Q4 2018 Earnings Call

Company Participants

- Daniel J. Durn, Senior Vice President & Chief Financial Officer
- Gary E. Dickerson, President, Chief Executive Officer & Director
- Michael Sullivan, Corporate Vice President, Investor Relations and Marketing Communications

Other Participants

- Atif Malik, Analyst
- C.J. Muse, Analyst
- Harlan Sur, Analyst
- John William Pitzer, Analyst
- Joseph Moore, Analyst
- Krish Sankar, Analyst
- Patrick J. Ho, Analyst
- Pierre C. Ferragu, Global Team Head
- Romit Jitendra Shah, Analyst
- Sidney Ho, Analyst
- Timothy Arcuri, Analyst
- Toshiya Hari, Analyst
- Vivek Arya, Analyst

MANAGEMENT DISCUSSION SECTION

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. We appreciate you joining us for our fourth quarter of fiscal 2018 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, let me remind you that today's call contains forward-looking statements, including Applied's current view of its industries, performance, products, share positions, and business outlook. These statements are subject to risks and uncertainties that could cause actual results to differ materially and are not guarantees of future performance. Information concerning these risks and uncertainties is contained in Applied's most recent Form 10-Q and 8-K filings with the SEC. All forward-looking statements are based on management's estimates, projections and assumptions as of November 15, 2018, and Applied assumes no obligation to update them.

Today's call also includes non-GAAP financial measures. Reconciliations to GAAP measures are contained in today's earnings press release and in our reconciliation slides, which are available on the Investor Relations 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. In our fourth fiscal quarter, Applied Materials posted solid results, in line with our guidance. Despite challenging market conditions in the second half of the year, each of our major businesses delivered double-digit growth in fiscal 2018. This would not have been possible without the hard work and dedication of our employees around the world and I would like to thank them for all their contributions over the past year.

While we expect market headwinds to continue in the near term, we're not seeing the large fluctuations that characterized the semiconductor and display equipment industries in the past. At the same time, we are demonstrating that we have built a more resilient company with diversified revenue streams that can execute well in a range of market conditions. Looking further ahead, we are confident that longer-term growth drivers in both Semiconductor and Display remain firmly in place and will continue to create great opportunities for Applied.

During the call today, I'll start with our perspective on near-term market dynamics, then I'll summarize Applied's performance and priorities and finish by talking about the future growth drivers reshaping our industry and describing the company's strategy and investments to address the evolving needs of our customers and the substantial opportunities ahead.

Over the past several years, I've shared my perspective that the wafer fab equipment industry has fundamentally changed. Today, it is structurally larger and less volatile than it was in the past. These changes are due to increasingly diverse market drivers spanning consumer, enterprise and industrial applications.

In recent months, however, we've seen several factors negatively impacting industry spending. These include; elevated macroeconomic risks, global trade tensions and specific to our industry, a pullback in memory investments. Recent commentary by memory makers has painted a consistent picture.

Overall demand in the server, PC and mobile markets is weaker than it was earlier in the year and memory prices are softening in the near term. Our customers tell us, they expect demand to pick up and pricing to stabilize in the second half of 2019.

I believe the pullback in memory spending we're going through today is different from the down cycles of the past. There are several reasons for this. Supply and demand are relatively well-balanced. Customers' investments in capacity are rational and disciplined, and the overall economics of the memory industry remain healthy.

In foundry and logic, overall spending levels are strong as customers optimize capacity at the current nodes, while concurrently pushing forward the leading edge. After a long time in development, the first EUV tools are expected to enter volume production in 2019. To support the initial adoption of EUV, we are seeing additional investments in these long lead time systems in 2018 and 2019 creating share headwinds for Applied during this period.

In aggregate, even with the current challenges I've just described, overall, wafer fab equipment spending remains at consistently high levels. We still believe that 2018 and 2019 combined spending will be around $100 billion. Relative to our prior view, we now see 2018 as slightly higher than 2019. While we are cognizant of macroeconomic and global trade factors, our long-term perspective on major technology trends is unchanged.

Fundamental growth drivers are firmly in place as more industries are becoming increasingly dependent on technology, data and specifically silicon to define their futures. One of the things that distinguishes Applied from our peers is our broad technology base and the diversity of our products. This provides us with a platform for future growth and the flexibility to deliver solid financial performance in a variety of market conditions.

Although our first fiscal quarter will be down sequentially and year-on-year, we will deliver performance that is approximately equivalent to our average quarterly run rate in 2017 when spending patterns were much more favorable for Applied. This is because we've been building out our product portfolio to better address major technology inflections. For example, we've significantly improved our position in memory, adding nearly 10 points of market share in the past five years. At the same time, we've scaled our Service business at a 15% compound annual growth rate over the past four years with plenty of headroom for further expansion.

