【Samsung Electronics Q1 Earnings Call】

Welcome everyone. This is Ben Suh, head of investor relations.
Thank you for joining Samsung Electronics' first-quarter 2023 earnings call.

For additional details regarding our quarterly results, please refer to our earnings presentation, which has a new format and is available on our IR website at www.samsung.com/global/ir.

Joining me on the call today are:
EVP Jaejune Kim, representing Memory,
VP Hyeokman Kwon for System LSI,
EVP Gibong Jeong for Foundry,
EVP Casey Choi for Samsung Display Corp, which I will refer to as Display during today's call,
VP Daniel Araujo(다니엘 아라우호) for Mobile eXperience,
VP KL Roh for Visual Display, and
VP Sangyoon Kim for Digital Appliances.

I want to remind you that some of the statements we will be making today are forward-looking statements, based on the environment as we currently see it, and are subject to certain risks and uncertainties that may cause our actual results to be materially different from those expressed in today's discussion.

I will start with the results for the first quarter of 2023.

The business environment in the first quarter continued to deteriorate, with overall consumer sentiment weakening due to rising concerns over an economic slowdown amid persistent global macro uncertainties and geopolitical issues. As a result, our consolidated revenue for the quarter declined by 9.5% sequentially to 63.7 trillion won.

Although revenue for the Memory Business and other component businesses declined considerably due to repercussions of decreased demand, the DX Division increased revenue on the back of strong sales of new flagship smartphone models.

Our consolidated gross profit decreased by 4.1 trillion won sequentially to 17.7 trillion won, mainly due to the continued price decline and inventory valuation loss in memory.
Gross margin also decreased by 3.2%pts to 27.8%.

SG&A expenses declined by 0.4 trillion won quarter-on-quarter to 17.1 trillion won, primarily due to reduced advertising & promotional spending. However, as a percentage of sales, they increased by 1.9%pts to 26.8% due to the decline in sales. R&D expenses exceeded last quarter's record amount and reached a new high as we continued to invest in the future.

Operating profit in the DX Division increased thanks to gains in the MX business, but operating profit declined significantly in our component businesses amid sluggish demand, causing our consolidated operating profit to fall 3.7 trillion won sequentially to 0.6 trillion won.
Operating margin also fell 5.1%pts to 1%.

For the following results and outlooks sections, I will provide brief overviews for DS, Display, and DX, and include specific business unit results only for those that are not covered in separate speeches.

For the DS Division in the first quarter, profits decreased considerably quarter-on-quarter due to an increased inventory valuation loss in Memory, which newly included DRAM, a decline in utilization at Foundry, and continued overall impacts of weak demand and inventory adjustments at customers.

For Display, while the mobile panel business recorded a decline in earnings amid a market contraction, the large panel business slightly narrowed its losses.

The DX Division delivered improved results thanks to strong sales of premium S23 models, an enhanced sales mix focusing on premium TVs, and improved operational efficiency.

The Network Business saw its revenue decrease, due to weakness in major overseas markets such as North America and Southwest Asia.

The Digital Appliances Business reported similar earnings sequentially amid still-sluggish demand and continued cost burdens.

Regarding currency effects in the first quarter, the Korean Won strengthened against the US dollar, Euro, and most major emerging currencies. The relative weakness of the US dollar had the effect of a company-wide, quarter-on-quarter operating profit reduction of approximately 0.7 trillion won, centering on our component businesses, which are more sensitive to the US dollar.

Next, I would like to share our business outlooks.

In the second quarter, under expectations of continued weakness in demand, DS will remain committed to boosting our technological competitiveness, including 2nm GAA, while meeting the demand for DDR5 and LPDDR5x and other high-end products.

For Display in the seasonally weak second quarter, the mobile panel business will focus on preparing for 2H demand; and the large panel business is expected to increase its sales.

DX will maintain solid profitability by expanding sales of A-series smartphones and new TV models while fully preparing for strong seasonality of digital appliances and improving cost efficiencies.

Network will keep solidifying its business foundation particularly in Korea and North America as it explores new business opportunities.

Digital Appliances will focus on securing profitability by improving its sales structure and cost efficiency, while continuing the global expansion of BESPOKE products as we enter a seasonal upcycle.

In the second half of 2023, there is a general expectation for market conditions to recover gradually amid projections for a rebound in global demand.
DS will stay on top of the demand for high-capacity server/mobile products and continue to reinforce its leadership in differentiated technology, which includes preparing for next-gen flagship mobile SoCs and increasing orders for our leading GAA process.

Display’s mobile panel business will maintain its unparalleled position in the high-end market based on its differentiated technology; and the large panel business will push to expand its presence in the premium market and improve profitability.

DX will further solidify its leadership in the premium segment, which includes foldables and Neo QLED. At the same time, it will increase its market share by cooperating with partners and enhance profitability by continuing to improve operational efficiency.

Network will pursue revenue growth through its major overseas contracts by promptly addressing customer needs and winning new orders, all while reinforcing our technology leadership in 5G core chips and Virtualized Radio Access Networks.

For Digital Appliances, we will boost our product competitiveness via SmartThings while pursuing growth by increasing sales of high-value products and further promoting package sales.

Moving onto capital expenditures.

Capex in the first quarter was 10.7 trillion won, with 9.8 trillion won invested in the DS Division and 0.3 trillion won in Display.

Memory capex concentrated on facilities in Pyeongtaek, which included completing P3 infrastructure and P4 framework progress for mid- to long-term supply; and also on equipment to prepare for advanced node demand. In addition, we continued our R&D and back-end investments to further bolster future competitiveness.

