



Conference Call Transcript

TSM - Q2 2007 Taiwan Semiconductor Manufacturing Co. Ltd. (TSMC) Earnings Conference Call

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PRESENTATION

Operator

Welcome to TSMC's second quarter 2007 results webcast conference call. Today's event is chaired by Ms. Lora Ho, Chief Financial Officer and Vice President, and Dr. Rick Tsai, Chief Executive Officer and President. (OPERATOR INSTRUCTIONS)

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

I would now like to turn the conference over to Dr. Elizabeth Sun, TSMC's Head of Investor Relations, for the cautionary statement before the main presentation by Ms. Ho and Dr. Tsai.

Elizabeth Sun - TSMC - Head of IR

Thank you, Jackie. Good morning and good evening to all participants. This is Elizabeth Sun, Head of Investor Relations for TSMC.

Before we begin, I would like to state that management's comments about TSMC's current expectations made during this conference call are forward-looking statements subject to significant risks and uncertainties and that actual results may differ materially from those contained in the forward-looking statements. Information as to those factors that could cause actual results to differ materially from TSMC's forward-looking statements may be found in TSMC's annual report on Form 20-F, filed with the United States Securities and Exchange Commission on April 20, 2007, TSMC's registration statement on Form F-3, filed with the SEC on May 8th, 2007, and such other documents as TSMC may file with or submit to the SEC from time to time.

Except as required by law, we undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

And now I would like to turn the conference call over to Ms. Lora Ho, our Chief Financial Officer and Vice President.

Lora Ho - TSMC - VP and CFO

Thank you, Elizabeth. Good morning and good evening to everyone. Welcome to our second quarter 2007 earnings conference call.

First, I will go over the highlights from our second quarter results. I will then give you-- give you our outlook for the third quarter 2007. Please also refer to the quarterly financial summary slides on our website. All dollar figures are in new NT dollars unless otherwise stated.

With that, let's start with slide number five. As we expected, the recovery of our business, which started in March, has continued through the second quarter and the momentum is expected to last through the third quarter.

Total revenue came in at the high end of our guidance to reach TWD 75 million, down 9% year-over-year and up 15% Q-over-Q. We saw recovery across all major applications, with communications and consumer segment growing at 25% Q-over-Q, while computer segment grew at 13% sequentially.

In terms of revenue by technology, the recovery from advanced technologies showed slightly stronger momentum through the quarter. As a result, revenue from advanced technology accounted for 53% of wafer revenue, up 4 percentage points from the previous quarter.

In particular, our revenue from 65-nanometer increased more than fourfold and accounted for 3% of our total wafer revenue, up from the first-- up from 1% in the first quarter. We expect that 65-nanometer revenue will continue to grow throughout the year.

Gross margin was 43% for the quarter, up 5.1 percentage points, Q-over-Q, mainly due to higher utilization and lower depreciation expenses, offset in part by a lower ASP.

Total operating expenses during the quarter were slightly higher than the previous quarter, largely due to increased R&D spending on 45-nanometer and 32-nanometer projects.

Operating margin was 33% for the quarter. Earnings per share were TWD 0.96, down 25% year-over-year and up 35% quarter-over-quarter.

Now let's take a look at the balance sheet. With continued positive cash flow generated from our operations, we ended the quarter with TWD 223 billion in cash and marketable securities, TWD 16 billion higher than last quarter.

Turning to capacity and CapEx, total installed capacity for the second quarter was close to 2 million 8-inch equivalent wafers. Our third quarter capacity will be about 10% higher than the last quarter. We expect our 2007 capacity to increase by 18% to reach 8.3 million 8-inch equivalent wafers.

We spent \$766 million U.S. in CapEx during this quarter. Our full-year 2007 CapEx will remain in the range of \$2.6 billion U.S. to \$2.8 billion U.S.

Page 10 through page 13 of the slides break down our sales by technology application, geography and customer, which I will not go over in detail.

With that, let me turn to the outlook for the third quarter of '07. Based on current business and foreign exchange rate expectations, we expect our consolidated revenue to come to between TWD 85 billion to TWD 87 billion. This represents a Q-over-Q increase of 13.5% to 16%.

In terms of margins, we expect our third quarter gross margin to come in between 43% and 45% and our operating profit margin to be between 33% to 35%.

This concludes my remarks today and we will now open the floor for Q&A.

QUESTION AND ANSWER

Operator

Thank you. (OPERATOR INSTRUCTIONS)

Elizabeth Sun - TSMC - Head of IR

Before we start accepting the questions from-- from everybody, we actually have received quite a few questions in advance, and I believe our CEO, Dr. Rick Tsai, will make some general comments regarding these issues first.

