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PRESENTATION

Operator

Welcome to TSMC's 3Q '11 results broadcast conference call. This conference call is being webcast live via the TSMC website at www.tsmc.com and only in audio mode. Your dial-in lines are also in listen-only mode. I would now like to turn the conference over to Dr. Elizabeth Sun, TSMC's Head of Investor Relations.

Elizabeth Sun - *TSMC - Director, TSMC Corporate Communication Division*

Thank you, Andrea. Good morning and good evening, everyone. Welcome to TSMC's third quarter 2011 conference call. Joining us on the call are Dr. Morris Chang, our Chairman and Chief Executive Officer and Ms. Lora Ho, our Senior Vice President and Chief Financial Officer.

The format for today's conference call will be as follows. First, Lora will summarize our operations in the third quarter and give you our guidance for the next quarter. Afterwards, TSMC's Chairman, Dr. Chang will provide his general remark on the business outlook and a couple of key messages. Then we will open the floor to questions.

For those participants who do not yet have a copy of the press release, you may download it from TSMC's website at www.tsmc.com. Please also download the summary slides in relation to today's quarterly review presentation.



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I would like to remind all listeners that the following discussion may contain forward-looking statements that subject to significant risks and uncertainty which could cause actual results to differ materially from those contained in the forward-looking statements. Information as to those factors that could cause actual results to differ materially from TSMC's forward-looking statements may be found in TSMC's Annual Report on Form 20-F filed with the United States Securities and Exchange Commission on April 15, 2011, and such other documents as TSMC may file with, or submit to the SEC from time to time. Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

And now I would like to turn the call over to Lora.

Lora Ho - TSMC - SVP & CFO

Thank you, Elizabeth. Good morning and good evening to everyone. Welcome to our 2011 third-quarter earnings conference call. I will start with the financial highlights in the third quarter then I will move on to the outlook for the fourth quarter. All dollars presented are in TWD unless otherwise stated.

In the third quarter, our revenue was higher than the guidance provided on July 28, thanks to some rush orders in August and more favorable exchange rate. Third-quarter revenues decreased 3.6% sequentially to TWD106.5b. And wafer shipments decreased 3% (sic - see presentation) to 3.2m eight-inch equivalent wafers.

Our wafer demand was affected by weakened global economic conditions and customers' inventory adjustment. Computer and consumer-related revenues was more affected and decreased by 16% and 18% respectively, whereas communication and industrial increased by 3% and 9% from the second quarter.

Overall, communication accounted for 48% of our total wafer revenue in this quarter while computer, consumer and industrial accounted for 21%, 10% and 21% of our wafer sales respectively.

By technology, demand for 40-nanometer and below technologies held up relatively well and reached 27% of wafer revenue in third quarter, including 0.5% from 28-nanometer. And we expect our 28-nanometer ramp to accelerate in the next few quarters.

Combined contribution from 65-nanometer and below represented 54% of our total wafer sales in the third quarter, which is 1 percentage point lower than the second quarter, as revenue from the 65 node decreased by 2 percentage points in the third quarter.

Gross margin was 42% and operating margin was 29.7%. The sequential decline in margin was mainly due to lower utilization.

Operating expense increased 1.4% from the previous quarter, mainly due to higher R&D spending on 20-nanometer and higher patent filing fees. In the future we will continue increase R&D spending to expand our lead in technology and keep SG&A tight at the same time.

Overall our third quarter net margin arrived at 28.5%. EPS was TWD1.17.

In line with what we said in the last conference, we have successfully reduced the inventory level during this quarter. Our inventory turnover days significantly reduced by eight days to the Company's normal level of 45 days, mainly reflecting lower inventory levels in finished goods and work in process inventories.

Cash from operations totaled TWD55b. Free cash flow was TWD17b during the quarter, up from an outflow of TWD1.8b in the second quarter due to less capital expenditure.



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Combined with TWD78b cash dividend payment and TWD18b proceeds from a corporate bond issuance, our cash and short-term investments decreased TWD39b to TWD120b.

In light of weakened demand we decided to further revise down 2011 capital expenditure to \$7.3b. Total capital expenditure in the first three quarters reached \$6.3b.

As a result of the adjustment, our total capacity would be flat in the fourth quarter. Full-year total capacity will increase 17% to 13.2m 8-inch equivalent wafers while 12-inch wafer capacity will increase by 29%.

Now let's turn to the outlook for the fourth quarter. Based on current business expectations and the forecast exchange rate of TWD30.3 we expect our consolidated revenues in the fourth quarter to come in between TWD103b and TWD105b. In terms of margins, we expect our fourth quarter gross margin to be between 43.5% and 45.5%. Operating margin to be between 30% and 32%.