Additionally, we've grown our Display business at more than 25% compound annual growth over the past six years. While our Display growth trajectory may not be linear and as we previously stated revenues could be down around 20% in 2019, I feel very good about our future opportunities. Across the company, we're taking a long-term perspective and we continue to prioritize our spending towards R&D to enable major technology inflections for our customers and drive our long-term growth strategy.

I strongly believe that over the next decade A.I. and Big Data will transform almost every sector of the economy and at the foundation of those changes are electronics and

semiconductors. Enabling this A.I.-Big Data future will require new types of computing at the edge and in the cloud, lower-cost lower-power chips, and abundant storage.

As classic Moore's Law scaling slows down, the semiconductor industry's traditional playbook is not providing the necessary improvements in power, performance, area and cost. As a result, a new playbook is needed, which includes the development of entirely new chip architectures, new 3D structures within the chip, the integration of new exotic materials, new ways to shrink feature geometries including EUV lithography, and self-aligned patterning, and advanced packaging techniques to connect chips together in new ways. All five of these areas require major advances in materials engineering and create a wealth of opportunity for Applied.

As a result, we are evolving our strategy and making investments to position the company to play a larger and more valuable role in the A.I.-Big Data era. We are creating new and unique capabilities for the industry and developing entirely new types of products. Earlier today, we announced plans for our new Materials Engineering Technology Accelerator or META Center which is expected to open in 2019 in New York.

The META Center will extend the capabilities of our Maydan Technology Center in Silicon Valley to address the ecosystem's growing need to accelerate innovation from materials to systems. This expansion of our R&D infrastructure will allow us to work with system architects, chip designers, and the manufacturing community in new ways. It's designed to support new types of collaboration from early prototyping to rapid transfer of new technologies from lab to fab.

We're already seeing strong pull for earlier and deeper customer engagements, especially for new integrated material solutions where we can combine multiple processes together often within a single system.

We are bringing together our broad portfolio of technologies and our ability to understand the interaction between materials creation, materials removal, and materials modification to address our customers' increasingly complex integration challenges. I'm excited about the value we can create at current, future, and trailing nodes.

Before I hand the call over to Dan, let me quickly summarize. While the industry is navigating near-term headwinds, spending remains robust. We believe this demonstrates that wafer fab equipment is structurally larger and less cyclical than in the past.

Although the current spending patterns within wafer fab equipment do not play to Applied's strengths we are still delivering strong financial performance thanks to the breadth of our product portfolio. We remain focused on positioning the company for the long-term, expanding our role in the A.I.-Big Data era, and winning the major technology inflections ahead.

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

Daniel J. Durn {BIO 17483115 <GO>}

Thanks, Gary. I'd also like to thank the teams for delivering record revenue and operating profit in fiscal 2018. Today, I'll share my perspective on our industry outlook, then summarize our Q4 financial results, provide our Q1 business outlook, and discuss the growth investments we're making in Upstate New York.

As Gary said, overall industry demand is weaker today than in the first half of 2018 and we expect our first quarter results to be lower sequentially. Our guidance includes the impact of a recent export restriction. Without this, we would have guided our Semiconductor revenue to be higher sequentially.

While we're not ready to call the bottom of the current cycle, we are optimistic that we're not going to see the same kind of volatility we saw in the past as an industry or as a company.

Our semi equipment guidance for Q1 implies annualized WFE in the mid-$40 billion range. It's important to note that this is about $10 billion higher than in all of the years prior to the current cycle. And it reinforces our positive industry thesis which is based on the three core beliefs.

First, we see a large market for PCs and mobile devices, plus the emergence of a big wave of new demand drivers related to A.I. and Big Data. Second, we believe that after a long downtrend the capital equipment intensity has stabilized. And third, our customers are more profitable and taking proactive steps to keep supply and demand in balance. We believe the industry is more attractive and the company is more attractive.

Over the past six years, Applied has built a bigger, more diverse, more resilient business. In fact, in both 2017 and 2018, we delivered more than twice the operating profit of any other year in the past decade.

Looking forward to 2019, our customers point to an improving demand outlook in the second half of the year. Even if the shape of the recovery off of our Q1 guidance is shallower and more gradual, we believe we will generate higher earnings this fiscal year than in 2017. Our improved profitability enables us to continue making disciplined investments in our future growth opportunities while simultaneously delivering attractive cash returns to shareholders.

Now I'll summarize our Q4 results. We delivered revenue and non-GAAP gross margin that was slightly above the midpoint of our guidance. We held non-GAAP OpEx below the midpoint and generated non-GAAP earnings of $0.97, just above the midpoint.

Turning to the segments, Semiconductor Systems revenue declined by about 5% year-over-year and was slightly below our expectation. Non-GAAP operating margin declined to 29.6%. Our Global Services business revenue grew by 18% year-over-year to $977 million and non-GAAP operating margin increased to 29.7%. Our Display group delivered

$702 million in revenue, which was slightly above our target. Non-GAAP operating margin remained high at 29.3%.

