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2330.TW - Q3 2013 TSMC Earnings Conference Call

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OVERVIEW:

2330.TW reported 3Q13 revenue of TWD163b and EPS of TWD2.00. Expects 4Q13 revenue to be TWD144-147b.



CORPORATE PARTICIPANTS

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Morris Chang *TSMC - Chairman & CEO*

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Dan Heyler *BofA-Merrill Lynch - Analyst*

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Michael Chou *Deutsche Bank - Analyst*

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Roland Shu *Citigroup - Analyst*

Andrew Lu *Barclays Capital - Analyst*

Mehdi Hosseini *Susquehanna Financial Group - Analyst*

Bill Lu *Morgan Stanley - Analyst*

Brett Simpson *Arete Research - Analyst*

PRESENTATION

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Welcome to TSMC's third quarter 2013 earning conference and conference call. This is Elizabeth Sun, TSMC's Director of Corporate Communications and your host for today. The event is webcast live via TSMC's website at www.tsmc.com. (Conference Instructions).

The format for today's event will be as follows. First, TSMC's SVP and CFO, Ms Lora Ho, will summarize our operations in the third quarter followed by our guidance for the current quarter. Afterwards, TSMC's Chairman and CEO, Dr. Morris Chang, will provide his general remarks and a couple of key messages. Then we will open the floor to questions. For those participants on the call, if you 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 earnings conference presentation.

Before we begin, I would like to remind everybody that today's discussions may contain forward-looking statements that are subject to significant risks and uncertainties which could cause actual results to differ materially from those contained in the forward-looking statements. Please refer to the Safe Harbor notice that appears on our press release.

And now I would like to turn the podium to TSMC's CFO, Ms Lora Ho.

Lora Ho - *TSMC - SVP & CFO*

Thank you, Elizabeth. Good afternoon, everyone. Thank you for joining us today. I will start the presentation with financial highlights for the third quarter and I will follow that by providing the guidance for the fourth quarter.



In the third quarter, TSMC set another record in both revenue and net income, thanks to our leadership in leading edge technologies. In the third quarter revenue increased 4.3% to reach NT\$163b. Gross margin was 48.5%, down 0.5 percentage points sequentially due to the lower capacity utilization offset by favorable inventory valuation adjustment.

Total operating expenses was NT\$19.3b, slightly increased from the second quarter, mainly due to higher R&D expense for 20-SOC and 16-FinFET technology development. The operating margin was 36.7%, down 0.3 percentage point from the second quarter.

Non-operating items was a loss of NT\$0.3b in the third quarter, mainly due to the NT\$1.35b impairment charge associated with our investment of Stion. Stion is a US-based solar company which we invested in 2010. The EPS impact for this event is about NT\$0.05.

Overall EPS was NT\$2 in the third quarter and ROE was 26.8%.

Let's take a look at the revenue by applications. After five consecutive quarters of growth, communications segment declined by 3% in the third quarter as consumer -- customers started to manage down their inventories. Computer segment declined 18%. Consumer segment grew significantly in the third quarter thanks to the strong demand from the game consoles. Meanwhile, industrial and standard-related revenues grew by 5% from the second quarter.

Despite the volatilities across different applications, our 28-nanometer continued to grow and contributed 32% of total wafer revenue in the third quarter, up from 29% in the second quarter. Combined with 40-nanometer, the advanced technologies represented 52% of our total wafer revenue.

Now moving to the balance sheet, we ended the third quarter with cash and marketable securities of NT\$218b. Current liabilities decreased by NT\$95b as we paid out NT\$78b of cash dividend in July.

On the financial ratios, accounts receivable turnover days increased 2 days to 45 days. Days of inventory further decreased by 2 days to 45 days as we had less work-in-process inventory in the third quarter.

On the cash flow side, during the third quarter, we generated NT\$96b from operations, invested NT\$55b in capital expenditure, distributed NT\$78b cash dividends, repaid NT\$13b bank loans and raised NT\$41b of corporate bonds. Overall, our cash balance decreased NT\$9b to NT\$217b. Free cash flow was an inflow of NT\$41b.

In US dollar terms, we spent \$1.8b in capital expenditure in the third quarter. This adds to the total of \$7.2b for the first three quarters, which is about 74% of our total year CapEx which is about \$9.7b.

Lastly, I would like to make a few comments on our capacity plan. Our total capacity grew 6.5% to around 4.3m 8-inch equivalent wafers in the third quarter and we will increase another 1% in the fourth quarter. For the full year, our 12-inch is expected to grow 17% year over year and our total annual capacity will increase 11% to 16.4m 8-inch equivalent wafers.

I have finished my financial reports. Now let me provide you our fourth quarter guidance. Based on current business expectation and the forecast exchange rate of NT\$29.5, we expect our revenue to be between NT\$144b and NT\$147b. In US dollar terms, this would translate to around 10% quarter-over-quarter decline.

On the margin side, we expect the fourth quarter gross margin to be between 44% and 46% and operating margin to be between 32% and 34%.

This concludes my remarks. Let me turn the podium to Chairman.

Morris Chang - TSMC - Chairman & CEO

Good afternoon, ladies and gentlemen. My message is outlined here on the screen. First, a few comments on third and fourth quarters of this year. Third quarter was another record quarter for TSMC both in revenue and in EPS. In a period where sales of certain mobile products were slowing,

we are pleased with our third-quarter results as they demonstrated once again TSMC's strong position in the leading edge technologies particularly in the 28-nanometer node.

As I said three months ago, the fourth quarter may be a down quarter, lower than the third quarter because we expect the supply chain to take serious actions to manage the inventory in the second half of this year. That has happened and is still happening.

As the CFO has just indicated in the guidance, our fourth quarter will decline by about 10.5% from the third quarter. This decline is mainly attributable to the softer demand for certain high-end smartphones and the inventory correction. We believe the decline is short term.

Meanwhile, TSMC's structural profitability, our technological strengths, and our close customer bonds remain intact. And we are optimistic about 2014.

Next, a few comments on industry outlook, supply chain inventory, and mobile products market. For the full-year 2013, we estimate the semiconductor market, the world semiconductor market will grow 4%. This is a bit higher than the 3% that we estimated last year, last quarter, mainly due to the strength of the memory segment of the semiconductor industry.

We again estimate that the fabless industry will grow 9%. That's unchanged from our last quarter estimate. We estimate that the foundry industry will grow 11%, unchanged from last quarter. And we now estimate that TSMC this year will grow between 17% and 18%, which of course is much higher than the foundry industry growth.

On inventory, in the third quarter, due to slower sales of certain high-end smartphone models, we estimate that the supply chain DOI in the third quarter went up and was above seasonal -- above seasonal. That was higher than we forecasted three months ago. In the fourth quarter, we expect the supply chain DOI to decline significantly and to approach seasonal level by the end of the fourth quarter.

