth. These included inventory reductions across memory, demand elasticity in NAND, and strong foundry logic demand, both in leading edge and specialty nodes. Today, I feel more positive, in semi, we have strong pull for our leadership products including record demand for epitaxy and metal deposition. We're also winning many new applications for our high growth semi products in dielectric deposition, etch, and inspection. We are significantly outgrowing our markets

in foundry logic with growing strength of the leading-edge nodes and key wins in automotive and advanced packaging.

While it's always hard to call the timing and magnitude of a recovery in memory, we think it's a matter of when, not if, and we expect NAND to lead the way. In AGS, revenue was stronger than we expected in Q4, and we still expect better than seasonal revenue in Q1, the subscription like portion of AGS has momentum, and will benefit from the thousands of new systems we added to our installed base in 2019. The transactional portion of the business should strengthen as memory utilization recovers in 2020. Rolling it all up, we're entering the new fiscal year with a backlog of $6.5 billion, which is our highest year-end backlog ever.

Next, I'll provide our Q1 guidance. We expect a Company revenue of $4.10 billion plus or minus $150 million, which would be up by about 9% year-over-year. We expect non-GAAP earnings to be in the range of $0.87 to $0.95 per share. Within this outlook, we expect Semiconductor Systems revenue to be approximately $2.775 billion. Services revenue should be about $975 million, and Display revenue should be around $330 million. We expect non-GAAP gross margin to be about 44.6%, and non-GAAP OpEx should be around $800 million.

In summary, I like this setup for Applied as we enter fiscal 2020. Our thesis surrounding IoT, Big Data, and AI is being validated throughout the ecosystem and our business outlook is transitioning from positive leading indicators to growing demand. The investments we're making in the new playbook are strengthening our product portfolio and driving new design wins that will serve us exceptionally well as the new nodes ramp across foundry logic, NAND, and DRAM. Our opportunities in the specialty nodes are also expanding. Our services business delivered a record year in 2019 and is on track for solid year-over-year growth in 2020.

Finally, we look forward to closing the acquisition of Kokusai Electric, and welcoming its talented team to Applied Materials.

Now Mike, let's begin the Q&A.

Michael Sullivan {BIO 16341622 <GO>}

Thanks, Dan. Now to help us reach as many of you as we can, please ask just one question and not more than one brief follow-up. Operator, let's please begin.

Questions And Answers

Operator

(Operator Instructions) Our first question comes from C.J. Muse with Evercore. Your line is now open.

Q - C.J. Muse

Yeah, good afternoon. Thank you for taking the question. I know you don't want to be too specific around the timing and magnitude of the recovery in memory, but was hoping, perhaps you could give just a little bit more color around your product positioning for when that does come as you look at leadership product as well as some of the new products that you have in the pipeline that you expect to come to market in 2020?

A - Gary E. Dickerson {BIO 2135669 <GO>}

Okay, thanks C.J. So what we're seeing in memory is customers continuing to drive technology roadmaps this year even if they're cutting the capacity additions to help with supply and demand. We really like the setup for Applied when memory spending recovers, which we think is in 2020 led by NAND. So if we look at different types of devices, in DRAM customers are moving to more advanced metal gate transistors in the periphery. And this is going to drive more demand like we saw in 28 nanometer foundry. So that's really positive for us in leadership areas like EPI, PVD, implant, thermals, also we're gaining share in etch. We're also enabling new DRAM capacitor module capabilities, and new patterning technologies that create large new opportunities for Applied where we're reducing the number of steps for multi-patterning and also improving pattern placement. So DRAM, especially with the more logic like types of steps really plays to our leadership positions. And so as those nodes go forward, we're in a good position in DRAM.

In 3D NAND as customers are scaling beyond 96 layers, we're winning new applications with etch and NAND. And as you go to more layers, you need new materials, especially high selectivity hard masks were designed in to many of the next nodes as they ramp into high volume manufacturing. We also have momentum with Integrated Materials Solutions. One example is in NAND where we do co-optimization of new hard mask films with the Sym3 etch, the co-optimization increases etch selectivity by about 50%, and we're seeing new dep and etch wins across multiple customers as we enable much better high aspect ratio patterning. So a strong pull across all the NAND customers for new materials, new products, integrated material solutions, we're seeing both in NAND and in DRAM. So we're optimistic, we're going to continue to drive strong growth as customers scale to future nodes.