Turning to the balance sheet, operating cash flow improved to 27% or nearly $1.1 billion. We returned $946 million to shareholders including $751 million in buybacks. We ended the period with $5.6 billion in cash and investments on the balance sheet and $4.3 billion remaining in our buyback authorization. We enter fiscal 2019 with a strong backlog of over $6 billion.

Next, I'll provide our Q1 guidance. We expect company revenue to be between $3.56 billion and $3.86 billion. Within the outlook, we expect Silicon Systems revenue to be down by about 21% year-over-year. Services revenue should be up by about 7% year-over-year.

As a reminder, Q1 of 2018 was exceptionally strong for our Services business with revenue up 30% over Q1 2017. Our Display revenue should be up by about 10% year-over-year. We expect non-GAAP gross margin of around 44.6% and non-GAAP OpEx of around $750 million plus or minus $10 million. Non-GAAP earnings should be in the range of $0.75 to $0.83 per share. Our non-GAAP tax rate expectation is approximately 12%. As a reminder this is up by nearly six points when compared to last year's rate.

Now I'll close by discussing the investments we're making in New York. Earlier today Applied and the state announced plans to create one of the most advanced R&D centers in the world. The META Center will pioneer the materials, process technologies and architectures our customers will need to overcome the industry's scaling challenges.

Applied is committed to investing $600 million over the first seven years of the agreement including both cash and in-kind contributions. Our planned investments will not raise the operating expense targets in our longer-term financial model. New York State will invest $250 million to purchase and install tools and equipment. State funding of the META Center is subject to a variety of approvals and we expect to secure public funding by the end of this calendar year. We intend to ramp up our activities in calendar 2019 and target pilot production in the second half of the year. The META Center will dramatically expand our capacity to collaborate with our customers to accelerate breakthroughs in Semiconductor power, performance, and cost.

Now Mike, let's begin with 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 at this time. If you have an additional question later, please just poll the operator, we'll do our best to answer it later in the call. Let's please begin.

Q&A

Operator

Thank you. Our first question comes from C.J. Muse from Evercore. Please go ahead.

Q - C.J. Muse

Yeah. Good afternoon. Thank you for taking my question. I guess question in terms of market share and positioning. So you talked about EUV as a likely headwind into 2019, but also investments you're making in terms of technological inflection. So curious, can you kind of walk through the timing where we could see a resumption of share gains on the WFE side? And also, as you think about mix in 2019, does that allow you to perhaps at least grow in line? Would love to hear your thoughts, I guess, both 2019 as well as inflections beyond that? Thank you.

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

Yeah. Thanks for the question, C.J. Let me give you some color on market share, and I think it's useful to think about three time frames; what we've done, what we see today and where we're going. When I joined Applied in 2012, we substantially shifted investment towards big inflections. As a result in the six years through 2017, we held or increased share for six consecutive years. I think we were up five years and flat one. And also we increased share in memory where we had a big focus. So we increased our total share of memory spending by about 10 points.

So in the near term, as I talked about in the prepared remarks, 2018 we're gaining or holding share in the vast majority of our businesses, but we also see rapid growth in EUV and also in other markets where we don't compete. So as a result we do expect our share to decline in 2018. After many years of development, we expect to see the first EUV tools used in production beginning in 2019. Those tools have very long lead times. And to support the initial adoption, we expect high spending in 2018 and 2019, creating a mix headwind for our overall WFE share. Of course, those long lead time shipments also are positive indicator for our future business.

And another thing you talked, C.J., about mix, another important near-term factor to think about is 3D NAND spending. Once that recovers, the mix will become a lot more favorable for us. And then over – the last thing is, over the longer term – over the last couple of months I've spent time with many customers and still believe that the industry needs a new playbook beyond 2D scaling and I deeply believe that Applied is in the best position to enable this new playbook. I heard this from all of the customers I met over the last couple of months.

And we've all seen classic Moore's Law scaling slowing. All the customers in the industry want more ways to drive PPAC, power, performance, area and cost. So as we've communicated before, we're driving a new playbook that includes five different techniques that I've been talking about including developing entirely new chip architectures, new 3D structures within the chip, the integration of new materials, new ways to shrink including EUV and self-aligned patterning and advanced packaging techniques to connect chips together in new ways.

All five of those areas require major advances in materials engineering and create great growth opportunities for Applied. As a result of that we're creating new and unique capabilities for the industry, investing in the META Center to accelerate materials to systems where there's tremendous value and developing entirely new types of products to move the needle for our customers and for Applied.