On mobile products, the smartphones, 2012 730m units. 2013, we estimate 987m units, a 35% growth. 2014, we estimate about 1.2b units, a 26% growth over 2013. Tablets, in 2012 165m units. This year, we estimate 255m units, a 54% growth. And next year we estimate 310m units, a 22% growth.

Next I will talk about 28-nanometers. 28-nanometers is now in our third year of volume production. It still leads our competitors in yields and performance. Since the second quarter this year, our quarterly revenue from 28-nanometers has exceeded the \$1b mark and we expect to continue to grow our 28-nanometer business further in the next year.

TSMC's 28-nanometer market share in our served available market is about 84%, which is higher than our 45-nanometer was in its third year of ramp. It is also higher than the market share of our 65-nanometer, our 90-nanometer and our 0.13 micron in their respective third years ramp.

In 28-nanometer oxynitride solution, we have a couple of competitors. But TSMC delivers higher performance, better yield and shorter cycle time, which helps mitigate customers' inventory risk. Our market share of the oxynitride solution is about 75% this year.

In 28-nanometer high-K metal gate solution, we have little competition. Today our market share of 28 high-K metal gate is above 90%. As some of our customers begin to migrate to more advanced nodes, 20-nanometer and 16 FinFET, we will have second wave customers to come in to fill our 28-nanometer capacity. As a result we expect to maintain a high level of capacity utilization for 28-nanometer in the next few years.

Because of our substantial lead in yield, speed, power and our customers trusting us, which we make a hard effort to earn every month, every year, every day and because we have a multitude of second wave customers adopting 28-nanometer in future years, we expect to keep our 28-nanometer market share strong for a long time.

Indeed, keeping a high market share in every one of our more mature technologies has been part of our corporate strategy all along. As the leader in the foundry field, we usually start with a very high share at the leading edge. Then as competitors begin to appear they capture some market share. But our share in every mature technology, up through 45-nanometers, has never gone below 50%.

Now, a few comments on 20-nanometer and 16 FinFET. We will begin volume production of 20-nanometers in the first quarter 2014. That's 90 days from now. 16-nanometers will follow 20-nanometers in one year. We view both 20-nanometer and 16-nanometers as virtually one node.

Specifically on 20-nanometer we have received five product tape-outs and scheduled more than 30 tape-outs in this year and next year from mobile computing, CPU and PLD segments. And all those tape-outs represent big volumes. Design ecosystem on 20-nanometer has been validated in real products and is ready to support customers. Yield learning is in line or better than the 28-nanometer path.

We expect a fast ramp of 20-nanometer next year, with revenue from 20-nanometer in 2014 bigger than that of 28-nanometer in 2012. You see 20-nanometer will be starting next year whereas 28-nanometer actually started in the fourth quarter -- third, fourth quarter of 2011. So the corresponding point for 28-nanometer was 2012. But our ramp in 20-nanometer in 2014 is going to be faster than the ramp for 28-nanometer in 2012. While our 28-nanometer ramp was a record for TSMC, 20-nanometer ramp will be even faster by about 30%.

On 16 FinFET, technological development is progressing well. Risk production is on schedule by the end of this year. More than 25 customer product tape-outs are planned in 2014 including mobile computing, CPU, GPU, PLD and networking applications. We are on track to begin volume production within one year of 20-nanometers.

On both 20-nanometers and 16 FinFET we are confident that we are competitive. We derive our confidence from our close working relationship with several large customers. It is they, our large customers who have to come out with products that will prevail over their competitors. It is they, our large customers, who ensure that our 20-nanometer and 16 FinFET technology will enable them to prevail over their competitors.

Next, let me talk about CapEx growth and revisit the 2010 five-year plan. As Lora just said, CapEx this year will be around \$9.7b, give or take a couple hundred million dollars. This year our CapEx is partially for this year's growth but primarily for next year growth. We expect another double-digit growth year for 2014.

Now, let's take a moment to revisit the five-year plan we announced in 2010. In 2010, we set a target of 10% per annum PBT growth and ROE of equal or greater than 20% for the five-year period of 2011 to 2015. We were dealt an immediate setback in 2011. Our PBT in 2011 actually retreated from the 2010 level. But since then we have been catching up.

This year, the gap between our forecast and the trend line, the 10% per annum trend line, is a very small one. In the meantime, we are still comfortably above ROE of 20%. We expect -- on the profit before tax, we expect to more than catch up with the trend line, the planned line in 2014 and 2015.

Next I will make a few comments about the CEO succession and the Chairman's continuing hands-on role. I will get to the bottom line first and then I will offer a few words of comment.

The bottom line is just as that said -- that says. We do plan to appoint a CEO or two Co-CEOs before June of next year. And let me just say that before June of next year. It doesn't have to be next year, it could be tomorrow. Between now and June of next year.

And the other part of the bottom line is the Chairman's, my continuing hands-on role. I think it's no news to you that I will continue to be chairman. But today, I want to emphasize hands-on, continuing hands-on.

Now let me offer a few words of comment. Well, you remember that I came back in June of 2009 because -- to become the CEO. I was always the chairman and I will continue to be chairman. But in June of 2009, I came back to become, to resume CEO responsibilities.

It was because I saw golden opportunities for TSMC and also serious challenges. I cried the Henry the Fifth rally cry, once more unto the breach, dear friends, once more. Now unfortunately, the meaning of that rally cry was lost on many people because not very many people saw either the opportunity or the challenge as I saw them.

As far as the challenges were concerned, many people thought that I was referring to an emerging company that styled itself as a global company. But actually even at that point, I looked through that challenge and my gaze was already upon the two 700-pound gorillas in the industry.

As far as opportunity was concerned, very few people saw very clearly the mobile products opportunity. Now of course it's clear. I also said back in 2009, June of 2009, that I would be CEO for three to five years. Three years because I felt that was the minimum amount of time I needed to shift the Company's strategy and to execute it. Five years because I thought well, by that time, I will have done my bit. I will have really done my duty with TSMC.

Now four and a half years, almost four and a half years have passed and I did realize the shift and at least, much of the execution of a new strategy at TSMC. So I plan to follow the initial intention that I set on the five-year part. And that's why I said the five years, which is next June, before then we will appoint a CEO or Co-CEOs.

Now, the chairman's role. I think that many people, but not everybody, knows what the chairman's role in a company is in Taiwan. And let me just point out a few salient facts.

Under both the Taiwan Company Law and under the Taiwan customs, the chairman of a company is always the ultimate authority. There's no such thing as a non-executive chairman in Taiwan and there's no such thing as an executive chairman. The term chairman doesn't require any modifier, any adjective nor does it even admit of a modifier. Chairman is chairman and is the ultimate authority.

