Applied Materials, Inc. (AMAT) Q4 2023 Earnings Call Transcript – November 16, 2023

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Applied Materials, Inc. (NASDAQ:AMAT) Q4 2023 Earnings Conference Call November 16, 2023 4:30 PM ET

Company Participants

Michael Sullivan - Corporate Vice President

Gary Dickerson - President & CEO

Brice Hill - SVP & CFO

Conference Call Participants

Stacy Rasgon - Bernstein

Vivek Arya - Bank of America

Chris Caso - Wolfe Research

Toshiya Hari - Goldman Sachs

Steven Chin - TD Cowen

Harlan Sur - JPMorgan

Srini Pajjuri - Raymond James

Timothy Arcuri - UBS Securities

Joe Quatrochi - Wells Fargo

Joseph Moore - Morgan Stanley

Sidney Ho - Deutsche Bank

Brian Chin - Stifel

Charles Shi - Needham & Company

Stacy Rasgon - Bernstein Research

Jed Dorsheimer - William Blair

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

Good afternoon, everyone, and thank you for joining Applied's fourth quarter of fiscal 2023 earnings call. Joining me are Gary Dickerson, our President and CEO; and Brice Hill, 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 filing 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 our website at ir.appliedmaterials.com.

Before we begin, I have a calendar announcement. On Tuesday evening, December 12, Applied will lead a panel on the future of logic near the IEDM Conference in San Francisco. Joining us will be leading technology executives from Intel, Samsung, and TSMC, along with Google, Qualcomm, Synopsys, and the EV Group. There won't be a webcast. So we hope you'll join us in San Francisco.

And with that introduction, I'd like to turn the call over to Gary Dickerson.

Gary Dickerson

Thank you, Mike. Before we begin, I'd like to speak briefly about Israel. As many of you know, Applied Materials has had a significant presence in Israel for nearly 30 years. We were shocked by the terrorist attacks of October 7 and the outbreak of war with its immeasurable suffering and loss. Our team in Israel is proving their resilience at this dangerous time and Applied Materials is committed to do our part to help our families stay safe until more peaceful conditions return.

Now turning to our results. We delivered a strong finish to fiscal 2023 with record earnings in our fourth quarter and record revenue earnings and cash flow for the year as a whole. I would like to recognize the hard work and commitment of our global team to deliver these outstanding results.

As this is our year end call, I'll begin my prepared remarks by reviewing our performance and key accomplishments over the past 12 months. I'll then talk about our longer-term growth thesis for the industry and Applied before concluding with our outlook and priorities for 2024. While semiconductor and wafer fabrication equipment spending were both down in 2023, Applied was able to demonstrate the strength of our broad portfolio, as well as the central role we play enabling major industry inflections.

Our Semiconductor Systems business delivered mid-single digit growth for the fiscal year and remains on track for growth in calendar 2023 which will be the fifth consecutive year that we've outperformed the wafer fab equipment market. We believe we can sustain this outperformance over the coming years, thanks to the leadership positions we've established at the major technology inflections that will enable our customers' roadmaps.

In the past 12 months, many of our business units delivered new records and major milestones, including Etch where we passed 10,000 shipments of our Sym3 chamber. We also released new products and secured incremental production tool of record positions and Gate All Around, Backside Power Delivery, patterning advanced DRAM and High-Bandwidth Memory and heterogeneous integration.

At the same time, we strengthened our ICAPS business that serves IoT, Communications, Auto, Power and Sensor customers with new products and application wins in etch, epitaxy, implant as well as metrology and inspection. In Services, we delivered low-single digit revenue growth in fiscal 2023, overcoming headwinds, including lower fab utilization rates and trade restrictions.

In this period, our total installed base increased 5%. In fact, our installed base of process chambers is now more than twice as big as our nearest competitor. In addition, there are more than 14,000 tools that are not chamber based including CMP, implant, and metrology and inspection. We grew the number of tools under long-term subscription agreements which now generate 63% of our total parts and service revenues. We also maintained the renewal rate of these subscriptions at 90%.

In 2023, we continued to focus on our operations and supply chain, and we've made significant and sustainable improvements. Compared to this time last year, we are providing customers with better on-time delivery and shipment quality, while normalizing our inventory levels. More importantly, our operations are ready to scale as the industry grows over the years to come.

Across the company, we're in a great position to enable our customer success and profitably grow Applied Materials as this next era of industry expansion takes shape. Looking to the future, there are four key components of our growth thesis. First, we believe that semiconductors will outgrow GDP as a digital transformation of the global economy progresses.

Second, we expect the market for wafer fab equipment to grow as fast or faster than the market for semiconductors. This is because the industry roadmap is becoming more complex and chipmakers need to deploy more technology to move from one node to the next.

Third, we believe that Applied will outperform wafer fab equipment because the key technology inflections are enabled by materials science and materials engineering where Applied has the broadest, most connected and most enabling portfolio of solutions.

And fourth, we believe we can grow our service business as fast or faster than our equipment business by providing customers with advanced service solutions that accelerate technology transfer from R&D to high volume manufacturing and optimize device performance, yield, and cost in their fabs.

