【Samsung Electronics Q3 Earnings Call】

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

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

Joining me today on the call 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.

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. They are subject to certain risks and uncertainties that may cause our actual results to materially differ from those expressed in today's discussion.

I will start with our results for the third quarter of 2023.

Our consolidated revenue increased 12.3% sequentially to 67.4 trillion won, with the release of new smartphone models and increased sales of premium Display products being the main contributors.

Consolidated gross profit increased 13.2%, up 2.4 trillion won quarter-on-quarter to 20.8 trillion won, led by improved product mixes from both MX and Display. Gross margin also increased slightly to 30.8 % from 30.6% in the previous quarter.

SG&A expenses grew 0.7 trillion won quarter-on-quarter to 18.4 trillion won, as advertising & promotional spending increased with the release of new smartphone models, while we continued our large scale commitment to R&D for future growth. However, as a percentage of sales, SG&A expenses decreased by 2.3% points to 27.2%.

Operating profit was 2.4 trillion won, up 1.8 trillion won sequentially, driven by strong sales of flagship models in MX, increased demand in Display thanks to strong demand for major clients' new products, and DS Division's narrowed losses, compared to the previous quarter.

I will now provide high-level overviews of our performance and outlooks, and representatives of the business units will provide more details following my presentation.

For the DS Division, Memory reduced its losses quarter-on-quarter mainly due to sales growth of high-value-added products and a rise in ASP.
For our system semiconductor businesses, results remained subdued with a delayed demand recovery in major applications. However, in Foundry, new backlog from design wins reached a new quarterly high.

In Display, the mobile panel business recorded a significant increase in profit thanks to the release of new flagship models by its major customers while the large panel business reduced its losses, as it saw improvements in both yields and cost efficiencies.

The DX Division again posted solid quarterly results despite a highly competitive market, as it delivered strong sales growth of premium smartphones and TVs.
In the Networks Business, sales decreased in major overseas markets, including North America, as mobile carriers scaled back their investments.
The Digital Appliances Business reported similar earnings year-on-year, in a period of weaker seasonality.

Harman notched a new high for quarterly operating profit, led by sales growth in car audio products amid an overall increase in orders from automotive customers, and also consumer audio products, such as portable speakers.

Regarding currency effects, average exchange rates of major currencies, such as the US dollar and the euro, had just minor fluctuations in the third quarter, and as a result, did not have any significant effect on our consolidated operating profit when compared to the previous quarter.

Now, I would like to share our business outlook.

In the fourth quarter, under prospects of a gradual recovery of global IT demand, the DS Division will focus on sales of high-value-added products, such as HBM, and bolstering technological leadership.
Display and DX, meanwhile, will remain committed to maintaining solid profitability via enhanced strategies focusing on premium markets.

For the DS Division, we expect demand from PC and mobile to improve as customer inventories have generally reached normal levels. The Memory business will actively address the growing demand for new interfaces while expanding the portion of advanced nodes; and HBM3 sales should start to expand meaningfully.
In our system semiconductor businesses, we expect to deliver improved results thanks to shipment starts for a major mobile customer's new products, which will also lead to demand growth for Foundry.

In Display, we expect the mobile panel business to maintain its strong performance on the back of continued robust demand for premium OLED smartphone displays. The large panel business will expand its QD-OLED sales driven by strong year-end seasonality.
The DX Division will strive to maintain solid profitability by reinforcing strategies for flagship smartphones; expanding sales of premium tablets and wearables; and capturing strong seasonal demand for high-value-added TVs.
Networks will seek to obtain additional wins in overseas markets.
Digital Appliances will focus on securing profitability while strengthening our product sales mix, centering on premium products.

Harman will push for another strong quarter by expanding sales of audio products during end-year seasonality amid ongoing and favorable trends in automotive product orders.

In 2024, while certain macro uncertainties seem likely to persist, we expect to see a recovery in Memory market conditions and IT demand. Accordingly, our component businesses will focus on expanding sales of high-performance, advanced-node products and continuing to win new orders. DX will strengthen its product competitiveness, focusing on premium segments, as it continues to prepare for future growth.

The DS Division, expecting that normalized inventory levels, as well as the trend of higher density adoption, will lead to a recovery in memory demand, will strive to expand sales of advanced-node products. We also plan to meet the demand for high-performance/high-bandwidth products by increasing our portion of HBM3 and HBM3E sales by leveraging the highest HBM production capacity in the industry.

For Foundry, we will work to narrow the gap with the lead competitor by entering mass production of our 2nd generation 3-nano GAA process and by starting operations of the Taylor Fab.
S.LSI will continue to strengthen the competitiveness of its SoC offerings.

In the Advanced Packaging business, which has been garnering keen attention recently, we have received orders from multiple domestic and overseas HPC customers, including orders for our one-stop turnkey service, which encompasses logic, HBM, and 2.5D. In 2024, we expect to start mass production and expand the business.

For Display, the mobile panel business will actively address rising demand in new application areas and leverage its technological leadership to further strengthen its position in the smartphone market.
In the large panel business, we will strengthen our position in the premium market and improve profitability by expanding our product lines and improving yields.

