Q4 2020 Earnings Call

Company Participants

- Dan Durn, Chief Financial Officer
- Gary Dickerson, President and Chief Executive Officer
- Michael Sullivan, Corporate Vice President

Other Participants

- Atif Malik, Analyst
- CJ Muse, Analyst
- Harlan Sur, Analyst
- Joe Quatrochi, Analyst
- John Pitzer, Analyst
- Krish Shankar, Analyst
- Quinn Bolton, Analyst
- Timothy Arcuri, Analyst
- Toshiya Hari, 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 everyone and thank you for joining Applied's fourth quarter of fiscal 2020 Earnings call. 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 most recent 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 quarterly earnings materials, 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 Dickerson {BIO 2135669 <GO>}

Thanks, Mike. I'm very pleased to report that Applied Materials delivered record revenue in our fourth fiscal quarter and earnings hit an annualized run rate of $5 per share for the first time. For the fiscal year, we grew revenues 18% and earnings 37% while making significant strategic investments in new technologies and products to address the industry's highest value problems and position the Company for sustained long-term success.

These results are all the more impressive considering the unprecedented disruptions we've navigated this year. I really want to thank all our employees, suppliers and partners for their resilience and adaptability. Our teams have switched to new ways of working delivered on our commitments to customers and investors and kept our technology and product development on track. While our actions to date are driven by a need to protect the health and safety of our employees, while keeping our Company strong, I'm very excited about the long-term benefits of working in new ways, especially remote support in R&D.

In today's call, I'll begin by sharing our current view of the market environment. Then as this is the end of our fiscal year, I'll highlight some of our major accomplishments in 2020 before describing the growth drivers and inflections that will shape our markets over the next several years. I'll conclude by outlining our strategy and investments that will drive Applied's long-term profitable growth.

As we adapt to the challenges created by COVID-19 and prepare for the post-pandemic era, we are seeing fundamental changes in many areas of our lives and the world is depending on semi-conductors more than ever. Investments in IT and communications infrastructure, combined with the accelerated digital transformation of companies and the economy as a whole are driving very robust semiconductor and wafer fab equipment demand. In foundry/logic, we see leading-edge customers building out their fabs and aggressively driving advanced R&D. This gives us confidence that current investment levels are sustainable into 2021 and beyond.

In addition, specialty markets underperformed in 2020 due to headwinds in industrial and automotive and therefore represent an upside for 2021, as these sectors rebound.

In memory, spending is growing faster than foundry/logic this year as customers push forward with their technology road maps. We see NAND outgrowing DRAM in 2020 and then DRAM growing significantly faster than NAND in 2021. Consistent with perspective, we shared on the August call, our outlook remains very positive. We are outperforming the market and we are demonstrating we can grow independent of the spending mix. This quarter semiconductor systems revenues were an all-time (technical difficulty) the midpoint of our guidance will be up another 12% next quarter.

For the fiscal year, semi-systems revenue grew 26% with broad based strength across products and device types. Our traditional leadership businesses that provide solutions for creating and modifying materials and structures are benefiting from innovations that

enable leading edge transistors and interconnects. For example, our metals deposition business technology that is critical to interconnect performance grew revenues 42% in fiscal 2020 to nearly $2.2 billion.

In our businesses that focus on shaping and analyzing Materials and structures. We have significant opportunities to grow our share and we're demonstrating our strong momentum. In fiscal 2020, our etch business generated record revenues growing nearly 30% year-on-year. We are gaining share in conductor etch, as we win new applications in DRAM and foundry, logic.

Our inspection business also delivered record performance and the systems revenues increased 46% for the year. We have significant traction with leading-edge customers and are winning share an optical wafer inspection and eBeam with new products that are still in early stages of adoption. As the benefits of traditional 2D Moore's Law scaling slowdown leading companies are describing how the industry is transitioning to a new playbook to drive performance power area cost and time to market of new devices.

This PPACt playbook includes new architectures, new structures, new materials new ways to shrink geometries and new packaging technology. Applied is uniquely positioned to accelerate this playbook. The breadth of our product portfolio is a key advantage because it allows us to combine technologies and innovative new ways. For example in patterning where we generated nearly $1.1 billion of revenue in fiscal 2020. We have been winning new applications across multiple customers with a new product that delivers a novel hard mask material combined with a co-optimized edge solution to open the hard-mask.

This is a great example of a new class of highly differentiated products we call Integrated Material Solutions or IMS. We have numerous IMS engagements with our leading customers. And I'm very excited about the IMS products we'll be bringing to market in the next several years. Another area where we are creating value using our broad capabilities, is advanced packaging that enables shifts to be connected in new ways.

Our packaging businesses scaling generating record revenues of $0.5 billion for the year up over 20% from fiscal 2019.

We're also expanding our ecosystem footprint through a combination of organic investments and partnerships. Moving to service, AGS also delivered record revenues for the quarter in the year, the portion of AGS revenue generated from subscription-style business also grew to record levels. In fiscal 2020, we increased the number of tools covered by long-term service agreements by 13%.

As a result, 60% of our service and spare parts business now comes from these stickier and more predictable recurring revenue streams. Our renewal rates for long-term agreements are also very high, at more than 90%. This illustrates the value customers see in our advanced service products.