By identifying major industry inflections early and making strategic multiyear investments in our product portfolio and capabilities, Applied Materials is best positioned to benefit from this exciting period of industry innovation and growth. We have by far the broadest portfolio of unit process technology to address our customers' high value problems in transistor, interconnect, 3D memory, specialty devices, and heterogeneous integration.

We're able to combine these technologies in unique ways to create co-optimized and integrated solutions, and we are seeing strong pull from our customers to work on higher value module and device integration problems. At no time in our history have we been closer to our customers. We have built a unique platform for a collaborative innovation and commercialization of next-generation technologies.

We will significantly expand this collaboration platform with EPIC, enabling Applied and our partners to innovate the way we innovate. And our advanced technology enabled service offerings are seen by customers as increasingly valuable, especially during technology transfer and fab ramp. These advanced services also provide growing subscription revenue streams for Applied.

Moving to our near-term outlook and priorities for the year ahead. While we are mindful of the complex macroeconomic and geopolitical environment, we see demand for Applied products remaining robust with some changes within the mix. In 2024, we expect demand from our leading edge foundry logic customers to be stronger year-on-year, underpinned by higher PC, cloud, and AI data center spending as well as the initial build-out of Gate-All-Around nodes.

We see demand for our ICAPS business being lower, mainly due to softness in the industrial automation and automotive end-markets. In DRAM, both pricing and utilization are improving for our customers and we see demand for Applied's products remaining strong. And we believe NAND spending will be up year-on-year, but still far below 2022 and less than 10% of wafer fab equipment spending overall. We expect NAND to remain a lower percentage of the wafer fab equipment mix moving forward.

In terms of the global trade environment, the October 2023 export control rule changes in the U.S. were primarily focused on alignment with other countries. The rules are complex and while we are working with the government to clarify certain details, we see no incremental material impact to Applied at this time. As I look ahead, I strongly believe that Applied Materials has the right capabilities, strategy and partnerships.

In fiscal 2024, our major focus areas include driving R&D programs to further differentiate our portfolio and extend our leadership at the key inflections that enable future industry growth, continuing to make operational and supply chain improvements to better serve customers, capture economies of scale and drive productivity across the enterprise, and ensuring that as we scale the company, we continue to reduce our environmental impact in-line with Applied's collaborative Net Zero playbook as announced earlier this year.

Before I hand over to Brice, let me summarize. In fiscal 2023, Applied grew our semiconductor equipment and service businesses even though our markets were down year-on-year. For calendar 2023, we were on track to outperform the wafer fab equipment market for the fifth year in a row. We believe this outperformance is sustainable, thanks to our strong positions at all the key industry inflections, the strength of our customer collaborations and growing demand for our advanced services.

And we remain positive about our long-term growth opportunities, where we expect semiconductors to grow faster than GDP, wafer fab equipment to grow as fast or faster than semiconductors, Applied to outperform the wafer fab equipment market and our Service business to grow as fast or faster than equipment sales.

Now, I'll hand over to Brice.

Brice Hill

Thank you, Gary, I'd like to start by thanking our teams for delivering record results this year and for making sustainable operational improvements in our inventory management, manufacturing linearity and on-time delivery performance. On today's call, I'll summarize our results for the fiscal year and Q4 as well as provide our guidance for Q1.

Before going into the results, I'll share my perspective on our unique business model and how it creates attractive returns for our long-term shareholders. Applied creates value by directing nearly $3 billion of annualized R&D into one of the most important markets of the world, semiconductors. Because we have the broadest and deepest equipment portfolio and expertise, we are invited to work closely with our customers as a trusted partner to identify and holistically solve their most valuable technical challenges.

Our R&D spending helps customers modify materials at atomic levels and on an industrial scale to deliver better semiconductors and end products for strategic growth markets like artificial intelligence. Our relationships with our customers provide us with insights in the end-market and technology roadmap trends and allow us to focus our spending on projects that have a high probability of commercial adoption and strong financial returns.

As a result of the R&D invested in our customer success, we now have line of sight to market share leadership and growth across the key semiconductor manufacturing inflections, including Gate-All-Around, Backside Power, heterogeneous integration, high-bandwidth memory and 3D DRAM.

The strategies we use to help solve challenges in leading-edge logic and memory are also being deployed in the ICAPS markets where our growth in 2023, more than offset weakness in NAND and leading edge logic. ICAPS is also a strategic growth market fueled by powerful trends like edge computing and renewable energy.

Applied's focused and effective R&D investments have led to fantastic results for our shareholders. Over the past 10 years, we've grown revenue at a compound rate of over 13%, non-GAAP EPS at nearly 30% and free cash flow at 33%. We've increased our quarterly dividend per share at a compound rate of more than 12% over this period, and earlier this year, we announced our belief that our free cash flow can support doubling our previous dividend per share over the next several years.