A - Michael Sullivan {BIO 16341622 <GO>}

And fair to say the mix is hard to predict right now C.J., so it'll depend on what happens in 2019, 2020 in terms of things like 3D NAND like Gary said. So I think we'll stay tuned on trying to make that prediction this early in the year. Thanks.

Operator

Thank you. Our next question comes from Atif Malik from Citigroup. Please go ahead.

Q - Atif Malik {BIO 15866921 <GO>}

Hi, thanks for taking my question. Gary, I have a question for you on Display. Can you talk about the puts and takes for your down 20% Display outlook next year? We hear LG and Samsung ramping and converting capacity on Gen 8 OLED TVs with some weakness on flexible Gen 6 lines. Also you guys launched a couple of new products at OLED World Summit where e-beam, CD-metrology and e-beam failure, so just your thoughts on display market next year?

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

Thanks for the question, Atif. So I'm happy to give you color on our Display business. As we've said before, we've grown Display a tremendous amount over the last six years at about 25% compound annual growth rate. For 2019, we've talked about the business declining in the range of 15% to 20%. And given the elevated risk, I believe we're likely to be at the low end of that range.

So then if you go into the different segments, in the TV segment, I continue to expect our customers will transition to Gen 10.5 technology because it's strategically important for them to deliver lower cost for large-screen TVs. And as we've previously communicated with Gen 10.5 panels you can produce eight 65-inch TVs and you only get three on a Gen 8.5 panel.

So for large-screen TVs it is strategically compelling to move to those larger panel sizes. And recent discussions with customers, we don't see any change in customers' plans. In the smartphone area, demand is going to be flat year-over-year. But we continue to see OLED as the best technology for the future for a number of different reasons, and we believe that OLED will recover as more suppliers are able to produce at a higher yield.

So, overall, we see a lot of good opportunities that continue to drive our Display business despite 2019 for the first time in, I think, seven years, seeing a decline in the business.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Atif.

Operator

Thank you. Our next question comes from Pierre Ferragu from New Street Research. Please go ahead.

Q - Pierre C. Ferragu {BIO 15753665 <GO>}

Hey, thank you for taking my question. Gary, I have a question for you, a follow-up on your comments about share movements in EUV and then I have a quick follow-up for Dan. So, I'm trying to reconcile what you just described and that makes a lot of sense. So, EUV is ramping. You're mechanically losing share in that context, but you're expecting to regain share when you bring material synergies that will go along with EUV lithography.

But at the same time in the last few weeks, I heard like TSMC, I mean, reiterating, they said that's for longer so like a large foundry player that they don't expect CapEx to grow significantly. Then your peer ASML is saying the same. And so does that mean you have a different perspective and you think overall CapEx is going to continue to grow in foundry significantly and even grow faster than revenues?

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

Yeah. Thanks for the question. So I think our perspective longer-term, Pierre, hasn't changed. And I've spent many, many meetings with customers over the last couple of months. We strongly believe that the industry needs a new playbook and that all of those five techniques I talked about earlier are absolutely crucial to deliver power, performance, area, and cost needed for this Big Data-A.I. era.

Now silicon and electronics are going to be at the foundation of all of those major industry transformations changing in a profound way all the aspects of our life. We still definitely believe that. And if you look at where we need to go with 1,000 times improvement in performance per watt, you can look certainly at what we've said in the past. You can look at what other people are saying also that they talk about those five areas of focus. And I deeply believe we're in a better position longer-term than we've ever been.

Now certainly there's a headwind in 2018 and 2019. After a long time you have the initial adoption of long lead time EUV tools. They'll go into production for the first time in 2019. That's going to certainly provide a headwind for us in the near term. But longer-term, I definitely believe the industry is not going to get where we need to go with doing what we've done in the past. I think it's also very clear with Moore's Law – classic Moore's Law slowing down that you have to drive this new playbook. And there's tremendous value in going from materials to systems at a much faster rate.

And again, everything I heard in meetings with customers over the last couple of months, totally reiterates that that's the right strategy. And so that's my thought.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Pierre. And I think Pierre you said you might have had a follow-up for Dan. I don't know if you still do, just checking. Okay. Hearing no response, let's move on.

Operator

Thank you. Our next question comes from Krish Sankar from Cowen. Please go ahead.

Q - Krish Sankar {BIO 16151788 <GO>}

Yeah. Hi. Thanks for taking my question. Gary, it looks like there's general view that next year the mix of WFE is going to skew more towards foundry and logic versus memory. In that scenario, is it fair to assume that your profitability portfolio, your margin portfolio should be better selling into foundry/logic versus memory? And then a quick housekeeping for Dan, what's the impact from export control on Fujian, was it about $100 million for you guys? Thank you.