Rick Tsai - TSMC - President and CEO

Thank you, Elizabeth. What I'd like to comment on are in two areas, the first one, the near-term outlook and the second one being the ASP.

So let me start with the near-term outlook. As Lora just mentioned in her-- in her talk, that the recovery, which started in March this year for TSMC, continued into second quarter and if you look at the guidance from our third quarter, you can see that we will have a pretty good growth in the third quarter also, compared to second quarter. So we feel pretty confident about the recovery being in good shape.

When we-- when we look at closely the inventory from the semiconductor companies, especially from our customer base, I think it's fair to say that the inventory level has been improving among almost all of our major customers. I'm talking about in terms of DOI, days of inventory.

I think overall, in general, the customer inventory, DOI, has come down roughly 6% to 7% between the end of first quarter and the end of second quarter. Some of the customers' inventory days has really come down to-- to the level that it's even lower than two years earlier.

So it seems to us that the inventory has been in reasonable control. Our customers have exercised very good discipline in managing their inventory and we believe they-- the inventory correction that's been going on during the fourth quarter and first quarter this year is definitely going away.

When we look at the-- from end markets demand point of view, as most of you probably know that the PC shipment in second quarter has been pretty strong, quite a bit better than the historical second quarter seasonal pattern. For the handset, I think the shipment for the first half also has been very good.

We-- I think that about two times ago, we talked about the unit shipment forecast from TSMC. We look at both PC and handset shipment growth rate to be around 10% to 11% for the year 2007. We now believe not only those numbers can maintain at the level and we can even up the growth rate for both PCs and handsets by a couple of points. That's how we look at them now.

For consumer electronics products, such as a game or a TV or a DVD, I think the growth has been also on track.

So from that angle, I think from the demand point of view, the-- it seems consumers have been buying continuously, even with the housing problems in the United States and also some higher gas prices at the pump.

Again, now we go back to our outlook at the semiconductor growth for this industry in 2007, we have been talking about a growth rate for 2007 to be between low single digits to mid single digits when we believe basically the growth rate for 2007 will be about 3% to 4% for the semiconductor industry. We maintain that view and you probably also have noticed that many forecasting agencies have lowered their forecast numbers now to around that range.

As to the foundry sector of the semiconductor industry, we believe the foundry sector will not perform as well as the semiconductor industry, mainly because of the inventory correction early in the year. If you look at the first quarter numbers for the foundry sector, you can tell very clearly it has underperformed the industry overall by quite a gap. It will be quite difficult for the whole foundry sector to grow in such a way to catch up with that of the semiconductor industry in 2007. So we do not expect the foundry industry to perform as well as the semiconductor.

So if you put all those views together, I think you probably can go back and play the numbers, because by the end of the meeting you will have, also, the third quarter number guidance and you can calculate our view for the fourth quarter -- without giving any guidance -- our view for the fourth quarter and we do not really expect to see any significant impact in the negative direction.

That is the view of the short-term-- for the near-term outlook from TSMC. Now let me comment on the ASPs.

Many of you have asked that the wafer ASPs has declined more in the recent years. By that, we mean 2006, 2007, and we'd like to give you some of our view on that.

Yes, you're right. The wafer ASP has declined more in recent years. Why? I think if we look at the bigger picture from an industry point of view, the first-- the first thing we have noticed is many of our customers -- and I probably would say most of our customers -- have moved into product areas that is more consumer in nature, more consumer in nature. And I'm talking about this in a broader sense, not just TVs or DVDs or game consoles, et cetera, et cetera.

Of course, those are consumer products, but in a broader sense, the handsets, most of the handsets now, are purchased by the consumers and used by the consumers and not just for the voice, but also for many of the entertainment and the-- just for fun among different people. So all the components in the handset, in a broader sense, can be defined as consumer in nature.

So it's pretty obvious many and most of our customers are either migrating into these sort of areas or diversifying into them. And, as we also know, that most of the consumer type of products, they have-- there are two-- there are two major characteristics -- one, the cost or maybe I should say price pressure; and two, the cycle time, very short cycle time, that is needed so that people can respond to the very -- sometimes volatile but certainly very exciting -- cycles from the consumer products.

So, as a result, TSMC has been working closely with our customers to-- so that they can win in their end markets and because of the pricing demand in the end markets, TSMC, as a result, has worked with our customers so that they can sell their products and they can win in their markets so they can have a reasonable margin and we can have a reasonable margin. That's one of the major reasons for the ASP being-- declining more in the recent-- in the recent years.

Also, during also the (inaudible) the past couple of years TSMC has been looking at different other growing-- growth areas, which we have not penetrated before. Some of those areas have lower ASPs and some of those areas have grown quite a-- quite a lot just during the last year and this contributed also to a lower mix, lower blended price for our product portfolio.

