

【Samsung Electronics Q2 Earnings Call】

[OPERATOR]

Welcome to the Samsung Electronics 2024 Second Quarter Financial Results Conference Call. I'll be your coordinator.

All participants will be in a listen-only mode until we open the question-and-answer session following the presentation. As a reminder, this call is being recorded.

I would now like to turn the conference over to the Investor Relations team. Please go ahead.

Good morning, everyone. Thank you for joining us this morning. I am Daniel Oh, Head of Investor Relations at Samsung Electronics. I am pleased to have you all on today's call.

I want to begin this call by introducing the following executives from our different business segments joining today's call.

Starting with EVP Jaejune Kim, representing Memory;

VP Tommy Kwon, for System LSI;

VP Taejoong Song, for Foundry;

EVP Charles Hur, for Samsung Display Corp;

VP Daniel Araujo (다니엘 아라우호), for Mobile eXperience business;

and last but not least, VP KL Roh, for Visual Display

The presentation deck and other materials, which are intended to supplement our prepared remarks for today's call, can be found on the Samsung Electronics' Investor Relations website at www.samsung.com/global/IR.

Please note that a webcast of this call will be archived on our website.

The following is our legal disclaimer for today's call. I want to remind you that some of the statements we'll be making during today's call are forward-looking, based on environment we currently see. They are subject to certain risk and uncertainties that may cause our actual outcomes to differ materially from those expressed in today's discussion. The information we are giving you on this call this morning is as of today's date, and we undertake no obligation to update the information subsequently.

Now, I will start with a review of our consolidated financial performance for the second quarter of 2024.

Total revenue reached KRW74.1 trillion, a 3% increase from the previous quarter. The DS division experienced 23% revenue growth, thanks to recovery of the Memory business, while Display's revenue increased by 42% on the back of robust OLED sales. However, the MX division's revenue decreased by 19% because of a weak seasonal demand for smartphones.

Gross profit was KRW29.8 trillion, up KRW3.7 trillion compared to last quarter. This was mainly due to strong demand for DDR5, HBM, and other high-value-added Memory products. The strong showing by our component businesses, including Memory, also contributed to our enhanced profitability. As a result, the gross profit margin expanded by 4 percentage points to reach 40.2%.

Our SG&A expenses slightly improved from previous quarter, reaching KRW19.3 trillion attributed mainly to efficient advertising and promotion expenditure management. Despite reaching a new high in R&D expenses aimed at driving future growth, SG&A expenses as a percentage of sales decreased by 0.9 percentage points to 26.1%, reflecting the overall increase in revenue.

Next, our operating profit surged by KRW3.8 trillion, sequentially to KRW10.4 trillion, essentially fueled by a higher average selling price, resulting from more favorable Memory market conditions and robust demand from key OLED clients. We achieved this growth despite persistent cost pressures from rising component prices in our finished product businesses. As a result, our operating profit margin expanded by 4.9 percentage points sequentially to 14.1%.

With respect to foreign exchange impacts, the strengthening U.S. dollar positively impacted our consolidated operating profit by approximately KRW0.8 trillion during the quarter.

Now, moving on to capital expenditures.

Capex in the second quarter increased by KRW0.8 trillion sequentially to KRW12.1 trillion, of which KRW9.9 trillion was invested in the DS division and KRW1.8 trillion was invested in Display.

For Memory, we continued our proactive investments to meet the demand for high value-added products such as HBM and DDR5, along with ongoing investment in R&D and back-end to enhance future competitiveness.

For Foundry, although we remained committed to investing in R&D to strengthen our technology competitiveness, the second quarter Capex decreased compared to the previous quarter due to adjustments to facilities and infrastructure investments based on market conditions.

In Display, our investments were focused on IT OLED fabs with additional investment aimed at mobile panel production lines to maintain our technology advantage.

Now, I will discuss the second quarter dividend.

The Board of Directors just approved a quarterly dividend of KRW361 per share for both common and preferred stocks. According to our current dividend policy, the total amount distributed per quarter amounts to approximately KRW2.45 trillion, which will be paid near the end of August.

Now, let me turn to our sustainability management.

Last month, we published our 2024 Sustainability Report, which provides detailed insights into our sustainability efforts. Here are some key achievements from last year.