The DX Division will strengthen its competitiveness with a focus on premium segments by increasing smartphone sales centering on flagship models, continue introducing innovative TV products, and leading the market for super-large TVs.
DX will also thoroughly prepare for growth by expanding the application of AI technology; providing tailored, hyper-connected experiences via SmartThings; and securing technologies in new growth areas such as XR.

Networks will strive to grow revenue by actively seeking new overseas business opportunities while simultaneously expanding existing relationships. It will also reinforce its technology leadership in core 5G chips and VRAN.

Digital Appliances will strengthen its leadership in premium segments via simultaneous global launches of home appliances with AI features. Meanwhile, we will continue to advance interconnection experiences between

SmartThings-based digital appliances and other devices while also continuing to improve profitability through increased sales of higher-margin products such as system air conditioners.

Harman is expected to increase its presence in new areas—including automotive display—as it continues to upgrade the in-vehicle experiences; and to enhance responsiveness to high-growth product demand, such as home audio. Moreover, it will further differentiate its products and expand sales through synergistic collaborations with Samsung Electronics.

Moving onto capital expenditures.

Capex in the third quarter was 11.4 trillion won, of which 10.2 trillion won was invested by the DS Division and 0.7 trillion won by Display. Total capex up to the 3Q of this year is 36.7 trillion won, with 33.4 trillion won invested by DS and 1.6 trillion won by Display.

We expect full-year capex to be approximately 53.7 trillion won, with 47.5 trillion won allocated to DS and 3.1 trillion won to Display. As a reminder, the full-year numbers are projections, and the actual figures may differ depending on factors such as future market conditions and the timing of equipment deliveries.

Memory investments are ongoing in Pyeongtaek infrastructure, which include the completion of P3 and progress on P4 framework, all to prepare for mid-to-long-term demand; and the investment portion for R&D is likely to increase due to our strong commitment to enhance technology leadership.

And just to reiterate, we dynamically adjust our capacity investments in accordance with market conditions. Nonetheless, we remain committed to investing in new technologies, such as securing industry-leading HBM production capacity and process upgrades.

For Foundry, investments will center on expanding production capabilities at Pyeongtaek to address the demand for advanced processes, in accordance with our principles of responding swiftly and flexibly to customer demand. Foundry will also expand investments for our Taylor Fab infrastructure to ensure longer term readiness. As a result, we expect Foundry capex to increase compared to last year.

In Display, investments will primarily focus on preparing for IT OLED products and flexible displays.

Next, I would like to address the third quarter dividend.

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

Finally, I will share some of our key activities in sustainability management.

First, our company once again ranked top in Forbes's 2023 list of "World's Best Employers"—our fourth consecutive year at number one. To compile the list, Forbes surveyed over 170,000 employees in over 50 countries working for various multinationals. Evaluation criteria included talent development, working conditions, benefits, diversity, and pride in the company's products and/or services, and we were the only Asian company in the top 20.

Next, in September, we received the highest ranking in the Korea Commission for Corporate Partnership's "Win-Win Growth Index" for the 12th consecutive year. Such recognition reflects our efforts and achievements in partnerships with our supply chain, which have included support via a fund for partner's R&D/facility investments, free manufacturing/quality innovation consulting to over 1,800 companies in the past decade, and support for SMEs to build Smart Factories to enhance their competitiveness.

And finally, Samsung Electronics has further embraced environmentally responsible production by incorporating recycled materials in a combined total of 15 internal and external components of our new foldable phones, Galaxy Z flip5 and Z fold5. The materials include plastics sourced from not only discarded fishing nets and water barrels—which were also featured in the previous models—but also PET bottles, and aluminum and waste-glass by-products generated during manufacturing processes.

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 third 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.

In the third quarter, the memory market somewhat recovered compared to the previous quarter.

For PC and mobile, increasing adoption of high-density products in both DRAM and NAND and the completion of customers' inventory adjustments led to improvements in the demand environment.

For server, demand was relatively sluggish in conventional servers as IT investments by customers were limited under macroeconomic uncertainties, but demand for generative AI-oriented high-density and high-end products remained strong.

In addition, we received a number of purchase inquiries from customers seeking to secure component inventory. And it's based upon widening awareness that the industry reached a bottom, while the industry goes through production cuts.

Focusing on profitability improvement in normalizing industry conditions, we continued to expand sales of advanced-node products such as HBM, DDR5, LPDDR5x, and UFS 4.0. At the same time, for products with relatively high inventory levels, we strived to reduce inventory level by production adjustment rather than by aggressive sales expansion.

As a result, bit growth came in under guidance, but ASP of both DRAM and NAND saw some decent increase compared to the previous quarter.

Now, let's move to the outlook for the fourth quarter.

Considering the normalization of industry inventory level, we expect the recovery trend in the memory market to accelerate.

In PC and Mobile applications, amid normalizing finished-goods inventories at customers, component demand is likely to improve thanks to effects of peak seasonality, including year-end promotions and launches of new smartphones by major mobile customers.

