STMicroelectronics N.V., Q2 2023 Earnings Call, Jul 27, 2023 (EditedCopy)

TEXT version of Transcript

Corporate Participants

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  STMicroelectronics N.V. - Group Vice President of Investor Relations

* Jean-Marc Chery

  STMicroelectronics N.V. - President, CEO & Member of Managing Board

* Lorenzo Grandi

  STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO

Conference Call Participants

* Aleksander Peterc

  Societe Generale Cross Asset Research - Equity Analyst

* Andrew Michael Gardiner

  Citigroup Inc., Research Division - Research Analyst

* Didier Scemama

  BofA Securities, Research Division - Director in EMEA Equity Research & Head of European IT Hardware

* Francois-Xavier Bouvignies

  UBS Investment Bank, Research Division - Technology Analyst

* Jerome Ramel

  BNP Paribas Exane, Research Division - Analyst of IT hardware and Semiconductor

* Johannes Schaller

  Deutsche Bank AG, Research Division - Research Analyst

* Joshua Louis Buchalter

  TD Cowen, Research Division - Vice President

* Lee John Simpson

  Morgan Stanley, Research Division - Equity Analyst

Presentation

Operator [1]

Ladies and gentlemen, welcome to the STMicroelectronics Q2 2023 Earnings Results Conference Call and Live Webcast. I am Moira, the Chorus Call operator. [Operator Instructions] The conference is being recorded. [Operator Instructions] The conference must not be recorded for publication or broadcast.

At this time, it's my pleasure to hand over to Celine Berthier, Group Vice President, Head of Investor Relations. Please go ahead, madam.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [2]

Thank you, Mara, and good morning. Thank you, everyone, for joining our second quarter 2023 financial results conference call.

Hosting the call today is Jean-Marc Chery, ST's President and Chief Executive Officer. Joining Jean-Marc on the call today are Lorenzo Grandi, President of Finance, Purchasing, ERM and Revenue and Chief Financial Officer; Marco Cassis, President of Analog, MEMS and Sensor Group and Head of STMicroelectronics Strategy, System Research and Application Innovation Office.

This live webcast and presentation materials can be accessed on ST's Investor Relations website. The replay will be available shortly after the conclusion of this call.

This call will include forward-looking statements that involve risk factors that could cause ST's results to differ materially from management's expectations and plans. We encourage you to review the safe harbor statement contained in the press release that was issued with the results this morning and also in ST's most recent regulatory filings for a full description of these risk factors.

[Operator Instructions] I'd now like to turn the call over to Jean-Marc, President, and CEO.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [3]

Thank you, Celine, and good morning, everyone, and thank you for joining ST for our Q2 2023 earnings conference call. In Q2, our balanced end market approach, our broad product portfolio and strong customer relationships, enabled again a double-digit year-over-year growth. This performance came along with a year-over-year increase of our profitability. And as already anticipated, 2023 will be another year of progress toward our $20 billion plus revenue ambition and related financial model.

Now let's start with the financial highlights overview. Second quarter net revenues of $4.33 billion came in above the midpoint of our business outlook range, and Q2 gross margin of 49% was in line with guidance. Q2 net revenues increased 12.7% year-over-year. The revenue performance continued to be driven by growth in Automotive and Industrial, partially offset by lower revenues in Personal Electronics.

Looking at our year-over-year performance, gross margin increased to 49% from 47.4%. Operating margin increased to 26.5% from 26.2%. And net income increased 15.5% to $1 billion. On the first half of 2023, net revenues increased 16.1% year-over-year to $8.57 billion, driven by growth in all product groups, except the Analog and MEMS subgroups. We reported gross margin of 49.3%, operating margin of 27.4% and net income of $2.05 billion.

On Q3 2023, our third quarter business outlook at the midpoint is for net revenues of about $4.38 billion, increasing 1.2% year-over-year and by 1.1% sequentially. Excluding the impact of the change in product mix in an engaged customer program in Personal Electronics, I mentioned in January, the Q3 revenue growth at the midpoint would be 3.5% year-over-year and 3.2% sequentially. Gross margin is expected to be about 47.5%. For the full year 2023, we will drive the company based on the plan for revenues of $17.4 billion, plus or minus $150 million. This represents a year-over-year growth of about 8%, and we now anticipate the gross margin to exceed 48% for the full year.

Now I will move to a detailed review of the second quarter. Net revenues increased 12.7% year-over-year. This performance was driven mainly by ADG, up 34.4%, and MDG, up 13%, and continued strength in Automotive and Industrial. AMS revenues decreased 15.7%, mainly reflecting lower revenues in Personal Electronics as expected. Year-over-year, sales increased 9.8% to OEMs and 18.3% to Distribution.

