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**Lora Ho** TSMC - SVP & CFO

**Morris Chang** TSMC - Chairman

**Mark Liu** TSMC - President & Co-CEO

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## CONFERENCE CALL PARTICIPANTS

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**Gokul Hariharan** JPMorgan - Analyst

**Dan Heyler** BofA-Merrill Lynch - Analyst

**Roland Shu** Citigroup - Analyst

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**Mehdi Hosseini** Susquehanna International Group - Analyst

**Michael Chou** Deutsche Bank - Analyst

## PRESENTATION

**Elizabeth Sun** - TSMC - Director of Corporate Communications

Welcome to TSMC's second quarter 2014 earnings conference and conference call. This is Elizabeth Sun, TSMC's Director of Corporate Communications and your host for today. Today's event is webcast live via TSMC's website at [www.tsmc.com](http://www.tsmc.com). (Operator Instructions) As this conference is being viewed by investors around the world, we will conduct this event in English only.

The format for today's event will be as follows. First, TSMC's Senior Vice President and CFO, Miss Lora Ho will summarize our operations in the second quarter, followed by our guidance for the third quarter. Afterwards, TSMC's Chairman, Dr. Morris Chang will provide a couple of key messages. Then we will begin the Q&A session where TSMC's two Co-CEOs, Dr. Mark Liu and Dr. C.C. Wei, will join Chairman Chang and Miss Ho in responding to your questions.

For those participants on the call who do not yet have a copy of the press release, you may download it from TSMC's website at [www.tsmc.com](http://www.tsmc.com). Please also download the summary slides in relation to today's earnings conference presentation.

As usual, 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, Miss Lora Ho.



**Lora Ho** - TSMC - SVP & CFO

Thank you, Elizabeth. Good afternoon, everyone. Thank you for joining us today. I will start my presentation with the financial highlights for the second quarter followed by the guidance for the third quarter.

Second quarter 2014 is a record quarter for TSMC, both in revenue and in net income. In this quarter, we saw strong demand for our wafers across all major segments. Our revenue increased 23.5% sequentially and 17% year over year to reach TWD183b.

On the profitability side, gross margin was 49.8%, 2.3 percentage points higher than that in the first quarter. The higher margin was mainly driven by higher capacity utilization, partially offset by inventory valuation adjustments and a small margin dilutive effect from 20-nanometer ramp.

Operating margin was 38.6%, up 3.2 percentage points from the first quarter, reflecting an improved operating efficiency for the Company.

During the second quarter, we recorded a TWD2b disposal gain from the sale of Vanguard International Semiconductor Company's shares.

We also saw a big jump in the corporate tax rate from 10.4% in the first quarter to 19.8% in the second quarter. The 9.4 percentage point increase was attributed to the accrual of retained earnings tax which is incurred in the second quarter every year. We estimate our full-year tax rate for 2014 will be about 13%.

Overall, the second quarter EPS was TWD2.30 and ROE was 26.9%.

Let's take a look at the revenue breakdown by application. Our revenue from all major segments increased sequentially in the second quarter. Compared to the first quarter, communication increased 19%; computer increased 14%; consumer increased 31% and industrial-related revenue increased 25% during the second quarter.

By technology, our 28-nanometer grew more than 30% from the previous quarter. Its contribution to our total wafer revenue increased from 34% in the first quarter to 37% in the second quarter. Combining the two advanced technology nodes, 28-nanometer and 45-nanometer, we derived 56% of the total revenue in the second quarter.

Now let's move to the balance sheet. Cash and marketable securities reached TWD315b at the end of the second quarter. Our cash increased TWD23b during the quarter, while our marketable securities increased TWD58b as we reclassified certain long-term investments to short-term marketable securities.

Current liabilities increased by TWD72b as we accrued TWD78b for the cash dividends in the second quarter.

Accounts receivable turnover days decreased 5 days to 40 days. As our revenue increased at a much faster pace than average accounts receivable in the second quarter, days of inventory decreased 1 day to 51 days.

Now let me make a few comments on cash flow and CapEx. During the second quarter, we generated TWD82b cash from operations, invested TWD73b in capital expenditure and borrowed TWD10b short-term loans for hedging purpose. At the end of the second quarter, our cash balance increased TWD23b to reach TWD255b. Free cash flow for the second quarter was an inflow of TWD8b.

In US dollars, our second quarter CapEx was \$2.4b. That makes our CapEx totaled \$6.2b for the first half of the year. Our full year CapEx budget remains in the range between \$9.5b and \$10b.

Regarding our capacity, we now expect to increase our capacity by 11% from last year. This is a small increase from the 10% growth as we forecasted earlier and it is mainly derived from our productivity improvement. Total annual capacity is expected to reach 8.1m 12-inch equivalent wafers this year.

I have finished my report on the financial progress. Now let me turn to the third quarter outlook. Based on our market outlook and the business exchange rate -- and forecast exchange rate of 29.81, we expect our third quarter revenue to be between TWD206b and TWD209b, representing between 12.6% and 14.2% sequential growth. Gross margin is expected to be between 48.5% and 50.5% and operating margin is expected to be between 38.5% and 40.5%.

This concludes my remarks. Let me turn the podium to our Chairman, Dr. Morris Chang.

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**Morris Chang** - TSMC - Chairman

Good afternoon, ladies and gentlemen. I want to make a few comments on the supply chain inventory situation and the second-half demand and then a few words on 20-nanometer and 16-nanometer progress and then a few words on 10-nanometer progress.

First, on supply chain inventory and second-half demand, our second quarter was record-breaking in revenue, operating income and net income. We have noted in past investor conferences that supply chain inventory dipped to a low point at the end of last year. The past six months have seen a rebuilding of inventory which partially explains the strength of demand in the period.

We estimate that the supply chain inventory has returned to seasonal level at mid-year, from a very low point at the end of last year to seasonal level at mid-year. We further estimate that it will actually continue to build through the third quarter and DOI will be 2 days above seasonal at the end of third quarter. But then we estimate that DOI will decrease and will be at 2 days below seasonal at the end of the year.

So last six months have seen a rebuilding of inventory and at mid-year, it's about seasonal level. It will continue to build some, modestly to 2 days above seasonal at the end of third quarter and then it will dip to 2 days below seasonal at the end of fourth quarter. So, one might characterize the next six months as a period of cautious inventory management by the supply chain.

However, the widespread adoption of 4G LTE tends to increase the demand of our 28 and 20 technologies. Overall, we're guiding third quarter to be another record-breaking quarter as Lora just said. It will be another record-breaking quarter in revenue, operating income and net income.

Also at this point because of our strength in 20-SoC and our strength in 28, 4Q appears to be a sequential growth quarter also. 4Q appears to be a sequential growth quarter also.

Now a few words on 20-nanometer and 16-nanometer progress. In the last two and half to three years, 28-nanometer technology has driven our growth. In the next three years, 20 and 16-nanometer technologies are going to drive our growth; 28 in the last two and half to three, 20 and 16 in the next three.

After two years of meticulous preparation, we began volume shipments of our 20-nanometer wafers in June. The steepness of our 20-nanometer ramp sets a record. We expect 20-nanometer to generate about 10% of our wafer revenue in the third quarter and more than 20% of our wafer revenue in the fourth quarter. And we expect the demand for 20-nanometer will remain strong and will continue to contribute more than 20% of our wafer revenue in 2015. It will reach 20% of our total wafer revenue in the fourth quarter of this year and it will be above 20% of our total wafer revenue next year.