Moreover, we expect to see a positive demand effect coming from the trend of high-density penetration for both PCs and mobile devices, which has been accelerating more than forecasted.

In server market, as cloud service providers' capex is concentrated on generative AI, the associated demand is expected to remain strong.
In addition, the expansion trend of purchasing activities is becoming more noticeable, because even server/storage OEMs and data center customers are getting aware that the memory market reaches a bottom as customer inventory levels will become normalized toward the end of the year.

Considering prospects of a market demand recovery and impacts of additional production cuts in the industry, we expect growth of the overall market ASP in the fourth quarter to expand compared to the previous quarter, although there can be some disparities in ASP movements among products.

Under these circumstances, we plan to operate businesses focusing on improving profitability. To do so, we will enlarge the sales portion of our high-profitable automotive products, and expand HBM3 mass-volume business for major customers, in line with growing demand for generative AI.

Also, we are now actively ramping up Pyeongtaek Line 3 as a part of the infrastructure investment activities that we have continuously carried on in order to secure mid- to long-term competitiveness and to expand the portion of cutting-edge nodes. Based on this, we will proactively address the rising demand for new interfaces such as DDR5, LPDDR5x, PCIe Gen5, and UFS 4.0.

Now let's move on to the outlook for 2024.

For PC and Mobile applications, set demand should benefit from the arrival of some replacement cycles for products sold during the initial phase of pandemic, and trends of high-density penetration are expected to keep expanding.

For DRAM, in particular, due to the spread of On-Device AI, the high-density trend in the flagship and high-end segments is expected to continue, and for NAND, the trend toward high density based on price elasticity is expected to set as a market trend.

Although demand in server application is improving relatively slow compared to the others, we expect overall memory demand to recover gradually thanks to increasing demand for AI and normalizing inventory levels at customers.

If the server market normalizes, the pace of business recovery may gain further momentum. But, various factors that could affect server market need to be continuously monitored. In particular, we will keep eyes on geopolitical issues, and IT spending trends which are related to macroeconomic condition and biased towards generative AI.

In this situation, in order to operate our business stably despite various uncertainties, we will expand sales of advanced-node products, such as 1b-nano-based DDR5/LPDDR5x and V8-based Gen5/UFS 4.0 while focusing on strengthening product competitiveness and improving profitability.

In addition, we plan to actively address the growing market demand for generative AI by significantly increasing our HBM3 and HBM3E portion of sales on the back of the industry-leading production capacity.

And, we strive to strengthen our market leadership by flexibly responding to diversified demand growth with our differentiated high-density, low-power, and high-performance products for On-Device AI, which has recently attracted significant attention.

Thank you.

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

In the third quarter, premium smartphone demand was solid, despite the influences of the economic downturn and inflation, as it is less sensitive to prices.
However, demand for mid- & low-priced models remained sluggish due to lengthened replacement cycles caused by a drop in consumer purchasing power.
As a result, performance improvements were slower than expected due to a delayed recovery in semiconductor demand alongside effects of inventory adjustments.

Mobile SoC has completed the development of E2400, which has significantly improved CPU, GPU, and NPU performances compared to its predecessor, and is expected to maximize user experiences, especially in high-end games through cutting-edge Ray Tracing technology with high benchmark performance.

In addition, Mobile DDI achieved its highest quarterly sales thus far this year backed by the launch of new products by major set customers; and image sensors have expanded the business area of 200 megapixel products from wide to tele applications.

In the fourth quarter, we expect the overall mobile market to remain mostly flat, but we believe inventory adjustments by customers are in their final stage and expect demand to start showing a recovery due to base effects. In addition, we expect our performance to improve significantly thanks to increased supply of parts for our major mobile customers' new products.

For mobile SoC, we are in the final developmental stages to respond to next year's flagship smartphones. Meanwhile, we plan to expand our business portfolio via targeting global customers for our modem business; and to enhance our solution capabilities for on-device AI.
Automotive SoC will strive to win design-awards for UWB and IVI products, and we expect image sensors to contribute to sales by starting mass production and supply of flagship-oriented sensors.

As the mobile market is forecast to pursue sales growth next year by increasing the premium model portion of sales, we will also seek qualitative growth by increasing our sales portion of flagship products.

In addition, to ensure a solid business structure that is less vulnerable to rapid market changes, we are assessing various options to widen our business area beyond the mobile market.

Thank you.

Good morning and good evening, everyone. This is Gibong Jeong from the Foundry Business.

In the third quarter, sluggish earnings continued, primarily due to fab expansion and lower capacity utilization stemming from anticipated volatilities in short-term demand forecast.
This recurring trend can be attributed to the impact of ongoing global macroeconomic uncertainties and the continuous inventory adjustments carried out by our customers. This, in turn, reflects a delayed recovery of demand for major applications such as mobile and consumer products among end-users.

Nonetheless, in the third quarter, we achieved a remarkable milestone – the largest new customer order per quarter, with a focus on High-Performance Computing (HPC) applications.
This achievement underscores our growing reputation and capability to meet the demands of customers seeking advanced process technology in the HPC field.
We anticipate robust mid-teens annual growth in new orders, with a strong uptick in GAA orders.