Q - C.J. Muse

If I could sneak in a quick follow-up, like you said, we could do a quick one, second one. On the service side, you talked about the excellent growth in your installed base, and we're coming off of fiscal '19 growth of 3%, how are you thinking about the trajectory from here particularly as utilization rates on the memory front start to move higher?

A - Daniel Durn {BIO 17483115 <GO>}

Yeah, thanks C.G. This is -- C.J., this is Dan. I'll jump in and take that. So the services business is a great growth driver for us. It's been a steady source of revenue growth, cash flow generation. I would say over the last handful of years, this is a business that's grown at a compound rate of about 15% per year. In the current downturn, current year, memory driven downturn, utilization is falling. The business is a low single-digit grower. When you

include things like refurbs and upgrades, a mid single-digit grower. So, good performance in a very difficult market that's down about mid-teens.

As we think about the performance of the business that drives those results, the long-term service agreement portion of the business this year was up mid-teens. It's really the transactional portion of our services business that's fallen with industry utilization, and has been a headwind to growth this year. And that's in the sort of down 10%, 11%. As we profile into 2020, we really like this setup around our services business going forward. We think we can continue to execute on the long-term service agreements and continue to drive that performance at the levels we've seen historically. And when industry utilization recovers in memory, we would expect our transactional business to transition from a headwind of growth to a growth adder for us in 2020. So we really like the setup and the execution of the team in this environment. We think it sets us up well for 2020.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, C.J.

Operator

Our next question comes from Atif Malik with Citi. Your line is now open.

Q - Atif Malik {BIO 7312618 <GO>}

Hi, thanks for taking my questions, and good job on the results and guidance. First, Gary, can you talk about the puts and takes between OLED and LCD in your kind of flattish display outlook? At this point we hear Samsung display is resuming construction of A5 and some TV fabs in China are pushing out? And as my follow-up Dan, if you can talk about the OpEx profile for the remainder of the fiscal '20?

A - Daniel Durn {BIO 17483115 <GO>}

Thanks, Atif. I'll actually take both parts of your question. So as we go to the display market, and we think about how 2019 played out it played out exactly as we expected. We said down about a third year-over-year and that's where we ended up. Where forecast expectations were set probably three, six months ago, embedded in that was incremental growth off of these levels and what really drove that incremental growth is as we said, solid performance of the TV market into next year and the handset market would recover creating incremental growth for the Company. We think the handset market is going to play out exactly as expected. We're going to see recovery in the handset market. What's happened in the interim in the TV side is is as we've seen several news headlines from some of our customers about the late investments, there's a bit of inventory build on the TV side, third party research firm has come out and confirmed what we've been reading about in the headlines, and our customer conversations also confirm this dynamic. And so as we look forward into 2020, we think there's going to be some incremental softness on the TV side that reflects all of the news that's out in the market to date. We expect the handset to recover as we originally expected. And that gets us a flattish profile similar revenue levels to what we're seeing this year. That's the best way I would describe it.

And then from an OpEx perspective, I think we're going to take this one quarter at a time. We came up to $800 million, we all know that profiling into Q2. There is the full impact of merit, and we don't get the benefit of the shutdown over the holiday season, and so maybe that goes up incrementally to $820 million to reflect that dynamic. That gives you a sense of where we level out on those typical seasonal aspects of transitioning from Q1 to Q2, and then we probably hover in that neighborhood for the rest of the year.

A - Michael Sullivan {BIO 16341622 <GO>}

Hey, thanks, Atif.

Operator

Our next question comes from Toshiya Hari with Goldman Sachs. Your line is now open.

Q - Toshiya Hari {BIO 6770302 <GO>}

Hi, guys. Thanks very much for taking the questions. Gary, you talked quite a bit about your expectations around new products into next year. I was hoping you could remind us roughly what percentage of WFE you guys served today at Applied, and how that would expand with some of these new products going into 2020 and 2021? And kind of related to that, obviously you seem to be picking up share nicely in 2019. What are your kind of preliminary expectations into 2020 when you think about your potential outperformance relative to the market? And then I have a follow-up. Thank you.