A - Daniel J. Durn {BIO 17483115 <GO>}

Thanks, Krish. Let me share with you a little bit of what we're seeing around the WFE market and then come to the profitability and the implications that that has for the profitability of the company. So in the prepared comments we talked about 2018 and 2019 combined being around $100 billion. I would say given the elevated risk profile over the environment we find ourselves in that's – our expectations around 2019 have probably softened in the last three months. We now see 2019 below 2018. If I were to – and I think it's premature to be point specific on either 2018, 2019 or the device types. But again, to just share little bit of what we're thinking to help shape a view of the market, 2019 feels more like 2017, than it does 2018.

And if I look at where we sit today in 2018, WFE all-time high in terms of aggregate spend and strength across each of the four device types. And as I profile off of that view into 2019, we would expect memory to be down and foundry/logic to be up. And then if I were to rank order the four device types, as we look into 2019 given everything we see today, foundry would be the strongest, then followed by logic, then followed by DRAM, then followed by NAND.

In terms of profitability, I think the best way to think about our business is less about end market profiling the four device types, and more about the mix amongst our businesses. The more of our leadership businesses and equipment that we sell, you'll see that be a favorable segment mix or a favorable product mix within the segment. The less leadership business – or the less leadership products we sell, will certainly be a headwind from a margin perspective. So I'd look at it more as a product mix influenced as opposed to end markets.

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

Yeah. Okay. And then the other part of the question was around this recent action that was directed by a particular Chinese customer. From what we see today, this feels like business as usual for the other customers in the region. And then regarding the

geopolitical situation, we certainly believe in fair trade and we think it's important for the overall ecosystem to have a constructive relationship between the U.S. and China.

We can't speculate on any other actions that could take place. And, of course, we continuously monitor the situation and we're going to respond appropriately. And then, Dan, do you want to give color on the magnitude of the impact?

A - Daniel J. Durn {BIO 17483115 <GO>}

Sure, Gary. So as we think about our guide into Q1 and we think about the export action that was taken against the one specific customer, we – a quarter ago, we're expecting our Semi business to be flat to up sequentially. We guided down a bit. In the absence of this export restriction, we would have been up sequentially in our Semi Systems business into Q1.

And I would say that our revenue with that one customer in Q1 is a meaningful number. So the EPS guidance we provided into Q1 reflects a significant reduction in Semiconductor revenue, along with an unfavorable mix within the product portfolio. And I think that gives you a sense of the impact of that action on the one customer. I don't think we want to be more specific, since it's a direct read-through on one customer, but I think that's enough to give you a sense of what the impact to our company was in our fiscal Q1.

A - Michael Sullivan {BIO 16341622 <GO>}

All right. Thanks, Krish.

Operator

Thank you. Our next question comes from John Pitzer from Credit Suisse. Please go ahead.

Q - John William Pitzer {BIO 1541792 <GO>}

Yeah, good afternoon guys for letting me ask the question. Gary, Dan to the extent in your prepared comments, I think you said you're not prepared to call the January quarter guide – January guidance a bottom. I'm wondering, was that relative to the overall Applied revenue stream, the silicon business? Was that a sequential comment or a year-over-year comment? I guess, specifically, with the silicon business, Dan, being down 20% year-over-year, I believe, relative to your Jan guidance, do you think that, that will represent a year-over-year bottom that we can start to build off of? Or how should we think about that?

A - Daniel J. Durn {BIO 17483115 <GO>}

Thanks, John. Let me share with you a little bit of what we're seeing in the market and, hopefully, it helps provide some context and color that gets at the essence of what you're asking about. I would say, based on our customer conversations, and the guidance we gave about not calling the bottom is specifically related to our semi business, because I think that's where the biggest question in the market is today.

Based on the customer conversations we're having, we think that first half 2019 would likely be higher than second half 2018. But we also think, given the elevated risk profile or the elevated risk environment we find ourselves in, geopolitical, trade, handsets, industrials being on the weaker side, that's certainly offset by decent markets in PC, comm infrastructure, cloud CapEx, but as a package creates an elevated risk profile.

We think it's prudent to create an expectation around a shallow gradual U-shaped recovery of the Semi business into 2019. And so for a variety of reasons, I don't think we want to put a stake in the ground and call it a definitive bottom, but we like what we see and are trying to be prudent in expectation setting.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, John.

Operator

Thank you. Our next question comes from Harlan Sur from JPMorgan. Please go ahead. If you have your phone on mute, please unmute your line.

Q - Harlan Sur {BIO 6539622 <GO>}

Good afternoon. Thanks for taking my question. Despite the equipment ban on this China domestic DRAM that you guys are talking about here in Q1, there are at least two other major programs in China, one in NAND, one in DRAM that are potentially looking to kind of ramp next year.

I think, last quarter, you guys said that, 2019 China domestic was looking more kind of heavily weighted towards foundry. Has your view changed in light of some of – has your view changed in light of this activity with some of the other memory suppliers that are looking to potentially ramp both NAND and DRAM capabilities maybe starting second half of next year?