Rounding out our portfolio with display, we hit our 2020 revenue target in a challenging market. Our outlook for 2021 is similar to this year with no significant changes to the view

we shared in our last call. However, we're starting to see some encouraging leading indicators of future growth that will be watching closely in 2021. These include increasing adoption of organic LED displays, OLED for IT applications, higher OLED adoption in the smartphone market, with more than 70% of the 5G handsets launch to date equipped with OLED screens and foldable OLED handsets approaching a price point that could spur volume adoption.

As I've said before, we're optimistic about the long-term opportunities for Applied in the display market as we focus on addressing the OLED inflection and expanding our available market. Finally, as I look back on our accomplishments this year, I'm also very proud of our new 10-year roadmaps for environmental and social responsibility that we announced over the summer. This roadmap lays out the detailed actions behind our vision to make possible a better future for everyone.

We've taken a holistic approach to these plans that considers our operations, how we work with customers and suppliers and how our technology can be used to advance sustainability on a global scale. We call our framework 1X, 100X, 10,000X and we've used it to rally the company around challenging new goals and commitments. Before I conclude, I'll take a few minutes to describe the longer-term growth drivers we see for Applied.

As I look ahead to the next decade, our opportunities have never been better. There are numerous trillion dollar inflections that can be enabled by advances in materials engineering from next generation displays and AR VR to electrification of transport and personalized healthcare. However, the one inflection that really stands out is AI. AI has the potential to change everything and it will touch every major industry and area of the economy. AI also has major implications for the electronics and semiconductor ecosystem.

First, we're moving from an application-centric to a data first world, we're almost all data will be generated and consumed by machines. This means that the industry's growth will no longer be limited by humans ability to create or consume data. Second, the new computing approaches needed to make sense of the massive volumes of data available will work best with workload specific hardware built from customized and entirely new types of silicon. This diversification of designs and devices is great for the industry.

And third training neural networks for AI computing is incredibly power intensive. So, there is a huge imperative for the industry to drive improvements in the performance per watt of computing solutions. The advances in technology needed to unlock the potential of AI, create tremendous opportunities for Applied Materials. We've aligned our strategy and investments around this vision for the future and we're uniquely positioned to accelerate the industry's new PPACt playbook to advance power performance, area cost and time to market of next-generation semi devices.

Before I hand the call over to Dan, let me quickly summarize. Despite the unprecedented challenges of 2020, Applied is delivering record performance. We're outperforming the market overall and have strong momentum in key growth areas like etch and inspection.

The demand for semiconductors remains very strong, driven by IT infrastructure, digital transformation of businesses and an acceleration of longer-term technology trends especially AI. Our future opportunities have never been better. We've been investing in next generation technologies that are critical for the AI ecosystem and laying the groundwork for Applied future growth.

Our strategy to accelerate the PPACt playbook is already yielding results for our customers and Applied. And as I look ahead, I'm very excited about the innovative new products and integrated solutions we will bring to market in 2021 and beyond. Now, I will turn the call over to Dan.

Dan Durn {BIO 17483115 <GO>}

Thanks, Gary. Today, I'll add my perspective on our Q4 performance and full year results. I'll share some noteworthy developments in our installed base business and I'll provide you with our backlog entering our next fiscal year, along with our business outlook for Q1.

Beginning with our Q4 performance, I'm pleased that our Company delivered record revenue and earnings per share, despite the ongoing challenges related to COVID. Our teams managed to significantly increase our system shipment and customer support and we did it in a very disciplined manner that resulted in higher operating profits and free cash flow. We've now shipped all of the unmet backlog from earlier in the year and our Q1 guidance gives you a direct look at the healthy demand trends we continue to see in our business.

In Q4, we delivered revenue above the midpoint of our guidance across all of the segments, including record revenue and semi systems in AGS. our next fiscal year, along with our business outlook for Q1. Beginning with our Q4 performance. I'm pleased that our company delivered record revenue and earnings per share. Despite the ongoing challenges related to COVID. Our teams managed to significantly increase our system shipment and customer support and we did it in a very disciplined manner that resulted in higher operating profits and free cash flow. We've now shipped all of the unmet backlog from earlier in the year and our Q1 guidance, gives you a direct look at the healthy demand trends. We continue to see in our business. In Q4, we delivered revenue above the midpoint of our guidance across all of the segments, including record revenue in semi systems in AGS.

We grew revenue by 25% versus the same period last year increased non-GAAP operating profit by 49% year-on-year and delivered record non-GAAP EPS of $1.25, which was up 56% year-over-year. We also increased operating cash flow to over $1.3 billion, up 59% year-over-year. About two months into our quarter, the US government imposed a licensing requirement related to one of our foundry customers in China. This requirement reduced our revenue in Q4, and our guidance for Q1. We've already applied for licenses where needed to comply with the new rules.

Turning to our full year results. I'm especially pleased with the growth of our semiconductor-related businesses. Semi systems and AGS combined grew by over 20%

year-over-year. Our installed base business, which includes AGS plus 300 millimeter upgrades grew by over 9% year-on-year and continues to represent close to a third of Applied's revenue. This growing part of our Company provides an annuity like revenue stream that makes us more resilient across market cycles. Within AGS, we've seen positive developments in our long-term service agreements. until Recently, the vast majority of our agreements had one-year terms, but in 2020 about a Tthird3rd of the agreements we signed had terms of at least 3 years.

We've increased these extended service agreements, by a factor of 10 over the past 3 years. This outstanding growth underscores the close working relationships we have with customers who are using our data-enabled services over the life of the node to generate world-class yields, output in costs. In fact, in 2020, we grew the installed base of our data-enabled pools by nearly 40%. For the Company as a whole in 2020, we delivered record revenue in both semi systems and AGS. We increased non-GAAP gross margin by 110 basis points, invested 69% of non-GAAP OpEx in research and development grew non-GAAP operating profit by 32% and increased EPS by 37%.