A - Daniel Durn {BIO 17483115 <GO>}

Hi, Toshiya, this is Dan. On the first one, the percentage of the addressable market that we focus on, it's going to vary from year to year depending on the spend, the mix, and profile of our customers. But the best way to think about it is low to mid-60%s [ph] part of WFE are markets that we can address in any given year, and that's going to vary and change again from year-to-year depending on that profile mix. And I think some of the new products that we ended up bringing to market, I think it's going to help drive growth in share in the current markets that we serve. Maybe there is some adjacencies, we begin to look at, maybe it pushes it towards the higher end of the range over time, but it's still going to be in that low to mid-60% [ph] zip code depending on any given year and what customers happen to be spending on.

A - Gary E. Dickerson {BIO 2135669 <GO>}

Yes, Toshiya. I guess, I can also add a little bit of color. I think relative to the different areas where we compete today, definitely we're driving innovations and unit processes around deposition, removal, modification and analysis. We have momentum with some new products, and we have some major new products in the pipeline that we're driving. But beyond that, as we've talked about before, you've got AI, Big Data a need for 1,000 times improvement in performance per watt and classic Moore's law, 2D scaling not being enough really to meet those needs for performance per watt. So we're not only driving unit processes, one thing that we've also been driving are the integrated material solutions. We're co-optimizing steps and even integrating multiple steps in a single system under high vacuum.

And we have really strong pull from customers, again not just for unit processes where, again I want to emphasize, we're driving very hard with some big new products in the pipeline, some we already see some adoption early momentum, but beyond that, it's really how do we enable not just materials for removal, how do we create structures, shape structures, modify and analyze structures, and I spend a lot of my time with R&D leaders across our customer base, tremendously strong pull for improvements in power performance. And Applied is in the best position both with unit processes and with these integrated processes to enable the future. So tremendous, tremendous pull for both of those different areas.

Q - Toshiya Hari {BIO 6770302 <GO>}

Thank you. And then if I can squeeze one in, as a follow-up. Dan can you give us an update on the Kokusai acquisition, what are some of the regulatory hurdles that you still need to to overcome? And then I guess with the acquisition, you're obviously gaining some exposure to batch processing. But when you look across your product and technology portfolio at this point, do you feel like it's complete or is future M&A is still on the table? Thank you.

A - Daniel Durn {BIO 17483115 <GO>}

Yes. Thanks, Toshiya. I'll jump in on the first part, transition to Gary on the second part. For Kokusai, there is no change in the timing of the transaction. We announced a 12-month timeline, when we announced the transaction. We've received regulatory approval in Ireland, in Israel, we had four other geographies. We're continuing to stay close to the regulators in those geographies, and we like the progress we're making, but no change to the timeline from what we announced when we announced the transaction.

A - Gary E. Dickerson {BIO 2135669 <GO>}

Yes, Toshiya, relative to Kokusai, we still see it as a great opportunity to expand our markets with batch technology and services to accelerate innovation for our customers. So nothing has changed in all of the feedback we're getting from customers versus what we saw at the beginning relative to the opportunity to create value. Relative to M&A, our strategy really hasn't changed. We continue to focus on three things, a great financial return, synergy to accelerate our customer value, and also our growth, and market leadership potential. And we still believe we have a very good organic growth opportunity. So the bar remains very high, and we're not needy for M&A, but anything that we look at that fits that criteria, we definitely will continue to investigate and move forward if we find something that fits that criteria.

A - Michael Sullivan {BIO 16341622 <GO>}

Hey, thanks, Toshiya.

Q - Toshiya Hari {BIO 6770302 <GO>}

Thanks so much.

Operator

Our next question comes from Krish Sankar with Cowen & Company. Your line is now open.