The reason for the lower revenue guidance but higher margin guidance is due to the following reasons. Number one, in fourth quarter we have better cost control so the cost saving contribute to margin improvement. Also the fourth-quarter utilization will be slightly higher than the third quarter. In addition to that, the exchange rate in fourth quarter is higher than third quarter which is favorable to the Company. The three favorable will be offset slightly by an unfavorable product mix due to the ramping of 28-nanometer.

This concludes my remarks today. Now I would like to turn the call over to Dr. Morris Chang our Chairman and CEO for his remarks.

Morris Chang - TSMC - Chairman & CEO

Hi, everyone. I'm Morris Chang, CEO of TSMC. I want first to talk about the world semiconductor market and foundry market this year. The weakening world economic outlook has impacted the demand for semiconductors. We now forecast this year's world semiconductor growth at 1%. We had forecast 5% in January and 2% in April, and we now forecast only 1% growth for world semiconductor market this year. And we have also trimmed our forecast for semiconductor foundry revenue growth to 10% -- I'm sorry, to 4% this year. We had forecast for 7% as late as July. All these are in US dollars. Now TSMC's growth this year in US dollars will be 9%.

I want to talk about the supply chain inventory. In the last quarterly conference, we said that the excess inventory in the semiconductor supply chain will be mostly digested in 3Q, and that DOI will be at its seasonal level by the end of 3Q. We also said that TSMC's utilization rate will be higher in 4Q compared to 3Q. These statements hold true today.

The supply chain inventory is estimated to be 3 days below seasonal at the end of 3Q. And TSMC has reduced our own DOI by 8 days to 45 days in 3Q which is about our normal level. However the increasing uncertainty of future demand has continued to prompt IC vendors, namely our customers, to de-stock. We believe this effective supply chain DOI will be further reduced to several days below seasonal by the end of 4Q. We do expect our fourth-quarter utilization level rate to be slightly higher than 3Q.

Now I would like to talk about our competitive strengths. In these economic uncertain times, TSMC's competitive position is stronger than ever. Our technology development is progressing well. And I'll talk about a few of them here.

First 28-nanometer, our 28-nanometer process is in volume production. More than 40,000 12-inch wafers will be shipped to customers in the next few months. And we anticipate the ramp next year will be fast. Three out of the four 28-nanometer process offerings are in volume production. They are 28HP, HPL and LP. The remaining version 28HPM will be ready for production by end of this year.



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Our 28-nanometer process has surpassed the previous generations' production ramps at the same point in time. And product yield continues to improve and is on track. We expect 28-nanometer to be an important engine of our growth next year, since we are the first and only foundry to volume produce 28-nanometer. We not only demonstrated our leadership in technology, but also provide arsenal for our customers for their design wins with competitive products.

Now a few words on 20-nanometer. Our 20-nanometer development is on track and demonstrated a fully functional SRAM. Multiple customers have already engaged for more than a year with TSMC on the development of 20-nanometer. We plan two offerings for the 20-nanometer process; 20G for high performance products such as CPU, GPU and server and 20SoC for high performance and low-leakage products such as mobile computing devices. Risk production for 20-nanometer G is scheduled for 3Q '12, next year. And risk production for 20-nanometer SoC will start in January of 2013.

We are world's first and only foundry to complete the tape-out of 20-nanometer ARM-Cortex A15 MP core processor which is high performance for future mobile computing product. We have also started the development of 14-nanometer thin [patch]. The device path-finding has been ongoing for more than one year. And we plan to risk start our 14-nanometer process in 2014.

A few words on COWOS. It stands for chip on wafer on substrate. Last quarter I showed you a framework for subsystem integration through silicon interposer. This time I'm able to show you the picture of the actual test chips. Let's view that one. The larger chip and the DRAM chips or cubes are placed on top of the silicon interposer. This is COW, chip on wafer, and then packaged on a substrate. This is COWOS, chip on wafer on substrate. We have achieved very good yields and obtained encouraging reliability on these test vehicle.

The process flow for COWOS is shown on the next viewgraph. The advantages of COWOS indicate the resolution for warpage and the thin wafer issues. A clear ownership of the long process flow, simplifies supply chain in shorter cycle time. The improvement on yield, cost reduction and reliability can be continuous, efficient and effective. With this COWOS technology, our business model is such that we will provide service in, one, top die logic wafer process, wafer sort, and microbumping. And two, integrate the back-end assembly solution or interposer wafer, final assembly and final test. We do not plan to sell just the interposer.