On a sequential basis, net revenues increased 1.9% with ADG up 8.2%, MDG up 4.3% and AMS down 11.9%. Net revenues came in 110 basis points above the midpoint of our outlook, mainly due to Automotive.

Gross profit was $2.12 billion, increasing 16.5% year-over-year. Gross margin increased to 49% compared to 47.4% in the same quarter last year. The 160 basis points expansion was driven by product mix, favorable pricing, positive currency effect net of hedging, and partially offset by higher manufacturing costs. Year-over-year, the second quarter operating income increased 14.2% to $1.15 billion. In the quarter, net operating expenses include negative nonrecurring noncash items amounting to $34 million. Operating margin was 26.5%, increasing from 26.2% in Q2 2022.

On a year-over-year basis, Q2 net income increased 15.5% to $1 billion compared to $867 million in the year ago quarter. Earnings per diluted share increased 15.2% to $1.06 compared to $0.92.

Looking at our year-over-year sales performance by product group: ADG revenues increased 34.4%, on double-digit growth in both Automotive and Power Discrete. AMS revenues decreased 15.7%, with lower revenues in the 3 subgroups. MDG revenues increased 13%, with growth in Microcontrollers and RF Communications.

In terms of operating margin, 2 of 3 product groups delivered year-on-year improvement: ADG operating margin increased to 31.9% from 24.7%. MDG operating margin increased to 35.4% from 33.6%, while AMS operating margin decreased to 14.8% from 24.1%.

Net cash from operating activities increased 24.1% to $1.31 billion in Q2 versus $1.06 billion in the year ago quarter.

CapEx in the second quarter was $1.07 billion compared to $809 million in the year ago quarter.

Free cash flow was $209 million compared to the $230 million in the year ago quarter.

During the second quarter, ST paid $50 million of cash dividends to stockholders, and we executed an $86 million share buyback under our current share repurchase program.

ST's net financial position of $1.91 billion as of July 1, 2023, reflected total liquidity of $4.56 billion and total financial debt of $2.65 billion.

Let me go through a recap of the main Q2 corporate and business highlights. We had 2 important announcements in Q2 related to our 300-millimeter and silicon carbide strategic manufacturing programs. First, we announced the conclusion of the 3-party agreements among the state of France, GlobalFoundries and our company, as approved by the European Commission. This relates to the new 300-millimeter semiconductor manufacturing facility in Crolles, France, first announced last July. This agreement will contribute to our $20 billion-plus revenue ambition and related financial model, and will further reinforce the European and French FD-SOI ecosystem.

We will build more capacity for our European and global customers in advanced technologies as they transition to digitalization and decarbonization. The total investment for this project is expected to be about EUR 7.5 billion, and will benefit from French state financial support up to about EUR 2.9 billion, in line with the objectives set out in the European Chips Act.

In silicon carbide, we announced a joint venture with Sanan Optoelectronics for high-volume 200-millimeter silicon carbide device manufacturing in China. The joint venture will support the rising demand for ST silicon carbide devices in China for car electrification and industrial power and energy applications. Sanan will build separately a 200-millimeter silicon carbide substrate manufacturing facility to fulfill the JV's need.

The combination of the 200-millimeter substrate facility to be built by Sanan, with the front-end JV and ST's existing back-end facility in Shenzhen, will enable ST to offer our Chinese customers a fully vertical integrated silicon carbide value chain, a significant competitive advantage in the silicon carbide landscape.

The new joint venture of silicon carbide fab is targeting to start production in Q4 2025, and full build-out is anticipated in 2028. It is an important step to further scale our global silicon carbide manufacturing operations, coming in addition to our continuing significant investments in Italy and Singapore. It will be 1 of the key enablers of the opportunity we see to reach above $5 billion silicon carbide yearly revenues by 2030.

In this corporate development overview, I would like also to mention a change in our Executive Committee. During the quarter, Orio Bellezza, President, Quality Manufacturing, Technology and Supply Chain, and Member of ST Executive Committee, announced his retirement from the company. Orio will remain Managing Director of the company's Italian subsidiary until the expiration of his mandate. Fabio Gualandris, ST Executive Vice President, Head of Back-end Manufacturing and Technology and Deputy to Orio Bellezza, is appointed President, Quality Manufacturing and Technology. Upon my proposal, ST's Supervisory Board approved the appointment of Fabio to the company Executive Committee. I would like to thank Orio for his engagement in the numerous roles he has played at ST. And I wish Fabio all the best in his new role.

I will now go through a short update on some of our strategic focus areas. In silicon carbide, we continue to increase the number of engagements: we are now working with 90 customers and 140 projects. Silicon carbide based power systems for electrical vehicle traction and industrial drives are complemented by our industry-leading STGAP galvanic isolation drivers based on ST's unique IP and advanced BCD technology. We announced an R&D collaboration with Airbus on wide bandgap semiconductors for aircraft electrification and decarbonization. This confirmed ST's leadership and the strength of our silicon carbide technology roadmap.