Q - Krish Sankar {BIO 16151788 <GO>}

Thanks for taking my question, and congrats on the good results. I had two of them, one is either Dan or Gary, I think in the past you guys have spoken about the data analytics talking about two year out WFE, maybe you want to speak about it, maybe not. If not, I'm just trying to put numbers around it, if next year, all else being the same as this year, if NAND WFE is up 10%, what kind of growth expectation should we expect for AMAT's NAND business or your semi business? And then as a quick follow-up for Dan, I think you mentioned this in your Jan quarter guidance, did you give any breakdown between foundry logic, DRAM, and NAND? Thank you.

A - Daniel Durn {BIO 17483115 <GO>}

Krish, I didn't understand the first part of your question, you said something about analytics, but then I heard you talk about NAND. So I don't know if -- I know you're in Europe, maybe we missed a syllable.

Q - Krish Sankar {BIO 16151788 <GO>}

All right, let me just make it simple. If in 2020 if everything else being equal, if NAND WFE is up 10%, I'm just putting some numbers out there, how should we expect AMAT's semiconductor business driven by NAND to perform or outperform? And also on the Jan quarter, did you give a breakdown between foundry logic, DRAM and NAND?

A - Daniel Durn {BIO 17483115 <GO>}

Okay. So thanks, Krish. From a WFE standpoint, we don't want to get into guides around next year. But what I would say is since Gary has come into the Company, we've become very balanced as a company in terms of our penetration of device types. This is a very balanced Company, I think we're seeing the benefits of that in this environment as we inflect from one device type to another, and I think it serves the Company well in a time of uncertainty. The Company has worked hard, made a lot of investments to create that, very balanced portfolio by device type. And so, without being specific, I would just leave you with that contextual thought that we're fairly agnostic to how these device types flash in one quarter or another, and I think that gives you some parameters on how to think about things. From a guidance standpoint, we don't guide by device type. But the thing I would highlight is is next quarter will be a record quarter for us in foundry logic based on the guidance that we've given, but we typically don't guide by device type.

A - Michael Sullivan {BIO 16341622 <GO>}

Hey, thanks, Chris.

Q - Krish Sankar {BIO 16151788 <GO>}

Thanks, Dan.

Operator

Our next question comes from John Pitzer with Credit Suisse. Your line is now open.

Q - John Pitzer {BIO 1541792 <GO>}

Yes. Thanks, guys. congratulations on solid results. Gary, I guess my first question, you guys did a great job kind of talking about trends relative to device type, but I want to get an update from you just on China for this calendar year? And then when we look to 2020, how important is growth towards China relative to your optimism next year?

A - Gary E. Dickerson {BIO 2135669 <GO>}

Okay. Yes thanks for the question. Our view on China is pretty similar to what we've communicated before. The domestic China market is incrementally stronger than our view at the beginning of the year, within the range of what we had expected, but incrementally stronger. And we now anticipate domestic China will be up from last year to around $6.5 billion. Longer term, I've been in many meetings and conferences over the last several years, and my message is the same today as it's been over the last several years. We still expect steady growth in China, so we think next year will be another year of investments, but we don't see hockey sticks. Again, what we do is we look at leading indicators for all of the different projects either domestic or international. And again, our view is again very, very similar to what I've talked about in the past. We think there is going to be steady growth, we're positive about the market, we're positive about our position in the market. Our share continues to be healthy and accretive to our overall global market share. So that's kind of a top level view for China.

A - Daniel Durn {BIO 17483115 <GO>}

And just to add a couple of things to what Gary said, John, as you think about our planning, we always had base cases, we always have upsides. We'll be ready to respond if there is upside to our base case, but that's not currently baked into our planning assumptions, and Gary has it exactly right. We've been talking for several years now about slow, steady development of an ecosystem there investing in technology roadmaps. We saw it last year, we see a follow through on it this year, we'll see a follow through on it again next year, and we're not planning for any hockey sticks associated with investments from that geography.

Q - John Pitzer {BIO 1541792 <GO>}

That's helpful, and as my follow-up, Gary, just going back to your comments about foundry logic looking sustainable going in the calendar year '20. I guess just given the recent CapEx ways [ph] from TSMC, and sort of the implied run rate for calendar fourth quarter, I guess there is a lot of concern in the investment community that perhaps from Q4 run rate levels things will have to come down, if you go into 2020. I'd like to hear your view on that, and if foundry weakens during the back half of next year, just because it's so strong now, do you think logic sort of picks up the slack? And is your comment about sustainability a full year to full year comment or kind of a current run rate level comments? Thank you.