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

Yeah. Thanks for the question, Harlan. Yeah. As I said earlier, we don't really see any change in the activities with the other customers in the region. Of course, we're going to continuously monitor that and respond to anything that we need to respond to.

But one thing may be helpful is, I give you color on our China business, how it's composed. So our Display, we have a large display business in China, and a little less than half of our revenue is Semi Systems. Roughly half of that is multi-national. The other half is domestic. And for domestic, we're fairly balanced between foundry, logic and memory.

And when we look ahead to 2019 and beyond, consistent with what we've said before, we didn't see a hockey stick in terms of growth in the domestic market and we continue to see modest growth in the semi market going forward. So, I would say, at least today, we

don't see any change in behavior with our customers. And that's basically the profile of the different parts of our business, which is pretty consistent with what we've said before.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Harlan.

Operator

Thank you. Our next question comes from Romit Shah from Nomura Instinet. Please go ahead.

Q - Romit Jitendra Shah {BIO 16865852 <GO>}

Yes. Thank you. Good afternoon. My question was on Services. So Services had a pretty strong year in fiscal 2018. It looks like it was up about 25% year-on-year and you're guiding it down sequentially a bit for January if I interpreted your comments correctly. My question is, does Services at some point in fiscal 2019 start to track the performance of SSG in fiscal 2018? And should we be cognitive of that as we model out the quarters of this coming fiscal year? Thank you.

A - Daniel J. Durn {BIO 17483115 <GO>}

Hi, Romit. Thanks for the question. I think the best way to think about Services growth, certainly the installed base is an influencer, but it's not a direct read-through. So I don't think that business will directly track the following year, what our Systems business does the prior year. But there is a growth vector around the installed base. There is a growth vector around the increasing complexity that the industry is facing and the challenges our customers are increasingly asking for help with to drive yield. And the third is, the strategy we have around comprehensive service agreements to get a bit more predictability in the business versus the transactional nature.

And so it's a multi-vector approach and strategy to growing the business. You point out that the company has done a great job executing that strategy. 2018 was a strong year and our goal will be to grow that – continue to grow that business at a 15% CAGR on a go-forward basis. So it's a business we feel good about, but I don't think you can make a direct read-through based on systems in any one year.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks.

Operator

Thank you. Our next question comes from Vivek Arya from Bank of America Merrill Lynch. Please go ahead.

Q - Vivek Arya {BIO 6781604 <GO>}

Thanks for taking my question. Gary, if I look longer term, what is your relative exposure to the smartphone market directly, indirectly versus the enterprise or data center? Because when I look over the last five years of growth in the semi-cap equipment industry, it kind of coincided with the growth of high-end smartphones. But as they are slowing down, when can the enterprise and data center be big enough to offset those declines? And do you think it is possible that WFE kind of stays flattish for the next two to three years because of this dynamic?

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

Yeah. Thanks, Vivek. As we take a step back from what drives WFE, if we were to go back a decade in our industry, vast majority of WFE was narrowly focused in and around the PC platform. Since then we've diversified into mobility compute handsets. We've got a leg in the data center. You can see Big Data, cloud service providers beginning to influence that. IoT is playing in increasingly large portions of semiconductor consumption as are things like autonomous driving and Industry 4.0. It's really hard to disaggregate those long-term technology trends that are increasingly depending on silicon and consuming silicon through direct read-through on WFE. That chain is extremely hard to disaggregate and attribute one to the other.

The second thing I would say is, units and handsets clearly are slowing down, content gains are still happening and so we do see favorable trends in that industry. What I like is the broadening of the end market demand drivers that support our industry.

And so as you take a look at how 2017 profiled, 2018, and now a quick look into 2019, you can see that our industry is structurally larger. Even though the adjustments or headwinds in any given period or quarter are coming from different areas, you can see that that diversification is serving the industry well in terms of moderating a bit of the volatility the industry has seen historically.

I would say, as we roll the clock forward and we take a point of view on what we think aggregate semiconductor demand is going to be in this world, this is an industry that's 450-billion-ish-dollars today. It's going to be $600 billion, $700 billion, $800 billion at some point in the future, manufacturing capacity to produce the wafers and chips that support an industry that's sized at those levels. It's going to be a very favorable trend for our industry. So if we were to be sitting here in 2025 talking about a $50 billion WFE, I would be extremely disappointed about that given what we know today.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Vivek.

Operator

Thank you. Our next question comes from Timothy Arcuri from UBS. Please go ahead.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Thanks much. Dan, I just had a question about the share repo. I think you bought back about $3.7 billion over the past six months at quite a bit higher prices than this, but you only bought back $750 million this quarter at much lower prices. So, I'm just wondering what the strategy is going forward on the share repo? Thanks so much.