However, not every chairman is hands on. Many chairmen -- well, not many but a few are not hands on. I frankly was not hands-on between 2005 and 2009 and now I'm telling you that I will be hands-on.

Well, those are the comments that I wanted to make. I guess we are now ready for Q&A.

Elizabeth Sun - TSMC - Director of Corporate Communications

Yes, this concludes our prepared statements. (Conference Instructions). Now let's begin the Q&A session. Our first question comes from the floor and it will be Bank of America-Merrill Lynch, Dan Heyler.

QUESTIONS AND ANSWERS

Dan Heyler - BofA-Merrill Lynch - Analyst

Chairman, thanks for taking my question and we hope you'll come back frequently and participate in the quarterlies. A couple of questions. First, on the 16-nanometer, you had made an accurate prediction of your position in 28 in two respects. You had said that TSMC would extend your lead in 28 several years ago and that has occurred. And you'd also indicated that you would actually be with your partners more competitive than the two bigger foundries who were at 22.

So could you offer us two forecasts of 20 and 16 on both metrics? Number one, will you extend your lead relative to your competition? And number two, where do you rest with your partners relative to the IDMs on 16 and 20?

Morris Chang - TSMC - Chairman & CEO

The question as I understand is whether we will extend our lead in 20 and 16. On 20, very definitely I think, on 20. On 16, I think the battle is still raging now.

On 20, I believe that we will start with a very high market share, just like we did on 28 and so on. And we will keep that high market share for quite a while, several years.



On 16, I believe that we do have the serious competitors, the gorillas that I mentioned. But my goodness, we are -- we intend to prevail. But I'm not going to tell you now that we won alright. I hope to tell you in, let's say a year and a half I guess, that it's -- that we have already won. But on 16, the battle is still raging you know.

Dan Heyler - *BofA-Merrill Lynch - Analyst*

Could you offer a bit of follow up on that, a little bit of color on 16 because obviously it involves what TSMC does internally? It also involves your ecosystem partners in achieving your advantage. So maybe elaborate a bit on what more is going in 16 to further, given how competitive it is, perhaps intensified alliances or closer collaboration with the ARM ecosystem and perhaps more color there on how you can pull ahead.

Morris Chang - *TSMC - Chairman & CEO*

Well, I think that what's going on with our competitors, well, I think --

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Ecosystem partners. With our ecosystem partners on the 16-nanometer development plan.

Morris Chang - *TSMC - Chairman & CEO*

With our ecosystem partners. Well, I don't think I'm an expert on that. I'm -- however, you know who our ecosystems are, people are. And we do have Cliff I think -- well, not just I think, I know that we have Cliff Hou that's in charge, responsible for that part of working with our ecosystem partners. And as you know ARM is a very important one. But others and other EDA and IP providers are also very important.

But more importantly, I think that our large customers don't need the ecosystem as much as the middle-sized customers. And that's why the bond, our bond with the large customers becomes very important. And we have really, I believe, worked very hard. Even 15 years ago, I started to say that we had three major strengths, technology, manufacturing and customer partnership. And that's true today -- technology, manufacturing and customer partnership. And we later kind of rotated it between the word partnership and the word customers' trust. To us it means the same thing.

So the large customers are most important and they don't rely on the ecosystem as much. They do use it. They don't rely on it because they have their own special stuff. So yes.

Dan Heyler - *BofA-Merrill Lynch - Analyst*

Thank you, that's great. And the second question for Lora would be on the EPS growth comments that you made earlier getting probably back, about back to trend if not exceeding the trend on the EPS growth. Does that require that your gross profit, structural profitability will actually increase next year to achieve that target? Or can you sustain -- achieve that EPS growth with maintaining your current structural profitability? Thank you.

Lora Ho - *TSMC - SVP & CFO*

Hi Dan. We are confident we can either maintain or slightly improve our structural profitability. I know many analysts was concerned about our capital intensity being so high, how can we maintain our structural profitability. I have went through the number myself, so let me explain to you this way.



You know our depreciation, there's about 85% of our depreciation that goes to COGS. If you just look at the depreciation increase, you will see oh, year over year increased so high. Now this year versus last year it's around 20%. Next year it will be more than 35%. So how can you sustain your structural profitability?

The fact is when we invest in capital expenditure, actually we're adding the capability to do more business. So our quantity will also increase. So if you divide it by the unit cost, the depreciation cost actually doesn't increase that much.

Other than that, since we have migrated technology to more leading edge, so our average ASP will go higher as you have seen in past few years. In addition to that, with the continual productivity improvement from our operation people, we will be able to drive the non-depreciation cost to go down on a per annual basis. That means we can maintain the structural profitability.

So making it simple, if we invest in CapEx and those capacity get utilized and we continue to drive the efficiency and then we can maintain the same structure and so the EPS will grow.

I hope my explanation is clear.

Dan Heyler - *BofA-Merrill Lynch - Analyst*

Yes, it is. Thank you.

Elizabeth Sun - *TSMC - Director of Corporate Communications*

All right. Next question also comes from the floor and it would go to UBS, Jonah Cheng.

Jonah Cheng - *UBS - Analyst*

(Spoken in Chinese). Very quickly, for my first question, I think last time, Chairman had said something about the Q4 will be a bit slow down. And right now since the days of inventory already were back to normal in the end of this year, can we assume that in Q1 next year we may see the normal seasonal pattern like roughly flattish and start to rebound in Q2, this kind of normal pattern or still something we need to watch. Thank you.

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Jonah's question is whether or not we will have a normal seasonal 1Q 2014 or --

Jonah Cheng - *UBS - Analyst*

Anything different we still need to watch.

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Or anything different.

Morris Chang - *TSMC - Chairman & CEO*

What's your idea of a normal seasonal?



Jonah Cheng - UBS - Analyst

Okay, my idea for normal is roughly flat to down slightly, QOQ.

Elizabeth Sun - TSMC - Director of Corporate Communications

Flat to slightly down.

Morris Chang - TSMC - Chairman & CEO

Well, it's a bit early to predict the first quarter. But I do want to say that with the introduction of mobile products, the mobile products have a seasonality pattern that's different from what you described, from our traditionally normal seasonality pattern. And so I would not rely on that normal seasonal pattern.

And as to what the first quarter will be, I think that it's a little too early to forecast at this point. But seasonality refers to what happens during one whole year, not what happens quarter to quarter. And I have said earlier that we're very optimistic about next year will be a double-digit growth year, the whole year -- the whole year.

Now if the first quarter comes in a bit low, you will have a surge in the second and third quarter that will rattle our teeth. And in fact, the mobile products fourth quarter, well, this time, this year for us, fourth quarter is a bit down, 10% down. But that's mainly because of the inventory adjustment and because as I said of the slowing of just a few --

Elizabeth Sun - TSMC - Director of Corporate Communications

High end smartphone model.