A - Daniel Durn {BIO 17483115 <GO>}

Yeah. Thanks, John. Let me jump in on that and give you my perspective. So what we see in the foundry logic right now, I would consider and characterize as demand led. We had a solid Q4 in the foundry logic market, implicit in the guide for Q1 is a record foundry logic quarter for this Company. We ended the year with backlog at record levels. So the foundry logic view we see is a [ph] follow through into next year and it's not a one-quarter phenomenon. There is strong pull from customers for the tools. It's multiple customers and multiple nodes, which gives us a sense of comfort. We take a look at the foundry market, and one foundry customer well into the ramp of N7, volume production at N7 plus, N5 in risk production, volume production in the first half of 2020, and N6 risk production in the first half of '20, volume production in the second half of 2020. You could make other similar comments about leading-edge technology nodes ramping at other foundry logic customers exposed to the leading-edge. So multiple customers, multiple nodes. In addition to seeing strength on the leading edge, we continue to see strength on trailing node geometries in specialty nodes. That continues. And while we don't have perfect visibility for the full year, we're very positive on the foundry logic market over the long run. We are layering in the next wave of compute in the semiconductor industry to complement what is already there in the form of PC demand, and mobile compute demand. We've got new architectures hitting data centers, lots of new tape-outs, cloud demand is recovering, 5G beginning to kick in, we see a proliferation of intelligent edge devices, and auto is growing. And so as we take a step back, we see the strength continuing into next year. We're really positive about the long run, but as I provide a little more context on 2020, the Company is performing well. We talked about the backlog entering the year, we talked about strength in foundry logic, we talked about AGS set up and looks good as we profile into next year. Swing factor next year for us is timing of the memory recovery. For us it's a matter of when, not if, and so it's really tough to determine the timing and magnitude of that and we'll stay close to the market, stay close to our customers and as new information becomes available, we'll try to be as open and transparent as we can be to help the investors.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, John.

Operator

Our next question comes from Harlan Sur with JP Morgan. Your line is now open.

Q - Harlan Sur {BIO 6539622 <GO>}

Good afternoon, guys. Nice job on the quarterly execution. On the better performance in AGS in the October quarter and a strong outlook into January, I would assume that the long-term subscription part of the model is very predictable. So was the incremental strength, the transactional business maybe starting to come back as some of your customer utilization start to rise as they bring back some idle capacity, and if it is that, is it more foundry logic or memory driven.

A - Daniel Durn {BIO 17483115 <GO>}

Yes, thanks Harlan. You're right, the long-term service agreement part of the business is continuing to chug along. We really like the performance and that's against the backdrop of the tough market. We talked about the transactional nature of the business. Transnational spares, last quarter being a bit of a temporary dynamic with a limited number of customers, and this is us just getting back to a more normalized environment. Clearly, customers are seeing the strength we're beginning the flash in foundry logic. I think we're seeing some early signs around the setup for memory as we go forward led by NAND and DRAM. And it's hard to really parse against that contextual backdrop exactly what's in customers' minds, when they drive the transactional part of the business. I would just say, in general, it feels like a good setup with some positive momentum, and we feel good about that setup as we look into 2020.

A - Gary E. Dickerson {BIO 2135669 <GO>}

Harlan, I think the big needle mover is really memory, memory utilization. Certainly the agreement -- the agreements, as Dan said, we're up to maybe close to 60% of spares and service with agreements where we have higher revenue per tool. But the big incremental driver will be when memory comes back, and utilization goes up in those memory factories. And certainly as Dan said earlier, we expect that to happen in NAND first and we, as he said earlier, it's a question of, if not when -- when not if, when not if. So it's definitely going to happen in some time here and we hope the NAND starts in 2020.