Looking ahead to the next 10 years, we expect semiconductors to grow faster than GDP. We expect the equipment market to grow as fast or faster than semiconductors due to increasing technical complexity. We expect Applied's equipment business to outgrow the market due to our strong portfolio of products and solutions that are squarely targeted at the highest value inflections. And we expect our Services business to grow as fast or faster than our equipment business as we help our customers generate increasing value from the industry's largest installed base of more than 48,000 tools.

Next, I'll summarize our fiscal year results. On a year-over-year basis, revenue increased nearly 3% to a record $26.5 billion. Non-GAAP gross margin increased 20 basis points to 46.8% as our value based pricing and cost improvement actions more than offset the impact of inflation. Non-GAAP OpEx increased 13% to $4.69 billion, with the majority of the increase in R&D. Non-GAAP operating profit declined 2% to $7.72 billion and non-GAAP operating margin decreased 140 basis points to 29.1%.

Non-GAAP EPS increased 4.5% to $8.05 per share. We generated record operating cash flow of $8.7 billion, and record free cash flow of $7.6 billion. Shareholder distributions were approximately $3.16 billion. We paid $975 million in cash dividends and used approximately $2.2 billion to repurchase 18 million shares at an average price below $123 per share. We remain committed to returning 80% to 100% of free cash flow to shareholders over time and returned 87% over the past three years.

Now I'll summarize our Q4 results. On a year-over-year basis, net sales of $6.72 billion were slightly lower. Non-GAAP EPS rose 4% to a record $2.12. Non-GAAP gross margin increased 130 basis points to 47.3%, and non-GAAP OpEx grew 8.8% to $1.19 billion with around two-thirds of the increase in R&D.

Turning to the segments. Semi systems revenue declined 3% year-over-year to $4.88 billion and segment non-GAAP operating margin was flat at 36.9%. For the full year, semi systems grew revenue by 5% and outperformed the market, delivering record net sales overall and in foundry logic as well as in implant, packaging, Metals Deposition and CVD.

Applied Global Services revenue grew 4% year-over-year in Q4 to a record $1.47 billion and segment non-GAAP operating margin grew 100 basis points to 29.3%. For the full year, AGS revenue increased 3%, demonstrating how the underlying growth drivers of the business, more than compensated for the trade restrictions enacted in October of 2022, along with fab utilization rates that declined over the past year.

AGS growth is a function of three things. The number of tools in the installed base, the increase in service intensity as process complexity increases, and the number of subscription agreements which increased revenue per tool. In 2023, we increased the installed base by 5%. And we increased the percentage of tools under service agreement by 3 percentage points to 16,600. An important catalyst for AGS is that we are adding entirely new kinds of subscription agreements including sensor and AI-based solutions in areas like tool matching for fab ramp acceleration.

In Q4, we signed a unique environmental services agreement under which a large number of process tools and sub fab resources are connected to Applied eco-efficiency hardware and software products, all delivered as a service that helps our customers reduce electricity consumption and carbon emissions. In addition, we recently signed our largest global comprehensive service agreement ever. Finally, AGS continues to produce more than enough operating profit to pay the company's dividend.

Moving now to Display. Q4 revenue increased to $298 million and segment non-GAAP operating margin increased to 22.5%. We continue to expect the Display cycle and Applied's Display business to improve modestly in 2024, and we look forward to our opportunity to drive OLED technology into the laptop and tablet markets in 2025.

Turning to cash flows in Q4. We generated nearly $1.6 billion in operating cash flow and nearly $1.25 billion in free cash flow. We distributed nearly $968 million to shareholders including $268 million in dividends and $700 million in buybacks. We repurchased 5 million shares at an average price of $138.54.

Next, I'll discuss our business in China. As Gary indicated, we do not expect an incremental material impact from the recently updated trade rules. Our business in China grew as expected in Q4, largely due to an increase in trailing edge DRAM shipments that contributed close to $500 million in revenue. In Q4, our overall revenue in China was 44% of company sales.

For the full year, revenue in China was 27% of sales with Semi systems sales in China composing 20% and AGS and Display sales in China the remaining 7%. We believe equipment demand in China is likely to remain healthy for an extended period because China's domestic manufacturing capacity remains significantly below its share of worldwide semiconductor demand. In addition, while nameplate fab capacity is growing in China, effective capacity is likely to remain below industry averages for some time until product and process yields gradually improve.

Now, I'll share our guidance for Q1. We expect our revenue to be $6.47 billion, plus or minus $400 million and we expect non-GAAP EPS of $1.90, plus or minus $0.18. Within this outlook, we expect Semi systems revenue to be $4.7 billion with ongoing strength in trailing edge DRAM. We expect AGS revenue to be $1.46 billion and Display revenue should be around $235 million. We expect non-GAAP gross margin to be approximately 47% and non-GAAP operating expenses to be around $1.23 billion. We are modeling a tax rate of 13%.

Thank you. And now, Mike, let's begin the Q&A.

Michael Sullivan

Thanks, Brice. Our goal is to help as many of our analysts as possible. With that in mind, please ask just one question on today's call. If you have another question, please requeue, and we'll do our best to come back to you later in the session.