The rising interest in our advanced process technology reflects the expanding demand for generative AI and energy-efficient computing.
This addresses the need for superior performance, energy efficiency, and cost-effectiveness.
Our GAA process technology is attracting considerable attention in the HPC industry, and our long-term capacity planning will be aligned with these evolving demands.

Since the 2nd half of last year, we have been producing 3nm GAA products in volume. Concurrently, we are dedicated to advancing the 2nd generation of our 3nm GAA technology, in line with our strategic roadmap, and progressing well with 2nm GAA technology for mass production in 2025.

In this month, we held the SFF and SAFE 2023 in Japan and Germany. During these events, we showcased our process technology roadmap for both advanced and mature nodes, presented our design platforms and ecosystem, and shared insights into our long-term capacity planning.

This comprehensive presentation also included a dedicated session on our Automotive and HPC solutions, where we introduced our 5nm eMRAM offerings.
In addition we actively promoted the Multi-Die Integration Alliance together with ecosystem partners. We emphasized the importance of collaboration as a key to success in the chiplet and advanced packaging industry.

In the fourth quarter, uncertainties persist regarding the market's recovery, driven by wars and geopolitical risks, a gradual demand rebound, and ongoing customer inventory adjustments.
Nevertheless, we are observing initial indications of demand gradually stabilizing and improving, spurred by recovering consumer sentiment, easing inflation, and major customers introducing new products, particularly in the PC and mobile segments.

To capture the upcoming increases in customer demand, we will prioritize enhancing our GAA technology, focusing on top-tier performance and energy efficiency.
We are fully committed to expanding our product portfolio through continuous development of specialized process technologies, including 5nm RF and eMRAM, embedded magnetic RAM technology.

That concludes my key messages from the Foundry Business.

Thank you.

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

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

For the mobile display business, market demand increased slightly quarter-on-quarter. Notably, with the polarizing trend intensifying between high-end and mid-range-and-below markets, we achieved solid results by focusing on premium OLED.

For the large display business, amid muted demand, we concentrated on high-end products such as gaming monitors; and we improved our bottom line by building stronger operational fundamentals, enabling yields and reduced losses.

Next, I will share our outlook and strategy for the fourth quarter and 2024.

For the mobile display business, we expect an increase in sales thanks to seasonal effects in the smartphone and IT markets, but any growth is likely to be limited as lingering inflation and high interest rates weigh on consumer sentiment.

We will strive to generate similar results quarter-on-quarter all odds by leveraging our competitiveness in the high-end market, that shows relatively strong demand and new foldable product offerings.

For the large display business, despite concerns over prolonged tepid demand due to the economic downturn, we will strive to offset losses by improving our mix via an increased share of monitors.

In 2024, in spite of persistent and adverse macro factors, we will double down on our efforts to continuously secure robust results by utilizing our unrivaled capabilities, which include preemptive investments, development of differentiated technologies, and our ability to manage reliable product quality and yield.

Also, our strategic customers are releasing products featuring OLED in earnest in the foldable smartphone, IT OLED, Automotive, and Gaming segments—areas that we have been committed to for several years to diversify our

business. We will actively promote OLED’s unique selling points and create a turning point in the market.

In particular, we will maintain our leadership by developing not only technology that caters to customer needs, but also a complete supply chain—both upstream and downstream—in the high-potential AR/VR markets.

Thank you.

Hi everyone, this is Daniel Araujo from the Mobile eXperience division.

I'd like to share our results for 2023 Q3 and the outlook for Q4 and next year.

In Q3, global smartphone market demand rebounded, leading to market growth QoQ. MX sales and operating profit both increased QoQ thanks to the successful launch of our new flagship models.

New foldables, tablets, and wearables all showed strong sales, backed by smooth supply, and the S23, which we released in the first half of the year, also maintained solid sales momentum. The portion of flagship sales in our major product lines increased, thus raising ASP and growing overall sales.
Together with continuous efforts to enhance resource allocation, we achieved solid double-digit profitability.

Next let me share the outlook for Q4.

Due to seasonality, the smartphone market is expected to grow and competition to intensify, especially in the premium segment.
Competition within the mass market segment is also expected to intensify, and given the geopolitical situation, market uncertainties remain.

As for the MX Business, we will continue steady sales of our new foldable products as well as the S23 series with various sales promotions in anticipation of the year-end holiday season.

For tablets and wearables, we will expand sales, focused on new premium products, by actively leveraging seasonality and strengthening marketing campaigns in close collaboration with our partners.

As competition in the smartphone market intensifies and economic uncertainties remain, we'll make every effort to expand flagship-oriented sales and up-selling, in order to increase revenue and profits YoY.

Next, let me share the outlook for 2024.

In 2022 to 2023, contraction of the smartphone market continued due to prolonged economic uncertainties. In 2024, however, market demand is expected to turn around as consumer sentiment stabilizes in anticipation of a

soft landing of the global economy, with the premium segment continuing steady growth.

Similarly, the tablet market also contracted in 2022 and 2023—compared to 2021's high demand related to remote work and education—but is expected to turn around in 2024, with growth focused on the premium segment, as the replacement cycle approaches.