The 16-nanometer development leverages off 20-SoC learning and is moving forward smoothly. Our 16-nanometer is more than competitive, combining performance, density and yields considerations. 16-nanometer applications cover a wide range including baseband, application processors, consumer SoCs, GPU, network processors, hard disk drive, FPGA, servers and CPUs. Volume production of 16-nanometer is expected to begin in late 2015 and there will be a fast ramp up in 2016. The ecosystem for 16-nanometer designs is current and ready.

A few years ago, in order to take advantage of special market opportunities, we chose to develop 20-SoC first and then quickly follow with 16-nanometer. We chose this sequence to maximize our market share in the 20/16-nanometer generation. As the 20/16 foundry competition unfolds, we believe our decision to have been correct.

Number one, in 20-SoC, we believe we will enjoy overwhelmingly large share in 2014, 2015 and onwards.

Number two, in 16-nanometer, TSMC will have a smaller market share than a major competitor in 2015. But we'll regain leading share in 2016, 2017 and onwards.

Number three, if you look at the combined 20 and 16 technologies, TSMC will have an overwhelming leading share every year from 2014 on.

Number four, in total foundry market share, after having jumped 4 percentage points in 2013, TSMC will again gain several percentage points in 2014. This is the total foundry market share covering all technologies. After having increased 4 percentage points last year, TSMC will gain another several percentage points this year.

Now a few words about 10-nanometer. The 10-nanometer development is progressing well. The 10-nanometer speed is 25% faster than the 16-nanometer. The power consumption is 45% less than 16-nanometer and the gate density is 2.2x that of the 16-nanometer. Power is 25% faster. Did I say power? I meant speed. Speed is 25% faster, power is 45% less, gate density 2.2 times more, all compared with 16-nanometer.

We work closely with our key customers to co-optimize our 10-nanometer process and design. We expect to have customer tape outs in the second half of 2015.

Those are all my prepared comments. I believe we are ready for Q&A.

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## QUESTIONS AND ANSWERS

**Elizabeth Sun** - TSMC - Director of Corporate Communications

Yes, this concludes our prepared statements. (Operator Instructions).

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**Morris Chang** - TSMC - Chairman

He has one already. He has raised his hand.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

All right. So I think Chairman wants Randy, right? Okay, Credit Suisse, Randy Abrams.

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**Randy Abrams** - Credit Suisse - Analyst

Okay, thank you.

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**Morris Chang** - TSMC - Chairman

Randy, yes.

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**Randy Abrams** - *Credit Suisse - Analyst*

I appreciate you calling me first. I'm sorry to harp on one negative with all the results quite good. I wonder if you could elaborate on your comments on 16-nanometer, where you talked about your market share next year being lower than a competitor. If you could talk about why you think that plays out, the potential impact of that and then confidence to regain share. Like what's driving confidence to regain share the following year.

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**Morris Chang** - *TSMC - Chairman*

Would you repeat that question, Elizabeth?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Sure. Randy's question is with respect to Chairman's comment on 2015's market share is lower than a major competitor in 2015. So Randy's asking why will it be lower and what is the impact to TSMC if we have a lower market share. And what gives us the confidence that we will regain the market share in following year?

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**Morris Chang** - *TSMC - Chairman*

Oh, okay. Well, we need to go back to history a little bit. 32 -- 28-nanometer followed 32 and that particular major competitor that I referred to, chose 32 and skipped 28. And then of course we came to 20 and 16, 16 for us, 14 for him. And we chose to do both. Actually we chose to do 20 first and 16 about a year or so later, but it was a pretty quick succession. And this major competitor skipped 20 and went on to 16.

So you ask why is our market share on 16 lower than this major competitor in 2015. Well, the answer is we got started a little late because we chose to do 20 also. And 20 turned out to be a very, very important node as I already spoke to just a few minutes ago. So we have both 20 and 16.

Now how can we be sure that we'll regain 16 share in 2016? Well, the answer is that the technologies these days, you just have to engage with the customers way in advance, like about two years in advance before you get orders. So you talk with the -- you discuss with the customers, the customers follow your technical progress and then the customers give you tape outs and you have to qualify the tape outs etc., etc. The whole process is about two years in advance of actual delivery, volume delivery.

So how can I be sure that we'll regain share in 2016? Well, this is the middle of 2014, about two years ahead of 2016. I think I have a pretty good idea of how much order I am going to get in 2016.

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**Randy Abrams** - *Credit Suisse - Analyst*

Just on the impact to TSMC, if you could talk about how material the revenue impact of that market share, because you'll be doing 20 in high volume. So how much impact potentially, the potential to outgrow the industry or how much revenue impact from this market share loss on 16 initially?

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**Morris Chang** - *TSMC - Chairman*

Would you repeat that question, Elizabeth?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

So, Randy, your question is in 2015 since we will lose some market share at the 16-nanometer, so what's the impact to us in revenue, if we do not have that part of the business.

**Randy Abrams** - *Credit Suisse - Analyst*

Your ability to outgrow the industry like you have in the past few years. Yes, either revenue impact or how you see your growth relative to industry.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

So will we be growing faster or slower than the industry next year?

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**Morris Chang** - *TSMC - Chairman*

Well, I don't know. I think there's too much unknown still, because we think -- I think that I have a pretty good idea of how much revenue our competitor -- foundry revenue now I'm talking about -- the foundry revenue our competitor is going to have in 2015 on the 16-nanometer. But I don't think I want to publicly say what the number is.

And actually there's still a bit of uncertainty here in the number. We could get some of that, but we are going to be late. But we'll be there actually in the second half.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Randy, maybe we should remind you that Chairman said in his key message that 2015 our 20-nanometer will be accounting for more than 20% of our total wafer revenue. I think that would give us --

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**Morris Chang** - *TSMC - Chairman*

I think everybody in the audience, Randy understood that and I think everybody also does so.

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**Randy Abrams** - *Credit Suisse - Analyst*

Okay. I've actually got a second question.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

That's your -- you have three questions.

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**Morris Chang** - *TSMC - Chairman*

Yes, you've got two chances already Randy. I think you wait your turn now and later --

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

All right. Okay, next question I think would be JP Morgan's Gokul Hariharan.

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**Morris Chang** - *TSMC - Chairman*

Gokul?

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**Gokul Hariharan** - *JPMorgan - Analyst*

It's Gokul.

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**Morris Chang** - *TSMC - Chairman*

Okay. Gokul did you say?

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**Gokul Hariharan** - *JPMorgan - Analyst*

Gokul.

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**Morris Chang** - *TSMC - Chairman*

Okay, all right.

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**Gokul Hariharan** - *JPMorgan - Analyst*

Thanks for taking my question. I had a couple of questions on 10-nanometer. So since you've mentioned that 10-nanometer will start risk production in Q4 of next year, is it fair to assume that 16-nanometer as a leading edge --

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**Morris Chang** - *TSMC - Chairman*

I'm sorry, I need to interrupt. Did you say that you -- we said before when 10 --

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**Gokul Hariharan** - *JPMorgan - Analyst*

I think Chairman, you just mentioned that 10-nanometer would start risk production in the second half of next year.