Operator, let's please begin.

Question-and-Answer Session

Operator

[Operator Instructions] Our first question comes from the line of Stacy Rasgon from Bernstein Research. Your question please.

Stacy Rasgon

Hi, guys. Thanks for taking my question. I'm sure you saw the news report that came out pretty much coincident with your earnings release from Reuters that talked about a potential investigation into your

China shipments to SNEC. It also mentioned though, that you've already disclosed on October -- in October '22, a potential subpoena. I was just wondering, can you tell us like what is going on here? What did you actually disclose around potential legal issues related to your shipments in China around the export controls at this point? And I mean, I don't know whether you can comment on this report or not, but any comment you might have on the news article, would be helpful. I don't think you had much time to put it in the script.

Brice Hill

Stacy, hi. It's Brice. Thanks for the question. We did disclose last year in our K that we've received a subpoena from the U.S. Attorney's Office, and they requesting information related to certain shipments to China. Well, we would say is, we're fully cooperating with the government on this matter. And of course, we're -- we remain committed to complying to all of the trade rules. And as you can imagine, because this is an ongoing legal matter, we can't add to any of the comments that are out there at this point but it's been a regular disclosure for us.

Stacy Rasgon

So there's nothing new though. This is all related to whatever was already going on?

Brice Hill

Yeah. I just can't add any comments to this. But yes, we did disclose this last October, I believe.

Stacy Rasgon

Got it. Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Vivek Arya from Bank of America. Your question please.

Vivek Arya

Well, thanks for taking my question. You mentioned that you expect China demand to stay healthy. And I'm trying to understand what that means because you did have these incremental DRAM shipments. So, I guess the first specific question is, what are you assuming for those DRAM shipments in your January quarter outlook? And should we understand from your China strength comment that your China sales conceptually could stay at least flattish next year or could they even grow? Just high level, what does, stay strong mean to you as it comes to the sales impact in fiscal '24?

Brice Hill

Hi, Vivek. Yeah. So for Q1, in particular, as you highlighted, we did see elevated shipments to China. In Q4, it was 44% of our sales mix. In Q1, we expect it to be elevated again. We'll continue to ship DRAM products at a high level in Q1 and when we think about the mix for China for the rest of '24, we're not ready to give a guide yet, but most of this business is ICAPS business and it's been very strong growth for '22 and '23 for us. For '24, we expect it to be a strong -- still strong. It may not be as strong as it was in '23, but China is the largest component to that. So again, we're not ready to guide that, but our Q1 guide, you will still see an elevated mix for China.

Gary Dickerson

Hi, Vivek. This is Gary. Just also what Brice said on the prepared remarks was for the full year China was 27% and actually it's down a little bit. But really pretty much same zip code as it was in the previous year. And as we go through the year, we would think it gets more back to the historical averages.

Vivek Arya

Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Chris Caso from Wolfe Research. Your question please.

Chris Caso

Yeah. Thank you. Just another question on the ICAPS. Just unpacking some of what you said. So perhaps you could talk to the non-China part of the ICAPS business. It sounds like that's where you're seeing a little bit of incremental weakness, again in line with some of your customers. And then, as -- I guess along with that with what you just said is trying to coming back to the historic averages. Is that a function of, just other business growing as opposed to China going down?

Brice Hill

Okay. Thanks, Chris. On the second part, I think the reason China comes back to its normal average is around 30%. It's just because the elevated DRAM shipments will normalize after Q1. So we had high DRAM in Q4. We expect that in Q1 and that should slow down and after that it will be, mostly ICAPS business again. And then, thinking of ICAPS In general, what I would say again is, we had significant growth in '22, significant even higher growth in '23. So when we think long-term, we're expecting mid to high-single digits of growth for ICAPS across several years.

And to your point, looking right now this year, Q1 is actually a strong guide for ICAPS, but we do see lower utilization. We have seen some push-outs from different customers as they re-time some of their fab projects. And we did see the lower utilization in Q4. So we do think that Q -- our '24 will be a strong year for ICAPS but may not be as strong as '23, but again it's, it's much higher than it was in '22 because of the growth cycle that has gone through.

Chris Caso

Got it. Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Toshiya Hari from Goldman Sachs. Your question please.

Toshiya Hari

Hi. Good afternoon and thank you so much. Gary, I had a question on '24 WFE, you gave really good color by application in your prepared remarks, leading-edge foundry and logic and NAND up. DRAM, it sounded like you're thinking flattish and ICAPS maybe down a little bit. Curious if you can, perhaps quantify how you're thinking about these different applications and perhaps for the overall WFE market into next year. And more importantly, you highlighted how you guys have outperformed the market for five consecutive years. Is it fair to assume that '24 could be the sixth consecutive year given what you see in your backlog today? Thank you.

Gary Dickerson

Hi, Toshiya. Yeah. I would say that relative to Applied's performance, I'm very optimistic. In leading foundry logic, we're really well-positioned for the major inflections that our customers were ramping Gate-All-Around and Backside Power Delivery. Gate-All-Around, we'll see some revenue in '24, but that's going to be ramping more significantly in the future years. And Backside Power, we'll see some revenue also in '24, but also a significant ramp in the coming years.