In car digitalization, we saw continued design momentum with our later generation of automotive microcontrollers called Stellar across multiple applications. In parallel, in ADAS, we continue working closely with our long-time customer and partner, Mobileye. Their EyeQ6 product is now in production, and EyeQ Ultra at the R&D phase. Volumes of previous generations are ramping up.

In May, we held our annual STM32 summit event for industrial customers in China, with 2,700 customers in person and a record breaking of 80,000 online. During the event, we made announcements related to edge AI, namely AI running on microcontrollers, microprocessors and sensors. We launched a new family of microprocessor for secure industry 4.0 and edge AI to allow our developers to address higher performance applications.

We also gave further details on the upcoming STM32N6 microcontroller. This is ST's first MCU with our neural processing unit hardware accelerator and will bring the best-in-class computing power, power consumption and cost of ownership for the applications we target. One of the industrial application demos we built with the customer performs up to 75 times faster for AI workloads versus today's high performance MCUs.

We will start to sample the STM32N6 from September onwards.

For developers, we are expanding our STM32Cube.ai software offering, including the launch of a collaboration with NVIDIA around the TAO, so Train, Adapt, Optimize toolkit now available. Edge AI is not only STM32. We have the same approach for sensors with the release of a new toolkit and associated software for our intelligent MEMS sensors for activity recognition and anomaly detection directly in the sensor.

Now let's move to our third quarter 2023 financial outlook and our plan for the full year 2023.

Wait a minute. For the third quarter, at the midpoint, we expect net revenues to be about $4.38 billion, representing year-over-year and sequential growth of 1.2% and 1.1%, respectively. As anticipated in January, we are entering in H2 2023 with a significant change in product mix in an engaged customer program in Personal Electronics. Excluding this change, our Q3 '23 revenues at the midpoint would grow year-over-year by 3.5% and sequentially by 3.2%. And based on our indication of $17.4 billion revenues for full year 2023, H2 2023 revenues would grow by about 6% compared both to H1 2023 and H2 2022.

Q3 gross margin is expected to be about 47.5% at the midpoint, including about 150 basis points of unused capacity charges. For 2023, based on our visibility, we will drive the company based on a plan for full year 2023 revenues of $17.4 billion, plus or minus $150 million. This represents growth of about 8% over 2022. The full year 2023 gross margin will exceed 48%. We confirm our 2023 CapEx plan of about $4 billion. Thank you, and we are now ready to answer your questions.

Question And Answer

Operator [1]

[Operator Instructions] The first question is from Jerome Ramel from Exane.

Jerome Ramel, BNP Paribas Exane, Research Division - Analyst of IT hardware and Semiconductor [2]

Yes. First question, if you could help us to understand the dynamic per division for Q3 and [year-over-year]? That would be the first question.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [3]

The dynamic for Q3 sequentially and year-over-year, I have to say that year-over-year, ADG and, let's say, will grow significantly, let's say, well above 20%. MDG will slightly grow year-over-year Q3 over Q4, but it is linked, okay, to the fact that China will not start slower than expected. Now AMS, okay, will decrease year-over-year by 31%, okay? But also this must be also corrected by the fact that we have this change in product mix.

Well, sequentially, if we look Q3 2023 versus Q2, ADG will continue to grow, I have to say, a single-digit. AMS will be basically flattish. And MDG, okay, will slightly decrease again for the same reason because, in China, we do not see the expected restart is slower than expected.

Jerome Ramel, BNP Paribas Exane, Research Division - Analyst of IT hardware and Semiconductor [4]

Okay. And maybe a question for Lorenzo on the OpEx. Probably came above expectation for Q2. How should we think about the OpEx for Q3 and maybe the second half of this year?

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [5]

In terms of OpEx, this quarter -- last quarter, in Q2, we were coming with a little bit higher level of OpEx. As we said, that we had [one time] that were not forecasted entering the quarter. And actually, the level of grants that we were expecting were not materializing due to the fact that they were a little bit postponed for administrative reasons, we were not in the position to recognize. What will happen in Q3, next OpEx, including other income and expenses will decline significantly in respect to Q2. We do expect a net OpEx in the range of $880 million and $890 million for this quarter, for Q3. This is the combination of seasonality and let's say the fact that the level of other income and expenses will be significantly positive, thanks to the fact that we will be in the position to recognize R&D grants. That was not the case in Q2. But for the year, I think we will position Q4 for sure in terms of OpEx, there will be some increase. Usually is a quarter that is a little bit, in terms of seasonality, more high level in terms of operating expenses.

I think at the end of the year, the range quarterly OpEx will be in the range of between $910 million or $930 million, something like that.

Operator [6]

The next question is from Francois Bouvignies from UBS.