We also generated $3.8 billion in operating cash flow, setting a new record and returned $1.44 billion to shareholders. We raised the dividend for the third year in a row, paid dividends of $787 million and allocated nearly $650 million to stock buybacks, repurchasing at an average price of $56.32. We increased cash on the balance sheet by nearly $2 billion as we prepared for the Kokusai Electric transaction. In Q4, our stock buybacks were limited to $50 million as our legal department imposed to trading blackout out of an abundance of caution in connection with our discussions with the Chinese regulatory agency that is reviewing the Kokusai Electric transaction.

We continue to have constructive discussions and we're working to secure clearance for the transaction before the end of the calendar year.

Next, I'll share some color regarding the demand we see as we enter our new fiscal year. Applied's backlog reached nearly $6.7 billion in Q4, setting a new year end record. The combined backlog of our semi-related businesses also set a year end record growing to nearly $5.5 billion. Our display backlog declined year-over-year and as Gary discussed, we're tracking the leading indicators of the eventual recovery. Now I'll share Q1 business outlook. We expect company revenue to be approximately $4.95 billion dollars plus or minus $200 million with the midpoint up about 19% year-over-year. We expect non-GAAP EPS to be about $1.26 plus or minus $0.06 were up nearly 30% year-over-year.

Within this outlook, we project semiconductor systems revenue of around 3.45 billion, up nearly 23% year-over-year. AGS revenue of about $1.07 billion up around 7% year-over-year and display revenue of around $400 million, up about 20% year-on-year, we expect non-GAAP gross margin to be about 45% which is higher year-over-year and lower sequentially due to near-term changes in product and customer mix. We expect non-GAAP OpEx to increase $860 million reflecting higher expenses from a 14 week quarter plus one month of annual merit increases partially offset by holiday shutdown savings.

Our Q1 guidance assumes a tax rate of around 12% and a weighted average share count of around $925 million. In summary, I'm pleased that Applied delivered record performance in Q4 and has strong momentum entering our new fiscal year, our backlog is at record levels as our products and technology generate strong customer pool. Our Installed base business is becoming larger and more resilient with growth in our data-enabled services and multi-year service agreements. I'm incredibly proud of our teams for supporting our customers under challenging global circumstances while delivering record earnings and increased cash flow to our shareholders.

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 the line of CJ Muse from Evercore, your question please.

Q - CJ Muse

Yeah, good afternoon and thank you for taking the question, I guess, for my first question, if I look at your DRAM business make assumptions and make assumptions around your January quarter, it looks like you're going to grow about mid 30% for DRAM and that's far better than what we're seeing industry-wide. So, I guess -- can you discuss what's driving that outperformance including some discussion on your success with conductor etch? And how should we think about your share of wallet for DRAM, given that that's probably the fastest growing sub segment in calendar 2021.

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah, thanks, CJ. I'll take the question. As you pointed out, our DRAM business is showing significant signs of strength this year. We've built momentum throughout the year and we expect to close the year very strong. As we think about the overall growth rate of the DRAM market in this year against the backdrop of an industry that's probably growing 10% to 15% probably at the high end of that range for overall WFE, our overall systems business is going to be up over 25% for the calendar year. Against that, DRAM as a market is probably a couple of points higher than the overall industry. So, based on the math you walk through, you can see that the Company is significantly outperforming. on last quarter's call, Gary talked about the momentum we're seeing from a conductor etch standpoint. So, the team is performing really, really well there.

And then as you think about things like High-k Metal Gate to get the IO speeds on off the DRAM device, we've been talking for a while about that inflection coming into the market

and we're just really well positioned from a technology standpoint to drive our customers' roadmap and seeing strong adoption. So, we feel really good about how we're performing against the backdrop of a good market. But clearly, strong performance and we're really encouraged by what we see going forward and we would expect this strength to continue in the next year as we continue to push our customers roadmap and drive strong adoption of the technology.

Yeah, maybe CJ just add a little bit more color. This is Gary for high speed, the periphery is moving to more like as Dan said more logic-like processes, we're -- that's in the sweet spot of where we have leadership with a number of different products. So, so that's part of a unique inflection. It's really fueling our growth in DRAM and I thought I think in the last earnings call about the growth that we've seen in our DRAM conductor etch, gaining about 30 points of share since 2016. And so with the key technology inflections for the high-speed memory and also the strength of the Sym3 and etch. Really that's fueling our growth and we feel really good that we're going to continue to enable the future inflections and continue to grow outgrow the market in DRAM.

Q - CJ Muse

Very helpful. And as my follow up, I guess perhaps if you could focus on domestic China and overall China and overall China. I think the concern out there is that the types of numbers we're seeing is not sustainable, particularly given what's going on with SMIC, but curious if you could offer thoughts on the greater breadth of spending that we'll probably see in calendar 20 21 and then how we should think about multinationals layering in and what impact that will have an overall CapEx coming out of China. Thank you.

A - Dan Durn {BIO 17483115 <GO>}

Yes, sure C.J. Let me jump in on that and see if Gary wants to add anything at the end. From an overall market standpoint in calendar year 2020, we see meaningful spend by both the domestic customers as well as the multinational customers. And if I were to think about waiting of that spend, I would say it favors the domestic market over the multinationals. But both both groups of customers are having meaningful spend. I think what you see is a broad base of investments you're seeing investments across 200 millimeter geometries 300 millimeter geometries. And within 300 millimeter geometries you're seeing investments in NAND, DRAM foundry/logic, so all device types.