Q - Harlan Sur {BIO 6539622 <GO>}

Yeah, thanks for the insights there. And when we think about cost per bit declines in memory, both DRAM and NAND, the rate of those declines is decelerating pretty dramatically, so productivity by your customers is a big focus, more batch-based systems is a focus, and one of the drivers for the Kokusai acquisition. But what else is the Applied team doing to help customers improve productivity?

A - Gary E. Dickerson {BIO 2135669 <GO>}

Yeah, thanks for the question. So I talked earlier about co-optimizing hard mask materials with etch to improve etch selectivity. That's certainly for the high aspect ratio patterning incredibly important. We have other cases where we're working with customers on patterning, where we're reducing, I mentioned that earlier, we're reducing the cost of multiple patterning. In some cases, we're able to reduce the cost to 30% and also enable better pattern placement. So for memory, especially in NAND, those are some of the areas we're driving. Another area is in the performance with the periphery going to more logic like structures, especially higher speed, memory devices that's an area that plays to our leadership products, and certainly we see tremendous traction from customers in those areas. I think longer term, it's about how do you optimize, new structures, creating, shaping, modifying, analyzing, new structures. We have a lot that we're doing today in co-optimization of those capabilities, a tremendous amount in the pipeline, where we have very strong customer pull.

Q - Harlan Sur {BIO 6539622 <GO>}

Yeah, thanks for the insights.

A - Michael Sullivan {BIO 16341622 <GO>}

Yeah, thanks. And operator and people on the call, I think that we're running a little short on time. We know there's a lot of people in the queue. I'm going to ask that we go to one question right now and no follow-ups. Please just so that we can hear from more of you. Thank you.

Operator

Our next question comes from Pierre Ferragu with Newstreet Research. Your line is now open.

Q - Pierre Ferragu {BIO 15753665 <GO>}

Hi, guys. Thanks a lot for taking my question. Could you give us -- I've heard with a lot of interest the answer you've given on your outlook in logic and how you see things evolving. Is there a way you could give us some sense of how your exposure is going to change on two specific nodes? So the ones I have in mind are the TSMC nodes, when TSMC move from 7 nanometer to 7 plus, so same kind of critical dimensions, but more EUV insertion, and at Intel between the 10 nanometer node and the 7 nanometer node, same thing, a lot of additional EUV layers. I understand you guys remain very well exposed to these new EUV heavy nodes. But I imagine that when you move from multiple patterning to EUV, the type of business you get is different. So could you describe that for us please?

A - Gary E. Dickerson {BIO 2135669 <GO>}

Yeah. Thanks, Pierre. So It's important to remember that when customers are scaling, I would say, the first thing is that they're driving five different areas, where shrinking is one of those five different areas. We talked about new architectures, new structures, new materials, new ways to connect chips together and the shrink. So again, we have tremendously unique technologies enabling that new playbook, and I'm with one of the R&D leaders for one of our customers next week, with another one the following week, again constantly we're getting tremendous pull in driving power and performance, because it's very, very, very difficult. So the first thing I'd say is that we have unique capabilities in enabling the new playbook. That's where we're investing, that's where we have tremendous engagements with customers. So then if you think about shrinking, I talked earlier on the call about where we're working with customers on multiple patterning and there are cases where we're able to reduce the number of steps by 30% and increase pattern placement. So that's another area where we're doing co-optimization, and it's also important to remember that as you're scaling, and EUV layers come in, some other steps also need to shrink and multi-patterning is still growing. So with Applied, the EUV steps that are coming in to replace other steps are not our steps. So Applied has opportunities and we are winning when EUV is being adopted. In some of those replacement steps, there is this focus on multi-patterning where we're focused on reducing steps, reducing cost.

I think another, Pierre, another really good example is in 2019 in foundry logic, we have very strong momentum with our Sym3 etch, and this is where you're seeing the highest EUV adoption. We're seeing very high growth in 2019 with wins across many customers,

and we definitely see significant growth, much faster than the market with our Sym3 etch business in leading foundry customers, and we anticipate based on the wins that we have, we're going to continue to grow at 5 and 3 as these new technologies are being adopted. Just another data point with Sym3, that's the fastest ramping product in the history of Applied. We just shipped our 4000th chamber, and many of them going into foundry and logic. So that's kind of a top-level view. I would say again, the key thing for all of these customers is how do they drive the technology roadmap for power and performance. 2D scaling is slowing down, they need new ways to drive the roadmap and that's really the sweet spot for Applied Materials.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Pierre.