A few words on embedded Flash. Our business in embedded Flash has grown by 30% to a level close to TWD800m this year thanks to the strong growth in smartphones and tablets. Battery management IC as well as touch sense controllers enjoy the highest growth within the embedded Flash segment. TSMC's 0.18-micron embedded Flash with complete platform solution saw record level of new product tape outs this year. Our 90-nanometer embedded Flash has started production ramp this year. 65-nanometer joint development programs and 90-nanometer phase in MCU have been established. And we expect to launch 40-nanometer embedded Flash program in 4Q this year.

Now a few words about next year's semiconductor and TSMC outlook. We expect next year's semiconductor growth, semiconductor market to grow 3% to 5% over this year. TSMC, with 28 high ramp up constituting our important engine for growth, will grow several points higher than the semiconductor market. All these, of course, in US dollars.

Now a few words on capital expenditure, CapEx. We have two opposite forces in action here. We have a relatively soft growth outlook in the semiconductor market. And yet we are going to ramp up our 28-nanometer very fast next year. Now this year we have already trimmed our 2011 capital spending to \$7.3b, as Lora just told you. It is \$100m less than we announced last quarter. For next year we plan to reduce our 2012 capital spending. It will be at a lower level than this year's.

Those are all the prepared comments I have.

Elizabeth Sun - TSMC - Director, TSMC Corporate Communication Division

This concludes our prepared statements. Operator, please open the floor to questions.

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QUESTIONS AND ANSWERS

Operator

At this time we will open the floor for questions. (Operator Instructions). Your first question comes from the line of Randy Abrams of Credit Suisse.

Randy Abrams - Credit Suisse - Analyst

Yes, hi and good evening. I wanted to ask a couple of follow ups on the COWOS and 3D packaging. The first one, if you think it makes more sense to vertically integrate more and offer more of the traditional back-end assembly and tests, even beyond some of the 3D packaging.

Morris Chang - TSMC - Chairman & CEO

Will we consider even a further integration?

Randy Abrams - Credit Suisse - Analyst

Yes, further, so doing more of the back end. You're starting to move into wafer level packaging and 2.5D and 3D --

Morris Chang - TSMC - Chairman & CEO

Yes.

Randy Abrams - Credit Suisse - Analyst

Packaging. But just, more broadly, do you think back-end assembly and tests is an area that you could vertically integrate even more, a more full suite of steps there.

Morris Chang - TSMC - Chairman & CEO

At this point, from the business point of view -- we are not at this point from the business point of view we are not considering further than what we already have told you. Now however we have quite a large 3D group on research. So they are constantly looking at the possibility of further integration.

Randy Abrams - Credit Suisse - Analyst

Okay. With the COWOS process, which technology node would you see this getting adopted? And maybe if you can think of how broad the application would scale across your business.

Morris Chang - TSMC - Chairman & CEO

I think that it would start in 28-nanometer and that it will be bigger in 20-nanometer.

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Randy Abrams - *Credit Suisse - Analyst*

Okay. And to get a sense of how you're planning coming out of this inventory de-stocking, well, 2009 we had a strong rebound. Are you planning to build -- I guess, for your planning, are you trying to put in place buffer capacity, particularly on 28-nanometer, in the event we have a speed-up recovery, or do you want to take a conservative approach given what you see out there?

Morris Chang - *TSMC - Chairman & CEO*

At this point we are taking the conservative approach. Now -- and I really don't expect a strong surge, if there is a surge. Well I think there will be a surge. There will be a surge. And I really -- but I don't expect that surge to be as strong as the one we saw in second and third quarters of 2009.

Randy Abrams - *Credit Suisse - Analyst*

Okay. The last question I had was just on -- there were comments the press had about [oneID] and Panasonic, but a few others have discussed outsourcing more. It's been very gradual over time, but are you starting to see any acceleration in outsourcing in that market.

Morris Chang - *TSMC - Chairman & CEO*

Yes I can. I'm not going to comment on any specific customer, but the answer to your question is yes.

Operator

Your next question comes from the line of Steven Pelayo of HSBC.

Steven Pelayo - *HSBC - Analyst*

I'm curious about your guidance. You're guiding for utilization rates to increase, a little bit more of a tailwind from currency, yet total revenues to decline 1% to 3% or so. It seems to me that that would mean that your ASPs have to be falling off quite a bit. So could you help me reconcile that and maybe talk about pricing both in terms of like for like and mix?

Lora Ho - *TSMC - SVP & CFO*

Steven, the fourth quarter we will ramp 28-nanometer. So if you talk about from the Company-wide average ASP point of view, it will support it. It will go up because of 28-nanometer. Other than that, I just described, the fourth quarter revenue decline just slightly, with the support of FX which will be 4% appreciation versus third quarter, so about -- eventually settling to about 4% of revenue. Did I answer your questions?