From an environmental perspective, as of the end of 2023, the DX division has achieved a renewable energy conversion rate of 93.4%, including a complete transition for major manufacturing facilities worldwide. This aligns with our objective of reaching net zero for Scope 1 and 2 emissions by 2030. The DS division recorded an 11.6% decrease in greenhouse gas emission in 2023 compared to the previous year. In pursuit of our long-term goal of net zero for Scope 1 and 2 emissions by 2050, we increased the installation of regenerative catalytic systems to handle process gases and we also expanded the utilization of waste heat recovery system to minimize the usage of liquefied natural gas.

In terms of a social responsibility, during the quarter Samsung Electronics introduced our Global Grievance Resolution Policy to protect human rights and to enhance working conditions. Additionally, recognizing the value of diversity in our workforce, we aim to significantly increase the proportion of our female executives by 2030, targeting a minimum twofold increase from the 2022 figure of 6.9%. Moreover, to boost our supply chain management, we conducted external audits on the work environments of second tier suppliers in Asia during 2023.

Regarding our products, we persistently broaden the application of recycled materials in our newest products. This is exemplified by the incorporation of nine recycled materials in the Samsung Galaxy Z Fold 6 and Z Flip 6 series, reflecting a substantial increase from the four materials utilized in the preceding series. Furthermore, we have enriched the variety of our recycled

material portfolio by incorporating gold and copper alongside pre-existing constituents.

As a responsible corporate citizen, we are committed to expanding our sustainability management in all areas of our operations.

Let's now move forward and invite the executives from each business segments to present more detailed information regarding the second quarter performance and second half of the outlook of each business. To begin with, we have EVP, Jaejune Kim from the Memory Business.

Good morning. This is Jaejune Kim from Memory Global Sales and Marketing. The Memory market in the second quarter continued to recover due to strong generative AI server demands. Furthermore, robust demand for not only HBM but also conventional DRAM and SSD for server drove the market recovery with contributions also coming from the expansion of AI investments by cloud service providers and rising demand for AI in the enterprise on-premise server market.

Meanwhile, our demand for PC was relatively weak due to sluggish sell-out. However, demand for mobile remained solid, thanks to increased overseas exports by Chinese OEM customers and some demand for inventory build-ups occurred in the -- in line with the prospect of price increases. While demand focusing on server application continued to show a favorable trend, our Q2 results improved significantly compared to the previous quarter, thanks to our active response to demand for high-value-added products for generative AI and to improved market prices overall.

By product category, compared to the previous quarter, HBM sales increased by mid-50% and server DDR5 sales recorded a mid-80% increases, thanks to increased shipment and ASPs. As for server SSD, despite the base effect of high shipment in the previous quarter, sales revenue increased by mid-40%. In addition, we strengthened our leadership in the DDR5 market by starting mass-volume business of 128GB product with customers based on 1b nanometer 32GB DDR5, which was developed for the first time in the industry.

Now let's move to the outlook for the second half of the year. For server, we expect the portion of AI servers in the market to continuously increase as major cloud service providers and general enterprises expand their AI investment in the second half. Considering that, AI servers equipped with HBM also feature high contents per box in terms of conventional DRAM and SSD, strong demand is expected to continue across related products such as HBM,

DDR5, server SSD, and so on.

For PC and mobile, demand still has momentum thanks to the effect of peak seasonality and increased contents per box driven by the expansion of on-device AI featured models. But considering the elevated customers' component inventories in the first half of the year, there might be some possibility that the growth in demand for the second half would be limited.

In terms of industry supply, as capacity is being concentrated on HBM, server DRAM, and server SSD in response to AI server demand, it is expected that the conventional supply of cutting-edge products for PC and mobile application will be continuously constrained.

To sum up, even though, the range of market price increased by each application is forecasted to be decoupled, the environment Memory business is projected to remain positive. In particular, we foresee a solid server demand led by generative AI to lead the strengths. Therefore, we also plan to actively respond to the demand for high-value-added products for AI in the second half. As for HBM, we will expand the portion of HBM3E sales with capacity expansion, and in the server, we will strengthen our market competitiveness based on high-density products such as 128GB and 256GB modules based on 1b nanometer 32GB DDR5.

In addition, in mobile and graphic applications, we will strengthen our leadership in high-value-added product lines through sales penetration over 10.7Gbps LPDDR5X, which is the industry's fastest operation speed and industry's first developed GDDR7.

Also for NAND, we plan to further expand our sales by strengthening the supply for TLC SSDs, which are currently in high demand for AI servers. Furthermore, increased products, we plan to timely address customer demand

based on our lineups, which is optimized for all applications such as server, PC, and mobile, and we also plan to start mass production of V9 QLC in the third quarter.