Of course, the reason we've been doing that is to get higher growth in our revenue. As a result, we get a better-- more net income and we have better ROEs and better earnings per share.

Price, of course, is not just determined by the end market, by, of course, the applications. Certainly price is a strong function of the short-term supply and demand. Price also is a function of the value proposition from a company like TSMC, the values such as technology, with a differentiating technology in particular, like the services, like the ability to enable the customer a fast time to market. All those things together determines at the end the price of what we sell to our customers.

So let me go to some more specific and short-term outlook for the pricing for the second half of 2007. I think the second half 2007 pricing decline-- decline has moderated. The utilization, of course, has been going up since the second quarter. That certainly has helped somewhat. We expect the second half pricing decline rate to be about 60%, 6-0%, of the decline rate of the previous several quarters.

That's my comment on both near-term outlook and ASP. Thank you, Elizabeth.

Elizabeth Sun - TSMC - Head of IR

Jackie, I think we can open the floor for questions now.

Operator

Thank you very much, Elizabeth. Bhavin Shah, JPMorgan.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

Yes, thank you. Look, I just wanted to talk a little bit about whether or not in the future there is scope for ASP declines to be more moderate. In other words, when you look at new areas of opportunity, especially in the processors and so on, do you think that the chance -- obviously, it's too far out -- but do you think there is a potential for the ASPs to fall at a slower pace because of that?

Rick Tsai - TSMC - President and CEO

Well, Bhavin, I think that's certainly-- I think that certainly probably will help the mix and the blended ASP. Whether that will raise the ASP, I think that really depends on how successful we will be in penetrating the market and in ramping the volume. We certainly are striving to penetrating that market very hard and we hope that-- we hope that can really help some.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

Okay. And when you mention that foundries will not-- will underperform the semiconductor industry this year, do you still expect the foundry industry to have, I guess, small growth?

Rick Tsai - TSMC - President and CEO

Yes. Yes, I think probably flat to small, small growth.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

Okay.

Rick Tsai - TSMC - President and CEO

Around there, flat.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

All right. Okay, thank you.

Rick Tsai - TSMC - President and CEO

Thank you.

Operator

William Dong, UBS.

William Dong - UBS - Analyst

Good evening. I just wanted to touch bases on the margin side and the pricing pressure. I mean, how much does your competitor plays a role into the recent sort of downward trend in pricing?

Rick Tsai - TSMC - President and CEO

Well, this-- I think, competitor always plays a role in the pricing. I would view that in the general picture of supply and demand. It is also a function of the how-- how strong or how strongly or how weakly their-- I think their capacity are being loaded and (inaudible). So these are all contained in our remarks earlier by--

William Dong - UBS - Analyst

But in terms of technology, I mean, do you feel the competitors have narrowed the gap during this sort of transition to 90 and 65? I mean, is that one of the reasons for more pricing pressure? Or, potentially, could we actually once again widen that technology gap when we go to 45?

Rick Tsai - TSMC - President and CEO

I believe that-- I believe that the 90-nanometer technology node gap was narrowed somewhat. I believe, also, we have-- we have done quite well at 65 nanometers. We learned a few lessons ourselves. We have done quite well in the 65 nanometers.

As to the 45-nanometer, I actually believe that we are-- we are stretching, we are enlarging our gap both, I think, in the low power and the general versions of our technology.

William Dong - UBS - Analyst

Okay. Thank you very much.

Rick Tsai - TSMC - President and CEO

Sure.

Operator

Dan Heyler, Merrill Lynch.

Dan Heyler - Merrill Lynch - Analyst

Thank you. I had a question on your internal metrics that you're focusing on. Over the years TSMC has talked about-- a lot about ROE and as the business model appears to be changing somewhat due to much lower capital-- capital requirements, CapEx is falling and your-- I guess your competition from the logic IDM system initiating another cycle seem to be less volatile. Have you thought about your internal metrics? Do you still focus on ROE or are there other things that you look at to-- to measure your internal performance?

Lora Ho - TSMC - VP and CFO

Hi, Dan, this is Lora. I think for our company overall, we have been using ROE and we were saying across the cycle we use about 20% as our goal for company ROE. However, we do the day-to-day operations when we're managing the capacity investment for any new product, new segment, we want to get into, ROIC is the one we use to measure those-- the financial case by.

So using ROIC actually they have two parts -- the margin part and also the asset productivity. Margin is always a combination of price and cost. Asset productivity is how fast we can ramp the technology in any new fab.

So we've been monitoring asset productivity quite seriously and we are seeing the improvement, overall, for any new project, any new fab we get into, that the productivity has been improving over time. So we are seeing, also, we have steady-- steady improvement on ROIC, company-wide.