Francois-Xavier Bouvignies, UBS Investment Bank, Research Division - Technology Analyst [7]

So I have 2 quick ones. First 1 is on Automotive. I mean, obviously, very strong performance, 34% growth year-over-year. Now if I look at the peers. I mean, NXP is growing 9% -- it's automotive, Renesas is growing 3% year-over-year this quarter. So you seem to outperform by far your peers in terms of growth rates. Now I understand that silicon carbide is a big growth driver. But even if I try to exclude silicon carbide from this growth, I get definitely more than 25% growth year-over-year anyway. So I was just wondering, can you explain the strong outperformance versus some of your peers. [Tesla] is also growing like 20%,, excluding silicon carbide as such?

And I'm asking because the U.S. peers, essentially they are saying that they don't want to fill the industry with inventories and they are managing basically this. So is there a risk that you fill too much the channel with inventories? Or yes, that's why I'm asking the drivers behind this stronger performance? And I have another 1 after.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [8]

No, I think there is -- the first reason fundamentally that we overperformed our peers, basically 2 reasons, we see that, okay. Do not forget that we partner with Mobileye. Mobileye is a leader worldwide of ADAS system. Now ADAS is more and more [challenging] the car industry, also driven by regulation. And if you want to be a 5-star NCAP, this kind of stuff, so you must embed some ADAS features. And ST is a partner of ADAS. And this is what I say in my script, the current generation of ADAS, mainly EyeQ4 and EyeQ3 are really ramping materially more. And the second reason, I know we are focusing on silicon carbide, but there is just Renesas and NXP. On top of that, we have, let's say, a richer portfolio, a larger portfolio on analog and microcontroller and MEMS.

Don't forget power. So IGBT, low-voltage MOSFET, high-voltage MOSFET, VIPower, more and more we are [perfecting] VIPower, which are very adapted device for the new architecture in this car. Our 2 competitors, okay, have not this kind of technology. So this is the 2 main reasons why we overperformed our peers. It is ADAS and the remaining portfolio we have in power, including the VIPower.

Francois-Xavier Bouvignies, UBS Investment Bank, Research Division - Technology Analyst [9]

Very clear. And my follow-up question would be on AMS. I mean I expected the share loss happening in the second half of the year. And I was a bit surprised on the Q2 year-over-year decline. And more importantly, the margins that decreased significantly. So I understand the top line, you have some kind of drop-through, but can you explain a bit more what's going on in AMS this quarter, and also a margin bridge would be amazing?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [10]

AMS from revenue, let's say, point of view, received a serious hit by Personal Electronics overall in Q2. I have to say, you know that smartphone, okay, this year overall will decrease. But more important, the inventory correction in Personal Electronics is going on, will still continue in Q3 as well.

On another side, AMS is also exposed to [order drive]. And order drive is in the computer verticals and computer peripheral is also, let's say, very weak. So certainly, this is really the 2 main reasons at this stage of the, let's say, decrease, significant decrease of AMS revenue year-over-year. But about margin, maybe, Lorenzo, you can comment?

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [11]

At the end, let's say, this impact on the margin is mainly due to the volume. It's mainly due to the fact that, of course, our, let's say, level of top line is declining. And for sure, the leverage on our expenses is worsening in this group. I would say this is the main driver. Then, of course, it's also impacted by some, let's say, deterioration in our manufacturing, especially, let's say, related to the activity that is lower for our MEMS, for these kind of products. But the main driver of our operating margin is related to the fact that the volume decreased and the expense to sales ratio for sure, is worsening for this group.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [12]

Next question, please.

Operator [13]

The next question is from Aleksander Peterc from Societe Generale.

Aleksander Peterc, Societe Generale Cross Asset Research - Equity Analyst [14]

My first question would be on inventory, which rose to 126 days. How would you qualify this level of inventory? Is it elevated and needs to be worked down in the second half? Or is it no more reflecting usual seasonality for your business? And I have a follow-up.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [15]

Lorenzo?

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [16]

I take this question. But we judge this a little bit too high. It's true that in Q2 our inventory for seasonality is increasing. Anyway, let's say, at this stage, 126 days of inventory is on a little bit on the high side. This is also the reason why, in the second part of the year, as we have already anticipated, Q3 and Q4, we will reduce our activity, our production activity, especially on the fabs that are more exposed to Personal Electronics and the consumer. This will bring unloading and this unsaturation charges. And this is visible in our gross margin this quarter, where we are hit by 150 basis points of unloading in our guidance of 47.5%. If you take it out, this impact, we are more or less similar to the 1 of Q2 in terms of gross margin.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [17]

And we finish the year, in terms of inventory?