With the industry-leading technology and supply competitiveness, we will keep enhancing our market leadership in the Memory industry. Thank you.

Good morning. This is Tommy Kwon from System LSI Business.

In the second quarter, an easing of inflation and an increase in disposable income have led to a recovery in consumer spending and sentiment. As a result, overall smartphone shipment have exceeded expectations. Additionally, the turnaround in domestic smartphone sales in China is seen as a positive signal.

However, smartphone OEMs have continued to implement price cuts due to the normalization of component prices and component cost pressures.

At Samsung, we posted improved earnings for the second quarter, primarily due to increased supply of key components, and we achieved record high sales for the first half of the year. Demand for the Exynos-2400 remains strong, and we've begun supplying new SoCs for a U.S. customer's second-half new model.

In terms of image sensors, we focused on stabilizing fab-lite operations and expanding the market for high-resolution sensors. DDI sales increased by over 40% year-over-year, driven primarily by OLED applications. We also started mass production of panel DDI for the first OLED tablet by a major U.S. customer.

Looking forward to the second half of the year, we anticipate further stabilization of consumer prices and interest rate cuts in many countries. Although consumer spending is expected to recover, the rebound is likely to be more pronounced in essential goods. Therefore, the impact on ICT devices will be somewhat limited and varied by application. We remain strategically cautious as smartphone component procurement demand might weaken in the second half, considering the outperformance and potential demand pull-in from the first half.

For our business, our industry's first 3-nanometer SoC for wearable is receiving strong, positive initial feedback. With this, we plan to focus our resources on

ensuring a stable supply of the Exynos-2500. In the image sensor segment, we will concentrate on addressing the high-resolution market by expanding the application of 200-megapixel sensor from main wide camera to tele cameras.

Our DDI products are set to be mass-produced for new model by U.S. customers contributing to increased sales in the second half. Lastly, our power products are slated for mass production in several market applications. Thank you.

Hello, everyone. This is Taejoong Song from Foundry Business.

In the second quarter of 2024, overall demand on Foundry Business improved. In most of our business applications, by achieving double-digit growth compared to the first quarter. As a result, the number of AI/HPC customers have increased twofold year-over-year due to expanded orders in sub-5 nanometer technologies. Meanwhile, 2-nanometer GAA PDK or Process Design Kit has been upgraded and released to several customers, which supports customers to move forward with product design for mass production in 2025.

Looking to the second half, we anticipate a rebound in mobile demand, as market uncertainties for set manufacturers gradually dissipate due to the recovery of the economy in addition to continuous high growth in AI/HPC demand. Consequently, we project Foundry market to see growth, particularly in advanced nodes.

For 2024, we expect our growth to outpace the market, driven by the expansion of advanced technology operations and full-scale mass production of the second generation of 3-nanometer GAA technology. We plan to continue expanding business of AI/HPC applications, aiming for fourfold increase in the number of customers and ninefold increase in sales by 2028, compared to the levels in 2023. In addition, we will focus on enhancing 2-nanometer maturity and competitiveness to meet high performance, low power and high bandwidth required in advanced technologies.

For mature technologies, we will develop competitive RF and EM RAM technologies, including design infrastructure, to expand the business in mobile, automotive and consumer applications.

This concludes the key messages from Foundry Business. Thank you.

Good morning. This is Charles Hur from the Corporate Strategy team at Samsung Display. I will now summarize you on our results for the second quarter of 2024. Our performance improved quarter-on-quarter, driven by overall sales increase of flexible, rigid and QD products. The sales contribution of mobile Display business remained over 90%, which is similar to the previous quarter.

For the mobile Display business, we achieved earnings growth as both sales and utilization rate increased sequentially. Sales volume has grown in double-digits, with contributions from the customer-based expansion for rigid Display and solid demand for flexible Display rising from the launches of flagship products of major customers. In the case of IT products, we supplied customer demand in a timely manner, thanks to our stable production.

In the large Display business, for monitors, sales of newly released products featuring high-resolution and high refresh rate have increased, mainly in the gaming monitor market. For TV, we maintain a stable sales base as the penetration rate of OLED panels has increased in the high-end segment.

Next, I will share our outlooks and strategies for the second half of this year. For the mobile Display business, with the release of our major customers' new smartphones and potential replacement demand from the adoption of AI, the second half sales are expected to be improved. However, the competition among panel makers is expected to be more intense compared to the first half of this year.