So I would say that ROIC is-- has been widely used when we do some internal management. And I cannot share with you our internal goal. The ROIC metric is generally much, much higher than our weighted costs or weighted average of cost of capital.

Dan Heyler - Merrill Lynch - Analyst

You anticipated my next question, because I was going to ask you if you could get some guideline in terms of perhaps a long-term ROIC target or where you think you are now relative to the past and what have been the major drivers? I mean, has it been asset productivity or margins or what's really driving the higher returns?

Lora Ho - TSMC - VP and CFO

Actually, we look at two things. Also the margin is very important. Also the per CapEx, per K investment on each capacity we add into the fab and how do we utilize that fab.

So if you look at our history, any utilization year-over-year has been quite stable and improved over the years. I recall recently we had to look into some statistics. In the past six-seven years our utilization has been above 90%. If you compare that to far earlier, our utilization was only about 85%. So the emphasis on asset productivity has been showing, has helped us to improve overall ROIC.

Dan Heyler - Merrill Lynch - Analyst

I mean, is it fair to say that 30% to 40% through the cycle is ample or are you looking above that?

Lora Ho - TSMC - VP and CFO

Well, it depends on which technology you're looking at. I think, generally speaking, our 8-inch fab has a little bit higher ROIC because the invested capital becomes smaller as depreciation goes down. While the advanced technology ROIC is at a reasonable level, but it will go up as we invest more and enlarge our capacity.

So company-wide, everybody uses different formulas to calculate ROIC, but based on our internal numbers our ROIC for last year was 34% and this year has not been a great year, but it's still high 20s. Going forward we believe that number is going to maintain or even higher.

Dan Heyler - Merrill Lynch - Analyst

Okay, thank you.

Operator

Shailesh Jaitly, Nomura Securities.

Shailesh Jaitly - Nomura Securities - Analyst

Yes, hi. Thanks for taking my question. Firstly, the nature of capacity additions, if you could comment. If I recall, last conference call you mentioned that quite a big chunk of the capacity additions is going to be on 200 mm and since then, there's been a lot of market chatter that you could be looking at acquiring some of the existing older assets from other companies. If you could, provide some more color on that?

Rick Tsai - TSMC - President and CEO

Okay. You're asking about the 8-inch capacity?

Shailesh Jaitly - Nomura Securities - Analyst

That's right.

Rick Tsai - TSMC - President and CEO

We-- you're right. We talked-- we talked about in the last conference call that TSMC is now paying a lot more attention to the mature technology business, simply because there's-- these are good businesses and they can be also growing business.

And so we have-- as a result, we have changed our previous practice. Previously, we really have, after a node had its quote/unquote peak use, we-- we simply stopped buying capacity for those technology-- technology nodes. But we have found that through much business development work we could generate more business.

So during the last, I would say, last three to six months we have been looking at opportunities in the market, somewhat-- there is some report in the press, some more accurate than the others. I cannot comment on each of them, but what I can say is we are looking at opportunities. We are looking at cost-effective 8-inch equipment and what-- when we make some decision, then we will communicate to you people.

Shailesh Jaitly - Nomura Securities - Analyst

And these opportunities, they are limited to Asia or are you looking beyond Asia, as well?

Rick Tsai - TSMC - President and CEO

We are looking all over. I mean, the important thing is whether they are cost effective.

Shailesh Jaitly - Nomura Securities - Analyst

Understand. I could have asked more directly, but on 65-nanometer engagements, that's about 3% of your revenues in the current quarter. If you could, comment the number of customers that contributed to that and how it is expected to change as you get into 3Q?

Rick Tsai - TSMC - President and CEO

The-- you are testing our ability. I mean, without going into the documents, I think it's around-- I mean, altogether about-- around ten, give or take. Of course, there is a distribution. I mean, there are probably three or four, three to five large ones, some smaller ones.

Shailesh Jaitly - Nomura Securities - Analyst

Three to five, you said, large ones, is it?

Rick Tsai - TSMC - President and CEO

Yes, three to five have pretty good volume.

Shailesh Jaitly - Nomura Securities - Analyst

Okay. And one last question on-- that is-- that pertains to your prepared remarks whereby you mentioned that you are seeing growth pretty much in all the three areas we get into 3-- in 3Q, you see more in wireless and consumer-related (inaudible). Now in the wireless segment, is the growth sketchy or you are seeing the growth all across the board? Because so far the results what have come, inventories have not gone down to their desired levels across the board.

Rick Tsai - TSMC - President and CEO

You are talking about wireless. Are you talk about the handsets, or--?