Foundry investments continued to focus on Taylor, Texas and Pyeongtaek to address the demand for advanced nodes, while Display investments focused on infrastructure and module production enhancements.

Next, I would like to address shareholder returns.

Today, the Board of Directors approved a quarterly dividend of 361 won per share for both common and preferred stocks.
Based on the annual dividend payout under the current dividend policy, which applies until the end of this year, the total quarterly payout is 2.45 trillion won, and it will be paid in mid-May.

Finally, I would like to share some of our key activities in sustainability management.

First, by applying innovative technologies, we have continued our efforts to ensure that using our products and services contributes to a low-carbon and sustainable future. As prime examples of Everyday Sustainability:

We increased the adoption of recycled materials in our products, especially in our latest Galaxy S23 phones;

We have also enhanced the energy efficiency of the key components used in our large digital appliance models, which contributed to 75% of our new models in Korea achieving top energy efficiency ratings;

And, we have further enabled energy savings through the AI Energy Mode in our SmartThings Energy service

Finally, following a successful release in Europe last year, we introduced the microplastic reduction cycle in the Korean market. The BESPOKE Grande AI model, developed in collaboration with Patagonia, can reduce microplastic release by up to 60% compared to a regular cycle.

On another front, we announced Samsung's Global Human Rights Principles – a policy based on international standards, such as the UN Guiding Principles on Business and Human Rights in February.

This announcement forms part of Samsung's ongoing efforts to respect and promote the labor and human rights of employees at Samsung Electronics and its partners in all aspects of our business. The Principles comprehensively encompass all of Samsung's pre-existing policies related to human rights such as our Child Labor Prohibition Policy, Anti-Discrimination and Harassment Policy, to name a few.

Meanwhile, Samsung Electronics ranked seventh in the 2023 Digital Inclusion Benchmark as measured by the World Benchmarking Alliance, a global alliance for sustainability management. We achieved the highest ranking among Asian companies, garnering this special recognition for our efforts to support open source, lead standardization in the industry, and foster an ecosystem for tech startups.

Last but not least, the Alliance for Water Stewardship awarded our Hwaseong Campus with Certified Platinum status, the organization's highest certification level for water resource management. This is the first such recognition in

Korea, and the award recognizes the outstanding water management systems at our semiconductor sites.

We will continue our efforts to enhance sustainability in all aspects of our business.

I will now turn the conference call over to the representatives from each business unit to present first quarter performances and outlooks for their respective business segments more in detail. We will start with EVP Jaejune Kim of the Memory Business.

Thank you.

Good morning, this is Jaejune Kim from Memory Global Sales & Marketing at Samsung Electronics.

In the memory market of the first quarter, while the macro economy continued to slow down and customer purchasing sentiment was weakened, overall demand decreased as many customers continued inventory adjustments to improve their financial health. As a result, our performance fell significantly compared to the previous quarter.

If you look at each product in DRAM, while customer inventory is still at a high level for servers, the demand for servers was sluggish with inventory adjustments by customers, mainly hyperscalers, affected by shrinking IT spending of many enterprises under economic uncertainties.

For Mobile and PC applications, although customer inventories of finished goods in distribution channels relatively improved, the demand situation was sluggish with purchasing delays and Set-Build reductions as consumer sentiment has not recovered yet.

Under this market environment, we preemptively responded to demand for high-density mobile products, which was boosted by strong sales of new smartphones by major mobile customers.

As for server applications, while customers continued to adjust their component inventories, we focused on capturing DDR5 server demand in line with the adoption of new CPUs.

As a result, the price fell less than the market forecast due to our focusing on selling high value-added products, but Bit Growth couldn't meet the previous guidance.

Next, I will talk about the NAND market.

The slowdown in demand for server and storage applications has been more clearly observed compared to other applications, and, as I previously mentioned for DRAM, our analysis revealed that the demand sluggishness is linked with reduced enterprise IT spending.

Actually, in addition to this, Server SSD demand showed a further contraction due to customer inventory adjustments.

For Mobile and client SSD, the demand continued to remain sluggish as well because the sell-out recovery was not visible as overall consumer sentiment has not recovered yet, despite China's re-opening.

In spite of this weak demand, we actively responded to the trends towards high-density across overall applications, such as eStorage of 512GB and above for major mobile customers and client SSDs of 1TB and above for PC OEMs. As a result, our Bit Growth exceeded the previous guidance.

Moving on to the outlook for the second quarter, First of all, let me tell you about the market by application. As major hyperscalers are conservatively investing in servers and customers are continuing to adjust inventories, demand recovery is expected to be continuously limited following the first quarter.

For Mobile and PC, customer inventories for components and finished goods are expected to be healthy, but consumer sentiment trends seem to be important variables for set demand due to macro economic conditions that include China's re-opening and follow-up economic stimulus packages. On the other hand, the transition trend to high-density products based on price elasticity is expected to continue.

In DRAM's case, in order to align with this market situation, we will timely respond to the increasing demand for DDR5 and high-density modules led by the launch of new CPUs for servers and increased demand for AI, and we will also actively respond to LPDDR5x demand for mobile high-end products such as new form factor smartphones.

For NAND, based on cost competitiveness, we plan to actively address demand for high-density products across all applications, while responding to customer needs for high-density storage by creating mobile QLC markets and diversifying product portfolios.