To address this, we are stably manufacturing products with improved performance in areas such as low power consumption, high brightness, slim design, and enhanced durability. In addition, with stable quality management and cost reduction, we'll continue to increase sales and also improve profitability.

Lastly, for the larger Display business, we'll strive to expand sales and narrow losses by enhancing productivity and centering production lines with high-value-added products. Also, we'll continue to focus on monitor sales by providing diverse refresh rate options into the market. Thank you.

Hi, everyone. This is Daniel Araujo from the MX division.

I would like to present our financial results for Q2 and provide our outlook for the second half. Seasonal trends continued in the smartphone market as demand for smartphones in Q2 decreased compared to the previous quarter, particularly in the Premium segment.

The MX division recorded smartphone shipments of 54 million units and tablet shipments of 7 million units in Q2. Smartphone ASP was \$279. While revenue declined compared to Q1 when our new models were released. The S24 series continues to see strong sales and achieve double-digit growth in both shipments and revenue Y-o-Y compared to the previous series when looking both at Q2 and the first half. Profitability fell slightly compared to the previous quarter due to increased costs from rising prices of key components. However, for the entire first half of the year, we recorded double-digit profitability.

Next, let me share the outlook for the second half of 2024. The smartphone market in the second half is expected to increase year-over-year with increased demand for premium products driven by growing AI demand and the launch of new products equipped with innovative features. However, the growth rate of the mass segment is expected to slow down due to channel inventory buildup resulting excessive sell-in during the first half by some vendors, as well as shrinking sales and marketing activities caused by rising material costs.

The market demand for ecosystem products is also expected to expand. The tablet market is expected to grow from the approaching product replacement cycle and the release of new models from major vendors. The smart watch market is expected to see a slight increase in value terms due to continued health-related demand, as well as upgrade demand. TWS demand is also expected to grow with the launch of new models from major brands.

As for smart rings, which is a relatively newer form factor, the market is expected to grow significantly due to increasing customer interest in sleep and health management products and the impact of our new product launch.

The MX business expects an increase in smartphone shipments and ASP in Q3, while tablet shipments are expected to remain at the same level. We plan to drive revenue growth by expanding sales of flagship smartphones and, in particular, ecosystem products. First, we aim to expand sales of foldables, where on top of their enhanced product competitiveness, we apply the Galaxy AI experience tailored to the form factor. In particular, the new devices have significantly improved core smartphone performance, including durability, battery life, and camera, compared to the predecessor products.

Furthermore, the Galaxy AI experience has been developed specifically for these form factors, allowing users to make better use of both the large screen and cover screen. We are actively promoting this new Galaxy AI experience, and at the same time, leveraging marketing associated with the Paris Olympics to attract initial attention from the market and customers.

Additionally, through active investment and promotions with our trading partners, based on close collaboration, we will ensure strong sales momentum and solidify our global leadership in the foldable market. With the S24, we will strengthen and sustain marketing to maintain sales growth compared to its predecessor and strive to achieve annual flagship growth through this effort. For tablets, with the introduction of Galaxy AI features beginning in the Tab S9 series, we'll continue to drive the expansion of premium tablet sales. And as for smart watches, we are targeting the Super Premium segment with the Galaxy Watch Ultra launched in the second half and aiming to achieve double-digit growth in overall watch sales.

For the Galaxy Ring, a micro-wearable device that can be worn 24 hours a day, we plan to provide an advanced health experience, including enhanced sleep monitoring, and strengthen its connection with other Galaxy devices to lead the market. Now, while cost pressures, such as rising costs of key components will continue in the second half of the year, we will make the utmost effort to secure solid profitability through optimizing product specifications, including component communization and standardization, and pursuing operational efficiencies.

Furthermore, even in challenging circumstances, we will continue investing in upgrading Galaxy AI functionality in order to secure a long-term sustainable growth engine. Thank you.

Hello, everyone. I'm KL Rho from the sales and marketing team of Visual Display. Let me brief you on the market condition and our result in the second quarter of 2024. TV market demand increased year-on-year, especially in advanced countries. And it also increased slightly quarter-on-quarter, mainly due to global sporting events.

Backed by differentiated launches of a new model in 2024, we solidified our leadership in the premium market by focusing on strategic products, such as Neo QLED, OLED, and Lifestyle screen. However, profitability decreased year-on-year as the cost increased due to panel price and intensified market competition.