Shailesh Jaitly - Nomura Securities - Analyst

I'm talking about the handsets, yes.

Rick Tsai - TSMC - President and CEO

Okay. Well, we reported, basically, I think the wireless, which includes, of course, handsets and some of your wireless networks, has grown quite a lot in second quarter. It also continues to grow in the third quarter, but not at as high a rate as that of the second quarter.

And if you, of course, go down to the detail as to who's doing better, there is a distribution. As you know, the handset makers are having a significant-- maybe I should say redistribution of the market share. That certainly was-- that certainly has-- are having a pretty significant impact on some of the customers.

So it's not-- not everyone is doing well, but overall the handset growth is still pretty good.

Shailesh Jaitly - Nomura Securities - Analyst

And would it be fair to assume that your handset chip customers as a whole are tracking lower than expectations as compared to what you would have thought three months back?

Rick Tsai - TSMC - President and CEO

No, I would not say so. It's about the same. I mean, I think there's-- I mean, their third quarter numbers are pretty much in line as to-- compared to what they told us three months ago what their third quarter number would be, again, give and take. But it's not as if they are changing their numbers in a significant manner, one way or the other.

Shailesh Jaitly - Nomura Securities - Analyst

I understand that. Thanks a lot.

Rick Tsai - TSMC - President and CEO

You're welcome.

Operator

Mark FitzGerald, Banc of America Securities.

Mark FitzGerald - Banc of America Securities - Analyst

Thank you. A couple of questions. The first one is, I'm curious if you guys have a first SWAG at 2008 chip growth rates and, given that you've underperformed or the foundry industry underperforms in 2007, if you think you'll outperform in 2008?

Rick Tsai - TSMC - President and CEO

Mark, we have not, of course, finalized our outlook of 2008. So I can give you some color. I don't think I can give you any numbers now. We believe for the semiconductor industry 2008 will be better than 2007 and the foundry sector certainly will be better also. I would say we expect foundry sector to do better next year, compared to the semiconductor industry as a whole.

Mark FitzGerald - Banc of America Securities - Analyst

All right. And just quickly on the entry into the CPU business, do you have to step up your CapEx investment or your R&D investment significantly outside of the percentages that you've been running at to enter that business?

Rick Tsai - TSMC - President and CEO

No, not as of now. I think currently we've been working with the customers or potential customers based on our available technologies. We may have-- we may have to tweak or modify our technology or transition somewhat, but they are still within-- we can use the same set of equipment to achieve that. There is a possibility that we may need to add some CapEx when the high-K dielectric and the metal-K technology is ready and that will be a little time away.

So basically we are going out to work in that area. Once we have the demand, we will-- we will prepare the capacity that the demand requires.

Mark FitzGerald - Banc of America Securities - Analyst

Right. And if I could, just one last quick one. When you look out at the 45-nanometer technology, the design costs, particularly on the logic side, start going up very sharply. Do you see that as a hurdle for some of your fabless logic manufacturers to move aggressively in there? Some talk of a lot of logic companies staying at 65-nanometers longer than they've historically done, would stay at a node?

Rick Tsai - TSMC - President and CEO

I think the design cost is going up. I think this has been discussed in many different occasions. I-- but on the other hand, I also believe that the engineers have been working also quite well to lower that hurdle as we move. For instance, TSMC has been investing in this area very aggressively to lower the design barriers.

Whether some customers will stay at 65-nanometers longer or not, again, I think every customer, depending on where they are at a certain node, they may-- I think what I can comment is that now it seems not very common, but probably more common now for customers sometimes to skip nodes. I mean, some customers will skip, say for instance, to go directly from 0.13 to 65 and other customers, I mean, I won't be surprised if they are at 90 and they say, hey, we probably want to jump to 45. This phenomenon does show up from time to time.

Mark FitzGerald - Banc of America Securities - Analyst

Thank you.

Operator

Steve Pelayo, HSBC.

Steve Pelayo - HSBC - Analyst

Thank you very much. Two questions, really along the same theme. First, the easy one. What's your outlook for the technology mix in the third and fourth quarter and, perhaps more importantly, can you comment about the moderating ASP declines? What's your assumption behind that? In the second quarter you saw 35%-plus quarter-over-quarter growth in 90-nanometer, which likely means that the organic pricing pressure must be fairly intense and it's not just a product mix. Can you comment on that?

Lora Ho - TSMC - VP and CFO

Your first question, as far as our technology mix, in second quarter our advanced technology accounted for 53% of our total wafer revenue. That number is going to go up from third quarter into fourth quarter where we-- probably about 15%.

I want to mention that 65-nanometer, where we have very good progress, in third quarter we expect the contribution of wafer revenue will be bigger than 5% and fourth quarter will be bigger than 10%.