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**Morris Chang** - *TSMC - Chairman*

No, no, no.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Customer tape out.

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**Morris Chang** - *TSMC - Chairman*

10, no, no, no. 16 will start volume production --

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**Gokul Hariharan** - *JPMorgan - Analyst*

In 2015.



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**Morris Chang** - TSMC - Chairman

In second half of next year.

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**Gokul Hariharan** - JPMorgan - Analyst

Okay. So --

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**Morris Chang** - TSMC - Chairman

So I didn't say anything about 10. Don't misunderstand. That's a very important distinction, 10 and 16, yes.

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**Gokul Hariharan** - JPMorgan - Analyst

So just wanted to understand what is the cadence for 16-nanometer since we are starting a bit later. Since 20 is still going to be more than 20% of revenues next year, (multiple speakers) does 16-nanometer also ramp up to be 20% plus of revenues in 2016 or is it going to be a shorter node and being overtaken by 10-nanometer maybe sometime in 2016 or 2017?

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**Morris Chang** - TSMC - Chairman

[You will have] to repeat that.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Okay. Gokul's question is with respect to the cadence. First part is with respect to the cadence between 16-nanometer and 10 nanometer, whether or not we will have a shorter cadence or a regular cadence. And whether or not 16-nanometer will account for more than 20% of the revenue for us in 2016 or 16-nanometer will become a short node.

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**Morris Chang** - TSMC - Chairman

Well, what's the second question?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Whether 16-nanometer will account for more than 20% of our wafer revenue in 2016 or whether or not 16-nanometer will be very short.

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**Morris Chang** - TSMC - Chairman

I don't think I've looked at it. Have you? For 2016, I don't know what the total -- well, I think the total revenue will be higher than 2015. But exactly what it will be, I don't quite know. I'm just guessing. Really I have more problem with your question, I have more problem with the total revenue of 2016 than I do with the --

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**Gokul Hariharan** - JPMorgan - Analyst

Or if I rephrase this.



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**Morris Chang** - TSMC - Chairman

16-nanometer revenue in -- yes.

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**Gokul Hariharan** - JPMorgan - Analyst

Well, if I could rephrase it. Will 16 peak out lower than 20-nanometer at the --

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**Morris Chang** - TSMC - Chairman

No. I have a feeling that 16 will be as strong or a stronger node for us than 20-nanometer.

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**Gokul Hariharan** - JPMorgan - Analyst

Okay. And the second question I have is on --

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**Morris Chang** - TSMC - Chairman

I don't think we have answered your first question. Your first question was 10, what was that?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Cadence, the cadence between 16-nanometer and 10-nanometer, whether or not it will be a shorter cadence.

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**Morris Chang** - TSMC - Chairman

I just noticed that Intel said that they aren't about to talk about their 10-nanometer agenda until sometime next year. So I'm going to follow that practice, okay.

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**Gokul Hariharan** - JPMorgan - Analyst

The second question I had is in terms of capital intensity. I think this year and next year, I think capital intensity is already coming down. Should we expect a change when it comes to the next leg of investment or is it still going to be the same pattern in terms of capital intensity coming down?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Capital intensity is measured by CapEx divided by revenue. Whether or not this number will be coming down or stays the same.

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**Morris Chang** - TSMC - Chairman

It will be coming down.

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**Gokul Hariharan** - *JPMorgan - Analyst*

Okay, thank you.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Okay. Dan Heyler, the next one from BoA Merrill Lynch.

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

Thank you. Thank you, Chairman and team. I wanted to follow up a little bit on again back to the 16 question. It feels a little bit like I remember the CPU days where you've had somebody would fall behind on one node and then try to leapfrog. And I want to revisit this question of the probability of success in skipping a node. TSMC has been over the years relatively careful at making sure that you're bringing up your technology and learning one thing at a time. So we have double patterning obviously at 20-nanometer and now we have FinFET at 16 and 14, in addition to two shrinks.

So have we ever seen a company, successfully have basically three major changes at once, leapfrogging and being able to do that? So I'm just wondering that you have consciously chosen 20 for multiple reasons. I think one --

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**Morris Chang** - *TSMC - Chairman*

I'm sorry. What three changes are you speaking of?

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

So we have FinFET, the double patterning and also you have a couple of node shrinks. So your competitor is skipping --

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**Morris Chang** - *TSMC - Chairman*

FinFET, double patterning and --

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Scaling.

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

Shrink, scaling.

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**Morris Chang** - *TSMC - Chairman*

And scaling.

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

So what is your confidence that in fact that can be done successfully by your competitor and --

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**Morris Chang** - TSMC - Chairman

By our competitor.

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**Dan Heyler** - BofA-Merrill Lynch - Analyst

Which is --

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**Morris Chang** - TSMC - Chairman

I'm not going to comment on how successful they will be (multiple speakers).

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**Dan Heyler** - BofA-Merrill Lynch - Analyst

You've just done that.

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**Morris Chang** - TSMC - Chairman

No, I don't think it's going to be easy. But as far as we are concerned, you mentioned three hurdles. To us, I think the double patterning would not be a hurdle because we have done that in 20 already. So 16 will not be.

But your question was not about us. It's about our competitor, right? And I don't think I really want to comment on that except to say that it's not going to be easy.

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**Dan Heyler** - BofA-Merrill Lynch - Analyst

Well, I mean -- yes, I think you are commenting already by saying you're going to lose share. So I just wanted to get a feel, maybe flesh this out. I think it's important from an investor's standpoint to understand the complexity in doing this. I think now you're pretty much down the road in 20-nanometer. I think your C.C. and Mark have had a good look at 20. You've looked at the challenges in bringing up double patterning. How critical is 20 as a learning node?

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**Morris Chang** - TSMC - Chairman

How critical is 20 as a learning aid?

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**Mark Liu** - TSMC - President & Co-CEO

Dan, you have a keen observation. I think indeed, I haven't seen industry skip nodes to be successful, if not still catching up. But we never underestimate our competitors, so I wouldn't want to comment.

But it is -- every change of a tech, of each generation is very difficult. Therefore you see the scaled technology, the definition, they change one thing at a time, as you know. So that sets most of it for the people trying to catch up, that's what they do. But historically -- there's a lot of history, historical data that you can see.

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

Thank you. Second question, cadence R&D, I've been impressed by your operating efficiencies, Lora. With this 16 acceleration, 10 looks pretty aggressive, should we be modeling R&D pick-up growing at a faster rate than sales or will it maintain as a percentage of sales over the next two to three years.

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**Morris Chang** - *TSMC - Chairman*

Let me answer. You're asking whether our R&D will build up even faster than revenue, is that right? I think that it's possible. In fact that's really our first priority, I think. We want to strengthen our technical side even more. So that's -- but it's not going to be very big. Right now, actually we modeled R&D as 8% of revenue at the beginning of the year. Now the revenue has turned out to be bigger than we thought it was going to be. So, right now R&D is only 7.3% of revenue. And in my mind however, the model is still 8%. All right?

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

Thank you.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Next question will come from the floor. It will be from Citi's Roland Shu.