Moreover, as we announced in our preliminary first quarter results, we have already started lowering down our productions. Therefore, our inventory levels are expected to start to decline from the second quarter, and such reduction is expected to expand in the second half.

Now let me tell you about the outlook for the second half of the year.

Demand is expected to gradually recover in the second half of this year as customer inventory levels will have declined due to inventory adjustments that have been occurring since last year.

This demand recovery is expected to begin with consumer products such as mobile and PC, for which inventory adjustments by customers began earlier than they did for commercial applications such as server and storage.

First of all, for mobile and PC, with the finished goods inventory level decreasing in comparison with the first half, Set Build demand is expected to improve with the launch of new smartphones and PC promotion in the second half of the year.

In addition, the trends towards high-density based on overall price elasticity is expected to continue, thus, we are expecting to see a demand pattern of 'weak in the first half; and strong in the second half'.

For server, the timing of a demand recovery may be later than for PC and mobile since customers' inventory adjustments started relatively late. However, the portion of DDR5 is expected to increase due to the expansion of new CPU adoption, and content-per-box will continue to grow as the transition to high-core CPUs will accelerate.

Thus, demand will continue to recover in the second half of the year, but it is expected to grow mainly with new memory products, due to factors such as CPU platform conversion scheduled for the second half of the year and the customer inventory adjustment trend.

Therefore, we are lowering production mainly for legacy node products for which demand is expected to be relatively sluggish, while responding to the market with an increased portion of cutting-edge nodes and high value-added products.

From a product standpoint, for DRAM, we plan to accelerate the conversion of cutting-edge nodes for DDR5 and LPDDR5x and actively respond to the strong market demand for HBM3 8H and 12H. For NAND, we are going to strengthen supply operations focusing on products that customers need by creating a mobile QLC market and expanding the portion of cutting-edge nodes such as V7 and V8.

Under these trends, we will maintain a similar level of CAPEX compared to last year and continue to expand infrastructure and R&D portions of investment to secure mid- to long-term competitiveness.

Thank you.

Good morning, this is Hyeokman Kwon from the System LSI Business.

In the first quarter, amid the off-peak season, demand for SoC, sensor and DDI dropped sharply due to sluggish demand for major applications such as mobile and TV, resulting in a sharp drop in sales. However, for mobile SoC, volume zone's sales increased with the launch of new volume zone products, and in order to expand new applications, we launched a UWB-based short-range wireless communication semiconductor product called U100.

In addition, we have solidified our technological leadership by supplying various 200-million-pixel image sensors to major global customers at home and abroad.

In the second quarter, even though the overall demand slump continues, customers' inventory reductions are showing for the products such as sensors and pDDIs, and inventory accumulation is expected in preparation for the peak season in Q3. As a result, earnings are expected to improve slightly QoQ

In addition, to strengthen the GPU competitiveness of mobile SoCs, we will expand our strategic partnership with AMD in the graphic IP field, and we are in the final stages of commercializing the NTN communication modem.

For 2nd half, System IC-related customers’ parts inventory is exhausted, and starting with the vitalization of the Chinese domestic market, overall mobile demand is expected to recover.

As the market is expected to recover in the second half of the year, we will make sure that there is no problem with the supply of parts. In addition, we are planning to re-enter flagship segment to strengthen the product business competitiveness of the mobile SOC business. And we also expect to expand our business area as a customer is planning to commercialize fingerprint authentication-based credit cards with more enhanced security.

Thank you.

Hello, this is Gibong Jeong from the Foundry Business.

In the first quarter, demand contracted due to a global economic downturn triggered by macro uncertainties. Repercussions included high inventory levels at major fabless and set companies and a subsequent decline in orders that led our earnings to fall significantly.

On the other hand, we are mass producing the 1st generation 3-nano process applying GAA technology—the best semiconductor device technology in existence—with yields remaining stable into and throughout the quarter. And based on our experience with the 1st generation, we are developing the 2nd generation process to secure even greater mass production capabilities.

In addition, we focused on securing new orders from tier-1 customers who need high-performance, low-power characteristics in mobile and HPC applications, aiming for mass production in 2024.

Moreover, by completing the development of the advanced package with 12 stacks of HBM memories, we have secured the foundation to support server products for generative AI segment.

In the second quarter, we expect revenue to improve quarter-on-quarter basis, as set makers' inventories recover to normal levels and customer demand recovers.

In the second half, the market is expected to recover around HPC/Auto, which requires advanced processes, and we expect our earnings to rebound accordingly in line with our investment strategy that focuses on advanced nodes.

Based on the stable development of 2nd generation 3-nano GAA, we will expand new customer orders by actively communicating with customers, and strengthen our technical leadership by smoothly advancing the development of 2-nano, the next generation technology.

Finally, we will lay the foundation for sustainable growth by evolving specialty and mature processes to expand within various applications such as mobile, automotive, HPC, and IoT.

Thank you

Good morning, I'm Casey Choi from the Corporate Strategy Team at Samsung Display.

Even in the face of unfavorable market conditions, we continue to generate stable results in the high-end smartphone business based on our differentiated technology, performance, and IP superiority.

I will now brief you on our results for the first quarter of 2023.

For the mobile display business, even though market demand continued to contract due to persistent inflation and high interest rates, we fortified our market leadership thanks to the robust sales of flagship products with differentiated features and the expansion of a foldable model.

For the large display business, we solidified our position in the premium market on the back of a full-fledged launch of new QD-OLED products by our major customers and a diversification of product sizes and other specifications.