In wearables, the smartwatch market is forecast to grow by double digits, given the replacement cycle together with health-related demand in advanced markets, and an increasing penetration rate in emerging markets. The TWS market is expected to grow slightly, mainly due to expansion of the mass market segment, primarily in emerging markets.

As for the MX Business, in line with our customers' needs, we're striving to refine and enhance the core experience of premium smartphones even further, and as global leader of the foldables market, widen the gap with our competitors.
Through these efforts, we aim to grow annual flagship shipments by double digits and achieve smartphone revenue growth exceeding the market growth.

In tablets, we're focusing on boosting sales by strengthening the premium product line-up to meet consumer preferences for large screens, and further advancing experiences such as the S-pen.

For wearables, we will increase their contribution to profits by expanding sales focusing on newer models and increasing the attach rate to smartphones by providing a stronger connected experience.

In particular, we'll actively address customer demand related to healthy living by strengthening wellness features of the Galaxy Watch, while for TWS, we'll focus on establishing a full lineup that can address the growing mass market segment as well as strengthen high-quality sound, active noise cancellation, fit, and other aspects of premium Galaxy Buds products.

Through these efforts, we aim to grow annual revenue and profit in 2024, while also continuing to enhance resource allocation in response to market instability, in our effort to secure stronger profitability.

Furthermore, we are trying to create meaningful innovations by applying Generative AI technology beginning with the core functionality that people need the most and use every day. We'll provide our customers with a more creative, convenient, and hyper-personalized functionality starting next year.

Additionally, in future growth areas like XR, Digital Health, and Digital Wallet, we're strengthening investment and advanced R&D in order to secure core technology, and collaborating closely with partners from the initial stages, to build an ecosystem so that the MX Business continues its growth in the mid-to-long-term as well.

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 3rd quarter of 2023.

TV market demand increased quarter-on-quarter, mainly due to seasonality, but decreased slightly year-on-year as consumer sentiment continued to decline amid the influence of various macro factors.

For Samsung, we expanded our leadership in the premium market by focusing on sales of high-value-added products, such as Neo QLED/OLED/super-big TVs, and we improved year-on-year profitability by reducing overall costs, including material costs.

Now, let me go over the outlook for the 4th quarter and for 2024.

In the 4th quarter, we expect demand uncertainty to continue due to various risks in the business environment; but demand should remain solid for premium products such as QLED/OLED and Super-big TVs. That said, we expect competition to intensify as companies respond to peak seasonality.

At Samsung, we will continue to strengthen the competitiveness of online and offline channels to capture peak-season demand; and focus on securing profitability by continuing to improve the mix centering on high-value-added product lines, such as Neo QLED/98" Super big TV /Lifestyle Screen.

Regarding the TV market in 2024, Demand is likely to fluctuate depending on the impact of external risks that continue from this year; and consumer sentiment is expected improve slightly from its current weakening trend and ease the decline in market demand compared to this year.

We will continue to innovate products centering on premium/lifestyle screens and lead the ultra-high-definition/ultra-large size TV market, targeting demand linked to several sporting events scheduled to be held in 2024.

Moreover, we will provide differentiated screen experiences and continue to actively promote not only the basic competitiveness of our TV products, such as picture and sound quality, but also product features related to areas that are

highly valued by our consumers recently, such as the environment, security, and content.

Thank you.

Thank you. That sums up the third quarter results presentations. Before we move on to the Q&A session, I would like to share several data points in key business areas. Comparative figures are on a sequential basis for quarterly data.

For DRAM, in the third quarter, our bit growth was approximately 10%; and ASP increased by a percentage in the mid-single-digits. For 4Q, we expect market bit growth to be around 10%, and our bit growth to exceed the market.

For NAND, our bit growth declined by a low-single-digit percentage, while ASP increased by a low-single-digit percentage. For the fourth quarter, we expect market bit growth to be flat and our bit growth to be above the market level.

For Display in the third quarter, the small-panel portion of revenue was in the high 90 percent-range; and small-panel sales volume grew by a percentage in the mid-teens.

In MX, approximate sales volumes of smartphones and tablets were 59 million units and 6 million units, respectively, and smartphone ASP was USD 295. In the fourth quarter, we expect smartphone shipments and ASP to decrease, and tablet shipments to rise.

For TVs in 3Q, sales volume increased by a percentage in the early part of the 10% range; and we expect it to grow by a percentage in the high teens in 4Q.

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

Q&A

<Q – Peter Lee>:

I have two questions.

- My first question is a memory HBM question. There has been growing interest in the market regarding HBM. Can you give us some updates on how you're responding with your HBM3, and also your plans of developing the HBM3E business?

- Second question is to Display. Your third quarter performance was quite noticeable and you have been maintaining the large gap versus competitors for quite some time. Internally what the Samsung Display consider to be its competitive edge?