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**Roland Shu** - *Citigroup - Analyst*

Hi. Good afternoon, Chairman. I think I just first still a follow-up question on 16-nanometer. I believe that Chairman comment in AGM that TSMC 16-nanometer is ahead of competitor's 14-nanometer in three regards. First is technology and productivity and also trust of customers. I think for the productivity and trust of customer, actually we have no doubt about that. So can Chairman quantify how big the lead it is for your 16-nanometer FinFET to competitor's 14-nanometer FinFET? Thank you.

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**Morris Chang** - *TSMC - Chairman*

Actually I intend to repeat what I said in the Annual General Meeting just now. Really, if you combine the three, speed, density and power, we feel that we are more than competitive.

Now you asked me how big a lead we have etc., etc. Well, I think that would be a very difficult question to answer because our competitors on the 16 are the two companies that I in the past referred to as the two big gorillas of the industry. And each has its strengths.

So the two are not the same at all. And each has its strengths; each has its weaknesses. And a competitor may be technologically strong, but if he turns out to be a competitor of his potential customers, then that's a weakness. And if a competitor is already used to being both a competitor and a supplier, but he has got technology weaknesses, that's a problem too for him.

So I don't think I can really answer your question in a very simple way. I can only answer it by just repeating what I said earlier. Combining performance, density and speed -- speed, density and power, we believe we are more than competitive. And in terms of the ability to get business we believe we are more than competitive.

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**Roland Shu** - Citigroup - Analyst

Thank you, Chairman. Then my second question is for near term, for the 3Q. The revenue guidance now is up 12% to 14%. But I think that 20-nanometer itself probably will be contribute more than 10%. So that means non-20-nanometer revenue growth in 3Q probably will be a bit below seasonality. So is this -- any reason behind this or is the reason just because of the capacity constraint for the non-20-nanometer revenue. Thank you.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

So Roland's question is with respect to third quarter. Since our guidance of the third quarter sequential growth rate is 12.6% to 14.2%, but then our 20-nanometer growth rate is going to be a lot faster, which means the non-20 nanometer geometry's growth rate will be slower. And so what was the reason behind the slower growth rate in other nodes. Is it because of capacity constraint or some other reasons?

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**Lora Ho** - TSMC - SVP & CFO

Randy -- I'm sorry.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Roland.

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**Lora Ho** - TSMC - SVP & CFO

Roland, Chairman was commenting on the second half, we'll go through an inventory depletion cycle again. So that actually has some impact on the third quarter and the fourth quarter. So it's not the capacity constraint issue. It is the overall inventory level going into the third and fourth quarter.

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**Roland Shu** - Citigroup - Analyst

Okay. Then do you see any specific segment actually have the biggest inventory correction issue into the second half? Thank you.

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**Lora Ho** - TSMC - SVP & CFO

I don't want to comment. Actually I don't have the information on DOI on specific segment. But based on my guidance I just gave you earlier, we are seeing very strong growth in communication in the third quarter. However, on the computer and consumer, it will be a decline segment. Industrial and related product will have a modest growth as well.

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**Roland Shu** - Citigroup - Analyst

Thank you.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Okay, we will now take our next question from the call. Operator, please proceed with the first caller on the line.

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**Operator**

Thank you. Steven Pelayo, HSBC.

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**Steven Pelayo** - HSBC - Analyst

Yes, I apologize if this was asked. The line dropped there. Your 20-nanometer ramp is very impressive, very steep. And I guess if I think about your revenues, excluding 20-nanometer, going from 10% of revenues to more than 20% of revenues in the fourth quarter, it kind of suggests rather anemic growth for the industry in the third quarter and a pretty sizeable down in the fourth quarter.

So is that what you think the industry is doing? Or do you think that maybe 28-nanometer competition and pricing pressure is starting to have an impact there? It just seems odd when I think about your revenues excluding 20-nanometer because that really is driving so much of your growth in the second half of the year.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

So Steven's question is very similar to Roland's question earlier in the sense that if we take out the 20 nanometer, then our third and fourth quarter growth doesn't look so impressive. Is that because of competition heating up at 28 nanometer or is it because of some other reasons?

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**Morris Chang** - TSMC - Chairman

Well, I really -- I guess, if we take out -- I think the rest of it, if you take out 20 nanometer, I'm just calculating in my head right now -- if you take out 20 nanometers, will we have growth in the third and fourth quarter? I think we still do.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

We have growth in third quarter?

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**Morris Chang** - TSMC - Chairman

We have growth in -- and will we have growth in the fourth quarter? Well, I haven't said anything about --

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Fourth quarter --

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**Morris Chang** - TSMC - Chairman

About the fourth quarter, total fourth quarter yet. But I'm just mentally calculating what it looks like if we take out 20 in the fourth quarter. And the answer of my mental calculation is that we will still have little growth, yes. I don't know how little is little; it may not be too little. Yes, we will still have growth but I think, just as Lora has said now, we are -- and I also said it in my opening remarks that the inventory will be cautiously managed. It almost always is toward the end of the year. Last year in fact it went overboard, the caution went overboard. And, as a result, we had a pretty bad fourth quarter and a lot of people had a pretty bad fourth quarter, only to recover in the first half of this year.

And we are predicting, as I said earlier, that inventory will be very cautiously managed and of course we will tell you again three months from now what it looks like at that point. But just based on the numbers that we have already given out, I would say that, yes, even if you take out 20, we will

still have growth -- we will certainly have growth in the third and we will still have growth in the fourth. And that is already taking into account the cautious inventory management that will happen in the second half of this year.

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**Steven Pelayo** - HSBC - Analyst

Okay, great. Maybe just one quick question for Lora. I noticed on the management report you're no longer breaking out depreciation within cost of goods sold. I think you've got it for total depreciation to grow I think it was 30% or 35% this year. Could you just remind us what it was within cost of goods sold in the second quarter and your outlook for the third quarter?

---

**Lora Ho** - TSMC - SVP & CFO

Okay. We have a chart in the later page, the last page of management report that tells the depreciation included in the COGS. But what I can tell you, the overall depreciation for the first quarter this year is TWD41.6b. And the second quarter will be TWD45.9b and it will go up very steeply in third and fourth quarter. For the whole year we still expect the year-over-year depreciation will be 33% growth, which is lower than what I have told you in the past.

---

**Steven Pelayo** - HSBC - Analyst

Okay, slightly lower. And just so that we can try to quantify, how much -- where does it step up to in the third quarter?

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**Lora Ho** - TSMC - SVP & CFO

You mean from second quarter to third quarter how much is the depreciation increase? Okay, the third quarter --

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**Steven Pelayo** - HSBC - Analyst

Yes, what's the depreciation (multiple speakers).

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**Lora Ho** - TSMC - SVP & CFO

Alright. Third quarter will be TWD59.5b depreciation.

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**Steven Pelayo** - HSBC - Analyst

TWD59.5b, okay. Great, thank you very much.

---

**Elizabeth Sun** - TSMC - Director of Corporate Communications

So the next question we'll come back to the floor and it will be coming from Barclay's Andrew Lu.