Steve Pelayo - HSBC - Analyst

Okay and then the thoughts on organic versus mix-related pricing pressures in the third and fourth quarters?

Rick Tsai - TSMC - President and CEO

Well, I think the-- we-- I have commented earlier that the price decline rate is about 60% of the decline rate of the previous several quarters. That price covers, I think, definitely what you call organic price.

Steve Pelayo - HSBC - Analyst

Okay, thank you.

Operator

Donald Lu, Goldman Sachs.

Donald Lu - Goldman Sachs - Analyst

Yes, my first question is, when you say the decline of ASP is 60% of the previous quarter, can you specify how many quarters? Is that from five or six quarters?

Second question is, what should be the new tax rate this year and also, more importantly, the next year after we start to include employee stock bonus into the P&L? Thanks.

Rick Tsai - TSMC - President and CEO

So, Donald, you asked about how many quarters the average--

Donald Lu - Goldman Sachs - Analyst

Yes. Yes, because I looked at your average quarterly ASP trend. It really jumps around, so it kind of depends on which time period are we looking at.

Rick Tsai - TSMC - President and CEO

About five to six quarters.

Donald Lu - Goldman Sachs - Analyst

Five to six? Thank you very much.

Rick Tsai - TSMC - President and CEO

Okay, second question?

Donald Lu - Goldman Sachs - Analyst

The second question is on tax rates.

Lora Ho - TSMC - VP and CFO

You asked for the tax rate, especially after 2008 where employee bonuses will be expensed.

Donald Lu - Goldman Sachs - Analyst

Yes.

Lora Ho - TSMC - VP and CFO

I would suggest you use, from next year, use about 10%-11% effective tax rate. That's including the tax expense and offset by tax credits for your model.

Donald Lu - Goldman Sachs - Analyst

So 10% to 11% effective tax rate?

Lora Ho - TSMC - VP and CFO

That's the combination of tax expenses minused by the tax credit. If you look at tax expense itself, this year it's around 16%. That number is going to go up slightly in 2008 and stay at the same level or slightly down after 2009. So net/net, I would suggest you use, including tax credit, use 10%-11% for your model.

Donald Lu - Goldman Sachs - Analyst

Okay, thank you. How about Q3 and Q4 this year?

Lora Ho - TSMC - VP and CFO

We look at tax on a total year basis and the quarterly number doesn't really mean anything, so you can spread out the same rate for every quarter.

Donald Lu - Goldman Sachs - Analyst

Okay, great. Thank you.

Operator

(OPERATOR INSTRUCTIONS) Manish Goyal, CREF Investment.

Manish Goyal - TIAA-CREF - Analyst

Sure. Hi. My question is on microprocessor business. Do you think the microprocessor business will have similar return characteristics relative to your corporate averages, whether I look at return on investment or I look at margins, operating margins? And where do you have to invest initially to ramp that business?

Rick Tsai - TSMC - President and CEO

Where do we need to invest? I believe-- I think we talked about this somewhat, earlier. I believe we have invested, at least to a very large degree, what is needed at 45-nanometer and also, going forward, 32-nanometer technology. Both are moving quite well. Both are moving quite well.

We are also, I think, accelerating our work in the high-K and metal gate area, which certainly be (inaudible) for our 32-nanometer technology, but maybe also with our 45.

These are, probably, some of the extra investments. I'm not even sure I want to call them extra, because these technologies are pretty much what we conducted-- I mean, the development work, what we conducted by our R&D during the past couple years already.

So I think in order to move into the microprocessor arena, I think our R&D dollars that you are seeing from our financial report pretty much covers all the investment already from a development point of view.

From a capacity point of view, there-- there will be-- there may be some incremental investment from high-K dielectric, but overall, if you look at the lithography, I think the big ticket items-- our (inaudible) design rules are quite competitive. There is certainly no need to go to any additional investment from that point of view.

Manish Goyal - TIAA-CREF - Analyst

And on profitability?

Rick Tsai - TSMC - President and CEO

Profitability, I think-- well, we are still working on that. I don't think it would be, to tell you the truth, appropriate for me to comment on that in this forum.

Manish Goyal - TIAA-CREF - Analyst

Can you directionally give some idea as to whether it will be dilutive or accretive to your averages?

Rick Tsai - TSMC - President and CEO

I would say probably I would work towards, of course, accretive side.

Manish Goyal - TIAA-CREF - Analyst

Okay, thank you.

Rick Tsai - TSMC - President and CEO

Sure.

Operator

Randy Abrams, Credit Suisse.

Randy Abrams - Credit Suisse - Analyst

Yes, good evening. I wanted to ask a followup on your operating margin guidance. For third quarter, what is driving the acceleration in operating expenses, which look like they're accelerating to grow in line with the mid-teens revenue growth?