A - Daniel J. Durn {BIO 17483115 <GO>}

Yeah. Thanks, Tim. So, what we said about our capital allocation strategy is, we're going to focus our excess cash on growing the company, maintaining a strong and healthy balance sheet, and then returning excess cash to shareholders. I think what you see is us executing against that strategy.

If you narrow the timeframe to any given quarter, the share repurchase may or may not be above where we trade on any given day. If we take a look at what the company has done over a long period of time, in the last two decades, we've given back close to 90% of our free cash flow back to shareholders. Our shares peaked at 1.7 billion shares outstanding. Today, it's under 1 billion. This is something the company has done for a very long time, not a new policy.

And if you look at our three-year track record, the company has given back about $8 billion and we've repurchased almost 20% of the company at an average price of $37. And so I think over the long run, the company has been disciplined and respectful of shareholders in the way in which we manage our free cash flow.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Tim.

Operator

Thank you. Our next question comes from Toshiya Hari from Goldman Sachs. Please go ahead.

Q - Toshiya Hari {BIO 6770302 <GO>}

Great. Thank you very much for taking the question. I wanted to follow-up on your market share comments. You talked about headwinds given the insertion of EUV, but Gary, do you have any expectations for your positioning in the markets that you do participate in etch depth, CMP, epi? Is it fair to say that your competitive positioning is still improving in the markets that you actually serve? Thank you.

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

Yeah, thanks for the question, Toshiya. We actually in 2018, we're gaining or holding share in the vast majority of our businesses where we compete today. There are markets that we don't compete and we have initiatives in those areas that where we have very strong pull from customers. And we're optimistic that over time that that will provide a significant increase in business for us.

And then the other thing, I would say, probably the biggest factor longer term is this new playbook I mentioned with the five different drivers. That is really playing to the strengths – uniquely to the strengths of Applied Materials with the breadth of our products, all the different materials creation, materials removal, materials modification and also the ability to combine all of these different technologies together in a single platform where you manage these interfaces that is a really, really, really valuable capability.

I met with all of our large customers in the last two, three months many times people running R&D, some of the feedback I was getting was just tremendous. People saying things that they didn't think were possible relative to power, performance, area, and cost. So those things will not play out in 2018 and not so much in 2019, but really that is the big driver for the industry. This new playbook going forward is extremely important and Applied is in a very unique position to enable those capabilities. So that's why we're investing. That's why we announced the META Center. And the goal is really to drive materials to systems many times faster than we're at today. We think there's tremendous value there. And certainly that's the feedback that we're getting from customers.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Toshiya.

Operator

Thank you. Our next question comes from Joe Moore from Morgan Stanley. Please go ahead.

Q - Joseph Moore {BIO 17644779 <GO>}

Great, thank you. My question is on DRAM. I guess, it seems like your DRAM numbers year-to-date have been quite strong in terms of your sales to DRAM companies despite the push outs that we've seen. And if we aggregate kind of the three equivalent companies who shift to DRAM they're all showing pretty significant strength, up in aggregate, I think, over 60%. So I guess I understand capital intensity is increasing, but it didn't seem like it was inflecting that much in any one year. So how is DRAM despite even with push outs having such a robust year and I guess does that mean supply would accelerate next year? Does it – anything you would tell us about the sustainability of that into 2019 would be helpful. Thank you.

A - Daniel J. Durn {BIO 17483115 <GO>}

Thanks, Joe. As we look at our position in DRAM, it gets back to a bit of the journey that gets us where we're at from a market share standpoint today. As Gary talked since he came into the company or when he came into the company we had one end market that was over 20% from a market share standpoint. All others were 15% or below. And the company has done a very good job diversifying across those device types to where we're almost agnostic across the device types from a market share standpoint. And DRAM has been one of the beneficiaries. The company's worked really hard with customers to deliver innovation when their road maps require it and it's allowed us to increase our market share with those customers.

We're increasingly seeing in the periphery transistors logic-like processes being adopted to drive I/O speeds on the devices. And that increase benefits to us as well in some of our higher market share businesses. And so the set up around DRAM going forward is a good one for us. It's been good over the last several years. And as you pointed out, we've done a good job driving market share there and we like that setup going forward as well. So we like the progress we're making in DRAM.

A - Michael Sullivan {BIO 16341622 <GO>}

And then, Joe, if you're looking for the year-over-year in DRAM, we've been planning for it to be sort of into 2019 maybe not quite the 20% that we've seen, maybe as high-teens to 20%. And very good job right now for the customers doing very proactive supply and demand management and also a lot of pull for DRAM especially the high-speed versions in the server market. So the customer – from the customer conversations, it feels pretty good, it feels not as tight as it was, but really proactive steps and it looks like a decent outlook for next year. We think it's still going to be a strong year.

Operator

Thank you. Our next question comes from Patrick Ho from Stifel. Please go ahead.