We think that continues into 2021. We probably won't see the growth rates that we did in 2020. It's going to be a strong year, but you certainly won't see those growth rates. From a growth standpoint, I would expect multinationals to show more growth than the domestic customers, but still strong spend in both categories. So, we see it's a good market. We continue to see strength in China and expect to see that for the foreseeable future as they build their ecosystem in a slow disciplined manner.

Q - CJ Muse

Thanks, CJ.

Operator

Thank you. Our next question comes from the line of John Pitzer from Credit Suisse, your question please.

Q - John Pitzer {BIO 1541792 <GO>}

Yeah, good afternoon guys. Congratulations on the solid results. Just to follow up on CJ's on China, Dan. You talked about your prepared comments that the ruling against SMIC did impact your fiscal fourth quarter, fiscal first quarter, wonder if you can just confirmed with us how much of the impact was it and this SMIC now represent 0 within the forward looking numbers or how are we thinking about kind of the impact there?

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah. Thanks, John. Here's what I can share with you. As you can imagine, we probably don't want to be too detailed on what any one customer is doing, but the licensing requirement that we talked about, it was put in place about two-thirds of the way through our fiscal fourth quarter. So, we saw about four to five weeks exposure to that new requirement. As we said in the prepared comments, Q4 revenue and Q1 guidance would have been higher if those restrictions had not been in place. So, we're complying with the new rules. We've already applied for licenses where we need them, trade situation remains fluid. So we don't want to speculate about the future, but certainly the revenue in Q4, and Q guide for Q1 would have been higher, absent that requirement.

As you know, we've been in China for a very long time, we've got a broad base of relationships and it's across all device types and we would expect the China market to continue to be strong for us going forward. And again, we're working with governments to get the licensing requirement satisfied.

Q - John Pitzer {BIO 1541792 <GO>}

That's helpful. And then maybe for my follow-up for Gary. Gary, a lot of the conversation around US, China trade tensions, there have been concerns around restriction of shipping equipment into China. But there is clearly a second side of the story where a lot of countries now are looking at the strategic necessity for semiconductor capacity. You have things like the chips acts in the US, you have TSMC announcing a foundry in Arizona earlier this year. EU officials have been talking about perhaps incentivizing more domestic production. In Japan, the same. So, I'm just kind of curious, given your vantage point in the industry. How important of the trend do you think this will be -- this idea of regionalization of semi capacity and what kind of potential growth driver could it be for your business?

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah, thanks for the question, John. So first off, I would say that really the major focus for all our customers is to drive their road maps, deliver the lowest power, highest performance chips at the best cost and I deeply believe that the future road map is going to look very different in the past. I've talked before about classic Moore's Law in 2D scaling, not being enough to enable the future AI infrastructure at the edge and in the

cloud. So, I do believe kind of aligned with your question that this is highly strategic for many countries in many regions, and I do --, we do see that certainly we see some near-term trends with big customers moving to new regions in alignment with that trend and I think that that's going to continue.

So, it definitely creates an opportunity for Applied going forward. Certainly as these customers are moving to new regions, the support in terms of accelerating their R&D, the ramp, transfer of technologies into these new regions, all of that creates a great service opportunity for us and then even more important, as I said, I do believe the future is going to look different than the past. We're at an inflection point in the industry relative to how you drive the technology forward. One of our biggest customers, two months ago talked about their roadmap beyond 2020 to double energy efficient computing every 2 years. And if you go look at the slide 2 months ago it exactly alliance what I've been talking about with the 5 elements of the playbook around new, architectures new materials, new structures and new ways to shrink and new ways to connect chips together with advanced packaging.

So exactly what we've been talking about in Applied is in a really great position with innovative products and integrated solutions to enable that new PPACt playbook. So, I think we've never been in a better position. And again, I do believe that the industry is at an inflection point and the countries and the companies that are best aligned to this new playbook and get there first or going to wind. It's very, very important for the whole AI infrastructure going forward.

A - Dan Durn {BIO 17483115 <GO>}

Thank you, John.

Operator

Thank you. Our next question comes from the line of Toshiya Hari from Goldman Sachs. Your question please.

Q - Toshiya Hari {BIO 6770302 <GO>}

Hi guys, good afternoon and thank you for taking the question. Gary, my first question is on inspection. I think in your prepared remarks, you talked about your business being up 46%. I think your systems business was up 46% in fiscal 2020, you probably outperformed most of your peers, if not all your peers during that timeframe, where are you seeing the most traction and inspection and how should we think about sustainability for that business in 2021 and I've got a quick follow-up.

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah, thanks Toshiya for the question. So absolutely the inspection business is a real bright spot for the company. And as you mentioned, we grew the systems revenue by 46%. We have a new optical inspection system and new eBeam products that are seeing strong initial adoption with leading customers. And in both areas, we have a lot of room to grow and will make an official launch fairly soon on some of these new capabilities.

And the other thing I would say, certainly the in this business, we have some really, really great leading technology and the other aspect that's important for Applied is the connection and driving the PPACt roadmap. (inaudible) all of these new innovations, when you think about wiring to lower resistance to improve the power or gate all around for high performance transistors, having these unique imaging capabilities and we have launched a product that has dramatically higher resolution than any product -- eBeam product that's on the market today.