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**Andrew Lu** - Barclays Capital - Analyst

Dr. Chang, I have a question for you regarding the market share on the 16-nanometer you mentioned earlier. Next year we might have a lower share compared to competitor. Can we use something to describe it, next year do you see the total addressable market for the FinFET is large like this year, like 20, or much smaller? That's either this one, or the second one we might lose share because our 20-nanometer customers switch to

competitor using 14-nanometer and that's why we're losing share, by not using our 16? These two answers will have a dramatic difference for the Company's earnings prospect.

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**Morris Chang** - TSMC - Chairman

Company's earnings?

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**Andrew Lu** - Barclays Capital - Analyst

The first one is for example this year we have a 50k 20-nanometer capacity by the end of this year. And that will be roughly --

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**Morris Chang** - TSMC - Chairman

All right let me -- I'm trying to follow your questions, but first let -- Elizabeth, did you get the questions.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Yes, I --

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**Morris Chang** - TSMC - Chairman

The first question I think I got.

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**Andrew Lu** - Barclays Capital - Analyst

Not the first question. It's two choices.

---

**Morris Chang** - TSMC - Chairman

Yes --

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**Lora Ho** - TSMC - SVP & CFO

Multiple choice

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**Andrew Lu** - Barclays Capital - Analyst

Two choices only, not multiple.

---

**Elizabeth Sun** - TSMC - Director of Corporate Communications

Andrew, your question is you want to know the overall size of the 16/14 nanometer, overall size of the business in 2015, whether or not that is bigger or smaller than the 20-nanometer size of 2014.



**Andrew Lu** - *Barclays Capital - Analyst*

That's correct.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

That's your first question.

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**Andrew Lu** - *Barclays Capital - Analyst*

So is that our share is losing because of the addressable market much smaller than --

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**Morris Chang** - *TSMC - Chairman*

Okay.

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**Mark Liu** - *TSMC - President & Co-CEO*

I think -- if you talk about 2015 --

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**Andrew Lu** - *Barclays Capital - Analyst*

Yes.

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**Mark Liu** - *TSMC - President & Co-CEO*

Put it this way, our 20 and our 20/16 is much bigger than -- the share is much bigger than the 16 --

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**Morris Chang** - *TSMC - Chairman*

I think his question is the total 16 foundry market --

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**Mark Liu** - *TSMC - President & Co-CEO*

Right.

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**Morris Chang** - *TSMC - Chairman*

Next year, is it as big as the total 20 this year. Is that your question?

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**Andrew Lu** - *Barclays Capital - Analyst*

Yes.

---



**Morris Chang** - TSMC - Chairman

Yes.

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**Mark Liu** - TSMC - President & Co-CEO

I think it's smaller, smaller.

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**Morris Chang** - TSMC - Chairman

The total.

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**Mark Liu** - TSMC - President & Co-CEO

Total --

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**Andrew Lu** - Barclays Capital - Analyst

FinFET including 16, 14 FinFET from all the customer use.

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**Mark Liu** - TSMC - President & Co-CEO

All, okay. Compare -- okay. About comparable.

---

**Andrew Lu** - Barclays Capital - Analyst

Comparable, so we are losing share.

---

**Morris Chang** - TSMC - Chairman

Losing where -- losing what share?

---

**Andrew Lu** - Barclays Capital - Analyst

Our FinFET shares.

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**Morris Chang** - TSMC - Chairman

That's what I said.

---

**Andrew Lu** - Barclays Capital - Analyst

Yes, yes. So that's --

Morris Chang. Of course. There's zero FinFET share this year for either party, right?



---

**Andrew Lu** - *Barclays Capital - Analyst*

Yes.

---

**Morris Chang** - *TSMC - Chairman*

Next year we will have a lower 16 share than a major competitor. That's what I said.

---

**Andrew Lu** - *Barclays Capital - Analyst*

Yes. So my question is whether this losing share is because our 20 customer move to competitor for 14, or this is a brand new demand which choose competitor's 14 nanometer first?

---

**Morris Chang** - *TSMC - Chairman*

I don't think -- It's a rule we're not going to comment on specific customers, all right.

---

**Andrew Lu** - *Barclays Capital - Analyst*

I did not mention any customers.

---

**Morris Chang** - *TSMC - Chairman*

You said because --

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**Andrew Lu** - *Barclays Capital - Analyst*

One important customer.

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**Morris Chang** - *TSMC - Chairman*

What, what?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

One important --

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**Morris Chang** - *TSMC - Chairman*

Are you asking because they switched from 20 to 16?

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**Andrew Lu** - *Barclays Capital - Analyst*

Yes, yes, 20 to 14.



**Morris Chang** - TSMC - Chairman

Because somebody switches from 20 to 16 and therefore we lose share? No.

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**Andrew Lu** - Barclays Capital - Analyst

Thank you.

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**Morris Chang** - TSMC - Chairman

At least not primarily.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

All right. Next question will be coming from Goldman Sachs, Donald Lu.

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**Donald Lu** - Goldman Sachs - Analyst

Good afternoon, Chairman, I think it's getting quite complicated on this market share issue.

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**Morris Chang** - TSMC - Chairman

I don't -- it really doesn't have to be so complicated.

---

**Donald Lu** - Goldman Sachs - Analyst

I think --

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**Morris Chang** - TSMC - Chairman

Just look to the total, just look at ours.

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**Donald Lu** - Goldman Sachs - Analyst

Yes. I think maybe let's just look at the total, TSMC's total foundry market share. I think last year you said you gained 4%. This year, based on your guidance, you're gaining --

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**Morris Chang** - TSMC - Chairman

Several points, yes.

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**Donald Lu** - Goldman Sachs - Analyst

Maybe more than 4%. How about next year?



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**Morris Chang** - TSMC - Chairman

Yes. In the -- I think we'll at least stay there. After gaining almost 10 points; 4% -- well not quite 10 points, 4 points last year, several this year, that's more than halfway to a 10 point gain in two years. And I think we'll stay there at least. So just as you said, Donald, it doesn't have to be very complicated once you think about the basics, yes.

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**Donald Lu** - Goldman Sachs - Analyst

Okay. So next year TSMC will at least maintain market share in the whole foundry market?

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**Morris Chang** - TSMC - Chairman

Yes.

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**Donald Lu** - Goldman Sachs - Analyst

Okay.

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**Morris Chang** - TSMC - Chairman

Next year what?

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**Donald Lu** - Goldman Sachs - Analyst

Sorry, I'm just rephrasing your words. You said next year TSMC will at least maintain your foundry, total foundry market share next year.

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**Morris Chang** - TSMC - Chairman

Next year? Yes.

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**Morris Chang** - TSMC - Chairman

Well at least we're going to -- at least we'll do everything we can, we'll actually inch forward a little.

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**Donald Lu** - Goldman Sachs - Analyst

Okay, great. Yes. My next --

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**Morris Chang** - TSMC - Chairman

Because remember actually the looming battle is really not 16. In my mind the 16 battle has already been fought. And the looming battle with -- and I don't know what the outcome of that battle will be -- is the 10. And I'm not going to say anything about it today, but before I came here today and after I leave here to go back to the office today, my thoughts are primarily on the 10 and not so much on the 16. The 16 is just as somebody said, Wellington I think, the Battle of Waterloo was won on the plains of Eton, and I have already graduated from Eton and I can already foresee the results of Waterloo on the 16, yes. The 10, I'm still in Eton.