Steven Pelayo - *HSBC - Analyst*

I guess it still doesn't really add up that much. Without the currency impact your revenue guidance would have been something lower and how do I reconcile that with rising utilization rates? To me the one missing component was ASP. So I was trying to understand.

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Morris Chang - TSMC - Chairman & CEO

Let me -- I think you probably didn't hear my statements on -- my prediction actually on last time -- three months ago. I actually predicted that the fourth quarter utilization will be higher than the third quarter even though the revenue would be flattish or might even be down. The reason I made a prediction -- and it has come true -- the reason I made a prediction was that we reduce our own inventory in the third quarter. And by reducing the inventory, naturally the utilization was held low. Now our own inventory reduction has been completed at the end of September. And in the fourth quarter then our utilization reflects a normal mode of operation. You see, when you're reducing inventory, you have to make less stuff; therefore, your utilization is low. Now after your inventory reduction has been completed, then you have to make stuff normally. Therefore your utilization comes up. Does that make sense?

Steven Pelayo - HSBC - Analyst

Now I understand. Now it makes a lot of sense. Thank you for restating that again.

I'm trying to understand a little bit with this COWOS process, you said it starts in 28-nanometer. Could you just give us a general idea of the number of customer engagements you have, or designs you're working with, or some way that we can try to quantify the potential impact next year and beyond I guess?

Morris Chang - TSMC - Chairman & CEO

I think the -- well, customers. We are actually not working with a large number -- well, we are working with several customers on the development phase. We are working with several customers on the development phase. The impact to us, revenue-side impact to us will be minimal even next year. So the 28 is going to run for quite a long time. So I do think that COWOS will start with 28. And I think that we are already working with a few customers also on the 20-nanometer process. So by the time 20-nanometer is in volume production, I think the impact on revenue will be reasonably significant. I can't --

Steven Pelayo - HSBC - Analyst

I understand.

Morris Chang - TSMC - Chairman & CEO

I can't quantify it beyond that.

Steven Pelayo - HSBC - Analyst

And if I could just sneak in one final one, today you mentioned that the depreciation would grow about 23% this year, but next year would be something lower. Given that we're all a little concerned about margin impacts from higher depreciation, can you quantify a bit more maybe on what you think depreciation growth would be besides just lower than 23% next year?

Lora Ho - TSMC - SVP & CFO

We haven't finished, currently, a decision on the CapEx for 2012 depending on how much 28-nanometer we want to build. But with the last CapEx for next year we believe the depreciation year-over-year increase will be less than 20%.

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Morris Chang - TSMC - Chairman & CEO

She said less than 20%. And let me say this. Of course the ideal situation financially is for the increase of depreciation to be below the increase of revenue. Now you have to keep in mind that depreciation is accounted in TWD even though the expenditure is largely in US dollars. But once we get the equipment, once we install the equipment, the depreciation base is in TWD. So the depreciation cost is in TWD.

Now the -- so on that basis this year our revenue increased in TWD. It's not very great. It's almost flat isn't it? It's almost flat. And yet we had a depreciation increase of 23%. That is certainly far from ideal. Now next year, I said earlier that I expect our US dollar revenue growth will be several points more than 3% to 5%. So we certainly would like to think that the TWD revenue growth will be comparable and that's assuming the exchange rate doesn't vary that much. Now if the TWD growth is in the -- TWD revenue growth is in the, let's say, 6% to 8% range, 6% to 8% range and depreciation increase is less than 20%, then that's a heck of a lot better situation than we have this year. Does that make sense?

Operator

Your next question comes from the line of (multiple speakers).

Morris Chang - TSMC - Chairman & CEO

I'm sorry. I was hoping that the gentleman --

Elizabeth Sun - TSMC - Director, TSMC Corporate Communication Division

Yes. Andrea, I think you cut off Steven's line and Chairman is asking if Steven is satisfied with that answer.

Steven Pelayo - HSBC - Analyst

If you can still hear me, yes, I'm satisfied, thank you. Yes, I'm satisfied. Thank you for taking the time. I really appreciate it.

Morris Chang - TSMC - Chairman & CEO

Thank you.

Operator

Your next question comes from the line of Mehdi Hosseini of SIG.

Mehdi Hosseini - SIG - Analyst

Thanks for taking my question. Dr. Chang, I want to ask you about the trend on the technology side. Your up-and-coming competitors are obviously moving towards 32-nanometer and planning to have pilot run for 28-nanometer sometime next year. But they are still on a gate-first while TSMC is gate-last. Is this something that do you think people still haven't really understood the differences? Is this something that could really set TSMC apart from these new competitors? And anything else that you can offer would be appreciated. And I have a follow-up question.