Being able to see those data all around structures and understand how to drive the different films and shaping the structures and modifying the structure is all of that tied together is also tremendously synergistic with the rest of our business and driving the PPACt roadmap. So, we're really in the early adoption of some of these new capabilities. I'm very confident that 21 and beyond we're going to have really good results from our PDC business, but also I'm real excited about the connectivity to the rest of Applied's business in accelerating the PPACt roadmap for customers.

Q - Toshiya Hari {BIO 6770302 <GO>}

Great, thanks a lot, Gary. And then Dan, as my follow-up just on gross margin, I know there are multiple sort of levers both through the upside the downside that could impact gross margins and you guided to a slightly lower number for fiscal Q1, but when you think about gross margins longer term, I think your most recent Analyst Day, you put up a 47% number, if I recall correctly, but is that still sort of the right target for you internally or is it higher, lower, how should we think about gross margins at a multi-year cadence? Thank you.

A - Dan Durn {BIO 17483115 <GO>}

Yeah, thanks Toshiya hi. So, from a gross margin standpoint, the Company is performing really well. If you think about what Gary said in the prepared comments in fiscal year 2020, we're up 110 basis points year-over-year. Our fiscal Q4 we just reported were up 190 basis points year-over-year. And then like you pointed. we see some different mix as we look into our fiscal Q1 is down a little different mix as we look into our fiscal Q1. It's down a little bit sequentially, but still up year-over-year. We think that's a little temporary and that mix is going to reverse itself as we look out in the fiscal Q2. So, we think the Company is executing well on a difficult environment. When we think about the long-term gross margin, I think the best way to describe it would be 45% plus or minus 2 points depending on where we are in the cycle. And if you look at the quarter, we just printed 45.7 and then you factor in some of the headwinds. We're experiencing in the current environment due to COVID in the pandemic, we would be at the upper end of that range we referenced of 45 plus or minus 2 points.

So, I think that model that framework around gross margin holds and the company is performing well to that as the legacy impacts and the headwinds from the pandemic begin to wane, I think you would see the performance in the current environment, reflecting that framework around long-term gross margin.

Q - Toshiya Hari {BIO 6770302 <GO>}

Thank you.

Operator

Thank you. Our next question comes from the line of Atif Malik from Citi. Your question please.

Q - Atif Malik {BIO 7312618 <GO>}

Hi, thank you for taking my question. Gary, you made an interesting comment in your prepared remarks that you guys can grow independent of the mix, which is an important distinction from some of your peers, which are more leverage to a memory or logic and you talked about the outperformance in etch, inspection markets, looking into next year where you are most excited about etch or inspection or different market?

A - Dan Durn {BIO 17483115 <GO>}

Yeah, thanks for the question. So, I would say -- if I look at what am I most excited about. It's what I talked about earlier that I really believe that the industry has had an important inflection point and you can see this also many leading customers and companies in ecosystem aligning around our view that classic Moore's Law and 2D scaling is not going to be able to enable the future AI infrastructure at the edge and in the cloud, and you see this playing out in terms of the marketplace.

From a competitive standpoint, the companies that deliver lower power, higher performance at the best cost faster than others. That's the fundamental driver of all of our customers and the ecosystem. So, Applied is in a great position to outperform because we have many unique technologies and combination of products that are used to create shape, modify, analyze, and connect structures and devices.

So, I think I talked on the last call about our performance in some of our deposition businesses. Last year, we gained 8 points of combined share and Epi PVD CVD amounting to about $5.2 billion. This year, we grew our Metals deposition business 42% to $2.2 billion. So these leadership businesses are very key to enabling next generation transistor and wiring materials and structures and combined with other unique capabilities. I'm really optimistic about our opportunities as we go forward to drive the PPACt roadmap.

And as you mentioned etch. We're also performing very well in etch, significant growth in this last year. We've expanded beyond our strength in memory to foundry and logic, where we're winning stats, we're winning EUV steps as customers are moving to future technology nodes. And really, really, really great performance there.

It's -- that's really based on our new Sym3 platform, probably the best platform in the history of Applied Materials and there are real fundamental advantages. One is conductance. Conductance since where you remove, the etch materials from the chamber. So, you're not re-depositing on these structures and causing yield and performance issues also particles that are deposited on the chamber. So that's just a

fundamental advantage of that particular technology. Also, I'm on the phone often with R&D leaders last night with one of the --, our top logic customers and we are seeing yield benefits with the Sym3 or they're seeing yield benefits with the Sym3 with new coatings that we have enabled on that platform that again is giving us better particle performance.

So etch again very, very good momentum and I talked already about inspection and we are in the early phases of adoption of some new products. So, I'm also very optimistic about that business as we go forward. But the really key thing that I'm most excited about is I do believe the industry is at an inflection point, the future is not classic Moore's Law 2D scaling and you look at what I talked about relative to creating and modifying analyzing connecting all of the structures and devices, we're really in a unique position. So again, we are doing really well in different environments from a mix perspective, and I believe that we're at the foundation of enabling the technologies for this future AI infrastructure.

Q - Atif Malik {BIO 7312618 <GO>}

Great (inaudible). follow-up Dan domestic China WFE is still in that $9 billion to $10 billion range for this year.

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah, that's correct. Our view on that hasn't changed. We've been pretty consistent on that over time, it's going to be in that $9 billion to $10 billion range.

Q - Atif Malik {BIO 7312618 <GO>}

Thank you.