**Donald Lu** - *Goldman Sachs - Analyst*

So maybe you can share with us what are you thinking about 10, what's the key issues maybe we should be focused on?

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**Morris Chang** - *TSMC - Chairman*

Would you repeat?

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**Donald Lu** - *Goldman Sachs - Analyst*

My question is on 10 nanometer, you said you're thinking before and after the conference. Maybe you can share with us what you're thinking, what are the key points that we should be focusing on the 10 nanometer progress as well?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

So Donald's question is what in Chairman's mind regarding 10 nanometer?

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**Morris Chang** - *TSMC - Chairman*

What is in my mind regarding 10?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

10 nanometer.

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**Morris Chang** - *TSMC - Chairman*

Why don't you -- he knows what is in my mind.

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**Mark Liu** - *TSMC - President & Co-CEO*

I think right now we reported our target for 10 nanometer. And the development is in full steam in TSMC. And at this time our 10 nanometer is very competitive. As Chairman just mentioned particularly in density that will be back on the historical trend; even better. And -- but most importantly is we have a few customers embracing this technology and also the timing. Our leading customer even plan to collaborate with us to do their product tape out before we qualified the technology. Therefore we see there is a strong market demand for the 10 at this point so we're very excited about this new technology definition, also very excited about our customer partnership of this 10 nanometer. And we are really in full steam to develop this.

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**Donald Lu** - *Goldman Sachs - Analyst*

Yes. Can I have another question here? My other question is more on the margin side. Maybe we can -- Lora can explain to us, you commented that in Q2 there is inventory adjustment and also a 20-nanometer ramp-up cost. What's the total margin impact there?

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**Morris Chang** - TSMC - Chairman

It's --

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Second quarter gross margin.

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**Morris Chang** - TSMC - Chairman

I do want to go back a bit on the -- I think someone from here asked a question about capital intensity.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Right.

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**Morris Chang** - TSMC - Chairman

Will it go down? And at that time I said unhesitatingly that it will go down. But I was just checking with Lora, because I remembered something, and I think there is a chance that next year it actually may pick up a little bit, but not significantly. This year -- but the general trend is very definitely downwards. We have already -- we are already over the hill this year. This year we'll be spending about less than TWD10b, TWD10b or a little less. And last year we spent -- what?

---

**Lora Ho** - TSMC - SVP & CFO

TWD9.7b -- 6.

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**Morris Chang** - TSMC - Chairman

TWD9.6b. TWD9.6b, our revenue last year was -- let's say our revenue this year is 20% some greater than last year and the same capital expenditure. Who asked the question by the way?

---

**Elizabeth Sun** - TSMC - Director of Corporate Communications

Gokul.

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**Morris Chang** - TSMC - Chairman

Yes, right. So our capital expenditure this year is about the same as last year and yet our revenue this year is 20% some higher than last year. So I expect the total trend to be coming down. However next year we may see a little aberration, a little one. But since we're going to be speaking with you again in 16 -- on the 16 nanometer, probably need to spend a little more capital.

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**Lora Ho** - TSMC - SVP & CFO

Chairman, if I can make some comments on that.



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**Morris Chang** - TSMC - Chairman

Sure.

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**Lora Ho** - TSMC - SVP & CFO

Chairman say that next year maybe our capital intensity will be slightly higher than this year, but it's very safe to say it will be much lower than 2013.

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**Morris Chang** - TSMC - Chairman

Yes. 2013 I think --

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**Lora Ho** - TSMC - SVP & CFO

Was 48%.

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**Morris Chang** - TSMC - Chairman

Yes.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Yes, but Lora, Donald still has a question for you on the margin of the second quarter. How much is the impact from inventory?

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**Morris Chang** - TSMC - Chairman

I'm sorry, did I interrupt something actually?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Yes.

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**Morris Chang** - TSMC - Chairman

Okay. Please, please yes.

---

**Elizabeth Sun** - TSMC - Director of Corporate Communications

It was the inventory readjustment and the ramp up of 20-nanometer impact to the second quarter margin.

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**Lora Ho** - TSMC - SVP & CFO

We'll talk about the 20-nanometer impact first. In second quarter we have very, very small shipments, but we have incurred some costs already. So the impact to margin is about 1 percentage point, okay. That's for 20 nanometer. For inventory adjustment it's more than 1% but below 2%.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

All right. Next question will be from UBS, William Dong.

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**William Dong** - UBS - Analyst

Good afternoon Mr. Chairman. I guess -- we keep talking about technology. I guess the question I want to ask is that with all this rush to continue to push down technology roadmap, to go down to 16, to 14 and to 10 nanometer, what are our thoughts about what's driving this demand? As we move toward, for example, Internet of Things, is there such a requirement to keep pushing on the technology front to actually have enough, sufficient demand to keep driving it down?

---

**Morris Chang** - TSMC - Chairman

Well, if the cost is low enough -- cost is very much a part of the equation. If the cost is low enough, the demand will increase because we can see a lot of applications that are just waiting there. Of course I'm talking about the mobile products, but I'm also talking about Internet of Things, so wearables and so on, so on, Internet of Things. The applications are just waiting there for better, for faster speed and lower power and higher density ICs. Cost is definitely in the equation.

So, yes, when you ask will the demand be there. If we can get the cost down to an acceptable level, demand will be there. And of course that's why -- that's how things like EUV come into the question. Nobody has asked about that yet. We actually were prepared to answer that with the same answer that we gave you last time, by the way, that we are still planning to -- there's still a possibility to use EUV on one, one or two -- or just one layer in the 10 nanometer, yes. One layer, one layer in 10 nanometer and 7 I think is, of course, an even better candidate.

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**William Dong** - UBS - Analyst

Okay. Thank you for that. So it's good to hear that EUV is -- will be potentially used.

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**Morris Chang** - TSMC - Chairman

EUV and we're trying -- we're working very hard with a lot of other people, ASML and other equipment vendors to reduce the patterning costs of optical immersion lithography. And we are also trying very hard to reduce the cost all around; not just lithography but all other costs.

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**William Dong** - UBS - Analyst

Okay, thank you. And one more question is, as we look at the earnings, it continues to improve and obviously the expectation is it will continue to rise. What are your thoughts about potentially having more cash dividend as we move forward in time, because right now we've been staying at around TWD3 for the last few years? But as we generate more and more profit, cash flow improves, how likely is that to happen, for cash dividend to rise?

---

**Elizabeth Sun** - TSMC - Director of Corporate Communications

As our earnings continue to improve, will we also increase our dividends?

**Morris Chang** - TSMC - Chairman

Dividend? It will be seriously considered, an increase will be seriously considered.

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**William Dong** - UBS - Analyst

Okay, thank you.

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**Morris Chang** - TSMC - Chairman

Yes. We do have about TWD7b worth of bonds that we have to repay right, but certainly an increase in dividend will be seriously considered.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Okay. I think we need to go back to the line for the next caller on the line. Operator, please proceed.

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**Operator**

Mehdi Hosseini, SIG.