Next, let me share the outlook for the second quarter of 2023.
We expect results to contract year-on-year due to the global economic slowdown exacerbating seasonal effects, but we will maintain our dominant position in the high-end market based on the stellar technology and performance of our products.

At the same time, building on our unrivaled product quality, we plan to maximize sales by delivering on our customers' needs in expanding the adoption of OLED panels in their mid-end lineups and by accommodating their mass production of new products in the second half.

For the large display business, we expect to see a slow recovery in demand due to the economic slowdown and effects of the endemic, but sales should grow as new products for 2023 rollout in earnest.

Finally, I will share our outlook for the display market and our strategy for the second half.

Concerns over market uncertainties and the economic downturn coexist with hopes for a potential demand recovery based on anticipation of improving market conditions in China prompted by its potential stimulus programs in 2H.

We will maintain our leading market position by leveraging our differentiated technology in our customers' new offerings; and ramp up sales by enhancing the performance of foldable products in the relatively solid market for high-end smartphones.

For large panels, demand is likely to be soft due to prolonged economic uncertainties. However, we will further strengthen our presence in the premium market by offering a wider range of sizes, supplying rollouts in an increasing number of countries, and diversifying our customer base.

Despite uncertainties surrounding future markets, we believe it is an optimal time to prepare for the future and will invest in 8.6-generation OLED. With this investment, starting this year, we will strive to scale up the OLED market by steadfastly increasing the share of OLED panels in the laptop, tablet, and automotive markets and eventually recreate the success we have achieved in the smartphone market.

Thank you.

Hi everyone, this is Daniel Araujo from the Mobile eXperience division.
I'd like to share our results for 2023 Q1 and outlook for Q2 and the second half.

The macro environment remained uncertain throughout the first quarter of 2023; and in the smartphone market, overall demand weakened, but the premium market grew in terms of both volume and value compared to one year ago.

Despite the market contraction, our sales increased quarter-on-quarter, and our profitability recovered, reaching double-digits.

The S23 Series, launched in Q1, achieved strong sales backed by improved product competitiveness. Overall sales growth was driven by the large S23 Ultra portion of sales and marketing that centered on models with high storage capacity.

Our efforts to enhance operational efficiencies throughout R&D, manufacturing, and logistics led to a major boost in operating profits from Flagship devices, Series A, and Tablets, which contributed to the strong first quarter performance.

Next let me share the Q2 outlook.

For smartphones, we expect demand to recover in the low-to-mid segment; and the overall market should increase slightly in volume but decline in value compared to Q1.

In the MX Business, we will continue to generate steady sales of the S23 series, which has been well received by the market, and re-boost the marketing of Foldables to continue sales of current models and drive awareness of the upcoming launches of new models in the 2nd half.

As for the A Series, we will actively address recovering mass-market demand by propelling the new A54 and A34 into global mega-hit models by delivering a stronger premium experience through upgrades to key specifications and the application of the Galaxy design identity.

In Q2, we will drive sales expansion with flagship devices and mid-to-high A Series models, with contributions also expected from our ongoing efforts regarding efficient management of region-specific product lineups, our

upselling strategy, and a variety of sell-out programs. Moreover, we aim to maintain double-digit profitability thanks to additional gains in operational efficiency.
Next is the outlook for the second half of 2023.

In the second half, we expect to see signs of a global economic recovery, including an easing of inflation. The smartphone market is forecast to witness increases in both volume and value—especially in the premium market—alongside a recovery of purchasing power. We expect the tablet and wearable markets to stay mostly flat due to difficult compares following significant growth during the pandemic.

The MX Business will unveil new Foldable models that offer even further differentiated and refined user experiences. Our close cooperation with partners is a strength, and we will use that strength to boost sales right from launch to further fortify our leadership in the global foldable smartphone market.

For the S23 Series, we will continue sales in the 2nd half by sustaining our marketing campaigns and actively responding to regional seasonality.

With the A Series, we will expand our overall share of the smartphone market by collaborating closely with our partners and actively implementing sales programs tailored to our customers by region.

We will strengthen the product competitiveness of our tablets and wearables, and highlight our premium ecosystem experience via a joint Unpacked event in order to continue to outpace the market.

In sum, we aim to achieve annual revenue growth in 2023 and secure solid profitability by improving our product mix and enhancing operational efficiencies.

Thank you.

Good morning, I’m KL RHO from the Sales and Marketing Team of Visual Display.

First, I would like to review the market conditions and our performance in the 1st quarter of 2023. TV market demand contracted both quarter-on-quarter and year-on-year as we exited end-year peak seasonality and felt continued effects of the global economic downturn.

For Samsung, we improved our profitability quarter-on-quarter and year-on-year by focusing on sales of differentiated high-value-added products to enhance our leadership in the premium market; and by reducing overall costs.

Now, Let us look at the outlook for 2nd quarter and 2nd half of 2023.

In the 2nd quarter, we expect negative growth in the TV market to decelerate, while demand for premium products, such as QLED and ultra-large screen models, is expected to keep growing.

Samsung will focus on improving profitability by expanding sales of strategic products with the differentiated launches of new models for 2023 while also strengthening each area of operations management.

Regarding the TV market in 2nd half, demand is expected to recover gradually with the arrival of peak seasonality, but we expect competition to intensify with continued uncertainties in the external environment.

We will actively capture peak-season demand by strengthening our differentiated promotional activities centering on strategic products such as Neo QLED, OLED and also targeting consumer needs utilizing our differentiated lifestyle screens.