A - Gary Dickerson {BIO 2135669 <GO>}

Thanks, Atif.

Operator

Thank you. Our next question comes from the line of Krish Shankar from Cowen and Company. Your question please.

Q - Krish Shankar {BIO 19454336 <GO>}

Yeah, hi, thanks for taking my question. I have two of them. Firs one for Dan. Dan, are we still targeting the December and close for the Kokusai acquisition or can it be delayed further? And along the same path, any kind of buyback increase is really tied to the outcome of what happens with Kokusai and then I had a follow-up for Gary?

A - Dan Durn {BIO 17483115 <GO>}

Sure. Thanks, Krish. So, as you know we've gotten five of the six regulatory authorities to approve the transaction, we're constructively engaged with the remaining authority and we continue to be optimistic that we're going to receive clearance by the end of the calendar year. So, we'll stay focused on that. From a buyback standpoint, once we close

the transaction and integrate the asset, I think we'll come back to the investment community and put forward a combined company model over the next several years to give investors a perspective of how the combined company will perform. As part of that communication, we'll talk about what our capital allocation strategy going forward is, but I wouldn't be surprised if it's what we've been doing now for quite some time, which is very shareholder friendly in terms of giving all excess cash back to shareholders.

And big buyers of our stock given what we see happening from an overall market standpoint, the structural growth we see and the execution of this Company against that opportunity we see our industry growing structurally larger higher highs, higher lows and we think there's a real opportunity to put capital to work from a share repurchase standpoint. So, we'll probably continue what we've been doing now for many years, but we'll have that conversation Once we get the investment community together post close of the transaction.

Q - Krish Shankar {BIO 19454336 <GO>}

Got it. Thanks, Dan. And then a longer-term question for Gary. Gary, on China, I'm not looking at this from a political handle, but from a long-term business and philosophical standpoint, do you think it's good business practice for AMAK [ph] or other US (inaudible) to ship to China, because on one side is balancing the needs of your customers, but also on the flip side, it might enable local competition or reverse engineering or how do you particular IC. So, I'm kind of curious how do you balance those two as China gets bigger?

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah, hi, sir. Thanks for the question. Local competition has been a factor for us for many, many years in many different regions, and I just keep coming back to -- the leading companies want to work with the most innovative technologies and products and there is just no way to go forward with the technology road maps, if you don't have the combinations of those different technologies. And as I've said before, I just deeply believe that the future doesn't look like the past. I don't believe that the following the classic 2D Moore's Law playbook is the path forward for the industry or to enable this AI infrastructure. So, there is going to be tremendous innovation. I mentioned earlier, one of the -- one of our leading customers two months ago. If you look at their architecture day and they talked about the road forward beyond 2020 for energy efficient computing to double every two years, and it was exactly aligned with the things that I've been talking about over the last two years with the new architectures, new structures, new materials, EUV enhancements and new ways to connect chips together with 3D advanced packaging.

So, I just believe there's going to be tremendous innovation. All of this is going to be a moving target relative to the products. And the other thing is, you have the opportunity to connect these products and technologies together in unique ways to manage the interfaces and the interfaces on these structures are becoming much more critical than they've ever been in the past. So, we know we've talked about some innovations in the transistor where we can enable enormous improvements in leakage current or drive current and it really comes from being able to combine these technologies together, not oxidized or damaged those interfaces. Those are completely unique capabilities that

having this portfolio is a tremendous advantage at very unique advantage for Applied. So I think that the world will operate the best certainly with fair and free trade and that these inflections that we're seeing today around AI, biggest inflections of our lifetimes will transform every industry in Applied is right at the foundation of those inflections.

A - Dan Durn {BIO 17483115 <GO>}

Thanks, Krish.

Q - Krish Shankar {BIO 19454336 <GO>}

Thanks, Gary

Operator

Thank you. Our next question comes from the line of Timothy Arcuri from UBS, your question please.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Hi, thanks. I had two. I guess, Gary, first, I know you think about capital intensity a lot and I've seen you charged and I totally agree with the 10.5% to 11% longer-term WFE intensity and it seems like if you strip out some of the duplicative spending today, there's probably at least $3 billion to $4 billion in China that's not backed by revenue. So, it seems like if you strip that out, we're probably closer to like 12% right now. So, I know when you think longer term, you do a lot of modeling about longer term WFE, but when you kind of think about of where WFE can go and you build out a underlying semiconductor revenue number, is it fair to use like a 12% sort of a real or our core WFE intensity number and then you can like layer on top of that spending that you think might happen because of issues that John I mentioned before, but that's not real dollars, that's backed by revenue. So the question is, is that 12% a good number?

A - Dan Durn {BIO 17483115 <GO>}

Hi, Tim, this is Dan, I'll jump in on this one. So, I do think 12% is a good number to start with. Do I think there is a upward bias on that over time given what we see from a technology road map standpoint? Yeah, I think you can make that argument, but I think 12% is a good number to lock-in on. Just a couple of more perspectives on it. We talk about when 300 millimeter came in around the 2000 timeframe, we saw multiple concurrent investments in both wafer size technologies and we saw probably 17%. So that's probably an all-time high. And what you saw is the 300-millimeter wafer size Technology came into the industry. And all of the efficiency gains that came with it as well as the consolidation of our customer base, we hit a low point in 2013 at about 9% and it's been on a steady upward trajectory since then.

