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Conference Call Transcript

TSM - Q1 2003 Taiwan Semiconductor Manufacturing Company Limited Earnings Release Conference Call

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PRESENTATION

Operator

Welcome to Taiwan Semiconductor Manufacturing Company's first quarter 2003 results Webcast conference call. Today's event is hosted by Mr. Harvey Chang, Senior Vice President and Chief Financial Officer, and Dr. Rick Tsai, President and Chief Operating Officer. This conference call is being Webcast live via the TSMC Webcast at - Web site at www.tsmc.com, and only in audio mode. Your dial-in lines are also in listen-only mode. At the conclusion of management's presentation, we will be opening the floor for questions. At that time, further instructions will be provided as to the procedure to follow if you would like to ask any questions.

Please be advised, for those participants who do not yet have a copy of the press release, you may download it from TSMC's Web site 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 Mr. Leon Ku (ph), head of Investor Relations for TSMC, for the cautionary statement before the main presentation by Mr. Chang and Dr. Tsai. Please go ahead.

Leon Ku - Taiwan Semiconductor Manufacturing Company - Investor Relations

Good morning and good evening to all participants. This is Leon Ku (ph), head of Investor Relationship 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 the 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 statement may be found in TSMC's annual report on Form 20-F, filed with the United States Securities & Exchange Commission on May 9, 2002 and such other documents that the company may file with or submit to the SEC from time to time.

And now, I would like to turn the conference call over to Mr. Harvey Chang, our senior vice president and the chief financial officer.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Good morning and good evening, everyone, and welcome to TSMC's first quarter results conference call. Let me begin by

giving you a brief presentation of our first quarter results and then followed by our guidelines for the second quarter, then we will open up the floor for questions.

Our first quarter revenue amounted to 39 billion NT, which is a little - roughly a four percent lower than the sequentially but about 10 percent lower from a year over year basis. First quarter property after tax is roughly 4.3 billion NT, which is 71 percent growth on a sequential basis, but compared on a year over year basis is a decrease of 34 percent.

If you look at our balance sheet and the financial structure, in our first quarter we have roughly 67 billion NT on cash on hand. Our interest bearing debt is roughly 35 billion. Our shareholder equity is roughly 499 million. Our overall financial structure are extremely sound. During the first quarter this year we shipped roughly 690,000 wafers. Our utilization is roughly 68 percent. And we have now a new definition for utilization, which is we are going to deduct all the engineered wafers with profits (ph). And so, that is roughly one percent. From then, I think all our announcements when we talk about utilization we will use the commercial wafer utilization. So, that will bring our commercial wafer utilization down by one percent to 67 percent.

That's some of the highlight of our first quarter. And then let me get a little bit into the year over year comparison price quarter over quarter comparison. Yearly over year comparison basis, as indicated, our revenue grew roughly 10 percent, primarily because wafers shifted bill (ph) over last year of roughly 600,000 wafers to this year's 694,000.

Gross profit measured (ph) fall a little bit from last year's 12 billion to this quarter's 10.3 billion, primarily due to the lower ASP as well as a higher depreciation expense. Because a year ago we haven't started the depreciate our facilities and poorly (ph) bad (ph) 12 (ph). So, our gross margin essentially fall from last year from 33.6 percent to 26.4 percent. Operating expenses are roughly the same level at about 10.7 percent.

The other thing worth noticing our year over year comparison is our investment from the losses. This quarter we have reported a investment losses of 1.5 billion NT versus last year, which is a little bit lower of one billion. The biggest difference is our wafer tag. The wafer tags in this quarter had a - reported a loss of roughly .5 billion versus last year, which they reported a profit of 450 million last year. So, that's where the difference came from.

As far as the total net profit after tax for this quarter, it's roughly 4.3 billion NT. So, that's on the income statement year over year comparison.

The one item that you should notice is that for this quarter actually if we offset the tax expense with our investment in tax credit, actually we got a positive number. Versus last year, this is a

negative number. So, that's a big difference there. I will explain a little bit more for this.