In addition, we will secure new growth engines by continuously diversifying sales channels and continue to lead the TV market by expanding the 98" Super large screen and Micro LED lineups.

Thank you

Thank you. That sums up the first quarter results presentations. Before we move on to the Q&A session, I would like to share several data points in key business areas. Considering the continuing macro uncertainties, we will not be providing annual guidance at this time. Comparative figures are on a sequential basis for quarterly data.

For DRAM, in the first quarter, our bit growth decreased by a percentage just into the double-digits; and ASP declined by a percentage in the low-to-mid teens. For the second quarter of this year, we expect market bit growth to increase by a low-double-digit percentage and our bit growth should be similar to market.

For NAND in 1Q, our bit growth increased by a low-single-digit percentage, while ASP fell by a percentage in the high teens. For 2Q, we expect market bit growth to be in the mid-single-digit range and our bit growth should be similar.

For Display in the first quarter, the small-panel portion of revenue was a percentage in the high-90 percent range; and small-panel sales volume decreased by a percentage in the mid-20s.

For MX in the January quarter, sales volumes of smartphones and tablets were approximately 60 million units and 7 million units, respectively, and smartphone ASP was USD 325. In the second quarter, we expect to see declines in shipments of smartphones and tablets as well as in smartphone ASP.

For TVs in 1Q, sales volume of LCD TVs decreased by a percentage in the low-to-mid teens; and for the current quarter, we expect it to contract by a percentage in the high-single-digits.

Now, I will now move on to the Q&A Session.
First, we will start taking questions from the conference call.

Q&A

<Q – SK Kim >:

My first question is about the memory division.

- In the first quarter, your DS division recorded an overall loss and it appears that the memory business is accounting for a larges hare of this loss. In that context, can you give us some more details behind the poor performance of the memory business this quarter -- in the first quarter?

- Second question is about the digital appliance business. Still in the first quarter, the digital appliance business performance relatively is still disappointing. Can you explain the reason why the poor performance is continuing and can you give us some outlook on your second quarter bottom-line?

<A>:

- To answer the question about the memory business first quarter results, in the first quarter, as you mentioned, our results of the memory business decreased significantly due to the demand weakness -- memory demand weakness continuing and that also being coupled with additional fall in prices.

To give you a bit more detail, many companies facing macroeconomic uncertainties have been operating conservative investment stance and this has resulted in a reduction in IT spending overall. So we have seen a slowdown of demand, especially around servers and storage.

Also, customers have been continuing to adjust their inventory to improve their financial conditions. This has led to a decrease in purchasing demand and this has driven to an additional price decline versus the previous quarter. Price changes are an item that has a direct impact on earnings and so during the first quarter, the additional price decline had a direct impact on our profitability as well.

Another factor in our first quarter results is the inventory valuation loss. Actually, in Q4, the inventory valuation loss started to kick in from the NAND product, but with the additional price decline, there was a larger inventory

valuation loss, including DRAM this time, recognized this quarter, and that had an additional impact on our performance.

- Your second question was about the details behind the performance of the digital appliance business. During the first quarter, the revenue of the digital appliance business decreased on a year-on-year basis, as we saw a decrease in global digital appliance market demand and also impact of inflation. Also, on the cost side, there was an increase of fixed cost nature. Costs that were, for example, logistics infrastructure that had been executed in response to the supply chain issues we saw in 2022. Also, expenses such as labor and utility increased also on a year-over-year basis by impact of global inflation.

On the material cost side, while material cost did improve versus last year, the raw material markets of certain raw materials such as steel plates, or resin, or foam insulation have actually been seeing strong demand. And so, the amount of decrease, the degree of decrease in material cost has not been as large as we had expected.

Now, looking towards the second quarter, what we expect in terms of our bottom-line is that we expect our revenue to be similar in second quarter to what we saw last year and that our profitability, our bottom-line, would also improve in the second quarter.

That said, we are still watching some downside factors. For example, there is still a risk of our performance being below what we expect, if the market contracts or inflation continues. Also, we think that there is a risk of possible increase of material cost versus the first quarter given the fact that the raw material market turnaround came faster than expected.

<Q - Ricky Seo>:

I have two questions.

- The first question is about the foundry. During your presentation, you mentioned about plans of the second-generation development of the 3-nano node. Can you give us a bit more detail of your plans of developing the cutting-edge nodes and also the roadmap for mass production? Also, can you give us an update an update on your customer order situation? Can you give us a bit more update on how new customers are being engaged?

- A second question is regarding the U.S. Chips Act that was announced. I think there is growing concern in the market of this bringing also increased risk, given the detail requirements, such as upside sharing or the requirement to share technology information and the guardrail system. Given this, can you share the company's plans on how to – how the company plans to respond to the Chips Act?

<A>:

- I would like to answer your first question by starting with a description of the key features of our 3-nano node. Samsung Foundry was the first in the world last year to adopt the GAA architecture through the MBCFET. MBCFET stands for Multi-Bridge Channel. And we did this because of the tradition of Samsung Foundry of emphasizing customer satisfaction and technology leadership.

You've also asked about the customer order updates and engagements. Our orders for the cutting-edge advanced nodes are mainly being consisted of mobile as well as HPC customers. And that is because we are the company that offers the only 3-nano product with GAA. We are currently running the 3-nano promotion and some of the customers have been creating test chips. We're also developing the 2-nano with mass production targeted 2025. And our goal is to stay ahead of the competition and to maintain our technology leadership in 2025.

- Your second question about the U.S. Chips Act actually covers several business units and therefore will be addressed by the IR team.