And each one of those inflections is a billion dollar incremental opportunity for Applied and we can capture more. We're on track to capture more than 50% of the overall spend for those major inflections. So really good position in foundry logic for Applied overall, as we said in the prepared remarks. We think that business will be healthy in '24.

DRAM is another case where we're really well positioned for the major inflections. We've gained 10 points of overall DRAM share in the last ten years. And again, going forward, we feel like we're well positioned. We have design wins for those future inflections in DRAM, and we see opportunities to continue to drive share there.

In packaging, that business is a billion dollars for us today and we're in very good position for all of the different architecture inflections in packaging. And there again, we have an opportunity to gain over 50% share in packaging inflections as that goes forward. So all of those areas that we talked about, the leading edge foundry logic, DRAM, packaging, all of those areas are very strong for us. And as we said, ICAPS will be weaker in '24, but those opportunities, those markets will offset some of the weakness in ICAPS.

And Brice, I don't know if you want to add anything on the overall market.

Brice Hill

No. I think. I think that's good. We just -- it's better for us to give you insights into each of the end markets and tell you what we see and that's the best way we can communicate what we see going forward.

Toshiya Hari

Very helpful. Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Krish Shankar from TD Cowen. Your question please.

Steven Chin

Hi. Thanks for taking my question. This is Steven calling on behalf of Krish. I guess a question I have is on gross margins. Just given the comments about normalization of China revenues in the coming quarters and also sort of the ICAPS dynamics, what are sort of the slightly longer term or medium term implications to gross margins if the mix of China goes down? Thank you.

Brice Hill

Hi, Krish -- sorry. Hi. Thanks for the question. Yeah. Thank you. So for gross margins, first, I would say to investors, we're still committed to what we had modeled, although we delayed it for a year. So we're modeling 48% to 48.5%. That's what we're committed as an interim goal to raising our margins.

As you highlighted, in Q4, we had 47.3%. It was buoyed by the 44% mix of China. If you strip that away, it's probably 100 basis points worth of uplift. Last quarter we highlighted that our underlying gross margin today, if not benefited or impacted by something specific in the market, is probably 46.6% or 46.7%.

And we do expect to make gradual improvements toward that goal in 2025 as we move forward. That'll be primarily, continued progress in value pricing as we work to offset high inflation impacts across all of our expenses and then cost reductions.

Steven Chin

Great. Thank you so much.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Harlan Sur from J. P. Morgan. Your question please.

Harlan Sur

Good afternoon. Thanks for taking my question. The team services business continues to drive strong year-over-year trends. Great to see the subscription attached continuing to rise. Utilizations are still depressed across your customer base, but have they stabilized, especially across advanced foundry logic and memory?

And then just as a quick one, operating margin in AGS are still about 200 basis points below the 30%. 31% that you drove for six consecutive quarters through fiscal Q3 of last year. Are inflationary pressures still the biggest factor or is it mix related as your 200-millimeter ICAP shipments continue to remain strong and any line of sight on getting back into that sort of low 30% range on AGS.

Brice Hill

Okay, Harlan, thanks for the question. First question on stabilized utilization rates. I think in general, I would say no, because we did see lower utilization rates in ICAPS, as I just highlighted in Q4. And so there is some digestion there in ICAPS, at this point. Otherwise, as I look across the rest of, the segments, if you think about the memory components and you think about leading logic, I would say that's been fairly stable.

On the operating margin side for AGS, and I -- thanks for highlighting the business because, we did grow this year despite the setback at removing some of the China tools from our ability to service going forward. That's really what set us back from a margin perspective and shrank the business in the year and remove some of the, smaller customer, better margin products that we had.

But going forward, we will be improving margins in that business and we're committed to that low double-digit growth rate for our services business. And again, just the components of that will be a growing installed base, a more intense, tool need for services and spares and information services, and then the ability to have the win-win with subscription agreements with our customers for those services.

Harlan Sur

Great color. Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Srini Pajjuri from Raymond James. Your question please.

Srini Pajjuri

Thank you. My question is on ICAPS as well. Gary, I think in the past you talked about ICAPs being about half of your business, and given the slowdown, you're expecting a couple of things, I guess you talked about China slowing down a bit in the short term. How do you see the non-China ICAPS business over the next 12 months? And where do you see ICAPS versus the other business mix, I guess, exiting, let's say fiscal '24. Thank you.

Gary Dickerson

Hi, Srini. Thanks for the question. So ICAPS is half of the total foundry logic business. So historically that's -- it's been in that zip code. So foundry logic is about a third, ICAPS is about a third, memory is about a third, with the compute memory DRAM being stronger than storage memory NAND. So that's the mix.

And I would expect that that mix will continue going forward. I mean, in any point in time, you could have some small changes in the mix, but we see foundry logic still remaining very strong going forward with that, about two-thirds of our overall business split between the leading edge and ICAPs.