Let's take a look at our income tax in wafer and tax credit. If we compare the two quarters, which is first quarter this year versus fourth quarter last year, our income before tax this quarter is roughly 5.7 billion NT. Last year fourth quarter is 5.2 billion NT. And I indicated in the past that right now our tax rate is roughly at about 18 percent. So, as you plan 18 percent with these two numbers, for this quarter 5.7 billion at 18 percent will give you roughly one billion and for last quarter 5.2 billion at 18 percent will give you roughly 900 million. So, that's our imputed (ph) income tax for these two quarters.

And as far as the investment tax credit is concerned, last quarter investment tax credit was roughly at 400 million NT, but for this quarter is about 1.2 billion NT. This is where the big difference come from, the 800 million difference there. The net result of that we've got actually a positive tax benefit of 200 million for this quarter. For last quarter it was .5 billion tax expense.

Why such a big difference on investment tax credit? This is primarily because there's a new change of interpretation of the tax law. In the past we are required to use our new latest tax credit first for the current year. And so, now they changed that. They allow us to use the existing - some of the tax value we already had on the book first. In the past, because we did each tax credit only have a life of four years - so, in the past we are not - if we had too much tax credit for the current year we might not be able to use the old tax credit and which might cause some of those to expire. And in order to prevent that happen, we need to make some provisions for that. So now we don't have to make those provisions anymore. That's why we have reported a full tax credit this year at 1.2 billion. And so, that's the tax situation.

Now let me come back to the first quarter balance sheet, cash flow and key ratios. You will see all these - the first quarter key numbers. Our balance sheet actually look at - compare the balance sheet this quarter versus a year ago there's not much difference except that we have a higher cash and equivalent cash, which is this quarter is now 67 billion versus total (ph) 61 billion a year ago. And our interest bearing debt right now is 35 end of this quarter versus 44 versus a year ago.

On the cash flow side, although our profit was not as high as a year ago for depreciation increase, depreciation for this quarter is 15 versus 12 a year ago. So, our overall basis operating cash inflow is 20.1 billion versus 21 billion last year. Our EBIT (ph) for this quarter is roughly at 5.9 percent. ROA (ph) is 5.2 percent.

On a sequential comparison basis, if we compare with last quarter, we have indicated actually the revenue side is a modest drop of four percent. As of our wafer shipment, actually this quarter's 694,000 wafers actually is roughly two percent higher than last quarter's 682,000 wafers. This is actually outperformed our

guidelines we said, which originally we expected a modest drop of wafer shipments. So actually we end up with a small positive number.

On the ASP side, ASP this quarter is roughly seven percent lower than last quarter, which is consistent with our guideline that we made last release. Gross profit is 10.3 versus last quarter 10.6. In terms of gross margin actually is improvement from 26 percent to 26.4 percent.

On operating expenses, operating expenses for this quarter is actually 17 percent lower than the last quarter, primarily because last quarter actually we had quite a bit of R&D expense that on the special task force to improve the yield for the .13 micron. And right now it seems that we have already essentially (ph) run up the yield from .13-micron technology products. We will have such a regional (ph) R&D expense this quarter now.

On the investment income and losses this quarter, it is slightly 1.5 billion in investment losses, which is lower than last year and last quarter's 2.2 billion. However, regional (ph) still wafer tag, wafer tag actually reported a loss of 500 million this quarter versus last quarter was one billion. Also I should mention that wafer tag is steadily turning profitable. They made a small profit as of April and they actually expect it to be profitable actually during the remaining months of the year.

And the other factor that caused some different impact on the investment income losses is on the performance of our venture capital fund, managed by the company Investar (ph). This quarter we reported 58 million in capital gain, while last quarter there was a loss of 228 million last quarter. Some (ph) task (ph), and I already talked about it this year, for this quarter is 178 million, a positive number, while last year is 525 million items (ph). So, on an overall comparison basis, net income for this quarter 4.3 billion versus 2.5 last quarter, which is 71 percent gross.

On a quarter over quarter, adding (ph) cash flow and key ratio comparison, again, if you look at the balance sheet actually the most significant difference is we repaid a four billion NT dollar bond during the quarter. So, the loss of debt there came out from 39 to 35. Our cash was a little bit higher than last quarter. It was 67 versus 61. This is primarily the reduction of our capital expenditure. Our capital expenditure this quarter is roughly 9.1 billion NT, which is equivalent to U.S. dollars \$160 million, while last quarter the NT 17.9 billion. So, it's a significant difference. Notable (ph) difference (ph) point (ph) to our cash on hand.