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Morris Chang - TSMC - Chairman & CEO

The most important people who understand are the customers. And I believe that our customers unanimously understand that the gate-last approach is the superior.

Mehdi Hosseini - SIG - Analyst

But when you say customers, obviously designers prefer gate-last. But then when it comes to cost, gate-first offers some advantages if you can resolve the yield issues. So when you say customers, does that refer to the decision-makers or the people who are actually involved with the product design?

Morris Chang - TSMC - Chairman & CEO

Well, it's certainly not obvious to me at all that gate-first offers even cost advantage. I believe that superficially it seems to be a simple process. And yet, there's a big difference between a simple process and lower cost because the simpler process may be harder to make and the yields may be lower. And therefore the cost will even be higher. That's my feeling about gate-first and gate-last.

Mehdi Hosseini - SIG - Analyst

Sure. When do you think there will be (Multiple Speakers) --

Morris Chang - TSMC - Chairman & CEO

And again my feeling, I think is less important than our customers [thoughts]. And our customers unanimously know that gate-last -- well, actually for that matter our competitors have decided to change to gate-last also.

Mehdi Hosseini - SIG - Analyst

But not until 20-nanometer. And I'm just wondering if from now till then there will be enough difference in performance and cost benefit of the product that would prevent these new competitors from gaining any more traction.

Morris Chang - TSMC - Chairman & CEO

I don't think so.

Mehdi Hosseini - SIG - Analyst

Okay.

Morris Chang - TSMC - Chairman & CEO

Well, I think our technical people, whom I respect, they have unanimously told me that gate-last is the way to go and still be competitive.

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Mehdi Hosseini - SIG - Analyst

And then my follow-up question, I kind of missed your commentary on inventory correction. Based on -- so I apologize if I'm repeating the question already asked.

When you look at the rolling forecast, given what we know today of market demand and when you look into your rolling forecast for beyond December, how do you see the trend playing out, especially when Christmas and Chinese New Year are back to back and when many chip companies have already told us over the past two weeks that chip inventory correction is going to come to an end by Q3.

So what I'm trying to figure out is, is there a realistic scenario to expect a pent-up demand if the sell-through during the month of January doesn't fall off the cliff. Is this something that you're contemplating?

Morris Chang - TSMC - Chairman & CEO

I'm sorry, I'm asking Elizabeth to --

Elizabeth Sun - TSMC - Director, TSMC Corporate Communication Division

Well, I think your question is some people are saying that the inventory correction will be ending by end of Q3 instead of by end of Q4 right.

Mehdi Hosseini - SIG - Analyst

Yes. So when you look into your rolling forecast for beyond December, what -- is there anything that you can share with us because -- and I'm asking that because inventory correction is coming to an end by Q3. Then we have two major catalysts which hit consumption, Christmas and then two weeks later, Chinese New Year. And if sell-through doesn't fall off the cliff, there could be a scenario where there's a pent-up demand and some of your customers may rush back.

Morris Chang - TSMC - Chairman & CEO

Look --

Elizabeth Sun - TSMC - Director, TSMC Corporate Communication Division

Mehdi.

Morris Chang - TSMC - Chairman & CEO

Look, I think that actually last quarter, three months ago we thought the supply chain inventory correction would probably end in September. But the inputs that we have been getting from our customers is that -- or I should say the implications that we've been getting from our customers is that the destocking is still going on.

Now keep in mind that we are not like an IBM, such as Intel. We do have our customers as another layer between us and the market and the equipment market. So the IBMs can control their inventory very well and they can -- they are in immediate contact with the equipment market. Whereas we are one layer more -- one layer apart -- one layer more apart from the equipment market. So therefore the way we see this destocking is a bit more complicated than the IBMs would see destocking. I don't know whether I made myself clear.



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Mehdi Hosseini - SIG - Analyst

Should I assume -- but basically we just don't know how the Q1 rolling forecasts are going to look like. Is that what you're implying?

Morris Chang - TSMC - Chairman & CEO

We don't know. Our Q1 is a seasonally weak quarter for us; it has always been anyway. So -- and now with the continuous destocking, there's -- if you want me to say now what I expect, I expect that the Q1 will be seasonally weak in revenue. But I expect that the Q1 may be quite good in orders.

Mehdi Hosseini - SIG - Analyst

Got it. Okay, that was clear. Thank you.

Morris Chang - TSMC - Chairman & CEO

Thank you.