Morris Chang - TSMC - Chairman & CEO

High end -- sorry, I just want to use the same words that I've used before. I know what they are but I just want to use the same words to describe them. A few high-end mobile products. But that does not necessarily reflect the normal pattern of mobile products.

So I don't know. I guess my answer to you is summarized by the following sentences. You cannot rely on the normal seasonal pattern and we are optimistic about the year as a whole.

Jonah Cheng - UBS - Analyst

Okay, thank you. And my second question is about the chairman just mentioned you will still hands-on after June next year. So what we are trying to know is for the investment relations side, can we keep hearing from you? Even after July next year, that you can still attend analysts meeting and provide your views to us. That's maybe something we want to know.

Elizabeth Sun - TSMC - Director of Corporate Communications

Yes, he's making a request for Chairman to still come to the investors conference after relaying the CEO position.

Morris Chang - TSMC - Chairman & CEO

Thank you for the invitation. And I will consider it.

Jonah Cheng - UBS - Analyst

Thank you.

Morris Chang - TSMC - Chairman & CEO

Just to show how hands-on I will be.

Jonah Cheng - UBS - Analyst

We're expecting it.

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay, all right. Next question comes from the floor again. It's Deutsche Bank's Michael Chou.

Michael Chou - Deutsche Bank - Analyst

Hi, Chairman. One question regarding 20-nanometer gross margin improvement pace. Given that you forecast 20-nanometer for the first year should be faster than 28-nanometer, so for the first 12 months right, so can we expect your gross margin in 20-nanometer improvement pace will be faster than 28-nanometer? Thank you.

Morris Chang - TSMC - Chairman & CEO

The question was what will 20-nanometer margin look like?

Lora Ho - TSMC - SVP & CFO

You're asking what the 20-nanometer gross margin like compared to 28-nanometer gross margin. As Chairman just talked about, the ramping profile for 20-nanometer will be more aggressive than 28-nanometer. So we expect 28 -- 20-nanometer will contribute quite significant revenue in 2014. Because the scale ramp so fast, so we can expect margin growth will be faster, in a much faster slope than 28-nanometer, if we compare to the same period with the same period.

Elizabeth Sun - TSMC - Director of Corporate Communications

Michael, your question really is whether or not the gross margin will also improve faster for 20-nanometer than for 28-nanometer, the speed of gross margin improvement.

Morris Chang - TSMC - Chairman & CEO

Well, I think the answer is yes. I think -- actually I said earlier that up to this point the 20-nanometer, D-zero improvement has been on a faster path than the 28-nanometer. So there's no reason to expect that that will stop. I think it will continue, the yield improvement pace.

That was the question? Yes. That was the question? I'm sorry I don't see any --

Michael Chou - *Deutsche Bank - Analyst*

Okay.

Morris Chang - *TSMC - Chairman & CEO*

That was the question right.

Michael Chou - *Deutsche Bank - Analyst*

Yes.

Morris Chang - *TSMC - Chairman & CEO*

So the answer is yes.

Michael Chou - *Deutsche Bank - Analyst*

Thank you. The second question is regarding the long term, as you say, the profit before tax target of 10% growth. Given that the addressable market of the mobile devices should decline in terms of growth rate going forward, so if you continue to improve your structural profitability, the second driver could be a bigger addressable market or you can see any new growth driver for your profitability?

Morris Chang - *TSMC - Chairman & CEO*

Can you repeat the question?

Elizabeth Sun - *TSMC - Director of Corporate Communications*

The driver for structural profitability improvement, what are they?

Michael Chou - *Deutsche Bank - Analyst*

Okay. Given that Lora just mentioned structural profitability should improve, but the addressable market of the mobile devices should start to see the slower growth rate. So how can you address to improve to capture the profit before tax of 10%?

Elizabeth Sun - *TSMC - Director of Corporate Communications*

So, right. Given the slowing growth of the smartphones and tablets, why can we still achieve PBT growth rate bigger than 10%. Given the growth drivers, which is the mobile products, the rate of growth is slowing, can we still achieve or how can we still achieve PBT growth bigger than 10%?



Morris Chang - TSMC - Chairman & CEO

Well, actually you'll notice that in the past two years in 2012 and 2013, our PBT growth has been higher than 10%. We had a setback in 2011 and we had to make up. So in 2012, if you show the slide again --

The dotted line, the upper dotted line is the 10% growth line and we had a setback in 2011. And so in 2012 we had to grow faster than 10%. PBT had to grow faster than 10%. And then in 2013, it grew faster than 10% again.

And now in 2014 I drew a kind of hazy ellipse here to show where it might go. And my expectation is that it's going to -- we're going to more than catch up in 2014. And we're going to -- by the time 2015 comes, I think we'll be above that.

So now we're going to -- look, we're going to grow double-digit, I think, comfortably double-digit next year. Not just barely double-digit, but comfortably double-digit next year. And it's our intention to grow PBT proportionately. And it's our intention to grow our PBT proportionately.

So you say how can we do that? Well, that's complicated. You can't just -- it's a mistake to try to analyze our Company one technology at a time or one customer at a time. I run a company as a whole and parts of the Company may be down, but parts of them are up. And I just want to be sure, that's my hands-on, that the up parts more than balance the down parts, okay.

So I was just to try to say that mobile products, the mobile product growth is slowing down and that's why maybe our revenue growth next year will be a bit less than this year. This year it's 17% to 18% and next year may be a bit lower. But it will still be comfortably, as I said, double-digit.

Lora Ho - TSMC - SVP & CFO

If I make some comment on the smartphone growing, your concern about the high-end smartphone growing is slowing down, but we still believe smartphone is still going to grow a, at least for the 10% for next year and the year after next. For overall smartphone where we have very high penetration on mid to low-end, we believe the overall smartphone will grow 35% this year and 25% next year. So our market position on the smartphone still will be a very big driver for us, TSMC's growth.

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay, all right. I think it's about time that we should take our next questions from the call. Operator, please proceed with the first caller in the line.

Operator

Steven Pelayo, HSBC.

Steven Pelayo - HSBC - Analyst

Great, thank you. Two questions; one very near term and one much longer term. More color, if you could provide some more color on your guidance for the fourth quarter. Revenue is down about 10% or 11%. I'm curious, is that all segments declining, can 28-nanometer maybe still grow in dollars? Will all segments be down? Which one will relatively outperform? Can you give us some more color and detail on both by segment as well as technology nodes relative to your overall guidance of down about 10% to 11%?

Elizabeth Sun - TSMC - Director of Corporate Communications

Steven, your first question is to provide additional color on the fourth quarter 10.5% decline, whether or not the decline is all from the decline of the 28-nanometer. That's your first question, is that right?

Steven Pelayo - HSBC - Analyst

No, actually my question was can 28-nanometer still continue to grow in the fourth quarter --

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay.