On the operating cash flow, operating cash flow is 40 (ph) this quarter. It was at 23 last quarter, primarily because the last quarter, I think, return of the sales - part of the revenue for last quarter came in from the sale of new (ph) operating (ph) hand (ph). Also, I think for this quarter, because revenue in March is higher than last year's December revenue. So, there's a increase of account receivable, which also used up part of the operating cash.

So, that's about the financials for the last quarter. On the business side, let's take - quickly go through. There's a shipment of the technology we see that actually the shipment of .18, .15 and .13 the total revenue account for 53 percent of this quarter's revenue, which is the same percentage as we - as last quarter and also consistent with our last guideline. And what is noticeable is that the .13 now account for 11 percent of total revenue versus eight percent last quarter. And we believe that the percentage of .18 will continue to increase.

As far as the revenue breakup application is concerned, the computer percentage growth was 39 percent to 41 percent, communication from 35 to 38 percent, and consumer is a drop from 18 to 13 percent. On the computer side the primary demand as (ph) I (ph) report (ph) is still coming from computer graphics, and it's computer chipsets. Also, we see some significant increase of demand for flat panel display. On the communication, it's primarily demand from the wireless, which is the mobile phone and the wireless LAN. As far as the consumer is concerned, last quarter - the first quarter's consumer demand accounted from DVD player, digital camera and TV game player. But we see noticeable decrease in CD debt (ph) player. This is primarily because I think a seasonal back (ph) allow our TV game players were shipped during Christmas, even coming into the first quarter. And those shipment came up quite a bit, but we expect to see them come back up during this quarter.

And on the geographical breakdown, 76 percent, the same, for North American, Asia-Pacific 14, down to 13, Japan actually from five percent to six percent. Europe remained at five percent.

As far as the breakdown by customer type and established continued accounts at 68 percent of the revenue. And on the fab (ph) utilization, we have indicated actually we end the first quarter with utilization of 67 percent, which is a few percent higher than the last - than our last indication we released. Although (ph) secretly (ph) we did indicate in our press release sales number release we indicated that we expect to see a three (ph) percent higher of utilization.

The next one is about in-store capacity. The last quarter and this quarter - we actually - at the end of the first quarter that we covered our capacity actually at 1,024,000 for the first quarter, which is a little bit lower than what I originally indicated, which is 1,068,000 wafers. Primarily Vanguard (ph) did not actually - before we did our last (ph) we expect to see Vanguard (ph) would increase their capacity for foundries (ph), but actually they did not do it. So, their capacity for foundry (ph) remain at 80,000 wafers. This is where the difference came from.

Our impacts (ph) for the first quarter is at 460 million. And more than half went to the profit (ph) track (ph). Another end (ph) go (ph) more than 80 percent was used for capacity increase, primarily 12 (ph), step (ph) eight (ph) and staff (ph) six (ph). As far as the

advanced capacity accounts (ph) .18, .15 and .13 account for roughly 44 percent of our total equity (ph).

Next one is a recap of our major events in the first quarter. I'm not going to talk to you with things (ph), only that we have made a release of all these incidents (ph). If you are interested in one of them, you can check on our Web site.

Finally, we come to our guidance for the second quarter, which I'm pleased to report that we do have a fairly optimistic outlook for the second quarter. We expect our wafer shipment will grow about 20 percent on a sequential basis. Also, we expect to see ASA (ph) improvement by four percent due to a better product mix. As far as revenue for advanced process technology, which means the .18 and more advanced, will account for six percent, which are significant up from the current 53 percent revenue (ph). And then our overall utilization we expect to exceed eight percent. And utilization for the more advanced technologies we expect to be higher than 85 percent.

As far as business demand for this quarter is concerned, it should improve across all customer applications. And the consumer segment should report a strong growth (ph) from (ph) manehen (ph). We have already talked a little bit about that.

The last one - on the kaypacks (ph), we continue to expect that the kaypack (ph) in 2003 to be in the range of one billion to one-and-a-half billion for the year 2003.

So, that's my presentation today. And so, I'll be happy to open the floor for questions. Rick, do you have anything to add?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

No, no, that's fine.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

OK. Let's just open the floor for questions then.