Lora Ho - TSMC - VP and CFO

Operating expenses, if you look at the history, normally accounts for 10% of our revenue. That trend is going to continue.

Randy Abrams - Credit Suisse - Analyst

Okay, but if it's-- it looks like it's accelerating sequentially where you're guiding up about 15% for revenue, but your delta between gross and operating margin, you're not necessarily getting operating leverage with that revenue growth?

Rick Tsai - TSMC - President and CEO

The R&D not only plays a role there, we have a fairly significant-- well, R&D investment continues to increase quarter-to-quarter, from first quarter to second quarter, second quarter to third quarter. The increment between second quarter and third quarter is higher compared to first to second.

This increment will slow down somewhat from third quarter to fourth quarter. I think we probably have some-- also some opening in our fab 14, phase three.

Lora Ho - TSMC - VP and CFO

Start-up.

Rick Tsai - TSMC - President and CEO

It's being started up.

Randy Abrams - Credit Suisse - Analyst

Okay, thanks a lot for that. And just one question on the NOR flash business. Given some of the significant price pressure in that market, is that changing your view at all in your ability to profitably address that market? And also do you see that opportunity, potentially, slowing down as your customer brings up their internal 300-millimeter capacity?

Rick Tsai - TSMC - President and CEO

We're-- we're in the business for the long haul. I mean, we really do not have an illusion when we move into the business, this memory business. We know that in the memory business the price can go up and down. And certainly it has gone through a period-- a period of down.

I think we work-- but still, we work very closely with our customers and we can-- we go through the period (inaudible), I think, which turns out to be mutually beneficial, still. We are definitely-- it is definitely a positive, reasonable margin for us. It's not great, for sure, but it's positive and reasonable.

I think going forward, I think if you look at our customers' growth plans, they are-- for the future, not just during the next quarter or two quarters, I think it's pretty clear that there is enough space. There is quite a bit of upside for both of us if we join to penetrate. So I have no-- I have no plan whatsoever to change-- to change our course.

Randy Abrams - Credit Suisse - Analyst

All right. Thanks a lot.

Rick Tsai - TSMC - President and CEO

Sure.

Operator

Dan Heyler, Merrill Lynch.

Dan Heyler - Merrill Lynch - Analyst

I had a couple quick questions. First, Lora, could you tell us what your exact third quarter depreciation and amortization number will be?

Lora Ho - TSMC - VP and CFO

Third quarter-- depreciation will go up in third quarter.

Dan Heyler - Merrill Lynch - Analyst

Can you give us a number?

Lora Ho - TSMC - VP and CFO

Actually, it will go up by about 2% compared to second quarter.

Dan Heyler - Merrill Lynch - Analyst

Okay and the fourth quarter?

Lora Ho - TSMC - VP and CFO

It will further go up about 3%.

Dan Heyler - Merrill Lynch - Analyst

About 3%? Okay. I was wondering, as your capacity grows 10% in the third quarter, it is fair to say that almost all of that is 65-nanometer?

Lora Ho - TSMC - VP and CFO

Yes, majority for the fab 14 for advanced technology to the 65-nanometer.

Dan Heyler - Merrill Lynch - Analyst

And what's the average cycle times on that? Is it running, say, eight to ten weeks?

Lora Ho - TSMC - VP and CFO

You mean cycle time?

Dan Heyler - Merrill Lynch - Analyst

Yes, production cycle time, on average.

Rick Tsai - TSMC - President and CEO

On average. I think it's about-- it's less than ten weeks, for sure. It's about-- I think it's about-- I mean, depending on the product, but the average, I would say seven weeks to maybe plus.

Dan Heyler - Merrill Lynch - Analyst

Okay, so is it fair to say, I guess, the capacity that you're adding that the wafer ins will occur this quarter since you're adding capacity now? Depreciation will get started, but then the actual revenues from that 10% increase, the majority of that 10% increase, will occur in the fourth quarter? Am I thinking about that the right way? So, therefore, your carrying cost per revenue shift are higher in the third quarter and that should reverse in the fourth quarter?

Rick Tsai - TSMC - President and CEO

I think, Dan, when we recognize the capacity in our capacity chart, we start--

Lora Ho - TSMC - VP and CFO

Depreciation will start.

Rick Tsai - TSMC - President and CEO

--the depreciation already.

Dan Heyler - Merrill Lynch - Analyst

So you start with the actual production with the wafers starting production, correct?

Lora Ho - TSMC - VP and CFO

No, actually, it will start with when we install the capacity in the line. And we start with it whether we use it, depreciation will start.