If you think about the big inflections, there's AI for high performance computing, but there's a lot of growth in edge computing across many different industries. So when we look at the markets, we think that mix is going to be pretty much similar to what we've talked about before, one-third foundry logic leading, one-third ICAPS, one-third memory. And then did you have another question or Brice, did you want to add anything?

Brice Hill

Yeah. I'll just add on, just, Srini, just a reminder for investors here. Our longer term view is mid to high single digits for ICAPS as well as the whole semi component, but mid to high single digits. And we do expect that to be consistent for China. We do expect that to be consistent for non-China. And we saw -- as we communicated in our prior quarter, we did see several geographies growing faster than China. So this is definitely a global market, not just a China market. And China isn't even, half of the market, as we communicated.

And then as far as the slowness goes, or, any lighter year, what I would say is our guide in Q1 includes an ICAPS that's very strong and continues to be very strong. So the way we're thinking about it is '22 was very strong, '23 was even stronger. We may take a breath here with lower utilization, but we expect this market to continue to grow.

Srini Pajjuri

Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Timothy Arcuri from UBS. Your question please.

Timothy Arcuri

Thanks a lot. I know you guys have been pretty reticent to provide a 2023, WFE number. Everyone else's, first they said 75. Well, first they said 70, then they said 75 and now they're saying 80. But it really can't be 80 because if you add up all five suppliers, it's more like flat year-over-year. So can you give a sense of what you think WFE will be this year?

I mean, I do agree, even if it's $90 billion, you're going to still gain share this year. But -- so I guess the first part of the question is, what is the baseline this year for 2020 -- for, WFE? And then I want to find out what's the message on 2024? I hear the message about mix changing, but are you committing to WFE being up next year or you're not willing to make that commitment yet? Thanks.

Brice Hill

Hi, Tim. Thanks for the question. So for '23, we've heard all of those numbers also, and we just feel it's best for us to report what we see from our seat. And for us, '23 was a growth year. We highlighted as we went through the last few quarters how strong DRAM and ICAPS were and how, having exposure to those two markets and a leadership position in those markets helped us offset weakness that were in some of the other markets, NAND and leading logic primarily. So definitely everybody can do the math. They can see what our numbers will be with the guide. And that should help with your calculation of what the overall market would be.

And then for '24, we're not calling the total. Again, we're trying to characterize what we're seeing in each market. We do think DRAM will continue to be strong. We think NAND will come up off of a, low position. We think leading logic will grow through the year, especially as Gate-All-Around begins to ship. And we think ICAPS, it's strong in Q1 still, but ICAPS may take a breath with lower utilization. So we'll have to see how that plays out. And then packaging was strong in '23 and we expect that to continue.

Timothy Arcuri

Okay. Great, Brice. Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Joe Quatrochi from Wells Fargo. Your question please.

Joe Quatrochi

Yeah, thanks for taking the question. I was wondering if you could help us understand just relative to that long term mid high single-digit growth for ICAPS. What did it grow in fiscal '23? And then as we look into '24, how do you think about just leading edge recovery of spending, offsetting the declines in ICAPS?

Brice Hill

What was the second part? Joe, can you repeat the second part?

Joe Quatrochi

Yeah. Just the recovery of leading edge foundry logic offsetting the weakness in ICAPS.

Brice Hill

Okay. So on the first -- on the first part. I think we're still hearing different estimates of what semiconductors might be in 2023 from a growth perspective. What we've been saying from an equipment perspective is the growth was very high. So we described that in '22 at 40% plus and we've said it was faster in '23 from an equipment perspective. So, the actual semiconductor is obviously not growing that fast. But the equipment market, in preparing for the growth going forward, that's the approximate rate that we see.

And then on the leading logic side, and offsetting ICAPS, again, our Q1 guidance, actually ICAPS is very strong, continues to be strong in our Q1 from a sales perspective. We do see lower utilization. We have

seen some pushouts. So we're expecting that it won't be as strong a year as it was in '23, although still very strong. And where we'll see some offset is growing; leading logic, because leading logic has been lower, the past few quarters and we expect that to pick up through the year as new node investments, especially with Gate-All-Around start to ship in earnest.

Gary Dickerson

Yeah. The other thing I would add is that, as I said earlier, we're really well-positioned for the major inflections. If you look at foundry logic, Gate-All-Around, spending starts to ramp in '24. We've been gaining share in DRAM and we're well positioned for those inflections. And as Brice said, packaging was strong in '23. We believe it'll still be strong in '24, and we're positioned to capture more than 50% of the spend in all of those different packaging architectures as they ramp in '24. So again, all of those areas will continue to be strong for Applied in '24 and beyond.

Joe Quatrochi

Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Joseph Moore from Morgan Stanley. Your question please.

Joseph Moore

Great. Thank you. You've talked about seeing some of these trends in ICAPS that have you thinking that there might be some deceleration. And you talked about China being good in DRAM and DRAM coming down. The China portion of ICAPS, should we be thinking about the utilization of those foundries? To the extent that we've seen that, it was already low and they were spending a lot, the utilization is coming down, they still seem to be spending a lot. Do you see that as a lead indicator for your part of the business?