Next, I will share our market outlook and strategy for the second half of 2024. We expect overall TV market demand to recover further, thanks to growing demand for QLED, OLED, and big TV. We will preemptively capture peak season demand in the second half by strengthening sales program focused on premium and big TV. At the same time, we will actively promote our unique competitiveness involving AI, security, and design, along with differentiated customer experience based on SmartThings to lead growth in the TV market. In addition, we will work to advance user experience and reinforce growth momentum by strengthening our service platform business, driven by advertisement and media such as TV Plus, to leverage the device scale secured by our leadership in hardware. Thank you.

With that, we have concluded our prepared statements. Before I turn it over to operator to open up the line for Q&A sessions, changing the order today, first, I would like to address the question that was submitted online in advance before this call concerning a matter affecting the entire company. Additionally, please note that following Q&A session will be conducted in Korean.

The question is, have there been any managerial issues related to the strike, such as setbacks in production?

We are continuing to communicate sincerely with the union in order to bring the strike to an early end. Despite the strike, we have had no issues in responding to customer demand and we will do all we can within the law to ensure there are no business setbacks or production delays in the future.

Thank you for your question. Now, let's open the line to analyst questions. We will now begin the Q&A session.

(Operator Instructions)

The first question will be made by Mr.Sung-kyu Kim from Daiwa Securities.

<Q – Sung-kyu Kim>:

Yes, I have two questions for semiconductor. First has to do with Memory. In the second quarter, your performance actually exceeded market expectations. And so could you provide more details about Q2 results and what is your outlook for third quarter performance?

The second question has to do with Foundry. So for the second-generation 3-nano process, I understand you are preparing ahead of full ramp-up. So could you give us a status update? Also, more on your sub-2 nano roadmap and differentiation strategy for AI, if you don't mind sharing?

<A>:

- Yes. Let me cover your question on Memory performance first.

In the second quarter, Memory market continued to see strong GenAI-driven growth with solid demands from server applications. And so there were limitations in available capacity for us to respond to all incoming demands from our customers. So given the conditions, we maintained our sales operations centered around profitability while expanding the share of high-value-added products, including HBM, server DDR5, and SSD, to achieve qualitative growth across our business portfolio. Our ASP increased in part thanks to improved portfolio and a -- I mean rising market pricing, and prices rose in the high 10% range for DRAM and low 20% range for NAND Q-on-Q.

For conventional Memory products, which saw a greater drop in ASP last year, well, actually, price increased, further accelerating our improved performance versus Q1. For bit growth, as we responded to server application demand for DRAM, HBM, DDR5, we saw a mid-single-digit increase versus the first quarter, and we achieved our guidance.

For NAND, we maintained our sales strategy, focused on profitability, recording a mid-single-digit decrease. Due to the high base effect of strong bit shipments in the first quarter for DRAM and NAND, second quarter bit growth may look limited, but as sales volume exceeded production, inventory levels saw additional improvement on the previous quarter for both DRAM and NAND.

In the third quarter, we expect favorable business conditions to continue and expect the overall uptrend in market pricing to also continue, but as we mentioned at our last conference call, the degree of pricing increase will likely be different by product. So we intend to strengthen our product portfolio further, center around profitability-based growth to continue to deliver improved performance given the constraints to production bit growth, and we'll focus on providing supply to real demand as a priority. So we expect third quarter bit

growth in DRAM and NAND to record low single-digit level. Also, considering the overall business cycle and market conditions, this is expected to be largely similar to the broad market level. Thank you.

- Let me take your question on Foundry.

First of all, for our 3-nano GAA process, our first-generation GAA process, which is now in year three of mass production, has reached a mature stage in terms of both yield and performance and are in stable mass production. Building on this as a base, our 3-nano second-generation GAA is scheduled to enter full-scale production for mobile products in the second half of the year and will start off with wearables. In terms of our sub-2-nano roadmap going forward, leveraging our experience in 3-nano GAA processes and mass production, we plan to start mass production of our first 2-nano process in 2025 and prepare a 2-nano process with further PPA enhancements by 2026.

We're also preparing our backside PDN process for AI/HPC by 2027. Recently, as we see continued growth in AI/HPC use cases, we will continue to work as one team with the Memory business to develop high performance, low power consumption, high bandwidth solutions that are key for advancements in AI. We're currently working together on an integrated solution that combines high bandwidth Memory advanced node processes and cutting-edge packaging technology. This will allow us to provide information required for product design in a more efficient manner to our customers, and will benefit not only through improved product competitiveness, but we'll be able to offer more supply chain optimization and quick time to market benefits as well.