Operator

Your next question comes from the line of Mike McConnell of Pacific Securities.

Mike McConnell - Pacific Crest Securities - Analyst

Thank you. Just to follow up on Mehdi's question, I wanted to see with the utilization -- the capacity slide in Q4 and you said utilization are going to be up. Does that mean starts will be up sequentially in Q4, to get the utilizations higher? Or is it just you're trying to rebuild back to a normalized level for inventory and we shouldn't extrapolate starts being up from your customers which will lead to potential growth in Q1? I just wanted to clarify that.

Morris Chang - TSMC - Chairman & CEO

No, I don't think that Q1 will be a potential growth quarter. As I said Q1 is seasonally weak anyway for us. I don't think so.

Mike McConnell - Pacific Crest Securities - Analyst

And just last question on 28-nanometer and how we should look at the ramp next year. You've talked a lot about tape-out activity being exceptionally strong for this node relative to some past leading-edge geometries. Typically in the first year, generally for leading edge geometries, you'll see revenue at a negative rate in that first year, high single digits. Do you think that this time when you're looking at 28-nanometer and the amount of tape-out activity you have that you could be in a double-digit range as the negative rate in terms of percentage of revenue next year?

Morris Chang - TSMC - Chairman & CEO

Well, we expect 28-nanometer to be ramping up continuously from this point on all through next year. But remember 28-nanometer still is a relatively small percentage of wafer starts though.

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Mike McConnell - *Pacific Crest Securities - Analyst*

Yes, starts. But revenue though, do you think it could be above 10% of the negative rate for next year?

Lora Ho - *TSMC - SVP & CFO*

We'll have about 2% in the fourth quarter from 28-nanometer and we'll continue to go up --

Morris Chang - *TSMC - Chairman & CEO*

2% this fourth quarter.

Lora Ho - *TSMC - SVP & CFO*

This fourth quarter 2% and by second half next year it will account for more than 10%.

Mike McConnell - *Pacific Crest Securities - Analyst*

Okay, great. Thank you.

Operator

Your next question comes from the line of Donald Lu of Goldman Sachs.

Donald Lu - *Goldman Sachs - Analyst*

Hi, good evening. My first question is you have been talking about 28-nanometer has a much higher CapEx intensity, much more expensive and so -- and on the other hand I would assume the wafer price will be a lot higher too. And so one should we -- will we see if any positive impact on TSMC's ASP, on a systematic way because of the higher 28-nanometer and 40-nanometer mix?

Morris Chang - *TSMC - Chairman & CEO*

Yes.

Elizabeth Sun - *TSMC - Director, TSMC Corporate Communication Division*

Donald.

Morris Chang - *TSMC - Chairman & CEO*

Yes, Donald. Certainly it will have a positive impact on our blended average price because it's higher price, 28-nanometer. How much impact well, now just as Lora said, the revenue impact will be 10% or more, more than 10% in the second half of next year. So you can figure out arithmetically. You can see that why it has a uplifting effect. But our base is pretty big now, so the



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revenue impact is over 10% in the second half of next year. I think the first half of next year it will be smaller than that, so it can't have a too big impact.

Donald Lu - *Goldman Sachs - Analyst*

And that ASP change is already included in your revenue assumptions for next year?

Morris Chang - *TSMC - Chairman & CEO*

Yes, of course.

Donald Lu - *Goldman Sachs - Analyst*

When you talk about your revenue will grow a few percentage points higher than the industry?

Morris Chang - *TSMC - Chairman & CEO*

Pardon me.

Donald Lu - *Goldman Sachs - Analyst*

Sorry. When you -- earlier you said TSMC's revenue growth next year might be a few percentage points higher than the industry and I assume that's already including this potential ASP effect.

Morris Chang - *TSMC - Chairman & CEO*

Yes, that's correct. Actually to tell the truth, Donald, I'm more confident of the growth in 28-nanometers than I am about the growth of everything else. So yes, we have included the 28-nanometer numbers in my overall estimate and I think that I have taken a reasonably conservative approach on the rest of the portfolio, which is, by the way, 80%, 90% -- no, 90% -- more than 90% of the total. I think I am taking a reasonably conservative approach when I say that the total will be several points above 3% to 5%.

Donald Lu - *Goldman Sachs - Analyst*

Got it. And my second question is for Lora. I think in the afternoon you had a very clear explanation on the margin change in terms of how much is from FX and other things. Can you please just repeat that so we can be sure we get the correct answer?

Lora Ho - *TSMC - SVP & CFO*

Donald, I think you're talking about the third quarter versus our fourth-quarter guidance. Is that right?