<A>:

- To answer your first question about the HBM, there has been a rapid increase in HBM demand, especially with the wider adoption of generative AI. Following our HBM2E, we have been actively expanding our HBM3 and HBM3E new product businesses. Regarding next year, in order to maintain the industry's largest supply capacity for HBM, next year we're planning to increase our supply capacity capability for HBM by 2.5 times increase. And also, we have already completed supply talks for next year with our key customers for this volume.

An update on our HBM3 business. Already in third quarter, we have mass produced and started supply of both 8-high and 12-high products and we are planning to increase that scale further throughout the fourth quarter, and so we expect our HBM3 to continuously increase, so that by first half of next year, it will account for more than half of our entire HBM volume.

In the case of our next generation HBM3E, it has been developed with 9.8-giga bps, which is industry's highest level performance. We've already started supply of samples for the 24-gigabyte 8-high product and plan to start mass production of this during the first half of next year. The 36-gigabyte 12-high product is scheduled for sample supply during the first quarter of next year.

Particularly, the HBM3E product is based on already proven 1A nano node technology and therefore it has advantages in terms of capacity scale and also mass production stability and we will be able to provide key customers with that additional comfort of stable supply. Also next year, second half, we plan to have a rapid switch over to HBM3E in order to actively capture the growing demand from the AI market.

And so regarding HBM, our plan and strategy is to maintain our leadership in the HBM market through greater product competitiveness, such as higher speed and low power, and also stable supply.

- To answer your second question about display and what we consider to be our strength that are keeping that gap versus competitors.
Recently during the several past years, there has been some structural challenges or threats such as competitors catching up and also the market becoming the more mature. Actually, we have foreseen this happening and so far, several years before, we have prepared against these challenges. And I think these efforts have started to deliver visible results.

I think one of our key competitive advantages is on the technology side. As the leader of the OLED industry, we have accumulated quite a large IP and technology know-how and that has worked as a very effective entry barrier against competitors. Even though competitors have been catching up and the market and products have become more mature, we actually see new technologies and new entry barriers being built up such as whole display and oxide new technology.

In addition to this technology advantage, the fact that we are the largest producer of OLED gives us the advantage economies of scale as well as the competitive supply chain that we have benefited from. That has contributed to our competitive advantage. Unlike LCD, in the case of OLED, there's a complicated layering of different materials, and also various components and equipments are key and critical to competitiveness. I think that has been also an advantage for us.

We do know that the smartphone innovations are leveling off, and the replacement cycles on smartphones are becoming longer, that has made competition more fierce. So we will continue to invest further on R&D and also focus on building a more competitive supply chain, so that we can maintain and strengthen our competitive advantage, while at the same time expand to new

business areas, such as IT, automotive, AR and VR, to create a more stable business portfolio.

<Q – Giuni Lee>:

I have two questions.

- My first question is a memory question.
I am wondering whether you have also reversed your inventory valuation loss this quarter like some other memory companies. Also in that context, can you give us a bit more detail of the criteria that the company uses user to take or reverse inventory valuation loss?

- Second question is once again towards display.
There is a lot of interest in the market towards the OLED IT market, and I think SDC, Samsung Display, is currently the only company that has made the 8G IT OLED investments. Can you give us an update on that investment and also in that context, what is your overall strategy regarding IT OLED?

<A>:

- To answer your question about the memory valuation, the inventory valuation loss. Despite the increase of ASP during third quarter, we actually took meaningful size of additional inventory valuation loss in third quarter due to some production cut effect and also our conservative accounting standards.

And you've asked about the criteria that we use for this. We take a conservative approach when either taking or reversing our inventory valuation loss, and of course depending on each company's accounting standards, the level or size of reversal or loss taking could differ even during a price rebound phase.

- To answer your question about the IT OLED investments, as we mentioned during the presentation, most of the investments for SDC in third quarter were in the investments in the 8.6G. Our investments are on track and we are gaining steadily both on product development as well as raising the completeness of our technology.

The definition of success for this project would be to achieve the same high level of completeness in the large-size IT OLED products even though they are

produced on large area glass that are around 2 times larger than our existing lines. We -- as you have mentioned in your question, we have started this investment earlier than other companies. The competitors have not yet been able to follow us on this investment. There could be several reasons why.

I think one is the fact that we have already secured the supply chain is a barrier that's keeping competitors from following. Also, at this point, there are not many companies that have both the technology and the investment capacity. And I think the head start we have made will give us a first mover advantage, not only in terms of technology, but also in claiming markets.

Of course, there are still different views regarding the IT OLED market and the IT consumption has rapidly decreased post-pandemic. And so there are some risks when we look into the market itself. However, fundamentally versus LCD, the OLED display has advantages not only in picture quality but also the fact that it's thinner and lighter. And so we think that there is sufficient competitiveness for IT OLED and also we know that collaboration with strategic customers are very critical and so we are closely collaborating with them. So we are going to continue to work on perfecting our technology and further enhancing our cost competitiveness, so that we will see another wave of OLED innovation in other applications such as IT and automotive.

<Q - Dongwon Kim>:

I have only one question about memory, and that's about your next year outlook on memory supply, demand, and if possible ASP?