<Q – Sei-cheol Lee>:

Good morning. This is Sei-cheol Lee from Citi. I have a question for Memory and also Display. First, for Memory, HBM, as you see -- well, in terms of the current status of your HBM business, could you provide a status update also on

qualification testing? Also update us on the different iterations, HBM3, HBM3E, and HBM4 as well?

Second question is regarding OLED. For a small size Display or within that market, OLED penetration continues or is expected to continue to rise, so as you see, how do you intend to maintain your market leadership? Are you preparing to maintain your position, and how do you see the potential for a future sales upside?

<A>:

- So first, regarding the status update on our Memory HBM business, one thing that I do want to start off by saying is that while I understand that there is significant interest among investors and media regarding our HBM qualification status, we are under NDA commitment with our customers, and so we seek understanding that we're not able to comment on those details.

First, for HBM3, we are expanding mass production supply to all major GPU customers. And in the second quarter, actually, revenue grew by about threefold Q-on-Q. For HBM3E, for the 8-high products, early last quarter, we started to prepare for early ramp-up and shipped samples to our customer sites, and so they are now being evaluated, and we're scheduled for mass production and shipment in the third quarter.

For HBM3E 12-high, which we were the first in the industry to complete development on, we have already shipped samples and have completed the preparations for ramp-up, and we are planning to expand supply in the second half in accordance with the required timelines for multiple customer. So 12-high products within HBM3 have already accounted for two-thirds of the total HBM3 revenue mix. So we have already achieved a very mature level of packaging yield based on our accumulated packaging technology in 12-high and in HBM3E as well.

HBM3E, as a percentage of HBM sales, is expected to expand to above 10% -- mid- 10% in the third quarter, and further up to as high as 60% by the fourth quarter. As we move to full-scale ramp-up for HBM3E, there will be an added effect for our capacity expansion as well, and we expect HBM revenue to grow even more sharply in the second half. In the second quarter, HBM revenue increased by about mid-50%, Q-on-Q, but we think that going forward, there will be about twofold increase in sales every quarter, and we expect the 2H revenue to expand more than 3.5 times the revenue recorded in the first half.

HBM4, we are on a normal track with the goal of market launch in the second half of the year -- in the second half of 2025. We are also on track to respond to customer demand for customized HBMs and currently developing custom HBM products, which are fundamentally optimized to respect the customer needs, and we're in talks with multiple customers on detailed specs. And so we will continue to enhance the competitiveness of our products and backed by underlying supply capacity.

- Here's the answer for your second question.

Firstly, with the recent rise of on-device AI smartphones, demand has increased for lower power consumption. In response, we are focusing more on technology development across all areas, including materials, electronics, and structure. By leveraging our differentiated technologies in power consumption as well as design and cost competitiveness, we will solidify leadership in the smartphone OLED market.

Next, it's about IT. In the IT market, particularly in high-end segments, OLED adoption is increasing. In 5.5 Gen rigid fab and 6 Gen flexible fab, we are actively producing IT OLED and also making preemptive investments in the 8.6 Gen fab. We are developing products and technologies optimized for each production line, and with this, we will actively address diverse customer needs and thus gain

competitive edge over competitors. We will also accelerate the OLED penetration rate to drive sales growth. Thank you.

<Q – Dong-won Kim>:

Thank you for the opportunity to ask, one question on Memory and one on Display. First, my question has to do with HBM. Samsung Electronics, for this year and next year, by how much do you expect to expand HBM bit supply? And are there any changes versus your existing plans?

And then for Samsung Display, I understand too the OLED monitor panels are actually building up greater presence in the gaming monitor space. So what are the strength of your products, and also could you share your future strategy?

<A>:

- So for HBM supply planned under Memory, let me cover this question. We are continuously increasing our HBM capacity, and based on our latest updated production and sales plans, the 2024 bit production and committed volume where we have completed discussions with customers is around 4 times that of last year.

In 2025, we seek to acquire leading capacity in the industry as we plan to expand bit supply to more than double the level of this year. However, even based on the expanded supply plan, we're still seeing continued increase in requested volume from some customers for 2025. We'll continue to engage with them in discussions on supply as we finalize the additional production volume for 2025.

- Here is the answer for your second question on SDC. Self-luminous QD-OLED, which was first introduced by Samsung Display is recognized for high color reproduction and quick response speed, and also evaluated as a product with distinctive strengths, especially in the premium segment. Our 31.5-inch 4K 240

hertz and 27-inch QHD 360 hertz monitors which were released this year provide enhanced immersion with its larger screens, high definition, and refresh rates. These are receiving positive feedback, especially in the gaming market.