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**Mehdi Hosseini** - Susquehanna International Group - Analyst

Yes, thanks for taking my question. Dr. Chang, going back to your commentary about 10 nanometer and how the tape-outs is going to be available in the second half of 2015, and that's when you're going to start ramping 16 nanometer, so if I'm one of your major customers, why would I want to switch from 20 to 16 and why not just skip 16 and just go directly to 10? And I have a follow-up too.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

All right. Mehdi, your question is with respect to what we said earlier about having 10-nanometer customer product tape-outs available in 2016? Well, I think we said second half of 2015, not 2016. And then your question is whether or not we see customers skipping 16 nanometer and going from 20 nanometer to 10 nanometer. Is that your question?

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**Mehdi Hosseini** - Susquehanna International Group - Analyst

Yes, that's correct. Thank you.

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**Mark Liu** - TSMC - President & Co-CEO

No. No, those customers are not skipping 16. I think there are segments of application is driven by the integration and possibly also lower power also together, to drive this technology. But that's only particular segments. That doesn't mean that driving a technology faster, the previous node will be short-lived. It's not because the market is -- application is spreading, spreading up. Some of the segments continue to drive the leading edge, but there are lot of segments and applications that stay on the older nodes. So it's not a -- when you move to the next node the previous node will be idle. It's not the case, so we just see this migration fuel the semiconductor growth in those applications.

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**Mehdi Hosseini** - *Susquehanna International Group - Analyst*

Okay, thank you. And as a follow-up is a clarification, the capital intensity may increase next year, but does the dollar value of CapEx remaining the same or will it go up in 2015 compared to 2014?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Mehdi, your question is if our capital intensity ratio will go up in 2015, does that mean that our revenue will go up in 2015? Is that your question? Sorry, can you repeat that?

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**Mehdi Hosseini** - *Susquehanna International Group - Analyst*

Let me rephrase the question. Should we assume -- during the last conference call there was a comment that CapEx in 2015 would be similar to 2014. Is that assumption still sustained or should we assume that CapEx may actually go higher in 2015?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Okay. So the comment of higher capital intensity in 2015 means higher CapEx in 2015.

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**Morris Chang** - *TSMC - Chairman*

Sure.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Sure.

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**Mehdi Hosseini** - *Susquehanna International Group - Analyst*

Yes, thank you.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Okay. Now coming back to the floor and next question will be coming from Deutsche Bank's Michael Chou.

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**Michael Chou** - *Deutsche Bank - Analyst*

Hi, Chairman. One question for InFO. Do you expect any InFO revenue next year?

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

What do you mean by evil?

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**Michael Chou** - *Deutsche Bank - Analyst*

InFO.

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**Morris Chang** - *TSMC - Chairman*

InFO.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Oh InFO --

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**Michael Chou** - *Deutsche Bank - Analyst*

InFO.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Okay.

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**Morris Chang** - *TSMC - Chairman*

C.C. will answer that question.

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**C.C. Wei** - *TSMC - Co-CEO*

No, not yet.

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**Michael Chou** - *Deutsche Bank - Analyst*

Thank you. The second question is regarding the 10 nanometer. Do you think the 10-nanometer total addressable market would be still bigger than 16, 14 or similar? Thank you.

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**Morris Chang** - *TSMC - Chairman*

Would 10 nanometer market be similar to 16, 14? I would be just guessing, I would just be speculating, but if you talk about dollars, I think it will be more. If you're talking about wafers I think it would be either similar or maybe a little less. Again I'm speculating with you, all right, because a lot depends on what cost we can come down to.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

All right. Follow-up question from Dan Heyler, Bank of America Merrill Lynch.

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

Hopefully this question simplifies and doesn't complicate things. Just to make sure I understand this share loss thing, so basically what you're saying is the share loss at 16, these are customers that are choosing to skip 20? Is that how should I think of this that these are not any -- are any of these customers that are currently 20 that are going to 16 next year or is this all people that are choosing to skip 20?

---

**Morris Chang** - *TSMC - Chairman*

Well, first of all, I want to question the word share loss. I don't consider there is share loss because just like 32/28 we had zero share in 32. But then we were very successful in 28. The two really belong to the same generation. And 20 and 16 also belong to the same generation. So, yes -- and share loss means that you start with something and then you lose it, it becomes less. Well, this year nobody has -- everybody has zero share, okay. And I am just saying that we will start on 16, we will start with a lower share than we did with 20 or 28. We start with a lower share than we did with 20 or 28. And then we'll get back to a high share in 2016. I'm just arguing with him, but he did have a question; what was that?

---

**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

So what is your question?

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

So the 20 -- it was a simple question. The 16 --

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Okay, yes. Yes, I remember. Dan's question is this lower share that we will have at 16 in 2015, is it due to a customer's --

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**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

Or just simply are your -- are these customers moving to 16, are these the ones that have currently been on 20 or are these the guys that have skipped because the debate in the industry is should we go straight to 16 and skip 20. So are these customers that have basically been at 28 and are skipping 20 and going straight to 14 at your competitor?

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**Morris Chang** - *TSMC - Chairman*

Why do we start with lower share, well because mainly because -- are you listening to me Dan? I'm trying to answer your question.

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**Elizabeth Sun** - *TSMC - Director of Corporate Communications*

Yes, Dan, you have to listen --

---

**Dan Heyler** - *BofA-Merrill Lynch - Analyst*

I'm listening, I'm listening.

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**Morris Chang** - TSMC - Chairman

Mainly because our customers wanted it sooner. We got in a little late, as I said; our customers wanted it sooner. So that's why we're starting -- and we'll catch up only a little later.

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**Dan Heyler** - BofA-Merrill Lynch - Analyst

Very clear; thank you.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

I think we have a follow-up question on the call. Operator, could you please proceed to the next caller?

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**Operator**

Steven Pelayo, HSBC.

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**Steven Pelayo** - HSBC - Analyst

Great. Thanks again for letting me come back with another question. I'm curious about customer concentration. In your annual filings you had one customer I think 22% or 23% of revenues. Seems like you're ramping, I think, another significant customer. I'm curious, if you think about maybe just your top five customers in 2015, let's say next year, it seems to me that those five alone could maybe approach as much as 45%, 50% of revenue. Do you think that's possible and do you have any concerns about increasing customer concentration?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

So, Steven, you're asking us about the customer concentration in 2015 and whether or not the top five customers that we will have in 2015 will account for about 45% or 50% of the total?

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**Steven Pelayo** - HSBC - Analyst

Just in the future, it doesn't necessarily have to be 2015, but even the second half of this year it seems like you're going to be ramping up pretty significantly another customer and so it would seem that your top four or five customers are going to be a very large amount.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

So the customer concentration starting second half of this year, that our top customers will have a very large share of our revenue.

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**Morris Chang** - TSMC - Chairman

Is the customer concentration going to change; is that the question?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

It's bigger.



**Steven Pelayo** - HSBC - Analyst

It seems like the concentration, customer concentration is increasing going forward. Last year you divulged in your annual filing one customer at 22% of revenues I think. I think you have another customer that's ramping up very significantly now. And there maybe a couple of other ones that really would suggest to me that maybe your top four or five customers are 40% to 50% of revenue. Does that sound right? Is concentration increasing and do you -- are you nervous at all of the risks of higher concentration, concentrated customer base?

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**Morris Chang** - TSMC - Chairman

Well, as you talk about the top five customers, I think that the top -- our top five customers have always had 40%, 50% of the revenue.

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**Steven Pelayo** - HSBC - Analyst

Okay.