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [18]

In terms of inventory, yes, thank you. We will -- with this, let's say, we think to bring down our inventory more in a range of 100, 110 days of inventory in respect to the 126. Thank you for the follow-up

Aleksander Peterc, Societe Generale Cross Asset Research - Equity Analyst [19]

My second question would be on smartphones. You talked about this already in your introductory remarks, there's lack of recovery, let's call it this way, so far. How would you qualify the market now? Do you see any evidence of any bottoming out of the smartphone market, particularly in China in the current quarter? Or is it too soon to call it?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [20]

No, this is what I say. I think in terms of demand, the data point we have, looks like this year, the market, okay, with the demand of smartphone will slightly decrease, I think 1.5% or 2%, with still a changement of mix between the 4G and the 5G. The point is, this industry is still paying, last year, a strong decrease, minus 9%. And of course, the inventory, which has been built up, okay, last year are not yet digested. And this will continue in Q3. More so we hope, okay, progressively moving forward, Q4 and Q1 next year, to see first inventory digested and to be exposed to the [head] demand to the B2C demand of smartphone. So this is the scenario most likely, okay, we expect.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [21]

Thank you, Alex. Next question, please.

Operator [22]

The next question is from Andrew Gardiner from Citi.

Andrew Michael Gardiner, Citigroup Inc., Research Division - Research Analyst [23]

Can I ask 1 on pricing, please. We covered this with first quarter results, but it would be great to have a real-time update here with Q2. Lorenzo, if I look at the gross margin guidance you've given, particularly as you just highlighted, adjusting for the underutilization charges, gross margin's flat into 3Q and still remaining

strong into 4Q. It suggests to me that there hasn't been much change in pricing, but if you can just walk us through some of the moving parts there, that would be helpful. And then I do have a quick follow-up.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [24]

No. We absolutely know no significant pricing impact sequentially Q3 versus Q2. Well, again, the gross margin dynamic, we have -- we will move clearly from 49% in Q2 to 47.5% in Q3, but it is impacted by the unused capacity. So in fact, okay, in Q3, basically, without this new capacity that we have decided by ourselves, okay, to decrease inventory level described by Lorenzo a few minute ago, our gross margin is still ballpark at 49%. For all the other effect, okay, you know that our input parameter like the product mix, the pricing, the manufacturing efficiency, all these parameters offset each other. So no, Q3, okay, we don't see any significant impact on the pricing.

Andrew Michael Gardiner, Citigroup Inc., Research Division - Research Analyst [25]

And actually just related to that quickly, how much is the Agrate 300-millimeter fab ramp a headwind in 3Q?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [26]

Agrate in Q3, okay, has been included in the manufacturing efficiency, okay, as the 8-inch, which are, let's say, exposed to consumer, but Lorenzo, you...

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [27]

In Q3 started to be, let's say, increasing, but is not yet very significant. It will be a little bit more during Q4 because, of course, the activity will start to be more visible. As we said, let's say, this is one of the factor of our second half gross margin, manufacturing overall and, let's say, the impact of the Agrate are, let's say, the main drivers of the declining, of course, together with the unloading charges, now this is obvious, but of our gross margin in the second half of the year. But still is not, let's say, super strong. It's not yet, let's say -- is part of this degradation, but it's not yet in Q3 so visible.

Andrew Michael Gardiner, Citigroup Inc., Research Division - Research Analyst [28]

Okay. And then sorry, just a quick clarification. Jean-Marc, you gave us the sort of adjustments related to the product mix and the customer program in 3Q, saying that instead of 1% year-on-year and quarter-on-quarter, it would be sort of low to mid-3% on both those sort of year-on-year and Q-on-Q. Rough math, that's sort of $80 million, $90 million worth of impact.

Earlier in the year, you thought it was going to be $500 million in the second half. Is there -- and I admit you broke up a little bit on my line in terms of when you were talking about the full year impact. Are you saying that sort of more of the impact is in 4Q? Or is it actually less than you had previously anticipated?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [29]

Well, it's a bit less than anticipated, but it is still very material because, again, I repeat this module we accepted to support our important customer. The revenue was really concentrated on H2 2022 and H1 2023. And basically, this appear in, let's say, Q3 and Q4 2023. The difference between H2 2023 and H2 2022 impacted by this -- by the device is a multi-hundred million dollar, below the number I gave in April, yes, it's below, but multi-hundred million dollar. That's the reason why, okay, if you make the math, we have confirmed this number of a significant change in the revenue dynamic H2 2023 versus H2 2022.

And I have to say, in Q4, if you make the math at the midpoint, it's more important. Because if you compute our Q4 at the midpoint of $17.4 billion, it's a growth H2 Q4 '23 versus Q4 '22 of 0.7%. Corrected by this module, the growth is [7%]. So it's really material. But the impact, difference H2 to H2 is multi-hundred million dollar below the number I gave in April.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [30]

Thank you, Andrew. Next question, please.