Brice Hill

Hi, Joe. Thanks for the question. I think utilization in China and utilization for ICAPS in general did come down a little bit this cycle. That's definitely visible from a global perspective. When we think about what's happening in China, we have a broad customer base that are, serving all of the different end markets. And so our perspective is -- our perspective is, they are probably -- they are working on ramping their yields and coming up to, mature product yields over time.

So I think this is partly, just a statement of where they are in the maturity curve of each of these product -- or projects. When we think about the market as a total, it's a long list of customers, it's a number of fab projects, that are being installed across the country. We think about the total capacity that's being put in place and the goal of being self-sufficient from a chip production perspective, and they're a long way from that, but we think we're -- they're committed to that as a whole. They have incentives in place to do it. So we view that market will be, a stable part of our portfolio going forward.

Gary Dickerson

Yeah, Joe. This is Gary. Also, as Brice said, if you look at the efficiency of the spending, it's going to be less, especially with those new customers for many years. So the wafer starts versus the output, the yields are going to be much less from a device standpoint. So again, that's going to impact the overall output. And we think, again, the gap there with their domestic demand will keep that market healthy for a number of years.

Brice Hill

Yeah, Joe. And just to finish my thoughts, sorry, I missed one point. We do think the lower utilization, and we've seen some push outs in the ICAPS business. This is a global statement. We do think that that's a signal that it'll be slightly less, than the roaring growth we've seen the last two years. And that's why we're saying it'll be a strong year. It just won't be as strong as what we saw in '22 and '23.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Sidney Ho from Deutsche Bank. Your question please.

Sidney Ho

Great. Thank you. I want to double click on the comments on the DRAM business. If I just look at your Semi systems revenue for DRAM this year, it's tracking to grow 10% to 20% and even exceed the last peak year in '21. But the market is still down quite a bit. The question I have is, how much of this outperformance comes from the market being maybe a lot better than we thought, versus maybe share gains that you may have?

Are you seeing anything structural that drives the capital intensity of that DRAM business to be higher? And my last part of it is, is just to clarify, you talked about expecting demand for your DRAM products to remain strong, which I assume means roughly flat in '24. Is that also true for the DRAM market in terms of WFE spend? Thanks.

Brice Hill

Yeah. Thanks for the question, Sidney. So, we do think the DRAM business was strong this year, partially strong because of some of the shipments to China customers, where the process they're running was recently clarified to be within the rules, within the allowed trade rules. So that's a partial explanation. But I think we -- when we think of that market, we think that it actually looks like a normal year even without those China shipments that the DRAM market was fairly strong from an equipment perspective. And that matches, recent years where a lot of the spending is technology upgrades, not necessarily new capacity. And we expect that to continue over time.

Gary Dickerson

Yeah, Sidney. Just talking with customers, certainly the forecast from them for compute memory is stronger than storage memory. And if you look just at one example on an AI server, the DRAM content there is much higher than an industry standard server. So again, just, I've spent a lot of time on the road this last three months, and they -- customers are pretty optimistic about DRAM longer term and compute memory demand.

Sidney Ho

Thank you.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Brian Chin from Stifel. Your question please.

Brian Chin

Hi, there. Good afternoon. Thanks for letting us ask a question. One of your peers recently stated that AI could account for 6 billion of WFE next year. I think more than double the contribution of this year. I know it's difficult to benchmark against these figures, but can you provide a reference point on how you see AI augmenting WFE spending this year, next year, or even beyond, and just kind of maybe a two-parter, but just a clarification, but advanced foundry logic spending, it's coolly dipped in calendar second half. But tying in your earlier comments, it sounds like you expect foundry logic to improve off these lower levels in calendar first half of next year. Is that correct?

Brice Hill

Okay. Thanks, Brian. On the first part for AI, last cycle, we provided some data points that I think are the relevant data points. We believe about 5% of our WFE is supporting AI workloads. That's not just Gen AI, but all AI workloads. And we did highlight that we expect that to grow at -- probably at 30% or higher CAGR going forward. And I think that's fair. So, whatever WFE number you're using, I think if you use 5% and use your 30% growth rate, that's what we think in our equations. And that would be true for leading logic and that would be true for, HBM on the DRAM side.

And then on the second question, it's really the advanced logic, we're expecting to accelerate in the second half of '24. In our first half guidance -- sorry, in our first quarter guidance, it'll really be another quarter of strong ICAPS and strong DRAM. No -- not -- it'll be similar in strength from a leading logic and NAND to prior quarters. So you still have that dynamic in Q1. So it'll really be second half that we see improving leading logic.

Brian Chin

Thanks. Appreciate it. Thank you.

Brice Hill

Yeah.

Operator

Thank you. One moment for our next question. And our next question comes from the line of Charles Shi from Needham & Company. Your question please.