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**Morris Chang** - TSMC - Chairman

Yes. Now, but something has changed in the last couple of years. So -- but to detect the change you have to ask about the top three customers, yes, has their concentration changed. Yes. The top three customers' concentration has changed. But I don't see it changing very much from this point, which is the second half of 2014. In the next 18 months to the end of next year I think the top three customer concentration is going to stay about the same.

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**Steven Pelayo** - HSBC - Analyst

Okay, thank you. One final question from me. I'm curious just about -- you're pretty far your view from actual end demand but the data points on end demand in the first half of the year maybe PCs were a little bit better than expected on end-of-life Win XP, but in general some of the data that came out in TVs and smartphones wasn't that good. And there's a lot of expectations with this 4G ramp in the second half of the year. I'm curious, what signals do you have or confidence in that end demand will be robust enough to support so much, in my opinion, undifferentiated four- to six-inch blank slate smartphones out there?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Steven's comment was that it doesn't appear to him, I guess, that the smartphone demand in the second half will be that strong.

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**Morris Chang** - TSMC - Chairman

He does not --

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Believe the smartphone demand --

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**Morris Chang** - TSMC - Chairman

The smartphone demand will --

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

In the second half will be that strong.

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**Morris Chang** - TSMC - Chairman

What do we believe?

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**Steven Pelayo** - HSBC - Analyst

I'm merely saying the data points we've seen thus far have been disappointing so we'll need a pretty big ramp in the second half of the year.

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**Morris Chang** - TSMC - Chairman

I think we have got some numbers also. Anyhow, you believe the smartphone demand will not be so strong and therefore --

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

So what drives the business growth in the second half.

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**Morris Chang** - TSMC - Chairman

What drives the business growth? Well, I guess we have the orders already, don't we, as far as third quarter is concerned. And the fourth quarter we have some orders also. I think maybe Mark

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**Mark Liu** - TSMC - President & Co-CEO

I think Chairman did mention the second half we'll go through some mild inventory correction. However, because of the -- our share on 28 and 20 nanometer, props us to have a stable trend.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

All right. So --

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**Steven Pelayo** - HSBC - Analyst

Yes, fair enough, thank you.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Yes. Coming back to the floor, there's follow up questions from Barclays, Andrew Lu.

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**Andrew Lu** - Barclays Capital - Analyst

Dr. Chang, Lora, I remember in January conference when the Q1 utilization was low, we built the inventory for the customer and believe some of the inventory was been taken out. So, second quarter seems doing very well, this new strategy. Assuming in Q1 next year we have a larger decline because customer have adjustment in inventory, will we do the same thing in Q1 next year?

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**Morris Chang** - TSMC - Chairman

Yes.

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**Andrew Lu** - Barclays Capital - Analyst

And to smooth out the --

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**Morris Chang** - TSMC - Chairman

Yes. I'm glad you phrased it as a very good strategy. I thought so too; I was the author of that strategy, all right? I thought so too, but it wasn't necessary for too long though because very quickly our inventory-building program was overtaken by customer demand.

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**Andrew Lu** - Barclays Capital - Analyst

So will we build more this time compared to -- this year, we're still conservative, learning the new --

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**Morris Chang** - TSMC - Chairman

When utilization is 100% just to respond to customers' demand, you have no capacity to build inventory. That's what happened when I said that program wasn't necessary for too long. We didn't have the capacity any more after, I guess, since March, maybe? Since March, yes. So that program was in place, inventory-building program -- inventory building meant anticipating orders, not having orders, and building inventory, That's what it means.

But -- and that was the case, I guess, in the fourth quarter last year and in January and February. And then from March on, we began to be flooded by orders. So there was no --

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**Andrew Lu** - Barclays Capital - Analyst

No inventory.

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**Morris Chang** - TSMC - Chairman

No capacity to build the inventory with. All the capacity had to be devoted to building orders, to building to orders, yes.

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**Andrew Lu** - Barclays Capital - Analyst

Yes. My second question, very quick. Earlier Dr. Chang mentioned ramp up on the 16 was starting from end of next year and changed to second half next year. So can we just have a clear picture, what kind of revenue contribution will be by Q4 next year from 16 nanometer? Thank you.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

So how much will 16 nanometer account for our fourth quarter revenue in 2015?

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**Morris Chang** - TSMC - Chairman

That's your question? Lora, do you want to answer? Okay, Lora yes.

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**Lora Ho** - TSMC - SVP & CFO

We will start mass production of 16 nanometer from third quarter next year, but it's a bit too early to tell you the percentage of revenue contribution. But we believe it will be a single-digit range.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Okay. Follow-up question from Deutsche Bank's Michael Chou.

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**Michael Chou** - Deutsche Bank - Analyst

Chairman, regarding the 16/20 nanometer, could we say your total market share in 16 and 20 nanometer will be similar to 28/32 for the corresponding period? Can we say that?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Combined 20 nanometer and 16 nanometer our market share will that be similar to the combined 32/28 nanometer market share?

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**Morris Chang** - TSMC - Chairman

The combined 20 -- I just ran an analysis just a couple of weeks ago, so I know exactly the answer to your question. The combined 20/16 market share in the first two years of its existence, which is this year and next year -- well, I guess I have to add in 2016 -- the combined -- our combined 20/16 share in 2014, 2015 and 2016 will still be greater than our combined share of 32 and 28 in --

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

2012.

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**Morris Chang** - TSMC - Chairman

Is it 2011 or 2012?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

2012. 2012, 2013 and 2014.



**Morris Chang** - TSMC - Chairman

2012, 2013 and 2014.

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**Michael Chou** - Deutsche Bank - Analyst

Thank you.

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Great. All right, in the interests of time I am just going to allow the very last one and that's Credit Suisse, Randy.

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**Randy Abrams** - Credit Suisse - Analyst

Thank you. This one might be more for Lora. Just wanted to ask on 20 nanometer the forward look, how much impact on margin, how long it might take to reach corporate average. And if you could do an initial look on structural profitability and depreciation for next year.

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**Lora Ho** - TSMC - SVP & CFO

Okay. I just talked about second quarter that 20 nanometer has about 1 percentage point impact to corporate gross margin. As we're ramping very fast in third and fourth quarter, so impact will be larger. Based on my current number, it will be ranging from 3 to 4 percentage point in second half of this year. For next year it will be 1% or 2% roughly.

When it will reach the corporate average? I think it usually takes seven to eight quarters so it will be in 2016. I don't know which quarter yet, okay.

And you asked about depreciation as well?

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**Randy Abrams** - Credit Suisse - Analyst

Yes.

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**Lora Ho** - TSMC - SVP & CFO

We have not finalized our CapEx for 2015. I think the magnitude of year-over-year increase will be much, much smaller than the 33% this year. So I don't have a firm number yet, okay?

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**Elizabeth Sun** - TSMC - Director of Corporate Communications

Okay. So as you know that we are very confident in our profitability, we'll end our conference call for this quarter right here. So before we conclude today's conference, please be advised that the replay of the conference will be accessible within three hours from now; transcript will become available 24 hours from now, both of which can be available through our website at [www.tsmc.com](http://www.tsmc.com).

Thank you for joining us today. We hope you will join us again next quarter. Goodbye and have a good day.

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