Steven Pelayo - HSBC - Analyst

Or alternatively will segments be down. Can you provide us a little bit more detail by both technology node as well as by communications, computing, consumer, will all those segments be down or any of them relatively outperform. So I'm looking for more just general color by technology and by segment on the fourth quarter guidance.

Lora Ho - TSMC - SVP & CFO

Okay. Steven, you're asking about segment changes on the fourth quarter. Of the 10% decline for TSMC, we will see most decline will be in consumer segment, decline the most, followed by the computer and followed by the communications. Industrial standard actually is slightly down or flattish.

Elizabeth Sun - TSMC - Director of Corporate Communications

And Steven, we do not give you any guidance on a particular node, sorry. And then what is your second part of the question?

Steven Pelayo - HSBC - Analyst

My next question is just much longer term for Chairman there. You obviously have a much better crystal ball than all of us, having seen the mobile opportunity in 2009. You just shared some forecasts for smartphones and tablet growth rates, falling from the 35% and 50% growth rates to the 20% to 25% next year. I think IDC is talking about 10% to 15% in 2015. So I'm curious, as you're looking out beyond 2014, what are going to be those next big opportunities to drive growth? And, perhaps just as important, will TSMC need to spend the greater than 40% CapEx to sales that they had to over the last few years to capture whatever those opportunities you see.

Elizabeth Sun - TSMC - Director of Corporate Communications

All right, so your question --

Morris Chang - TSMC - Chairman & CEO

Actually before I ask you to repeat Steven's second question, I want to add to Lora's answer to his first question, all right? His first question was whether the 28-nanometer would decline in the fourth quarter and Lora didn't really answer that. Well, you said no. I don't mind answering it. Well, remember we said that one of the main reasons for the fourth quarter decline is the high-end mobile products, the slowing of it. And 28-nanometer, our 28-nanometer will decline just a little bit, all right; not 10% but just a little bit. So that's -- yes. Okay. Now.



Lora Ho - TSMC - SVP & CFO

All right. The second part of Steven's question is how does Chairman see our growth drivers beyond 2014? What will be the other growth drivers beyond the mobile product for us and then how much CapEx we'll be spending to capture both types of growth beyond 2014?

Morris Chang - TSMC - Chairman & CEO

I see. Very difficult question. On the outlook for -- beyond 2015 well, look, we made a five-year plan and I thought that was pretty far-reaching back in 2010. And nobody even remembered that until today when I brought it out again, okay.

So now I said in my autobiography that as far as semiconductors are concerned, I am an eternal optimist. I believe that the people will keep finding new applications for semiconductors. Now it's the mobile products. Now the next one may now be something even more miniature and something even more convenient, like the wearables, like the watches and the -- but I think it could well be something even beyond that, but I don't think one can foretell what the future holds for us in semiconductors. I know that it will be good because it's a fundamental component. It's as indispensable to the world as almost food is, I would say.

Now, of course, people can never go without food, but in this information technology world -- and information technology was what drove the economic progress in the last 30 years. And in the information technology world semiconductors are indispensable and people will keep thinking about -- thinking up new applications. So I'm optimistic about years beyond 2015, but I cannot tell you what the exact applications, where the exact applications will be. Now, was there another one, another question?

Elizabeth Sun - TSMC - Director of Corporate Communications

Steven, thank you for your question. Now we come --

Steven Pelayo - HSBC - Analyst

Thank you.

Elizabeth Sun - TSMC - Director of Corporate Communications

Come back to the floor. The next comes from the floor of Credit Suisse, Randy Abrams.

Randy Abrams - Credit Suisse - Analyst

I wanted to ask, you talked about the double-digit profit before tax growth. Could you talk about now your expectation on CapEx?

And also there's some talk about EUV continuing to be a bit slower, so just how that affects capital intensity and timing for EUV?

Morris Chang - TSMC - Chairman & CEO

Yes, can you repeat that one.

Elizabeth Sun - TSMC - Director of Corporate Communications

Randy asked Chairman to share the view about future CapEx. And given EUV appears to be a bit slower, what would be its impact to our CapEx and capital intensity.

Morris Chang - TSMC - Chairman & CEO

EUV will be a little --

Elizabeth Sun - TSMC - Director of Corporate Communications

Slower. Delayed.

Morris Chang - TSMC - Chairman & CEO

EUV will be little slower? Okay we'll get to that, all right. I want to ask you where your information came from.

Randy Abrams - Credit Suisse - Analyst

Okay.

Morris Chang - TSMC - Chairman & CEO

Well, let me first talk about CapEx. Next year's CapEx will still be high. But if you want me just to give you a ballpark, I would say the ballpark is around what we -- is around NT\$10b, okay? But earlier I said that this year NT\$9.7b, give or take a couple of hundred millions. So when I give you NT\$10b, I have to say give or take a couple of billion, okay.

So now it highly depends on what we see the growth opportunities of 2015 will be, all right, but I do think that the capital intensity has either peaked this year -- this year the capital intensity is about 50%. We have NT\$20b of revenue and about NT\$10b of CapEx, so I do think that 50% is about the right peak.

Now then --

Elizabeth Sun - TSMC - Director of Corporate Communications

EUV.

Morris Chang - TSMC - Chairman & CEO

EUV, well actually I just met with our ASML partners yesterday, yes, and they told me just the reverse of what you just said; it's slowed or something? No, I think that the EUV progress is good and we are obviously tracking it very, very carefully. And -- but remember we are a significant investor in ASML and we also join in their EUV R&D program. And so tracking it very carefully and we are pretty sure that we're going to need it sometime in the future.

Randy Abrams - Credit Suisse - Analyst

Yes. The reason I mentioned ASML, I think at the investor conference perception was throughput was improving a little bit slower, so fewer tools were coming up in the next year, so it's a perception of it was just a little bit slower path in terms of improving productivity and throughput. But it sounds like by 10-nanometer you expect EUV to start for some of your process steps.

Morris Chang - TSMC - Chairman & CEO

EUV progress itself has not slowed. Well, it had a breakthrough about, I guess, earlier this year and before that it was a bit disappointing. And -- but they had a breakthrough early this year and since then their progress has been on track.

Randy Abrams - Credit Suisse - Analyst

Okay.

Elizabeth Sun - TSMC - Director of Corporate Communications

Next question comes from the floor from Citi's Roland Shu.

Roland Shu - Citigroup - Analyst

Thank you. Good afternoon, Chairman. First question is Chairman mentioned about we are going a second wave 28-nanometer product adoption. So can Chairman explain more for what are the growth driver for the second wave 28-nanometer product? Is this coming from the existing customers or coming from the existing products or this is a totally new customer or totally new segment? Thank you.