Q - Pierre Ferragu {BIO 15753665 <GO>}

Thanks.

Operator

Our next question comes from Patrick Ho with Stifel. Your line is now open.

Q - Patrick Ho {BIO 5499707 <GO>}

Thank you very much. Gary, I think you just provided a little bit of color already to the question I have, but with capital intensity trends for foundry and logic continuing to increase as we go from 7 to 5 and eventually 3, aside from say like the etch Sym3 and products like that, where else are you seeing, I guess increasing capital intensity trends on the foundry logic end that helps both your leadership tools or your leadership businesses as well as some of the growth opportunities aside from etch? Are you seeing it in deposition? Are you seeing it in the process control area? What other areas are you seeing that growth in capital intensity trends for your products?

A - Gary E. Dickerson {BIO 2135669 <GO>}

Yes, thanks for the question, Patrick. So if we look at 2019, we talked about a record foundry logic performance, and we have a very strong incumbent leadership position, as you talked about, in foundry logic, a much larger business, and more diverse business than our process tool peers, and that's driving our outperformance in 2019. So if we look at the foundry logic in this calendar year, we'll have the highest foundry logic revenue ever, highest EPI revenue ever, and highest metals revenue ever. So those are areas that are part of our leadership products. We are working with customers on new materials like tungsten deposition, shaping structures with selective removal where we're gaining key wins that's enabling performance gains for our customers and growth for Applied. So those are some of the areas where we're seeing growth in terms of 2019. We're also seeing strong growth besides etch, in CVD, thermal, and you talked about inspection. That's an area where we just introduced a new product. We're seeing very strong adoption and that will give us momentum to grow quickly in that business in 2020. So, well, that's a little bit of color around some of the areas that we're driving, but it really does get back to driving power and performance area and cost for customers, and really

more and more, not just with unit processes, but also with these integrated solutions that's a sweet spot for Applied and gives us tremendous momentum going forward.

A - Michael Sullivan {BIO 16341622 <GO>}

Hey, thanks, Patrick.

Operator

Our, next question comes from Timothy Arcuri with UBS. Your line is now open.

Q - Tim Arcuri {BIO 3824613 <GO>}

Thanks a lot. Dan, I guess I have a question on gross margin guidance. There is hardly any incremental drop through year-over-year yet you're doing like $350 million more in revenue, but gross margin is the same. I guess it's a little surprising because SSG, which is the highest margin segment, is up a lot year-over-year. So are SSG margin is lower in January because it seems like the margins at a corporate level should be 150 basis points higher or something like that. So can you just walk me through that? Thanks.

A - Daniel Durn {BIO 17483115 <GO>}

Sure. Tim, we won't guide gross margins -- but let me -- by segment. So let me share with you a little bit of what we do see in gross margin. As you know, gross margin, any given quarter, it's always going to be a function of a few things. Revenue level, segment mix, product mix, customer mix, factory activity all are going to vary from quarter to quarter and go into the gross margin. We think our performance compares favorably with our peers over this cycle. Our peak to trough gross margin over this cycle was down about 210 basis points. Our next closest competitors in the process tools space, one was down 300 basis points, another one was down 310 basis points. And as we're profiling into the back part of the calendar year, on a relative basis, I think that gross margin performance on a quarter-over-quarter basis, also looks pretty good. So we like how we're executing. Are we ever satisfied with our gross margins, no. Are we maniacally focused on driving improvements and improving the cost structure, absolutely. We're going to keep at it, we're going to continue to work hard, and I think you're seeing the breadth and depth of our portfolio in a broad sense play out in the gross margin resiliency over the course of the cycle.

A - Michael Sullivan {BIO 16341622 <GO>}

Hey, thank you for asking the question Tim.

Operator

Our next question comes from Vivek Arya with Bank of America. Your line is now open.