Operator [31]

The next question is from Josh Buchalter from TD Cowen.

Joshua Louis Buchalter, TD Cowen, Research Division - Vice President [32]

I wanted to ask about gross margin as well. So the guidance implies sort of a very modest decline from the third quarter to the fourth quarter. I think you previously called out 3 drivers of half-over-half declines of the start-up costs under your utilization charges and mix. It all seems like those should be peaking around the fourth quarter. Is that the right interpretation? And I guess, is there any reason why the fourth quarter wouldn't sort of be the trough of gross margins as you see things right now, assuming again stable market conditions?

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [33]

At the end, let's say, when we look at the H2, the gross margin that we will have in average in H2 will be slightly above 47%. And this is impacted by more than 100 basis points of temporary unused capacity charges. Then at the end, let's say, the remaining 100 basis point of decline in compared to H1 are due to the full impact of our manufacturing increased input cost, as we said many times, that we will, let's say, be very, very, let's say, visible in the second part of the year, and the main part of the ramp-up of the Agrate 300 millimeter. I would say these are the key ingredients for our dynamic of our gross margin.

Joshua Louis Buchalter, TD Cowen, Research Division - Vice President [34]

Got it. Just want to follow up, I was hoping to ask about silicon carbide. Any color you could provide on the JV announcement in China in particular, how much capacity are you expecting to get out of that? And what's your confidence in being able to get enough volumes of 200-millimeter wafers from your partner there?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [35]

So the capacity at the full buildout will be 10,000 wafer per week 200-millimeter in 2028. The confidence level on 200-millimeter is very high. because, okay, they have a process we know very well. Because, okay, this process is similar to our process of Nortel, never forget that we bought Nortel, from [Canada]. And we know exactly our process, and we know that our equipment, which has been designed for 200-millimeter in Nortel, okay, do not represent any specialty difficulties, okay, to move to 200-millimeter [indiscernible] equipment, which has been designed purposely only for 150-millimeter. So no, our confidence level is very high. So that's the reason why we have done this deal.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [36]

Thank you, very much. Next question, please.

Operator [37]

Next question is from Lee Simpson from Morgan Stanley.

Lee John Simpson, Morgan Stanley, Research Division - Equity Analyst [38]

Just a couple of classification questions really. You mentioned at the top there, OpEx, I think, around about $80 million, $90 million going into the second half. Just trying to maybe break out or clarify any changes in other income, particularly as we look at the start-up costs on Agrate should be moving out of other income and into COGS. But are we allowing for that in that overall number? That's my first question. I've got a quick follow-up.

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [39]

No. As I said before, let's say, what we see in the third quarter in terms of expenses and net expenses is in the range of [$880 million, $890 million]. This is for the third quarter. a little bit higher, we will be in the next

quarter in Q4 in terms of expenses due to seasonality. In terms of other income and expenses in Q3, we will have a benefit coming from the R&D grants that were not, let's say, in the first 2 quarters of this year due to the fact that all not the conventions that we needed to have signed were ready in order to be recognized where, let's say, there because the agreement was already done. But the point is that we needed to have the documentation, as you can easily understand. And this will be done during this quarter.

So at the end, this will be the dynamic. In terms of other income and expenses this year, our expectation is to be overall in the year positive $70 million, $80 million as slightly above what was my indication entering the year. So it will be a little bit better in this respect.

In terms of -- yes, in terms of start-up costs, these other income and expenses are impacted by the start-up cost of a Agrate 300, but the start-up cost progressively will become a manufacturing cost, let's say. And here, of course, there is on the other side, the fact that we are going to start to produce wafers. So it will not be a pure cost. It will be also contributing to our top line this activity. For sure, at the beginning, the 300-millimeter will have an efficiency that is not the best. This is clear. The manufacturing efficiency of this fab will progressively improve in the course of next year.

Lee John Simpson, Morgan Stanley, Research Division - Equity Analyst [40]

That's quite clear. Jean-Marc, I think you were also very clear on some of the rationale around the Sanan JV, particularly as it sort of carries on from the design understanding of the work at least that Nortel would have done prior inside Sanan, but it does seem to just gel a little awkwardly with your stated aim to verticalize supply, move more things internally for silicon carbide. And also, it stands out a little bit to me that you've involved yourself in a bit of a tech transfer. Admittedly, it brings in your back-end business quite nicely. But I wonder if you could just maybe talk through a little more broadly the rationale for this JV, particularly from that tech transfer risk and really as it works with your existing strategy for internalization?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [41]

The technology transfer, okay. I would like to be very clear. This JV is a foundry, and this foundry will work exclusively for ST. So it's exactly the same model that is still used, okay, of an [EDM] transferring technology to a foundry for its exclusivity usage. So this is this model, okay? Clearly, so there is absolutely no transfer of IP. There is no license, there is nothing. It's a transfer of manufacturing process in a foundry that will work exclusively for us to address vertically the Chinese market, which is booming. I know it's -- there is a common consensus that the electrical car in China. But as important, the related infrastructure, so loading charges, fast-charger loading charges in residential, then hold the power and energy related to the renewable energy, because of the strong decarbonization in China, all these markets will move in the near future.