Morris Chang - TSMC - Chairman & CEO

Well, until about three or four years ago our first-wave customers at any leading edge were graphics and baseband and the PLD and so on. But then the first wave was taken over by the IC makers, IC suppliers for the mobile products. And the second wave now is what used to be the first wave, all right? And in the first wave there are some users that are later than the first first wave, for instance the providers, suppliers to the China phone market is later than the provider, IC provider to the American, European market, so.

Roland Shu - Citigroup - Analyst

Okay. Thank you. So, I expect since the original first wave leading edge technology adopter are mainly for the computer, for graphic or for FPJ PLD, so this time around I think for them to become a second wave customers I think that the adoption maybe more likely from the high-k metal gate point of view. It's not from the PolySiON because I think that for them, they need more powerful devices. So, that means going forward the growth, revenue growth for 28-nanometer probably will be even faster than the volume growth because with this high-k gate metal gate adoption, for the higher ASP and the higher gross margins. Am I reading you right or --

Morris Chang - TSMC - Chairman & CEO

I'm sorry, would you --

Elizabeth Sun - TSMC - Director of Corporate Communications

All right. Roland is making a prediction that our second wave customers filling our 28-nanometer capacity will be the ones that requires high-k metal gate instead of the oxynitride and therefore our revenue growth of 28-nanometer will be faster because high-k metal gate is more value added.



Morris Chang - TSMC - Chairman & CEO

Our revenue growth will what?

Elizabeth Sun - TSMC - Director of Corporate Communications

On 28-nanometer --

Morris Chang - TSMC - Chairman & CEO

Will be faster?

Elizabeth Sun - TSMC - Director of Corporate Communications

Will be faster than otherwise, yes.

Roland Shu - Citigroup - Analyst

Because of higher ASP on high-k metal gate.

Morris Chang - TSMC - Chairman & CEO

Now that I think about it, you may be right.

Roland Shu - Citigroup - Analyst

Okay, thank you. Thank you Chairman. My second question is on the 10-nanometer side. I think Intel is pushing out 14-nanometer adoption -- mass production by one quarter to maybe first quarter next year. And personally I predict, for Intel's 10-nanometer, mass production probably will be two years after its 14-nanometer which probably will be 2015. And then we look at TSMC, according to your product road map, now you are going to risk production 10-nanometer from 2015. So is there any chance of -- or what is the chance you think for TSMC, on 10-nanometer, TSMC is probably going to beat Intel in the mass production [side]. Thank you.

Morris Chang - TSMC - Chairman & CEO

Would you repeat the question?

Elizabeth Sun - TSMC - Director of Corporate Communications

All right. Roland is also making a prediction. Judging by just recently announced Intel pushing out their 14-nanometer by one quarter to next year, so that puts us into 2014. Mass production follows in two years, that's 2016. So Roland said if we start risk production of our 10-nanometer in 2015, is there a chance that we will be ahead of Intel?

Roland Shu - Citigroup - Analyst

Or I rephrase my question. What's the chance, if there is a chance, what's the chance you think you are going to beat Intel in 10-nanometer production? Thank you.



Morris Chang - TSMC - Chairman & CEO

I am not going to comment on that, Roland. I'm not going to comment, Roland, on that and I never, never underestimate anybody. I would not underestimate Intel. I didn't even underestimate anybody that was lesser than Intel and I would not underestimate Intel. Yes.

Roland Shu - Citigroup - Analyst

All right. Maybe I can ask in another way. Typically, how long does it take for 10-nanometer from risk production to mass production?

Morris Chang - TSMC - Chairman & CEO

Ours?

Roland Shu - Citigroup - Analyst

Yes.

Lora Ho - TSMC - SVP & CFO

[One year].

Morris Chang - TSMC - Chairman & CEO

No, no, 10, he said 10. 10 is two years after 16. 10 is two years after 16.

Roland Shu - Citigroup - Analyst

No, I mean, how long will it take for the risk production to be completed?

Morris Chang - TSMC - Chairman & CEO

Well, that can be shorter than it traditionally was. That could be shorter than it traditionally was.

Roland Shu - Citigroup - Analyst

Okay, thank you.

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay. We really have quite a few people in the queue.

Morris Chang - TSMC - Chairman & CEO

I saw Andrew.



Elizabeth Sun - TSMC - Director of Corporate Communications

I know, but there are several people waiting a long time.

Morris Chang - TSMC - Chairman & CEO

Andrew comes first.

Elizabeth Sun - TSMC - Director of Corporate Communications

All right, Andrew comes first. Okay, Andrew first.

Morris Chang - TSMC - Chairman & CEO

(technical difficulty).

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay, Andrew first.

Andrew Lu - Barclays Capital - Analyst

Thank you, Dr. Chang. Much appreciate on this. I have two questions. First one is regarding, earlier you mentioned Q1 next year we will start on mass production the 28-nanometer, Q1 2015 mass production. This mass production is a wafer start, is that correct?

Morris Chang - TSMC - Chairman & CEO

Yes, well, wafer start.

Andrew Lu - Barclays Capital - Analyst

Is a wafer start --

Morris Chang - TSMC - Chairman & CEO

But the cycle time is a given thing, yes. So, yes, wafer start, yes. Well, wafer start --

Andrew Lu - Barclays Capital - Analyst

So can we say --

Morris Chang - TSMC - Chairman & CEO

Just a minute. I think that we expect we have some revenue right?



Lora Ho - TSMC - SVP & CFO

From second quarter, revenue comes from second quarter. First quarter must be wafer start.

Morris Chang - TSMC - Chairman & CEO

Right.

Andrew Lu - Barclays Capital - Analyst

So you will have about three to four months wafer start work-in-progress style, so we are going to build a lot of inventory in Q1. Can we assume --

Morris Chang - TSMC - Chairman & CEO

Work-in-process inventory. \

Andrew Lu - Barclays Capital - Analyst

Work-in-progress inventory, so that will share some of the depreciation cost in Q1.

Morris Chang - TSMC - Chairman & CEO

Now you're looking into deep into our accounts, okay. Sure. That's standard accounting procedure.

Andrew Lu - Barclays Capital - Analyst

Yes, thank you.

Morris Chang - TSMC - Chairman & CEO

Yes.

Andrew Lu - Barclays Capital - Analyst

The second question is, I remember two years ago TSMC provided 28-nanometer per 1,000 wafer investment is about for \$120m. Can we have rough color for 20-nanometer investment per 1,000 wafer and 16-nanometer investment for 1,000 wafer?

Morris Chang - TSMC - Chairman & CEO

I haven't reviewed the numbers lately. So I don't -- can't give you an exact number. Design, design, is that right? Are you talking about per design?

Elizabeth Sun - TSMC - Director of Corporate Communications

CapEx per k.



Andrew Lu - *Barclays Capital - Analyst*

CapEx, CapEx.

Elizabeth Sun - *TSMC - Director of Corporate Communications*

CapEx per k.