<A>:

- First, in terms of next year demand, we think that the current recovery that we're seeing will continue. Next year, the fact that customers and industry inventory have been normalizing, also the growth in AI-related demand, and also the high-density trend in PC and mobile, all are positive factors assigning for demand recovery next year.

Now regarding the supply side, next year, we think that on a selective basis, production cuts would continue within the industry next year. Also considering the fact that there has been an overall reduction in Capex in the industry since the second half of 2022, there will be a fairly limited up room in terms of production bit growth next year in the industry. On top of that, considering

that even within the limited Capex, most of them has been focused on HBM related investments. The production bit growth in other advanced node products would actually be lower than the demand growth average.
And so we think that in these products, the industry improvement, the recovery could actually happen earlier than other products.

Now regarding ASP, because there are so many factors in play, we're still very cautious. But we think that as the overall industry recovers, the potential for price increase would also further increase. That said, of course, that would depend on each product, because the demand and supply situation would differ.

<Q – Sung Kyu Kim>:

I have two questions.

- My first question is a memory question. Samsung has been going through quite aggressive production cuts. Can you give us a bit more detail of the size of the production reduction by product and roughly until when you plan to continue to reduce your production?

- Second question is for digital appliances. Your profitability has continued to worsen, and this does tie in with the fact that overall consumer durable demand has been slowing down. What are your plans to improve the profitability of the business? And also, there has been quite a lot of interest around AI. Does the company have any plans of launching digital appliances that are related with AI or services? And can you share with us your overall strategy?

<A>:

- Now regarding your first question, as we mentioned during the past earnings call, we have continue to downwardly adjust our production volumes and especially with this flexible production operation and improving demand, our inventory, after peaking out in May, has been decreasing for both DRAM and NAND. And looking towards the fourth quarter, considering the improved demand environment and also our continued downward adjustment of production, we think that our inventory levels will decrease at a rapid pace during Q4.

Our basic approach is to achieve normal inventory levels within a short period of time, and in order to do that, we are planning to take additional necessary measures such as selective production adjustments additionally, and also for the time being, we plan to downward adjust the production of NAND larger versus DRAM.

Among various products, especially, the advanced node products that are essential for high-performance on-device AI products or generative AI, the demand for these products have been rapidly increasing. But actually, the increase in supply is relatively limited, given the fact that during 2022 to 2023, there has been a reduction of Capex within the industry.

On the other hand, we have maintained our Capex for the sake of mid to long-term competitiveness. And based on that Capex, we are planning to continue to expand the supply of our cutting, the advanced node products, without any downward adjustment in production. So this would include products such as the 1a, 1b nano DRAM, and the V7/V8 NAND. And by increasing the supply share of these advanced node products, we plan to further strengthen our position within the market.

- To answer your second question about the digital appliance profitability, we have been working on various fronts to further improve our profitability, such as increasing the revenue, especially around the premium products. Number two, working through the component inventory that we had built up during COVID, which had been a burden. And number three is to improving the competitiveness of our material costs. For example, by signing competitive contracts with shipping companies and logistics contracts.

We have also been continuously working on streamlining our models, increasing the share of components that are standardized or common use, also introducing more manufacturing automation and improving our supply chain. And with these operational efficiency initiatives becoming more visible, we are looking forward to a turnaround next year in 2024.

You've also asked about our AI-related plans and strategies. We have several initiatives going on that front as well. For example, we are planning to roll out our AI energy mode to a wider range of our products. This will help respond to the increasing demand for high-efficiency appliances. Also, we are planning to launch the Bespoke with AI Care solution globally in all of our products. The Bespoke with AI Care solution actually senses the situation autonomously,

learn the user's usage pattern, and provides customized functions and features. We're planning to launch this in all our product groups globally at the same time.

Also on top of that, we want to connect various digital appliances, mobile devices, and TV, so that in the home, the consumer is able to enjoy a very simple, easy, but also healthy and convenient lifestyle by, for example, having the devices connected and operate according to the process of shopping groceries, storing, prepping, cooking, and also cleaning.

<Q – Young-gun Kim>:

I have one question regarding the mobile device. Can you give us your outlook for the foldable market next year and also whether you're planning to leverage your success experience on the mobile form factor to other devices such as tablets and PCs?

<A>:

- This is Daniel from MX again. The foldable market in 2024 is forecast to continue on last year's growth in all regions as well as continue expanding its portion of the premium market. Demand in the super-premium segment, which is less affected by economic fluctuations should continue to be strong and we'll see polarizing demand patterns as the foldable technology becomes more widespread and the mass market segment also sees high growth.

We pioneered the foldable category and as you know, our foldable phones have been well-received by the market. So going forward, we plan for foldables to be a key engine for our flagship growth with their clear differentiation in usability, experience, and refined product quality tailored to those -- to these form factors.

The Z Fold 5, which was released in the second half of the year, improved on the multitasking and productivity experience enabled by the large screen. And together with the gaming experience, it's attracting new user inflow and upgrades by customers who prefer high performance and large screen viewing. The Z Fold 5, with its iconic design and color selection, the FlexCam selfie, and bigger cover screen to help users express their individuality, is expanding its base among the younger generation and female customers in particular.