And so/ we think the trend is a pretty good one. The other thing I would point you to, and maybe this is a little bit of a different way of thinking about the industry, If you take that low point of capital intensity and you combine 2012 and 2013 as a combined two-year window and then compare it to the next two-year combined window of 2013 and 2014 compare that for the next two-year window of 2014 and 2015 and onwards when you do

that exercise out to 2021. And what you'll see is each successive 2 year windows within upwardly sloping line and so we think our industry has gone from no growth cyclical to growth with a upward sloping trend line and we will see higher highs and higher lows is that thesis plays out.

And so we feel really good about where this industry is going and support of all (inaudible) trends that Gary has talked about for many quarters now.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Yeah, yeah, got it, Dan. Thanks. And then I guess my second question is just on DRAM. I know, Gary, you sort of emphasized the DRAM is going to outgrow NAND on a percentage basis next year, which I guess sounds a little ominous for DRAM, but can you put that in the context of demand. It seems like DRAM WFE is certainly coming off of a much lower base this year and on the supply side we're far better point right now that we are in NAND. So, can you sort of back those numbers into what that means for the supply demand balance next year? Thanks.

A - Dan Durn {BIO 17483115 <GO>}

Yeah, sure. Tim, I'll jump in on that one again and I think the best way to get at this and unpack it for the investment community. Just talk about what we see in 2020 and then use that as a jumping-off point to describe the contours around 2021. So, starting with 2020, we continue to see the overall market, up 10% to 15%. We'll probably at the high end of that range. We talked about Applied systems business against the market that's up 15%. Our systems business is going to be up 25% for the calendar year. By device type, we see foundry/logic greater than 55% in 2020, but it's growing below the market average.

DRAM, on the memory side of the house, DRAM, it's growing a little faster than the overall market. I think the real story in 2020 is NAND. NAND is growing 2x the overall market in 2020. And so, I think that's maybe a little contrary to what the conventional thinking is around 2020. 2020 is a memory growth year especially for NAND. And against that backdrop of the memory growth year, Applied is is outperforming very nicely. So, we feel good about 2020. As we look into 2021, we expect another strong year for the industry and for Applied.

And while we're not sharing specific forecast around WFE, I think it's premature to be point specific at this time. We see foundry/logic is going to continue to be strong and we see it is over 55% of total WFE again next year. But what you'll see on the memory side of the house is going to be a reversal from a growth standpoint. NAND, we expect to be flattish year-over-year and DRAM set up to significantly outgrow the market. So, this is a great set up for Applied given the strong share gains we've been talking about now throughout 2020 and DRAM. It gives us confidence as we look into 2021 at the setup from an overall end market standpoint, strong foundry/logic, flattish NAND strong DRAM. It's good setup for Applied as we look into next year.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Thanks a lot, Dan.

A - Dan Durn {BIO 17483115 <GO>}

Thanks, Tim.

Operator

Thank you. Our next question comes from the line of Harlan Sur from JPMorgan. Your question please.

Q - Harlan Sur {BIO 6539622 <GO>}

Good afternoon, great job on the quarterly execution. On your commentary on leading edge systems, driving much of the incremental revenue growth this year with lagging edge system shipments muted, just given the weakness in auto industrial and analog segments of the market. The recovery in these markets we're seeing now and into next year should be a tailwind for the business. So, what's your expectation on the mix of leading edge versus lagging edge over the next few years, just given the number of new 12-inch analog fabs and microcontroller content and analog content growth and all-electronic applications. And what's your positioning in these segments of the market?

A - Dan Durn {BIO 17483115 <GO>}

Hi, Harlan. I'll jump in on that one. I think you pointed out rightfully. This is a little bit of a weaker market for the trailing node geometries. A couple of quarters ago or even last quarter, we talked about auto, and industrial market showing some signs of weakness as a result of the pandemic. Since then, we've seen those end markets continuing to perform stronger. But I think it's going to follow the natural progression we would see in any one of our end markets off of low utilization levels, we see utilization rise. Once utilization gets to a certain level, then you'll see customers begin to layer in capacity and so I would expect to see legs up in those markets trailing node geometries as we look into next year.

Longer term, we think the trailing node geometries as a result of Communications Infrastructure Industrial Auto Internet of Things. There's a whole host of drivers that are taking that industry structurally larger over time and we would expect that trailing node geometries segment to outgrow the overall market over a multi-year window. So, we feel good about it. In the the near term, while customers are pulling really hard multiple customers, multiple nodes on the leading edge, you've seen a rotation from a very balanced foundry/logic market between leading edge and trailing node to probably more weighted to leading-edge technologies in the current environment.

Over time, we would expect that to moderate a bit and get back to a more balanced profile than what we've seen maybe in 2020 or 2021, but we do think that those markets are set up to do well and we're encouraged by that because anytime you broaden the growth drivers of an industry. It just makes it structurally stronger, less cyclical, less volatile and we think that that's going to benefit this industry significantly.

From a positioning standpoint, we're well positioned competitively across that entire node profile and so we're going to continue to deliver enabling technology to the market and we continue to see strong pull from customers top to bottom across the profiles.

Q - Harlan Sur {BIO 6539622 <GO>}

Thanks for the insights there. And then as the industry moves towards more innovative and complex packaging technologies, multi-chip modules triplet strategy. We're actually in some cases even seen the return of, innovation, I'm pleasantly surprised by the size of Applied's advanced packaging business $500 million in revenues this year. How big is this market? Do you estimate and what type of growth outlook do you guys see for this emerging segment of the business?