The Chips Act took effect with the signature of President Biden last August. Since then, there was following announcements of detailed rules in February and also the detailed guardrail rules announced in March, and they include several obligation clauses tied to the incentives offered under the Chips Act.

You've asked about the market being concerned of these requirements and obligations being tied to the incentives offered. The U.S. government regarding that has expressed that it will collect opinions and feedback from the industry and also carry out negotiations with individual companies to iron out the details of such obligation clauses. And we, Samsung, also plans to participate in such procedures. Also, the company currently is studying various possibilities

and scenarios and will continue to work on minimizing the geopolitical risk on our business.

<Q - Nicolas Gaudois>:

Good morning, and thanks for taking my questions.

- The first one relates to memory. Could you provide more color and context on the memory production cuts you have announced earlier this month? How sizable is the production cut that you ultimately plan to do and for which products?

- And secondly, it is well understood that this year, your flagship smartphone models, including the Galaxy S23, are solely using Qualcomm system solutions. Should we expect Exynos to come back in 2024, starting with the Galaxy S24? And also, could you please elaborate more broadly on the overall Exynos srategy going forward? Thank you.

<A>:

- First, to answer your question about the memory production cut, as you know, in terms of operating our memory production, our focus has been on maintaining stable supply capabilities of the products that the customers want from a mid to long-term perspective, rather than a near-term perspective. And we have been operating our production in order to secure sufficient inventory availability to respond to future demand.

Now, the rationale behind our production approach has been because while on the demand side, mid to long-term demand is expected to be solid, given the growth of several markets, such as automotive applications, and also the expected growth of the data-driven computing, such as AI or ML. On the production side, we do see bit growth restrictions, given the fact that there is a die size penalty in -- as part of the switch towards the new interface products. Also, there is growing difficulty with the advanced nodes in terms of technology, and also increased production lead times.

That said, we were looking into our production by product lineup, and found -- determined that in certain products, we have already secured sufficient volume

to supply and meet customer demand changes, and therefore decided to lower production in these products.

Therefore, the lowering of production that has been announced is being carried out mainly around the legacy products that we have already secured sufficient volume to meet mid to long-term demand. And this comes on top of the line optimization that already started in Q1. And so, we expect the size of the reduction to be far more meaningful, as we expect our inventory levels to start to decrease from Q2.

Also, going forward, in the second half, we will continue to monitor the market demand and operate our production flexibly. And so, we expect our inventory normalization speed to accelerate in the second half.

But now, to be clear, many outside research firms are forecasting that as customers complete their inventory adjustments during the first half, demand will gradually start to recover from the second half. And based on such outlook, we will maintain our advanced node production without any adjustments, given that the advanced node products will be leading the demand growth.

And going forward, we will continue to flexibly adjust our business strategy based on mid to long-term demand and also continuous strengthening of our – continuous strengthening of our mid to long-term demand and also our supply ability.

- Your second question was about the System LSI Exynos business. As you know, the MX business is a major customer of the System LSI. And our goal is to develop our business with a full lineup that can be applied in all of the Galaxy series segments, and we are currently pursuing re-entry to the flagship segment.

Now, that said, growth rate of the mobile market as a whole is on a decreasing trend and we do see the need for us to be prepared for that. And so, while in the short term, while we focus on building the SoC competitiveness for mobile SoCs, at the same time we are focusing on expanding our non-mobile business including automotive SoC. And also, to enhance our ability to rapidly respond to the market changes from a mid to long-term perspective, we are also continuing to focus our eff orts on market research and business feasibility studies, in order to develop new business areas.

<Q – Peter Lee >:

My first question is about the memory business.

- You have announced plans of reducing your production, but also you've announced that you plan to maintain your CapEx to a similar scale as previous years. Can you give us a bit a bit more detail behind why your CapEx would still remain similar, even though your production would be reduced?

- Second question is about the MX division. Actually, you have come in with better profit results than the market expected in first quarter. Can you give us a bit more detail behind that and also your plans of how to expand your profitability in the second quarter?

<A>:

- To answer your question, this year, we plan to maintain investments similar to the previous year. The reason why we have decided to maintain CapEx at similar levels as the previous year is because our key goal of the business is to maintain sustainable market leadership by strengthening our future competitiveness, rather than operating based on a near-term strategy.

And therefore, based on that business goal, despite our decision to lower our for our production, we are going to maintain CapEx at level similar to last year because we believe it is necessary for us to concentrate our investment capabilities preemptively from now, in order to secure future competitiveness.

The semiconductor business by nature requires consistent large-scale fab investment. Also, it takes quite a long time for the fab to go into mass production since the start of the investment itself.

Therefore, given the fact that mid to long-term demand is expected to be solid, in the future, in order to have the supply ability -- stable supply ability to capture that solid demand in the mid to long-term, we need to make the infrastructure investments that have longer lead times ahead of that of that from a mid to long-term perspective.

That's why we plan to continue our infrastructure investments for the Pyeongtaek Phase 3 and 4 lines in order to secure the necessary essential clean rooms that will give us the ability to timely respond to the growth of the mid to long-term demand.

Also, in addition to that, we are planning to increase the share of R&D investments. As the memory nodes become -- are further scaling, as we approach the cutting-edge nodes, the difficulty of development is increasing rapidly. And given the situation, we believe that we need to increase the investments preemptively from the R&D phase, in order to strengthen our quality and also develop our cutting-edge products timely. And this will be another way to enhance our competitive edge in responding to mid to long-term supply.