And it's important for ST to address, okay, this market with a local production end to end. So from the wafer epitaxy, wafer processing, wafer sort, assembly and test. For assembly and test, of course, we will leverage our long-lasting JV we have in Shenzhen, called STS, that will assemble and will test our product. So the rationale is point #1, this market will be the fastest growth market in the field of electrification and decarbonization. We want to address locally this market, okay, end-to-end. So that's the reason why with this well-known partner Sanan, we have set up a JV working as a foundry exclusively for us. And we will transfer our production process, not IP, that will be processed for us and assembled in our factories.

Johannes Schaller, Deutsche Bank AG, Research Division - Research Analyst [42]

Yes, that's a great response?

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [43]

Thank you. so next question, please, Moira.

Operator [44]

The next question is from Didier Scemama from Bank of America.

Didier Scemama, BofA Securities, Research Division - Director in EMEA Equity Research & Head of European IT Hardware [45]

Actually, I just wanted to go back to a question that was asked previously. Lorenzo, you said on the last earnings call that there would be 300 basis points of gross margin contraction H-on-H in the second half and of which 100 basis points is pricing pressure, 100 basis points is input cost and 100 basis points is under loading of the fab. So can you reconcile what is the -- what are the new components of that H2 gross margin?

And then related to that, and again, the question was asked, but was not really answered. Is there a scenario where your first half gross margin in 2024 is actually lower than the second half of this year? And I've got a follow-up.

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [46]

In term of dynamic of the gross margin, I would say that you see that our indication for the year is now, let's say, exceeding the 48% gross margin. That means that, today, let's say, in term of impact of pricing, we don't see any significant, let's say, impact. As we were saying before, let's say, also Jean-Marc, this was the dynamic seen in Q3 and Q2 moving forward. So at the end, I would say that, as I was saying before, the second half of the year will be mainly impacted by 2 components. Let's say, the first 1 is the unloading charges. This is clearly something that is driven by the fact that we want to control our inventory. And here, today, the visibility is that this impact will be slightly above the 100 basis point. The remaining is mainly impacted by the impact of the manufacturing efficiency and this impact of the 300-millimeter. Mix price and the other substantially offset each other. So at the end, these are the main drivers that, today, visibility is giving to us.

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [47]

This is clearly -- the baseline, the solid baseline we have in our [end], so 48%, it is what I communicated in April as well. And this is totally consistent, okay, with our trajectory to reach a 50% gross margin associated with our $20 billion plus revenue ambition in '25, '27.

Didier Scemama, BofA Securities, Research Division - Director in EMEA Equity Research & Head of European IT Hardware [48]

So 48% is the baseline going forward, interesting. I wondered if you could give us an update also on our grade 300-millimeter ramp and on Catania silicon carbide. And what I mean by that is, could you give us a sense of the time line through which those fabs, maybe individually, will contribute to gross margin positively? If that's the second half of next year or if it's further out?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [49]

So on silicon carbide, first of all, in Catania and Singapore, we are increasing continuously our capacity. And I repeat this year, okay, we will deliver about $1.2 billion revenue, and we have the ambition to be at $2 billion in 2025. So this is already contributing, let's say, to our operating margin, okay, because it's MOSFET. Never forget that the MOSFET has not the gross margin of MCU or digital IC.

Okay, the internal supply, we target to have 40% internal supply as a run rate. It will happen end of 2024, and will, let's say, significantly impact our cost starting 2025, yes.

Didier Scemama, BofA Securities, Research Division - Director in EMEA Equity Research & Head of European IT Hardware [50]

And for Agrate?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [51]

And then for Agrate. So for Agrate today that we are sticking with our plan. So we have installed capacity basically about 1,000 wafer per week, which is linked to the single of kind [indiscernible] we have installed.

We have qualified our [fab finder] technology. Yields are very similar than Crolles, which is a great news, and we are starting to ramp up. Again, the objective from this 1,000 wafer per week is to achieve by end of '25 [the highest] full buildout of what we have targeted in association with [that].

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [52]

We think that already in the second part of next year, Agrate will start to contribute...

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [53]

To the cost margin and the gross margin.

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [54]

[Not to be declined].