A - Gary Dickerson {BIO 2135669 <GO>}

Yeah, thanks for the question. So as I mentioned before, the packaging part of the ecosystem is one of the key drivers. There are the five drivers that I talked about before. And then you see this is being also discussed by many leading companies, our customers. Other companies in the ecosystem fabless companies relative to the importance of packaging. I definitely think if you look at the power performance and cost going forward, packaging is really, really, really important, and we have a very strong position. We are number one in advanced wafer-level packaging and we're working with a number of different ecosystem partners. We talked about our partner with another company to deliver the first industry's first fully integrated solution for hybrid binding where you can connect to chips together and die form and that enables shorter interconnect distance forex increase in Iowa density.

So there is a lot of innovation that's going to happen in that market and we have very, very strong positions. If you look at just that one particular innovation, you need to optimize etch CMP deposition wafer surface cleaning, we have metrology inspection defect particle control that we can add to enable that inflection and then we also have the Center of Excellence at Applied advanced packaging technology center in Singapore and we have some very large leading customers working with us on some of these new innovative architecture. So, I'm really excited, certainly it's a meaningful part of our business today, but I think we're really at the early phase of the adoption of many of these new technologies and we are number one and advanced packaging expanding with partnerships through the ecosystem.

So I'm excited about it. I don't want to give a specific number right now, but I think it's going to become much more important than most people realize in the ecosystem.

Q - Harlan Sur {BIO 6539622 <GO>}

Yeah. Thank you.

A - Michael Sullivan {BIO 16341622 <GO>}

Thanks Harlan. And operator, we have time for two more questions, please.

Operator

Certainly then our next question comes from the line of Quinn Bolton from Needham, your question please.

Q - Quinn Bolton {BIO 3192909 <GO>}

Hey, guys, congratulations on the nice results and outlook. I just not to take anything away from what you've achieved this year in the foundry/logic and DRAM segments, but if I look at your NAND revenue at least in fiscal 20, revenue was roughly flat year-on-year were, it sounds like the overall NAND WFE may be up close to 30%. So it looks like you lost share this year, wondering as you look forward, are there opportunities to stem that share loss in fiscal 221 or does your outperformance really depend on continued strength in DRAM and foundry, logic. Thanks.

A - Dan Durn {BIO 17483115 <GO>}

Yeah, hi, Quinn. I think you might be drawing the wrong conclusion. You know, when we talk about the WFE end market and we talk about NAND that's a calendar year comment. And so if you look at the first three quarters of calendar year 2020, you see our NAND business up significantly more than the flat you referenced and at the midpoint of our guide we won't talk about by device type, but I think you'll see the performance of that business, roughly in line with the overall market. It just the peculiarities of quarters when they happen to hit, and the revenue expectations within those quarters. And som if you look at the quarterly profile for the trailing 12 months, you will see that the one quarter out there from a historical standpoint was quite large showing performance this year on a fiscal year basis flattish.

The first three quarters of 2020, you see a very different number -- but when we're talking three months from now at next quarter's results, I think you'll see a business that's more roughly in line with the overall market. So we're very comfortable confident with how we're positioned within that end market and we're going to continue to drive our business in technology and look to do better over time.

Q - Quinn Bolton {BIO 3192909 <GO>}

Great, thanks for that.

Operator

Thank you. Our final question then comes from Joe Quatrochi from Wells Fargo, your question please.

Q - Joe Quatrochi {BIO 18961101 <GO>}

Yeah, thanks for taking the question. I was curious on your prepared remarks. You talked about a long-term service agreements now, one-third of those e being over 3 years. When you look at your current kind of book of contracts for your installed base, how do you think about that trending over the next few quarters.

A - Gary Dickerson {BIO 2135669 <GO>}

So. Hi, Joe. This has been playing out over a multi-year period. If we go back in time, at one point 30% of our revenue was generated from long-term service agreements, then we grew at the 40 then 50, now you see it at 60. I think we've got the right strategy

around this business. You see those long-term service agreements, extending out in tenure, which provides even more stability and we're going to look to drive that number north off of the 60% of revenues over time. We're going to look to continue to drive that number north. So we'll take it one quarter at a time, one year at a time and continue to execute against our strategy, but we see more headroom against that number and look to push this business forward in a much more stable growth oriented way.

A - Michael Sullivan {BIO 16341622 <GO>}

Hey, thanks, Joe, for your question. And Dan, would you like to help us close out the call today.

A - Dan Durn {BIO 17483115 <GO>}

Yeah. Thanks, Mike. I'm really pleased that in a year we're all going to remember for its extraordinary challenges Applied delivered record revenue, earnings, operating cash flow year-end backlog and I would like to sincerely thank our employees and partners for everything they did to support our customers in that difficult environment, looking into next year. Just a few quick thoughts to leave you with.

I think the growth opportunities for the semiconductor industry are bigger than ever. The industry roadmap is clearly moving towards our new playbook and our balanced market exposure lets us perform well regardless of the spending mi,, our installed base business is growing and making us more resilient across the cycles and I'm encouraged by the early green shoots we're seeing in display, Gary and I look forward to seeing many of you at the Credit Suisse Conference next month and until then, I hope you all enjoy a happy and safe Thanksgiving. Take care.

A - Michael Sullivan {BIO 16341622 <GO>}

All right, thank you very much. That concludes our conference call and thank you for your continued interest in Applied Materials.

Operator

Thank you, ladies and gentlemen for your participation in today's conference. This does conclude the program. You may now disconnect. Good day.