Q - Patrick J. Ho {BIO 5499707 <GO>}

Thank you very much. Gary, maybe just to follow up on the playbook you're talking about, the five key factors in terms of the architecture and the structures within chips and continuing materials innovation. Given your strong exposure to the foundry/logic segment, do you believe some of these variables would come into play at the 5-nanometer node? Or is this something that, I guess, past 5-nanometers and we'll see it more in the next decade?

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

Patrick, I think the great thing about many of those drivers is they're not only for future technology nodes. You can use those and – some of those drivers can make a big difference, move the needle on current devices and also on trailing geometries even planar transistors. So that's – and we're seeing strong pull from customers across the board for some of those major drivers at the AI Design Forum in July and at the Electronics Resurgence Initiative, the DARPA conference in July. One of the examples we gave was 1,000 times improvement in leakage current. Again, many of these new technologies that we're driving can be used in trailing geometries and even current geometries. So we don't need to wait for the adoption of 3-nanometer or – and certainly some of those technologies will be targeted for leading technology nodes, but some of them can be used today.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks, Patrick. And operator, I think, we have time for one more question.

Operator

Thank you. Our last question comes from Sidney Ho from Deutsche Bank. Please go ahead.

Q - Sidney Ho {BIO 6922415 <GO>}

Thanks for taking my question. I would just want to go back to an early question on profitability. You guided gross margin at 44.6% and that's quite a bit lower than your fiscal 2020 model of 47%. Understand that less about end market and more about product mix between leadership and growth products, but can you explain what situation would lead you to you see higher growth for your leadership products versus growth? And I would assume first half of 2019 you'll see growth business a little lower because of memory spending. I mean, the Display revenue is already at lower level. Just trying to think about what the path for you to get to the fiscal 2020 margin target from here, how much is driven by mix versus volume?

A - Daniel J. Durn {BIO 17483115 <GO>}

Yeah. Thanks, Sidney. Yeah. Let me try to unpack that and walk through this systematically. If there's anything I leave out please follow up. What I would say about gross margins, we've done a good job over the last handful of years. We've increased the gross margin by about 500 basis points. Q4 gross margin in line with our guidance. And as, you know, actual gross margins in any given quarter are going to be a function of several factors. There's a revenue level, segment, product mix, customer mix, factory activity, all of those will vary quarter-to-quarter. We're seeing Q1 as part of our guide sequentially lower from a revenue standpoint. AGS continues to be a growing part of the mix and we talked about an ERP transition throughout 2018 to risk mitigate customer deliveries at a point of the cycle where the supply chain was very tight, we kept an elevated level of inventory to make sure our customer needs were covered. We're going to be bringing that factory activity level down over the next three, four quarters to bring that inventory more in line with the natural progression.

And so, clearly, there's a number of factors at play. And I guess the thing I would point to the most is aggregate revenue level and then how that revenue profiles across our various products and amongst our segments are going to be the largest influencer to gross margin, company has done a good job driving those margins historically. I wouldn't look to too much in any one given quarter and we're going to continue to work hard and make progress and continue to drive gross margins off of these levels.

A - Michael Sullivan {BIO 16341622 <GO>}

Okay, great. Sidney, thanks for the question. Dan, before we close the call, anything else you'd like to add just so we wrap up on time.

A - Daniel J. Durn {BIO 17483115 <GO>}

Yeah. Thanks, Mike. I guess I want to close with a couple of thoughts first. We all know that we're in a challenging environment. I think the company has delivered strong results in 2018, but we're definitely not satisfied. We know we still have a lot of work to do and we're going to work aggressively to achieve the goals we set for the company.

I guess the second thing is if we fast forward to a year from now when we look back at our Q1 results they may prove to be the low point of the year, but we're not ready to call Q1 the bottom until we've collected multiple proof points across a variety of our businesses.

I think if you look at sort of the company's and the way we've engaged in the past many of you that follow our journey, you know our style is to be transparent, our goal, our intent is to help you see what we see.

As tough as the environment feels right now, the industry is substantially higher than it was even compared to prior peaks. We're confident that our long-term thesis around the industry, the long-term technology trends are going to be favorable and they're firmly in place. We also believe we've built a more resilient business, a company that is more profitable. It allows us to invest and uniquely be well-positioned to drive the industry inflections that we already see on the horizon.

I guess, lastly, finally, look forward to seeing many of you at the Credit Suisse conference in a couple of weeks. Thanks very much.

A - Michael Sullivan {BIO 16341622 <GO>}

All right. Thanks, Dan. And we'd like to thank everybody for joining us today. A replay of the call will be available on our website by 5 PM Pacific Time today, and we'd like to thank you for your continued interest in Applied Materials.

Operator

Thank you, ladies and gentlemen for attending today's conference. This concludes the program. You may all disconnect. Good day.