So we're strengthening tactile marketing in order to expand interaction points of the foldable experience and enhance product appeal as we also improve sell-out platforms like trade-ins, equipment installment plans, and student offers to reduce the purchase burden on our customers and broaden our customer base in the long run. And designs of the traditional EIP or equipment installment plan, we're also offering various new payment options like buy now, pay later. And considering the high retention rate of current foldable customers, we aim to boost upgrades by providing additional trading incentives for target customers who are more likely to purchase.

And lastly, on the last part of your question, we're open to the possibility of expanding the foldable category from only smartphones into other product groups like laptops and tablets.

<Q – Min-sook Chae>:

- My first question is about the NAND business. The NAND business profitability has declined. What is your plan of responding to this?

- Second question is for the foundry and the packaging side. In addition to the -- so with the growth of demand related with generative AI, there is a market view that there will be a shortage of not only advanced node foundry, but also advanced packaging capacity. In this context, does the company have any plans of increasing its capacity?

<A>:

- To answer your first question about our NAND, I think during the recent downturn, it was very much highlighted that in the business, cost competitiveness and also the product competitiveness is very critical. We are also putting a priority on these two aspects and therefore accelerating our node migration to V7 and V8. Especially the recent VEU approval from the U.S. government has resolved quite a lot of uncertainty around the Xian fab node migration. And so we expect that our migration towards the advanced nodes will actually accelerate going forward.

While we go through that migration, we're also working very hard on the development of V9 to give us additional cost and also product competitiveness. In V9, the core of cost competitiveness comes from being able to stack up a higher level layers of cell with minimum stacking numbers. And with our unique etching technology, we have been able to implement a 160 layers on a

single stack. And so with this, we have been able to successfully secure a mass production operational chip V9 at around 300 layer levels with only a double stack process.

And so compared to what the industry offers, we have the advantage in terms of superior mass-productivity and shorter manufacturing lead time. We expect to carry this into our V9 offering, so that we will be able to further enhance our cost competitiveness and market response.

Also, as the client on-device AI grows and the server market continues to adopt PCIe Gen6, there will be a greater market demand, we believe, for a high performance, low-power NAND. And therefore, our V9 will adopt a new technology that would give it 20% improved write performance and also 15% improved power performance versus the previous generation. This is an example of how we continue to provide products that meet market demand.

While investment environment remains challenging due to the unprecedented weak market situation, we will continue to make investments and challenges to secure new future products that will give us the advantage in terms of cost and performance.

- To answer your question, with the large increase in demand and interest into generative AI, especially the large language model AI, there has been a shortage of supply of two data centers related with AI.

The accelerator module actually consists of four large elements, one is the advanced node that's used for the AI chip itself. Then there are the mature nodes that are used for the silicon interposer. Then there's the HBM memory and the 2.5D package.

And within the supply chain, what seems to be currently the bottleneck is the HBM and the 2.5D package.

And so given the situation, we are focusing on rapid – quickly increasing the supply ability around the key bottlenecks at the HBM and the 2.5D packaging while we continue to monitor the supply situation to plan out further investments and increases if necessary.

<Q>:

Finally, we will answer questions that were submitted online in advance. We have been accepting questions via our webpage in advance of an earnings release as part of our efforts to strengthen communication with individual investors and also enhance understanding of the company. We received a wide variety of questions for this quarter as well. I believe the majority of the questions were sufficiently answered during the Q&A session and we will answer one more question on a topic that garnered a high level of interest from our shareholders but were not addressed during the Q&A.

The question is the following. It appears that generative AI is spreading globally and bringing many changes in our daily lives. So anticipation is growing that AI will be integrated into devices like smartphones and tablets. Could you please tell us how Samsung is preparing for developments related with on-device AI? And this question will be answered by VP, Daniel Araujo, representing the Mobile eXperience.

<A>:

So smartphones are poised to become the most important access point for AI. So based on our device strength and our global installed base of KRW1.1 billion, we want to establish a new standard for experiences that mobile devices can provide through hybrid AI, which encompasses both on-device and server-based AI solutions. AI technology, which continues to evolve, is progressing both on the cloud and on-device, especially around generative AI or gen-AI. And recently, on-device AI is gaining traction.

Cloud-based gen-AI models have the strength of being able to provide a very wide range of services, but there are some difficulties in reflecting the characteristics of edge devices.
On-device gen-AI solutions, on the other hand, can be fine-tuned for product characteristics like input data and device usage patterns and also have scalability to expand our services since they can be linked as needed to cloud-based solutions.

So we recognize the possibilities and importance presented by on-device AI technology, and we continue to work to use it to realize new experiences for our devices. We expect to apply gen-AI technology to the core functionality that our users interact with every day in order to bring more creativity and

convenience to their daily lives. And beginning in 2024, we plan to offer meaningful and innovative experiences optimized for our users' most important functions based on their individual usage patterns and preferences. Thank you.

I would like to thank everybody who shared their valuable opinions and we will be sure to refer them in our decision-making process. And with that, that completes our conference call for this quarter. And we wish all of you and those close to you to stay strong and in good health.

Thank you.