Morris Chang - *TSMC - Chairman & CEO*

CapEx, so you're asking what the CapEx per --

Andrew Lu - *Barclays Capital - Analyst*

1,000 wafer.

Morris Chang - *TSMC - Chairman & CEO*

For what?

Andrew Lu - *Barclays Capital - Analyst*

20-nanometer and 16-nanometer.

Morris Chang - *TSMC - Chairman & CEO*

Okay. It's around -- approximately 20% higher than 28, yes. So but 28 has been reduced since -- you heard the number, okay.

Andrew Lu - *Barclays Capital - Analyst*

Okay.

Morris Chang - *TSMC - Chairman & CEO*

And it's -- sure, I mean, my goodness, it's a key parameter for us. Capital expenditure per 1,000 wafers per month capacity. That's a very, very critical parameter for us. And it's also something that we would love to know about our competitor. So -- and we try very hard; we have standing programs, standing projects that reduce it. And so when we told you what the 28-nanometer CapEx per k per month was -- what did we tell you?

Andrew Lu - *Barclays Capital - Analyst*

\$120m for 28.



Morris Chang - TSMC - Chairman & CEO

\$100 what?

Andrew Lu - Barclays Capital - Analyst

\$120m.

Morris Chang - TSMC - Chairman & CEO

That's been reduced --

Andrew Lu - Barclays Capital - Analyst

For 28.

Morris Chang - TSMC - Chairman & CEO

Yes, it has been reduced since then, yes. Yes, but the 20, and I'm telling you now, the 20 is approximately 20%.

Andrew Lu - Barclays Capital - Analyst

How about 16? Earlier you said 20 and 16 (multiple speakers).

Morris Chang - TSMC - Chairman & CEO

We regard them almost as one node you know.

Andrew Lu - Barclays Capital - Analyst

Okay good. Thank you.

Morris Chang - TSMC - Chairman & CEO

It's about 20% but it's not 20% above the \$120m or whatever you -- because the \$120m has been reduced okay.

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay. The next question will come from the call. Operator please proceed to the next caller.

Operator

Mehdi Hosseini, Susquehanna.



Mehdi Hosseini - *Susquehanna Financial Group - Analyst*

Thanks. My first question for Dr. Chang, have you seen any changes to your Q1 rolling forecast, particularly from some of your customers that have exposure to China and specifically post the holidays, post the early October holidays?

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Mehdi, your first question is do we see any change in our rolling forecast for 1Q, 2014 given our Chinese customers' business after their Golden Week? That's right? Is that your question?

Mehdi Hosseini - *Susquehanna Financial Group - Analyst*

Yes.

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Q1.

Mehdi Hosseini - *Susquehanna Financial Group - Analyst*

Yes, that's the question, yes.

Morris Chang - *TSMC - Chairman & CEO*

You want to answer that question, Lora.

Lora Ho - *TSMC - SVP & CFO*

It's hard to link that to a Chinese lunar New Year, but of course the 1Q forecast constantly changing and also the fourth quarter is changing. So if you want to say versus fourth quarter number, it's kind of fluid. So we don't see much changes; that's the simple answer to your question.

Mehdi Hosseini - *Susquehanna Financial Group - Analyst*

Great.

Elizabeth Sun - *TSMC - Director of Corporate Communications*

Mehdi, do you still have another question?

Mehdi Hosseini - *Susquehanna Financial Group - Analyst*

Yes. And then actually for Lora, you were talking about the unit cost at 20-nanometer pretty competitive to a 28, even though depreciation is going up by 20% but unit cost is competitive. What about 16-nanometer? Would the unit cost actually go down because 16-nanometer is a true shrink compared to 20-nanometer?

Elizabeth Sun - TSMC - Director of Corporate Communications

I think Mehdi's question is you want us to comment on the unit cost between 20-nanometer and 16-nanometer; unit cost of 20-nanometer and 16-nanometer.

Morris Chang - TSMC - Chairman & CEO

Well, unit cost of 16-nanometer is projected to be higher than unit cost of 20-nanometer, but you're talking about in terms of cost or price?

Elizabeth Sun - TSMC - Director of Corporate Communications

Cost.

Morris Chang - TSMC - Chairman & CEO

Cost right now, yes, it's still projected to be higher than 20-nanometer.

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay, let's come back to the floor. The next question I think will come from Morgan Stanley's Bill Lu.

Bill Lu - Morgan Stanley - Analyst

Hi Dr. Chang. I want to just start with a very broad question. You said earlier, when you came back as CEO, that it required a different strategy for TSMC. Now that we are here in the next three to five years do you see any changes that you need to implement as far as TSMC's strategy for the next couple of years?

Elizabeth Sun - TSMC - Director of Corporate Communications

Whether we will have a different strategy for the next two years?

Bill Lu - Morgan Stanley - Analyst

Or any changes --

Elizabeth Sun - TSMC - Director of Corporate Communications

Any change.

Bill Lu - Morgan Stanley - Analyst

Yes.

Morris Chang - TSMC - Chairman & CEO

Yes, I think not a different direction but I think we modify our tactics almost all the time. The general direction I think will stay the same. The general direction is -- but this is technology -- ours is a technology business and we want to lead in technology. Now, however, to allow that, we have to generate enough income from the existing products, existing technologies and therefore we need a good structural profitability.

Now, I -- so once we have good structural profitability, we push on the expenses, we push on expanding our R&D capability to the limit. And, of course, to realize all the benefits that technology leadership brings in, we also expand our capacity, our manufacturing capability with the industry. That has been the general direction, all right? And at the same time, in order to make sure that we have customers, large customers all the time, we -- as I said we work every day to earn the customers' trust. So all this is a integrated whole. So that general direction does not change.

Now, as far as the tactics are concerned, they change quite often. How much emphasis do we put on one technology versus another -- particularly the specialty technology, how much do we put on one versus another, how much really can we afford to expand R&D and how much emphasis we could put on one customer versus another. Those change all the time, but the general direction does not change.

The general direction is how we described it. First, you have to have good structural profitability. Then you push to expand, to strengthen R&D to the limit of your affordability and then, to realize the benefits that technology leadership brings you, you expand manufacturing. So, I mean, just -- then, if you have listened to what I said, you will begin to understand why our R&D expenses have gone up, why we have emphasized so much technology leadership and why our capital expenditures have gone up so much.

Okay? Is there another question?

Bill Lu - Morgan Stanley - Analyst

Yes, there is a very quick one. The Stion write-off, can you talk about whether that means a change in strategy in the solar business or what exactly is happening here?

Morris Chang - TSMC - Chairman & CEO

Stion, so what about Stion write-off? I'm sorry that it happened but what was your question?

Bill Lu - Morgan Stanley - Analyst

I'm just wondering what it means for TSMC's solar business overall.