So in sum, while we have lowered our production in the short term, we will continue to thoroughly prepare for mid to long-term demand by continuing to make infrastructure investments to secure the necessary essential cleanrooms. And also, we will be increasing the share of R&D investment that will strengthen our technology leadership.

Now that said, we do recognize that there will be some impact of geopolitical issues and the macro economy on demand for some time. And therefore, in terms of equipment investments, we will execute that flexibly by carefully watching the industry situation.

- I'll take the question on MX. So in Q1, year-on-year declines in market demand mainly concentrated in the mass market segment were attributable to rising global interest rates and worsening economic indicators. But demand in the premium segment remained solid with slight growth.

Our total smartphone shipments in Q1 decreased Y-o-Y but grew quarter-on-quarter. And our revenue held up well compared to the market decline, thanks to a higher proportion of premium products and increased ASP, owing to flagship-oriented sales, especially theS23 series.

The S23 series achieved higher sales in Q1 compared to its predecessor series with favorable reviews from the market for the improved Nightography camera, gaming performance, and sustainability factors, all boosted by our Share the Epic campaign. And within the S23 series, the S23 Ultra proportion of sales increased and we continued to upsell by strengthening communication around our high storage models.

Regarding profitability, we secured a double-digit operating profit margin through continued eff orts on increasing operational efficiencies throughout the whole R&D, manufacturing, and logistics processes. Tablets and wearables

also contributed to the improved overall profitability in Q1 with continued solid sales and operations streamlining, even though no new product was launched. In Q2, we will continue to proactively address the premium and mass market segments with efficient product lineup operations in each geography and our upselling strategy, which together with continued optimization and efficiencies, we are aiming to maintain double-digit profitability.

<Q –J.J. Park>:

I have two questions.

- The first question is about the DDR5 demand. Can you give us a bit more update on the DDR5 especially? Have you seen an uptick on demand since the release of Sapphire Rapids?

- Second question is about the OLED 8.6G line. You've mentioned the investment into this during your presentation. When would be mass production from this line and how much capacity are you planning? Also, I think that I'm wondering whether there will be some overlap, in terms of product coverage by this line and your existing lines for TV. So this new 8.6G investment that you're planning, would it only be addressing IT applications or would it also cover TV?

<A>:

- Regarding your question about DDR5 demand, there is a bit of uncertainty still around DDR5 demand, given that customers' plans of adopting the new CPU platform that supports DDR5 is still fluid. As of now, the entire demand for PCs as well as server DRAM, DDR5 share is on the tract to come up to around low 20% as of second quarter, which is in line with original expectations.

Now, this switch to DDR5 does come with inherent bit production reduction because of the chip size penalty. But on the demand side, because it's a new product, there is still a low initial market inventory and we expect there to be an increase -- additional increase in demand in the second half. And in line with this expected growth of DDR5 demand, we are planning to accelerate the node migration for DDR5 products to further enhance our product competitiveness.

- Your second question was about the 8.6G OLED investment. I would like to give you a bit more background to why we decided this investment before

answering your questions about specific schedule, mass production schedules or how this will work with our existing QD-OLED TV capacity.

In the case of OLED for IT products, as people spend more time consuming content on IT products and also as they do more work that requires higher picture quality, there is a rapid demand growth and even the OEMs are continuing to adopt OLEDs more on their IT products as a differentiating feature. Also, it's that users are demanding for similar picture quality as they are used to on their smart phone. They want to see the same picture quality on their IT products.

Given this expected demand growth, we have been developing for several years' production -- mass production technology that has caused competitiveness. We have been working for several years on developing, for example, the large-sized substrate technology, low-cost technology, eco-friendly technology, and oxide technology to do this. And we have decided to make this investment, believing that we have reached a certain level of mature technology.

You've also asked about details of timeline, and given that this is the technology -- we are the first to try this technology, first time in the world, rather than setting fixed milestones in terms of future timeline, we are estimating, considering the level of technology we have developed, that we will be able to operate this line on a full-fledged scale within two to three-year timeline from investment.

In terms of capacity, the product that we will be producing in terms of size is roughly around 2x the size of a 6G glass. So in terms of capacity, we are expecting that we will be able to produce volume that would be corresponding to around 10 million notebooks or tablet PCs -- laptops or tablet PC OLEDs a year. We also are planning to make our production cost-competitive on the 8.6G line versus our existing 6G production line.

We have learned from our smartphone experience that such preemptive investments give us the advantage over competitors by allowing us to get the head start in terms of completing the core supply chain management and also gaining the know of materials and development. And so, in addition to the smartphones, by making this bold investment, we will focus on successfully expanding the OLED to other applications, including IT products.

<Q –Dongwon Kim>:

My first question is about the memory business.

- In terms of technology competitiveness, what kind of preparations are you making? Where are you focusing on in terms of technology competitiveness? And what are you preparing for the next-generation memory technology?

- Second question is about the display business. Recently, Samsung announced an MOU with a European OEM, and there is growing interest into the displays automotive business. Can you give us some update and future outlook on your automotive display business?

<A>:

- To answer your question about our technology competitiveness, as you know, we have continued to strengthen our competitiveness around the cutting-edge nodes. And in the case of DRAM, the focus has been on preparing for the mass production of 1b-nano products based on our EUV know-how. And that preparation for mass production is almost at the completion phase. And so, we are planning this year to go to mass production within the year with the 1b-nano base 32 gigabit DDR5 product to lead the industry.