QUESTION AND ANSWER

Operator

At this time, we will open the floor for questions. If you would like to ask a question, please press the star, then one on your touch-tone telephone now. Questions will be taken in the order at which they are received. If at any time you would like to remove yourself from the question queue, please press the star, then two. Please limit your questions to one at a time to allow all participants an opportunity to ask questions of the management members. One moment, please, for the first question.

And the first question is from Shekhar Pramanick (ph) with Prudential Securities. Please go ahead with your question.

Shekhar Pramanick - Prudential Securities - Analyst

Hi. Good evening. Just one or two questions. You know, we have a very impressive second quarter guidance of essentially revenues up 25 percent quarter over quarter. And what do you see whether this - can we have still a growth from these levels into the September quarter, particularly in this kind of - it reminds of second quarter of 2002, where you had a 25 percent growth. Do you see any kind of similarities or is it truly different this time?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, you have to look at our capacity. Can we handle a 25 percent growth each quarter? I don't think so. And also, it is curve (ph) that it's your forecast of 25 percent revenue growth. We did not forecast that.

Shekhar Pramanick - Prudential Securities - Analyst

Well, you have said the shipment dry (ph) is 20 percent and price is going up by four percent. Mathematically, that's kind of close to 25 percent. I understand that. But what we are trying to really figure out is that how much of this do you think is an inventory build going on in a semi space? And do you think it's - or is it purely outsourcing, and so this is not really any reflection of end market growth?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, it's probably a combination of both. We do see, I think, some inventory building for this quarter. This is - I think that gives us a signal that the industry actually may be sort of our reviving (ph) trends (ph). But, yes- but - so whether this thing can continue

or not, I guess we have to wait a few more months to see how everything (ph) goes.

Shekhar Pramanick - Prudential Securities - Analyst

OK. My last question, you're spending on a cap ex right now about a run rate just above a billion. When do you think you can - what signal you are looking that you spend at one point close to 1.5 or maybe higher? I mean ...

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, when we get enough orders for our 12 inch .13. And ultimately (ph) this year is primarily we want to keep our newly rest (ph) of equipment utilization as high as we can. And so, that's a change of our strategy because our focus here is really we want to bring our impact (ph) up.

Shekhar Pramanick - Prudential Securities - Analyst

OK. I mean, are you looking for a very strong wafer start next two months for you to make that decision that your cap ex will go to close to 1.5?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, I cannot say that. Right now, of course, we have more conservative four months that we had our BB (ph) ratio that exceeding 1.2. So, we are getting a fairly strong signal at this point. Of course, we hope to see those continue. When they continue we will probably see accelerate our kaypack (ph) a little bit, but whether they will go to the level of 1.5 I really don't know at this point.

Shekhar Pramanick - Prudential Securities - Analyst

Thank you.

Operator

Thank you. The next question is from Bhavin Shah (ph) with J.P. Morgan Securities. Please go ahead.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Bob, you are late today.

Bhavin Shah - J.P. Morgan Securities - Analyst

Congratulations, Harry and Rick. Absolutely fabulous results. I just wanted to address a couple of things. Wafer tech, pretty nice improvement there, even though it looks like the revenues are not really changing a whole lot. So, could you explain a bit about what's driving that improvement and why it will be sustainable?

And, secondly, would you expect the R&D line to increase in a couple of quarter's time when the 90-nanometer activity accelerates? And just how do we see that line evolving over time?

And finally, 90 nanometer when do you see revenues? How many quarters out is it at this point, do you think? Thank you very much.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Rick, why don't you do it first?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Wafer tech, I think basically we - well, it's quite difficult that we have improved the loading over the back (ph). Over the past few quarters we have guided a new tape (ph) outs (ph) wafer tag. We start loading .15, .18 has been reasonably good for some time. But the low end technology that was not as good, but now even 4.25 they're getting loaded up pretty well. So, we feel confident that the probability will continue into the future.

On the R&D line, Bob, I believe (ph) you (ph) mean (ph) a sub-12 (ph). Our R&D is being done in sub-12 (ph). Is that what you were asking? Hello?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Bob? Bob, are you still with us?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Well, I guess I will just answer by understand.