Charles Shi

Hey, good afternoon. Hi, thanks. I think you mentioned in your prepared remarks you expect the WFE to grow as fast or faster than semiconductors, which kind of implies you are thinking WFE intensity, which probably is already at the roughly 20-year high this year to go -- there may be upside to go higher. So really just want to understand your thinking behind, where could the upside be? For example, I think your largest customer in Taiwan is expecting their capital intensity from the current 40% something level to go to what they think is normalized level in the 30s. How do I reconcile your statement versus their statement? Thanks.

Brice Hill

Okay. Thanks, Charles. It's hard to -- we probably won't compare with anybody else's comments, but from our perspective, it has been growing. One of the reasons it's been growing is because ICAPS, that particular business, the mature product technologies, as we've described before, there used to be available, used facilities and available used equipment, and it's really no longer the case.

The industry is growing, and without that, just new investments have to be made in wafer starts and capacity, and that's raised the overall intensity level. When we think to the other types of equipment

processes, DRAM, NAND, and leading logic, we expect those to be more intensive with more steps from an equipment perspective, requiring new capabilities and new technologies. And that's actually what our R&D is engaged in. So it's, more than intuition that we expect that intensity to go up over time.

Charles Shi

Thanks, Brice.

Operator

Thank you. One moment for our next question.

Michael Sullivan

Yeah. And operator, we have time for two more. Thank you.

Operator

Certainly. Our next question is a follow-up question from the line of Stacy Rasgon from Bernstein Research. Your question please.

Stacy Rasgon

Hi, guys. Thanks for letting me slip one more in here. I wanted to explore just a little more the tradeoff between the leading edge and the ICAPS next year. So, I know you said ICAPS is down, foundry logic or leading edge foundry logic, so I am thinking, you said it would sort of offset some of it. Are you thinking that the overall foundry logic, at least for a WFE standpoint, is up, down, or flat in '24 versus the '23 levels, given those dynamics?

Brice Hill

Hi, Stacy. It's Brice. Yeah, we didn't make a call on that. You kind of heard probably the components. I know probably everybody wants us to make a call, but what we're saying is, we have a very strong Q1 still in ICAPS. The dynamics in Q1, assuming things play out as we're forecasting, will be similar to Q4. You'll have a strong DRAM market. You'll have a strong ICAPS market. But we know that there have been some pushouts and there is lower utilization in ICAPS. So we're expecting that market to not be the same, as strong as it was in '23.

When we flip and look at leading logic, leading logic is weak in Q4 and it's weak in Q1 also that same dynamic. And we know that new technologies will be ramping, including Gate-All-Around. So we're expecting that to, help throughout the year. Whether that's bigger or smaller than, whatever happens with ICAPS, we can't tell yet, but we'll just have to let that play out.

Stacy Rasgon

It sounds like neither one is dominating over the other, though. Is that a fair way to characterize?

Brice Hill

Yeah. I don't think you can make -- yeah, it's not easy to make a call at this point.

Stacy Rasgon

Got it. Thank you.

Brice Hill

Thank you.

Operator

Thank you. Then our final question, one moment for our final question. And for our final question, we have the line of Jed Dorsheimer from William Blair. Your question please.

Jed Dorsheimer

Hi, thanks, and thanks for letting me squeeze one in here. I just -- quick two parts. I just want to confirm the pushouts that you started to see in ICAPS. Do you -- is -- can you comment on the end market? Was that auto related? And then second, the investigation. I know you don't want to get into any detail or can't there, but it seems like that's also in the ICAPS. Can you confirm those two? Thanks.

Brice Hill

Yeah. On the second, Jed -- thanks for the questions. On the second, I just can't add any commentary to, what we previously discussed with respect to the legal matter. On the first one, there's definitely mixed inventory situations and mixed reports on all the different ICAPS markets. Actually, where we would point is probably being the slowest at this point is industrial. What -- just to add a comment for you. On the auto side, I would say that it may be slower from a unit perspective, but because of the density of, chips in EVs and even newer cars, we're not expecting much weakness in the auto market. So I guess that's the way I would think of that.

Jed Dorsheimer

Great. That's helpful. Thank you.

Brice Hill

Thank you.

Michael Sullivan

Okay. Thanks, Jed, for your question. And Brice, with that, would you like to give us your closing thoughts?

Brice Hill

Thanks, Mike. From a year end and closing perspective, I really like the sustainable operational progress our teams have made. Our Semi systems business grew in a down year and our services business also had a record year, proving its resilience, just like it did in 2019. The R&D investments we've been making in collaboration with our customers put us in a great position for the next wave of inflection spending.

We now have a line of sight to market share of over 50% across Gate-All-Around, Backside Power, and Advanced Packaging. At the same time, we're increasing gross margins and generating strong free cash flow, and this sets us up for increasing shareholder distributions. I hope I get to see many of you at the Wells Fargo Conference in Southern California. In the meantime, for those of you in the US, we hope you enjoy a safe and Happy Thanksgiving. Now, Mike, thank you. And let's close the call.

Michael Sullivan

All right. Great. Thanks, Brice. And we would like to thank everybody for joining us today. A replay of today's call is going to be available on the IR page of our website by 5 o'clock Pacific Time. 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.