Didier Scemama, BofA Securities, Research Division - Director in EMEA Equity Research & Head of European IT Hardware [55]

Very well. And just a quick follow-up, like a quick one, if I may. On the Sanan JV, I mean, I think the concern that everybody got is that the track record of Western companies I have covered in the past having JVs in China is not great because #1, your cash is trapped in China; and #2, if something happens from an IP perspective, it's very difficult to actually get reimbursed or at least to have some compensation. So I think what sort of assurances did you get, or can you give us that this is not going to end up badly for ST and ST shareholders?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [56]

First of all, sorry to be a bit, let's say, trite. We have a JV in China since more than 30 years. And [EGD], okay, of assembly and test is basically certainly 1 of the most performing assembly and test plant in the world. They always performed at our expectation. We never face any specific issue. They were very resilient during the COVID period. So we have this experience. And then from the financial flow, maybe, Lorenzo, okay, you...

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [57]

I mean we are not so worried in the sense that, as I said, as Jean-Marc was saying, let's say, we have the experience. So we know how to handle. We know how to not to fall in a situation in which we may have a problem in term of repatriating cash. It's 30 years that we work in China with a JV. To be honest, today, we don't have -- we are not facing this kind of problem with this JV. I do think that we will be able to manage similarly with Sanan as repeated. We have some experience. We work, we structured in a way that at the end it's not creating a major risk in this respect. And also...

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [58]

[And also not very much cost.]

Lorenzo Grandi, STMicroelectronics N.V. - President of Finance, Purchasing, ERM & Resilience and CFO [59]

[Not also major cost.]

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [60]

We have time for one last question, Moira.

Operator [61]

Last question is from Johannes Schaller from Deutsche Bank.

Johannes Schaller, Deutsche Bank AG, Research Division - Research Analyst [62]

The first 1 is on Agrate again. I mean you have a pretty wide range of products and end market applications you can address with that fab. Can you maybe give us a bit of an update what you are targeting initially for the ramp in the second half of this year and then obviously more into next year when volumes are starting, which kind of products, which kind of end markets? And then as a second question, not just 1 of your competitors has talked a bit more about gallium nitride in the first half of this year. There were a few others making comments as well. Can you just give us a bit of an update on your strategy and on your road map on the GaN side here and which end applications you think are the most interesting for ST?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [63]

So Agrate submission is a mix around analog, analog with either analog with digital content to address, let's say, personal electronics and computer and communication. This main advantage is to, let's say, structurally long term as volume, important volume. Of course, okay, there is -- short term is a bit challenging, but structurally, okay, this is what we want. And then the complementary mission of Agrate is analog for automotive and industrial. So at the end, we want -- our strategy is to build Agrate capable to address basically the 4 verticals we had in order to guarantee a long-term sustainable and stable loading. So first, of course, we start with the consumer and personal electronics because we go very fast in the qualification. You know that for Automotive, it's taken more time, and it is followed by Industrial. So this is the mix of what the fab will manage, analog with digital content and/or with more power content to address Automotive and Industrial.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [64]

And then for GaN?

Jean-Marc Chery, STMicroelectronics N.V. - President, CEO & Member of Managing Board [65]

The GaN, GaN strategy. First of all, I would like to repeat, we strongly believe at ST that the successful leader in the field of power energy are companies which are capable to control the wide portfolio of technology, okay? Again, from a low-voltage, high-voltage MOSFET, vertical integrated power, IGBT, GaN, MOSFET and silicon carbide and modules. So this is our strategy.

We started very fast on GaN to address, let's say, the consumer market, basically, the fast charger of, let's say, personal electronics and computer. And in order to go fast, okay, we are using the technology of [indiscernible]. And we have already, okay, business link to this technology and to customers, okay, enabling fast charger in the field of personal electronics.

In parallel, we are developing GaN MOSFET to address both the power and energy market for investors. And this technology is in development [indiscernible] where we have set up 8-inch line and where we have a strategy to build in the future, okay, our 8-inch capability to address massively this market. Well, then last but not the least, we have 2 other blocks where we intend to play a role. It is to address the radio frequency product. So with [GaN this year], based on our technology, GaN [and MOSFET] that will be processed in Catania. And the latest 1 is what we call smart integrated GaN, where it's -- we mix [a BCD] driver with an advanced controller and, again, MOSFET.

So as a takeaway, we say we started very fast with the STM32 technology to address the consumer market with fast charger. Now in parallel, we are developing our technology to address the power GaN MOSFET mainly to address investor for industrial market. We complement this strategy with [indiscernible] on our own technology. And then we merged this technology with BCD to develop what we call Smart Integrated GaN, which will be a very efficient technology to address multiple industrial applications.

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [66]

And I think this concludes our call. It was the last question. Moira?

Operator [67]

That was the last question. Would you like to conclude the call then?

Celine Berthier, STMicroelectronics N.V. - Group Vice President of Investor Relations [68]

Yes, please.

Operator [69]

Ladies and gentlemen, the conference is now over. Thank you for choosing Chorus Call, and thank you for participating in the conference. You may now disconnect your lines. Goodbye.