Leon Ku - Taiwan Semiconductor Manufacturing Company - Investor Relations

I think Bhavin Shah's (ph) question is where do we expect R&D expenses to rise in the future given the 90-nanometer development.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think R&D expense is going to be controlled. I think last year we did about - for the whole year it was six percent, right, of revenue goes to R&D. We probably want to undermaintain (ph) the ratio.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

This quarter - the first quarter our R&D expense accounted for roughly 60 percent of our operating expense. Probably, I think, we will be around that area.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes. It will not drastically go up.

Ninety-nanometer revenue we have customer take-outs (ph). We probably have some early production in the second half, late - or maybe first quarter time. We did some revenue, but that will be pretty small.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Actually a fairly minor percentages in that. We actually send (ph) us the question as of when we're going to see at least more than one percent revenue. Actually, the answer is I don't know right now. I don't know when we're going to see. It really depends on when we go (ph) have sort of significant demand. We're (ph) making (ph) our orders for that. Right now it's hard to take that time (ph).

Operator

Thank you. Our next question comes from Tim Arcuri (ph) with Deutsche Bank. Please go ahead.

Tim Arcuri - Deutsche Bank - Analyst

Hi, guys. Actually, I have two questions. First of all, you just talked about fab four - sorry, fab 12. Can you talk a little bit about fab 14? Is there anything happening there? And if not, when do you plan to resume filling up that fab?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Fab 14, well, nothing really happening. You probably know that the fab is pretty much equipped not with tubes (ph) but with clingdom (ph) and sodity (ph) equipment. Production tools we have not put KO'd (ph) yet. We still have quite a capacity available in fab 12. It's more expensive, quite a bit late (ph) in fab 12 for capacity maintenance (ph). So, I don't know if we can give you a positive answer now for the fab 14.

Tim Arcuri - Deutsche Bank - Analyst

So, then what point - maybe I can ask it this way. What point - what capacity in fab 12 would you have to reach before you started to order for production in fab 14?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Maybe up to 80 percent of the full capacity.

Tim Arcuri - Deutsche Bank - Analyst

And the full capacity, again, is, I'm sorry, 25,000, or was it 20,000?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

No, 25 plus.

Tim Arcuri - Deutsche Bank - Analyst

Twenty-five plus. OK. And I guess last question, if you look at year over year, look at your customer base year over year it does, as a previous question suggest, that things do look quite similar year over year. But if you can pay your customer base year over year is it broader in Q1 '03 versus last year or is it narrower or is it about the same?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Customer base let me - I will say it's broader. I think one way we can look at it is to look at our top 10 customers. A year ago our top 10 customer accounted for roughly 63 percent of our total revenue. But this quarter our top 10 accounted for roughly 66 percent.

Tim Arcuri - Deutsche Bank - Analyst

Would that be the same analysis if you looked at your top five customers?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

It would be same (ph) 10.

Tim Arcuri - Deutsche Bank - Analyst

OK, great. Thanks a lot.

Operator

Thank you. The next - our next question comes from Dan Heyler with Merrill Lynch. Please go ahead with your question.

Dan Heyler - Merrill Lynch - Analyst

Good evening. I wanted to follow-up on your comment, Harvey, when you had mentioned during the second quarter demand is pretty broad-based. Could you comment what areas do you see strength first in the quarter and where you see application growth going throughout the quarter? I.e., are you seeing computer a little bit stronger in the early part of the quarter and other areas come up in the second half of the quarter?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Dan, you are talking about first quarter or this coming quarter?

Dan Heyler - Merrill Lynch - Analyst

The current quarter, the second quarter, June quarter.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

OK. The June quarter for this year, right?

Dan Heyler - Merrill Lynch - Analyst

Right.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, the June quarter this year basically it would be the demand on the computer side are primarily accounting for the graphics, from chipset and DVD-ROM. And communications, while they remain roughly the same, a little bit small or modest growth over first quarter, but first quarter is already very strong. On the wire

line we see more doses (ph) total increase for DSL and the Ethernet switch. The consumer has been for DVD player, the digital camera and TV game. And I think they will resume growth again this quarter. Last quarter it was a little bit weak. And then we also see set-top box also growing this quarter.