Donald Lu - *Goldman Sachs - Analyst*

Correct.

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Lora Ho - TSMC - SVP & CFO

The margin difference.

Donald Lu - Goldman Sachs - Analyst

Yes.

Lora Ho - TSMC - SVP & CFO

Okay. If we were to take the midpoint of our fourth-quarter guidance the margin that I guided will be 44.5%. Compared with third quarter 42%, it's the 2.5 percentage higher. On the 2.5% higher we have several factors. Number one, a better cost in fourth quarter, this is 1.2%; better utilization, this is 0.7%; better foreign exchange rate, 1.7% and last, unfavorable product mix because we're ramping 28, this is a negative 1%. So if you add those four things up, you get roughly 2.5 percentage points.

Donald Lu - Goldman Sachs - Analyst

Right. And your US dollar assumption for Q4 is --

Lora Ho - TSMC - SVP & CFO

TWD30.3.

Donald Lu - Goldman Sachs - Analyst

TWD30.3, great. Thank you very much.

Lora Ho - TSMC - SVP & CFO

Welcome.

Operator

Your next question comes from the line of Dan Heyler of Bank of America.

Dan Heyler - Bank of America-Merrill Lynch - Analyst

Thank you for taking my question. Two quick questions; one for Lora and one for Dr. Chang.

Lora, I wanted to double check my numbers on the fourth quarter revenue. With your revenue guidance to be down about 1% to 3% sequentially in 4Q and the TWD currency forecast to appreciate about 4%, that would mean your US dollar based decline is about 4%, if we assume the midpoint of your guidance. Would the shipments be down about that much and thereby helping inventory digestion, is that how we should think about this?



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Lora Ho - TSMC - SVP & CFO

Actually --

Morris Chang - TSMC - Chairman & CEO

Shipments are down a little less than that.

Dan Heyler - Bank of America-Merrill Lynch - Analyst

A little less. Okay, thank you. So you've got a little bit of ASP decline.

Lora Ho - TSMC - SVP & CFO

Not much.

Dan Heyler - Bank of America-Merrill Lynch - Analyst

Okay. And then I guess -- Dr. Chang, thanks. To follow up on (inaudible) question on FinFET because you did mention that TSMC contemplated deeply when to deploy FinFET, whether it would be '14 or earlier, I'm wondering why TSMC wouldn't deploy this basically just as quickly as possible, particularly since you guys have done so much work over the years in this process and the benefit to the [power] seem to be quite favorable. So I'm wondering what the thought process is. Could this be something that you would try to deploy sooner and if so, why not?

Morris Chang - TSMC - Chairman & CEO

Well, we have been working on FinFET for quite a few years. But I have to say that in FinFET we are somewhat behind Intel. Now however we could try to catch up by accelerating FinFET and putting it on 20. And the alternative is what we chose.

The alternative is to find a way that our planar 20 can compete with Intel's FinFET 22 and delay the use of FinFET to the 14-nanometer generation. We will be more ready with FinFET when the 14 generation comes. And we chose that alternative. We believe our 20-nanometer planar in its ecosystem is competitive with Intel's 22 FinFET in Intel's ecosystem. We believe that.

Dan Heyler - Bank of America-Merrill Lynch - Analyst

That's very clear. Thank you so much. The ecosystem being also the design core as well, including (technical difficulty) arm as well, I presume.

Morris Chang - TSMC - Chairman & CEO

Thank you.

Dan Heyler - Bank of America-Merrill Lynch - Analyst

Thank you very much.

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Operator

Your next question comes from the line of Szeho Ng of BNP.

Szeho Ng - BNP Paribas - Analyst

Hi, good evening. Actually the question is about R&D. R&D has gone up quite a lot last couple of quarters. Just want to know if this is the trend going forward or should we expect it to level off at some point in time?

Morris Chang - TSMC - Chairman & CEO

That has been a deliberate policy to increase the R&D, both in amount and in percentage of revenue. And my present thinking is to let R&D go up to about 9% of revenue, which is where it is almost at now. And now of course, as revenue grows, R&D amount will still grow. But my present thinking is to stabilize the R&D expenses at 9% of revenue.

Szeho Ng - BNP Paribas - Analyst

Okay. Another question is also on the [COWOS] assembly space. When would you expect it to be a bigger part of your business like 5% of revenue for example?

Morris Chang - TSMC - Chairman & CEO

Well, I'll try to answer that question. Really I expect -- I really can't quantify it -- I expect that the COWOS will have a significant impact on revenue only two, three years away. In the next two or three years I do not believe -- I do not think that COWOS will have the significant impact on our revenue.