QD-OLED are also introduced to reference monitors fulfilling demands for the highest image editing technology, and thus recognized for its superior picture quality. QD-OLEDs are now expanding their presence beyond the gaming market. In the premium monitor market, the demand for high resolution and excellent color reproduction is expected to continue, leading to a rise in penetration rate of self-luminous panels. We will continue to enhance our lineup of ultra-high resolution panels and expand sales beyond the gaming market to include B2B. Thank you.

<Q –Dong-je Woo>:

Thank you for the opportunity. My question is to System LSI followed by MX. First, regarding System LSI, of the chips that you provide for flagship smartphone applications, what is the current status on that? And do you expect increased adoption of your products in future smartphone release models?

Second question has to do with MX. I understand edge AI functionality has been improved. So what is your differentiation strategy? And what is the direction for AI functionality that will be introduced onto future models like S25?

<A>:

- Thank you for your question. For flagship smartphones, in terms of the status of our chips, also expectations for the future. If you look at major customers' new flagship smartphone models released this year, they include various SoC products like modems, APs, RFs, also 200-megapixel, 50 mega pixel image sensors, DDI, PMIC, security, etc. So in fact, 20 out of the 28 core components

that are required to produce smartphones are now semiconductor products. So compared to 10 types last year, this actually is a remarkable level of growth.

We expect or we plan to increase that number further and we expect it to top 20 types next year. But this increase actually is quite significant, going beyond just a boost to our top-line and profits. I don't think we should limit the interpretation of the underlying meaning of this increase in semiconductor parts, the components. This signifies increasing important role of semiconductors in boosting future productivity. And in fact, across the global supply chain, we are one of the very few companies with the competitive advantage to provide a total solution. So as AI advances further, there will likely be countless on-device innovations, so across computing, telecommunications, camera, display, which are essential for the innovation in on-device application as AI progresses. And thus we will help usher in the AI era. Thank you.

- So on your second question, we've consistently upgraded the hardware in our S-series to deliver industry-leading experiences to customers and will continue to enhance key experiences as well as upgrade the hardware, so that we can offer top performance.

For camera and display specs in particular, where we've been leading, the S25 at launch will have top-of-the-line upgrades. And we're also preparing industry-best APs and Memory to boost AI performance and offer an overall premium experience. We introduced the world's first AI phone through the S24 launch in January of this year, followed by the recent launch of the world's first AI foldable phone. So we'll stay ahead of evolving AI technology trends so that we can enrich and also simplify the mobile experience for our customers.

We're expanding the Galaxy AI ecosystem beyond smartphones to include smart watches, Buds, the Ring, Tab and Galaxy Books, as well as our OS, apps, and services. The Galaxy's hybrid AI will effectively make use of both on-device AI for

fast and stable usability and cloud AI for high-quality results, depending on the situation, while also providing strong security, including customer data and personal information protection through Knox.

Looking forward, we expect to be able to understand the context of conversations and provide a natural conversation experience across our devices. But to achieve this, we'll strengthen partnerships and collaborations while developing our AI technologies further. By partnering with global AI leaders, we aim to proactively introduce diverse AI solutions and better understand users' commands and intentions, making AI more enjoyable, rich, and easy to use across various experiences, like creation, productivity, and health. Thank you.

<Q – Giuni Lee>:

Thank you for the opportunity. I have one question for VD and another for MX. For VD, could you please tell us how a major sports event affects TV demand and give us a forecast for the second half of this year? And also, for MX, with the rise in Memory price, we expect there might be some impact on smartphone margins. Do you have any strategy to offset this?

<A>:

The second quarter is usually a slow season. However, this year, thanks to the impact of big sporting events, such as Euro 2024, the demand slightly increased year-in-year. By segment, QLED, OLED, and big TVs over 75 inches showed a solid growth trend. In response, we achieved our sales targets in major markets through the expansion of premium and big TVs, and increased our market share in the global premium market.

TV market in the second half is anticipated to see a demand recovery, thanks to the peak season and the ongoing trend towards big TVs. We will enhance product competitiveness and non-price sales and distribution strategies to

capture peak season demand and promote differentiated customer experiences to solidify our position as market leader. Thank you.

- So, while there are concerns about reduced profitability due to continued increases in the cost of key components, we are working hard to ensure solid profitability in 2024 by continuously improving efficiencies across our processes, including development, manufacturing, and logistics, and at the same time, to minimize any impact of rising costs from macroeconomic factors, we will continue with our upselling strategy focused on premium products to grow our revenue.