Dan Heyler - Merrill Lynch - Analyst

So as the dollars of those wafers come off the line, your actual revenue per depreciation is going to rise, right, because you're not-- you're actually recognizing depreciation in the third quarter, but a lot of the revenue will be recognized in the fourth quarter? Is that-- is that a fair assumption?

Lora Ho - TSMC - VP and CFO

Yes, that's probably true.

Dan Heyler - Merrill Lynch - Analyst

Okay, thanks.

Operator

Mike McConnell, Pacific Crest Securities.

Mike McConnell - Pacific Crest Securities - Analyst

Thank you. Thank you for the comments regarding the outlook for pricing in the second half of the year and the reasons why. I guess if I kind of look at this from a longer-term perspective, though, a lot of the trends you've talked about with the shift to consumer, the higher percentage of memory or new products that are coming into the factories and what effect that's having on pricing, I guess if we look at this from a longer-term view, these seem to be trends that will continue.

How will the company try to stabilize pricing in the face of these trends, which don't seem like they're going to be going away any time soon?

Rick Tsai - TSMC - President and CEO

Well, Mike, I think the question is the-- we have-- you have to look at margins. You have to look at return on equity and earnings per share all together. The pricing is a factor.

We certainly-- I think the trend is there. I mean, we're not trying to say the trend will reverse. The trend is there.

From a pricing point of view, what we need to really strive for, again, is to improve, to continue strengthening our value, to see whether we can-- we can get a better-- a high premium. But the other major ingredient, of course, is the cost, whether we can manage our fixed costs, whether we can be very productivity in our capital, whether we can control our cash costs. I think if we can manage our cost decline rate versus the price decline rate, that we have a good shot at managing our profitability.

The other-- both-- we have to manage both profitability and growth. At the end of the day, we hope to deliver to the investors a better ROE and earnings per share for all of our investors.

Mike McConnell - Pacific Crest Securities - Analyst

And then maybe a little bit more near term to the second half, you said that you felt that pricing pressure would alleviate 60%, relative to the first half of the year. Is that just a function of higher utilizations or what's-- why-- why the statement? I guess, what are the reasons behind that?

Rick Tsai - TSMC - President and CEO

I think both-- I mean, both-- I think the-- usually the two-- two reasons. One is more seasonal pattern. Usually in first quarter we see a higher-- higher rate and, two, basically short-term supply/demand utilization being higher, so it renders a more moderate price environment.

Mike McConnell - Pacific Crest Securities - Analyst

Okay. And then final question, just for a line item on the-- for modeling purposes. Your best guess, just with net non-operating income for Q3 and how should we kind of look at that, maybe as far out as we can?

Lora Ho - TSMC - VP and CFO

You're asking about non-operating income?

Mike McConnell - Pacific Crest Securities - Analyst

Correct, for Q3.

Lora Ho - TSMC - VP and CFO

Second quarter we have positive operating income and several reasons that will not happen in third quarter. So third quarter non-operating income will be smaller than second quarter.

Mike McConnell - Pacific Crest Securities - Analyst

Okay. Significantly? I mean, will we be back at kind of Q1 levels, then, just directionally?

Lora Ho - TSMC - VP and CFO

It will be smaller than Q1 and Q2 levels.

Mike McConnell - Pacific Crest Securities - Analyst

Okay. Thank you very much.

Elizabeth Sun - TSMC - Head of IR

Jackie, in the interest of time, I think we will just have one question from one caller.

Operator

Okay, thank you very much. Bhavin Shah.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

Yes, I got the lucky one. A simple question. Lora, you mentioned that you achieved, using your internal measure of ROIC, high 20s this year and 34% last year. And then you said you expect to achieve that in future. What number were you referring to?

Lora Ho - TSMC - VP and CFO

I don't know what method you use to calculate ROIC. I have noticed that different analysts use different methodologies. Our methodology, however, shows 34% last year and high 20s this year. Based on our methodology, we believe that number, ROIC, is going to steadily improve, year-over-year.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

Right. So you expect to improve from high 20s using your methodology.

Lora Ho - TSMC - VP and CFO

Yes.

Bhavin Shah - JPMorgan Chase & Co. - Analyst

Okay, sounds great.

Elizabeth Sun - TSMC - Head of IR

Jackie, I think we are-- we're done with the Q&A session.

Operator

Thank you very much. And I'll turn it right over to you for closing remarks.

Elizabeth Sun - TSMC - Head of IR

Thank you for everybody's participation and thank you for your time and we're looking forward to talking to you next quarter. 'Bye-bye.

Operator

Thank you, ladies and gentlemen, for your participation in today's presentation. This does conclude today's conference call. You may disconnect and have a wonderful day.

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