Elizabeth Sun - TSMC - Director, TSMC Corporate Communication Division

Operator, in the interest of time we will only accommodate one more caller's question.

Operator

And you have a question from the line of Robert Lea of Jeffries.

Robert Lea - Jeffries - Analyst

Thanks for taking my question. I know it's been a very long day for you. So I just wanted to ask, just looking at the costs Lora referred to the fact that costs down in Q4 will help the margin. I just wondered if you can elaborate on that or if it's anything particular in terms of the de-bottlenecking or is it a general reduction in operating costs or manufacturing costs?

And also if we do a quick analysis of the non-depreciation costs per wafer in the third quarter, it did rise by about 6% or 7% Q over Q. So I'm just wondering specifically what drove that increase. Thanks very much.

Lora Ho - TSMC - SVP & CFO

Okay. The first part of your question is talking about a cost improvement. I was talking -- I was referring to the manufacturing costs when I said cost improvement. There's two things that favor --- (multiple speakers)

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The cost improvement actually what I'm talking about is mainly the material wafer costs. That had some improvement. Also in the fourth quarter utility costs will be less than the third quarter compared to -- it will be less in utility costs. That's the two major items for the cost improvement.

Robert Lea - *Jeffries - Analyst*

Got it. And what exactly did drive the small increase in costs, non-depreciation costs that we saw in the third quarter? Within cost of goods sold.

Elizabeth Sun - *TSMC - Director, TSMC Corporate Communication Division*

Okay. Robert, I think in the third quarter compared to the second quarter we actually had higher utility costs because it's summer season. And secondly, because our utilization rate in third quarter is lower than the second quarter, so those non-depreciation fixed costs on a per wafer basis would be higher. So that's why the manufacturing -- the so-called non-depreciation manufacturing costs was higher in third quarter compared to the second quarter.

Robert Lea - *Jeffries - Analyst*

Got it, thanks very much. And a very quick follow-up question. Just if you draw parallels with the challenging experiences that the industry went through in '08, '09, what parallels are there at the moment, in terms of what your customers are saying sentiment-wise, I mean just your own gut feel? And I guess you're looking for the industry to essentially recover next year. To what extent -- how far are we in the bottoming process for the industry based on where we are today? And when does that inflexion point come? I know this has been referred to earlier on in the call. Essentially are we looking for the business and the industry to rebound into the second quarter?

Morris Chang - *TSMC - Chairman & CEO*

Well, it's I think it's problematic to try to predict the future on the basis of what happened in the past. But I -- you know in the '08, '09 situation, the depth of the plunge was much greater. And the plunge was just for two quarters -- fourth quarter of '08 and the first quarter of '09. And then in the second quarter of '09 there was a surge -- a surge began. And the surge was very strong. And it continued to the third quarter and then sort of stabilized a little bit from the fourth quarter on. But it continued to grow actually. But the slope of the surge obviously became gentler from the fourth quarter -- from fourth quarter '09 on. So that was the experience.

Now if you try to draw an exact analog here I would think that in the first quarter of next year we will start to get orders, strong orders and revenue will probably begin to surge in the second quarter of next year. Again I mean that -- as I said earlier it's problematic to draw conclusions, to draw predictions about the future from experience in the past.

Robert Lea - *Jeffries - Analyst*

Because I guess the overall read is, for both yourselves and many other companies in the sector, although things are maybe getting incrementally worse, so nowhere near a comparison with the '08/'09 situation and actually in some respects things are holding up remarkably well despite all the frightening headlines in the newspaper and on CNN.



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Morris Chang - TSMC - Chairman & CEO

I think the frightening headlines in CNN and newspapers -- you're talking about American newspapers, I assume. I think they are about the general economy and semiconductor is little different. Semiconductor is a little different because we -- I think we do have a killer app just emerging and that's the mobile product. So that's our new killer app. And then I think TSMC is even a little more different than the semiconductor so. Yes, the frightening news I think is probably true. The world economy I think doesn't look very good.

Robert Lea - Jeffries - Analyst

Okay. Well, it certainly seems your business is holding up well. Thank you very much.

Morris Chang - TSMC - Chairman & CEO

Thank you.

Elizabeth Sun - TSMC - Director, TSMC Corporate Communication Division

Thank you, Robert. Well, I think this concludes our Q&A session and thank you for joining us today. We hope you will join us again next quarter. Bye-bye.

Morris Chang - TSMC - Chairman & CEO

Thank you, goodnight.

Operator

Before we conclude TSMC's 3Q '11 results webcast conference call today, please be advised that the replay of this conference call will only be accessible through TSMC's website at www.tsmc.com. Thank you all.

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