In the second half of the year, with the S24's continuing positive sales trend and expanded smartphone sales, primarily focused on flagship devices like the Fold6 and Flip6, which have enhanced core features and form factor-specific AI experiences, we will continue improving our sales mix.

In tablets, we are focusing on expanding premium sales with the Tab S Series, and for wearables, we are enhancing our presence in the premium market with new models like the Galaxy Watch Ultra, aiming to contribute more to our profits. And I mentioned this in the earlier update, but despite -- or despite demanding circumstances, we plan to continue investing in upgrading the capabilities of Galaxy AI so that we can secure it as a sustainable growth driver for the long run. Thank you.

<Q – Young-ho Ryu>:

Thank you for the opportunity to ask. I have a question just on semiconductor Memory. Across the industry, there's a lot of investments in terms of migration of existing nodes and lots of production constraints in place. So given the conditions, what kind of Capex plan do you have, and what's your supply strategy as well?

<A>:

So in terms of Memory Capex and supply strategy, let me cover this. So following on the second half of this year, we think next year, we will also continue to see very strong demand driven by GenAI server application, whereas industry bit growth is likely to be constrained. For DRAM, amid a boost in HBM ramp-up, conventional DRAM based on advanced processes is expected to see particular supply constraints. NAND was impacted by reduced Capex, which acted as a constraint in the last year. It is impacted by bit loss from node migration of the existing lines, so we expect production bit growth also to be limited.

So as we're also seeing increased server SSD demand related to GenAI, whereas the industry supply will likely continue to be tight across the industry. Recently, we have received requests from customers to enter into an earlier annual supply contract for 2025 for both DRAM and NAND. They're asking us to sign LTAs or MOUs. So same as last year as we continue to invest despite the downturn, this year we will continue to manage our investments flexibly focusing on products with real demand within a more limited scope of change versus the prior year, same as we did last year.

So for HBM, we are continuing to invest in capacity expansion mainly in advanced packaging. For conventional products where we expect bit growth to be constrained, we are accelerating the migration of legacy lines to smoothly respond to rising demand for advanced node processes driven by high-performance high-density trends triggered by AI. So we will execute fast migration for DRAM from 1x/1y/1z-nano to 1b and 1c and for NAND from V6/V7 to V8 and V9 to enhance our available capacity for advanced-node products. So we'll continue to execute investments to secure more space also to respond to mid to long-term demand for DRAM and NAND as well. So again we'll continue to reflect these market conditions and also outlook for mid to long-term demand in our investment plans as we build the foundation for sustainable growth.

Because of the time we will accept one last question.

<Q – Jay-hyun Kwon>:

Thank you for the opportunity to ask a question on NAND. As GenAI spreads, it seems that overall in the industry, there is a very rapid rise in demand for server SSDs. So what is the current status of your SSD business and how would you intend to respond?

<A>:

So for the server SSD market, let me answer your question. So this market actually has shown sharp growth year-on-year with the spread of multi-modal AI. The competition volume of AI models is increasing exponentially. And so this has spurred rising demand for high-performance, high-density SSD. So we actually were the first in the industry to start mass production supply of Gen 5 SSD. Building on our traditional leadership in server SSD, we are actually moving to respond quickly to rising demands in this space. Also expanding our supply capacity by shifting our product mix around server applications.

So server SSD revenue will be benefited from improved ASP, shipment growth, and higher premium product mix as we expect improved performance in the second half of the year. And we expect to achieve 4 times higher revenue performance on a year-on-year basis this year. Also our premium TLC-based 16-channel SSD, which is above 16-terabyte capacity has shown a sharp rise in sales this year, and we expect revenue to grow by more than tenfold versus last year.

For QLC products, although it is just in the low-mid 10% range of the total server SSD market mix, we do see it as a potential in terms of source of future demand, and so we are conducting technology and business development together. And 16-terabyte and 32-terabyte SSD, which accounts for the most of the volume in QLC SSD, is already in mass production. 64-terabyte SSD, which is under

customer approval at the moment, is set for mass production in the second half of the year as well. We'll add on 128-terabyte product to our lineup in the second -- in the fourth quarter as we provide a timely response to rising demand for high-density QLC SSDs.

Thank you for your answer. I would like to thank everybody who shared their valuable opinion, and we will be sure to refer to them in our decision-making process. And thank you for participants, including executives, for today's event. That completes our conference call for this quarter. Thank you.