On the NAND side, we have -- we -- our schedule is to complete preparations for mass production for the 8th generation V8 node for not only 1 terabyte but also the 512gigabyte within the second quarter. And that will give us the condition to -- we will be prepared therefore to address not only the performance, but also the value our markets within second quarter. Also on the solutions side, we have prepared the full lineup for the enterprise as well as the data center server, PCIe Gen 5, and we were the first in the industry to do so.

Now, regarding future markets, we're all continuing to make the necessary technological preparations to capture future markets. As you know, recently, the generative AI has become the very hot topic in the IT industry. And as a part of this, we are seeing an increased demand, especially around the high performance and high-density DRAMs.

And so given this trend, in order to provide the best performance and highest density products on time and in line with the AI market needs and technology trends, we have already supplied the HBM2 and HBM2E products to customers

and we're currently delivering samples for the ultra-low-power HBM3 eight-layer and 16 gigabytes and the 12-layer 24 gigabytes and have already completed mass production readiness. And the HBM3 will be followed in the second half with the HBM3P product, which is the next generation that offers industry-leading performance and density.

Now, there's also the -- with the generative AI server, there is a need for the high-density TSV modules. And regarding the TSV modules, by using our high-density products that uses the cutting-edge node technology, we are planning to strengthen our competitiveness of high-density products for servers that's 128 gigabytes and above.

Another area that we are looking at with quite a lot of interest is the CXL memory. With the data processing volume expected to rapidly increase going forward, there is a growing need for CXL memory that has higher density and larger bandwidth, as the industry starts to adopt dis-aggregated computing architectures. In fact, starting from this year, we are seeing increasing sample inquiries from customers for CXL products and overall growing interest in the market.

And as market interest in CXL increases, we have already completed development of the of the 512 gigabyte CXL DRAM last year, first in the industry, and also are currently preparing a lineup of CXL products based on CXL 2.0 across different densities. We're also currently developing an SSD based on CXL. And so, this is an example of how we continue to diversify our memory solutions according to customer demand, and we will continue to focus on enhancing our technology competitiveness to respond to future market opportunities.

- Your second question was about the automotive OLED, the display business. As you know, recently, with the increase of electric vehicles, EVs, there is a rapidly increasing adoption of OLED panels on the vehicle itself. Also, with the increased penetration of EVs, the vehicle itself is changing from a means of mobility to a smart space where the passengers can enjoy entertainment. Also, the most recent vehicle designs are adopting end-to-end full-sized displays, and the display itself is becoming a more important part of the vehicle interior.

Regarding our plans of developing the automotive display business, we are planning to pursue that by leveraging the technology we have already secured by our smartphone display business. We're currently in active communication

with key global automotive OEMs, including those in Europe, U.S., China, and Japan. And we are planning to actively promote the technologies that we have already developed and have been proven in the smartphones on auto applications. For example, this will be whole displays or under-panel cameras and other technologies that have been adopted in the foldable displays.

The automotive industry, we believe, emphasizes stable supply, given that an auto project is a very long-term business. And in terms of such stable supply capabilities and sustainable business ability, we believe that we have an advantage compared to competitors. For example, we have the largest OLED capacity in the world and have very stable financial strength. And this is an advantage compared to competitors. And by leveraging the advantages and strengths that we have, that I've just described, we plan on securing firm market leadership in automotive area by increasing the adoption of OLEDs in automobiles.

<Q>:

Finally, we will answer questions that were submitted online in advance. We have been accepting questions via our web page in advance of an earnings release, as part of our efforts to strengthen communication with individual investors and enhance understanding of the company. And we have received a wide variety of questions for this quarter.

I believe the majority of the submitted questions were sufficiently answered during the Q&A session. So we will answer one more question on a topic that garnered a high level of interest from our shareholders, but was not addressed during the Q&A session. And that question is the following.

What are the major ways to strengthen competitiveness such as raising the company's hardware specifications to cope with the mid to low-priced market? Please explain a major strategy such as price and marketing to boost demand.

<A>:

So, we're strengthening our product competitiveness in several ways that consumers will really be able to feel, including raising the hardware specifications of the A Series and expanding our premium software experience and design.

We're upgrading the AP in all models, which is core to the smartphone experience. We are also upgrading the camera and display by model, especially for the A54 5G, which has a big pixel camera sensor that's usually deployed in our flagships, which enables a high-quality and low-light camera experience. We're strengthening the Galaxy's core software experience, which is based on One UI 5.0, and the Galaxy design identity is being applied to all models of the 2023 A Series.

In Q2 in particular, we'll respond to the market contraction by focusing on the new A54and A34, which can become mega-hits with their improved product experience and an upselling strategy centered on high-capacity storage. We'll also collaborate more closely with local mobile carriers to highlight the fast 5G connectivity of the A Series for our customers, focused in areas where the 5G conversion rate is high, like Europe, Southeast Asia, Southwest Asia, and Latin America.

In terms of marketing, we're running our AWESOME campaign to communicate in a fun and intuitive way to MZ consumers about core experiences like our large displays, high-end cameras, high-capacity batteries, waterproofing and dustproofing, security, and OS upgrade support. We'll continue to reduce the purchase burden on consumers, while also boosting demand by setting competitive retail prices and operating purchase support programs like Samsung Trade-In and Student Offers, tailored to each model and region, and considering exchange rate effects and the local situation.

I would like to thank everyone who shared their valuable opinion and we will be sure to refer to them in our decision-making process. That completes our conference call for this quarter. We wish you and those close to you stay strong and in good health.

Thank you.