Lora Ho - TSMC - SVP & CFO

I can take that one, Chairman.

Morris Chang - TSMC - Chairman & CEO

Yes.

Lora Ho - TSMC - SVP & CFO

Stion is the technology investment that we did in 2010 for the purpose to (inaudible) license the CIGS technology. And we did that so we have -- it's a core technology developed ourselves and it has been quite successful so there is no change in that front. The write-down is just because the

Company has decided not to continue to operations, so we had to take it out from our books, but since we had their technology and it's protected so it's no impact to our solar strategy and business.

Elizabeth Sun - TSMC - Director of Corporate Communications

All right. I know there are still people waiting on the queue from the call so operator please proceed to the next caller.

Operator

Brett Simpson, Arete Research.

Brett Simpson - Arete Research - Analyst

Thank you very much. Dr. Chang, if we go back to fourth quarter 2012, I think you said back then, after the first year of ramping 28-nanometer, that the gross margins were at or above corporate average. Can you just give us your impression how do you see 20-nanometer playing out? Should we expect we get the same gross margin level, so at or above corporate average by the end of 2014?

Morris Chang - TSMC - Chairman & CEO

What will the 20-nanometer gross margin be at the end of 2014?

Brett Simpson - Arete Research - Analyst

That's right.

Lora Ho - TSMC - SVP & CFO

Our 28-nanometer it took seven or eight quarters for the gross margin to reach to the corporate average and it has happened in the first quarter of this year. We believe the 20-nanometer will follow the same pattern.

Brett Simpson - Arete Research - Analyst

Okay, great. And just --

Morris Chang - TSMC - Chairman & CEO

(multiple speakers) 28-nanometer reached corporate average when?

Lora Ho - TSMC - SVP & CFO

Seven to eight quarters.



Morris Chang - TSMC - Chairman & CEO

Seven, eight quarters and she is saying that 20-nanometer will follow the same pattern. I tend to think that 20-nanometer will reach the corporate average sooner than eight quarters because, as I said earlier, the learning curve is faster up to this point than 28-nanometer's. So I think that will continue and in fact I think that it's almost necessary for 20-nanometer to run faster because the ramp-up is very fast; the ramp-up is faster than 28-nanometers. So in time it will have to take a shorter time for 20-nanometer to reach corporate average.

So I think it would -- I cannot answer you exactly what it will be by the end of next year because the end of next year will only be the third or fourth quarter, but I do say that it will be -- the gross margin will be higher than the 28-nanometer was at its third or fourth quarter.

Brett Simpson - Arete Research - Analyst

Got it, yes. Thank you. And just a follow up, I think you talked earlier about unit cost and we can all see at 20-nanometer this is the first node you start multi-patterning and, since that will be expensive, if you're expecting to maintain your structural profitability and the costs arising, what do you think the impact of this is going to have on the mobile value chain? Do you think the mobile market can absorb a cost increase, or do you think that chip prices are structurally going to start rising? How do you see the ripple effect from the inflation at leading edge that's coming?

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay. Brett has a very profound question. Seeing that our 20-nanometer was using -- it was using double-patterning and 16-nanometer was using FinFETs, both are expensive so it is going to have the impact to the mobile value chain. So how will the mobile products absorb these higher prices or costs? So what happens to the value chain?

Morris Chang - TSMC - Chairman & CEO

Well, the -- actually I can talk for hours about this, but the -- I believe that the supply chain value, the price, the end price, the end price to consumers is a pretty elastic one. That means that the lower the price, the more you sell. And now, if you are constrained by the cost, your price will have to be at the certain level and you will sell less. Now, of course, everybody wants to push it to a lower price so that they can sell more, but it's not a simple matter of being able to afford it or not being able to afford it.

Brett Simpson - Arete Research - Analyst

Thank you very much.

Elizabeth Sun - TSMC - Director of Corporate Communications

All right. I think we will go --

Morris Chang - TSMC - Chairman & CEO

It is a matter of competition, we just want to be -- our cost to be lower than competition's. I come back to the story of two people in the camp and a bear, a big bear is approaching. And the first person quickly puts on his running shoes and the second person says what's the use, the bear's going to outrun you anyway; it's going to run faster than you anyway. And the first person then starts to run and -- or he paused, he says to the second person, all I have to do is to run faster than you, not the bear, you know. So this price and costing, all you have to do is to run faster than the competitor.

Elizabeth Sun - TSMC - Director of Corporate Communications

Okay. From the floor there are a couple of media people in the back and they are raising their hands. So we'll give you the microphone but you'll please identify yourself. This is the last question.

Morris Chang - TSMC - Chairman & CEO

Okay. I enjoy this but I think that every good thing -- just, as the Chinese say, every feast comes to an end.

Unidentified Participant

Good afternoon. I'm a reporter from UDN TV. I just have two questions for you. The first question being that you have gone quite into the TSMC outlook on the fourth quarter and the first quarter in the next year, but people are quite concerned about the current economy and with the complications in US. And would you like to share your wisdom on maybe the next year's economy outlook and if it has an effect -- would it affect your expectation of TSMC in the next year?

Morris Chang - TSMC - Chairman & CEO

Global economic outlook for next year? Well, my goodness. I am -- I don't know what our Company official forecast is. Our Company forecasts that this year it's 2.5% global GDP and next year it's 2.8% global GDP growth, growth. That's consistent with my feel. I think that things are slowly improving.

I think the US, I think, in spite of the short-term problem, which I think probably faces a pretty quick resolution, is -- the US is on recovery path. I look at the new job creation, I look at the housing prices and I look at the -- well, those are the two main things I look at, new job creation and housing prices, the housing market really. So those things tell me that US is on a recovery -- continues to be on a recovery path. Europe I think actually is not doing any worse, anyway, and Japan I think is doing better. And China I think is going to be successful in a soft landing, you might say. Okay?

So I think I'm optimistic. So intuitively I think that the 2.5%, 2.8% forecast which means that next year will be somewhat better than this year, intuitively I think it's about right.

Unidentified Participant

Okay, thank you. My second question being that of course Chairman Chang has just told us when the CEO succession will be announced, but people are quite curious about who will be next in line. Would that be a current operating -- chief operating officer in the Company or can we expect someone else from outside of the Company?

Morris Chang - TSMC - Chairman & CEO

Well, the logical candidates are the two COOs. I think those are the logical candidates, yes. And was there another question?

Unidentified Participant

Thank you.



Elizabeth Sun - TSMC - Director of Corporate Communications

Okay. As Chairman said, all the good things must come to an end, so we will end here. But before we conclude today's conference, please be advised that this replay of the conference will be accessible two hours from now, transcript will be available within 24 hours from now, both of which will be available through TSMC's website at www.tsmc.com. Thank you for joining us today. We hope you will join us again next quarter. Good bye and have a good day.

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