Q - Vivek Arya {BIO 6781604 <GO>}

Thank you for taking my question. In just thinking conceptually about next year, if foundry logic sustains, and memory is really incremental to the model, and I think display you're

starting at a low level, but just a run rate implies that you'll grow through the year. Does that say your January quarter is the low point of the year in terms of sales and gross margins?

A - Daniel Durn {BIO 17483115 <GO>}

I'm sorry, Vivek, could you please repeat it? It cut (inaudible) I just want to make sure I got the full question, sorry.

Q - Vivek Arya {BIO 6781604 <GO>}

Sure. Yes, of course, Dan. So if memory spending is incremental to the model from here on and you said foundry and logic should sustain, and even on the display side, I think you're starting at a low point in January, does it say that your January quarter outlook is the low point of the year in terms of sales and gross margins that things could actually conceptually get better in the year as memory recovers?

A - Daniel Durn {BIO 17483115 <GO>}

So I guess, the best way for me to describe it, because I think what we're going to do is we're going to guide one quarter at a time, and the environment is clearly better today than it was a quarter ago or six months ago. And what I would say just at the very highest level, Company is performing well. We've got a good backlog entering the year. You pointed out strengths in foundry logic services. Swing factor in the year. I said it before, it's really the essence of the issue, the swing factor for the year is going to be what happens in the memory market. So we're going to stay close to customers, we're going to be ready to respond when the NAND market starts to hit, followed by DRAM. And we'll take it one quarter at a time. So I don't think we want to start giving multiple quarter guidance and shaping the full year given some of the uncertainty we see from a timing standpoint on when things like memory are going to start to flash.

Q - Vivek Arya {BIO 6781604 <GO>}

Thanks.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks Vivek. And operator, we'll take one more question, please.

Operator

Our last question comes from the line of Quinn Bolton with Needham & Company. Your line is now open.

Q - Quinn Bolton {BIO 3192909 <GO>}

Hey, guys. Thanks for squeezing me, and I guess I just wanted to follow up on John and Vivek's questions there. Just -- it seems almost illogical for us to assume that the foundry strength that you're seeing in the January quarter sustained at that quarterly level through each quarter of fiscal '20 so that would get the business up probably well into the teens, if

not 20%, year-on-year. And so again I guess not asking you to necessarily guide us quarter to quarter, but isn't it logical to assume that you're probably not going to sustain that peak quarterly revenue at foundry in every quarter of 2020? Thanks.

A - Daniel Durn {BIO 17483115 <GO>}

Yeah, no question, Quinn. And my sustainability into next year is really meant to be that it's not going to be a one-quarter phenomenon. We've got a nice backlog. Q4 was a really nice quarter for us in foundry logic. Q1 will be a record quarter. And I think it would be probably not the right place to set expectation to think every quarter is going to be at a record foundry logic level. And so while the activity level can be nice, it doesn't always have to be a record.

Q - Quinn Bolton {BIO 3192909 <GO>}

Got it. Thank you.

A - Michael Sullivan {BIO 16341622 <GO>}

Okay, great. Well thank you, Quinn. And I think we're almost at the end of our hour. Dan, anything you would like to say in closing?

A - Daniel Durn {BIO 17483115 <GO>}

Sure, Mike. Just a couple of quick thoughts. First, like I said at the beginning, I'm pleased with the way we ended the fiscal year, and I especially like the setup for Applied in 2020 given a record year-end backlog and the momentum that we see in key parts of the business. Second, we look forward to staying close to investors. December 3rd, Gary and I are going to be at the Credit Suisse Conference in Scottsdale. Next week after that I'll be at the UBS Conference in New York. In the meantime, we hope you all have a happy and safe Thanksgiving with your families. Mike, let's go ahead and close the call.

A - Michael Sullivan {BIO 16341622 <GO>}

Okay, great. Thanks, Dan. And we'd like to thank everybody for joining us today. A replay of our call is going to be available on our website by 5:00 p.m. Pacific Time. And we would like to thank you for your continued interest in Applied Materials.

Operator

Ladies and gentlemen, this concludes today's conference call. Thank you for participating. You may now disconnect.