Dan Heyler - Merrill Lynch - Analyst

Right. But my - yes. My question is there kind of any discernible pattern in the quarter? Are you seeing computer relatively strong early in the quarter? Are you seeing demand kind of pick up across a variety of different areas of the quarter?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, that - if you're talking about the second quarter, I would say consumer ...

Dan Heyler - Merrill Lynch - Analyst

OK.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

... was weakest the last quarter.

Dan Heyler - Merrill Lynch - Analyst

Do you see consumer picking up as the quarter progresses here? OK, great.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think the - Dan, the cell phone seems to be starting a bit. Is that what you guys are seeing also?

Dan Heyler - Merrill Lynch - Analyst

Yes. There's definitely lots of data points out there that people are seeing cell phone related orders decelerate. I think there's been consistent pattern here.

What I was also wondering with regard to your technology mix, if you were to look at - you had commented that .18 was - and below was pretty much in line, flat for the first quarter, although .13 ramping is fairly steep. Do you anticipate the .18 and below to kind of maintain its current level and for that pattern to continue

with .13 increasing share? Or do you see demand on the .18 node improving, and that pretty much stable at this point?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

You (ph) mean (ph) .15, .13 continue to be pretty good. That's why I think part of the reason Harvey gave the guidance on the technology loading even moving toward the higher percentage than what we have been seeing in the past few quarters. It's grown 53 percent to 60 percent.

Dan Heyler - Merrill Lynch - Analyst

Fifty-three to what?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Fifty-three to 60 percent. That's our ...

Dan Heyler - Merrill Lynch - Analyst

Right.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes, that's our guidance.

Dan Heyler - Merrill Lynch - Analyst

And then any idea where that goes in the second half? Do you think .18 will start to run its course, or where does that pick (ph) up?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I cannot really say about second half, but what I can - what we can say about the general trend for .18 I think there's still quite a good life ahead. I mean, we are seeing a robust customer take-off (ph) activity, both at .18 and .15. We - actually, our .15 is again is a very - what I would say a very robust technology for the aluminum, about a sweet spot for the aluminum generation. So many does not really appreciate that.

Dan Heyler - Merrill Lynch - Analyst

Right. You've got good returns left for that.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes.

Dan Heyler - Merrill Lynch - Analyst

Great. OK. Thanks.

Operator

Thank you. The next question comes from Mike O'Brien with SoundView Technology Group. Please go ahead.

Mike O'Brien - SoundView Technology - Analyst

Yes. Hi. Good evening. Could you just give me a little idea on ASPs? You say they're up because of mix. Any particular technology nodes where there's still a lot of pricing pressure?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

We still see actually pricing pressure - well, actually pricing pressure on both sides. On the more advanced we have people like IBM that more (ph) mature (ph) there are a number of other proprietors. So, the pricing pressure has been around. But as the demand start to pick up, we do hope to see that because pricing pressure is also a function of utilization. Once we got the utilization up, I think we have less incentive (ph) to other (ph) price for business.

Mike O'Brien - SoundView Technology - Analyst

And do you think that as you get into the third quarter or fourth quarter ASP declines should start to moderate or stop, I mean on an individual basis, not on a blended basis?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Right now it all depends on, as we said, the second quarter customer seems (ph) to building (ph) a little bit inventory. If those inventory goes really quick, then (ph) hopefully the pricing pressure will ease up.

Mike O'Brien - SoundView Technology - Analyst

OK. And could you talk a little bit about the flat panel business and what you're seeing there as you go into the June and September quarters, flat panel chip business?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Rick, you want to take that?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Well, flat panel monitor business still growing. Hopefully the controller chips, which goes with it, are doing reasonably well. And the LCD driver business, of course, is continuing our share in that is probably not too bad. Japanese (ph) IDN (ph) is probably our biggest shareholder. But in general we believe we are seeing a flat - of course, there is a flat panel TV application, but I think that's the start to grow.

Mike O'Brien - SoundView Technology - Analyst

OK. And just my final question. On your comments on R&D and R&D growth over the next few quarters, I would assume that the percentage will go down with the June quarter. I think you said R&D will be up modestly, but I also thought you said it would stay at about the same percentage, which I would assume it's probably not going to grow at a 24 percent or 25 percent rate like the top line.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

No, definitely not.

Mike O'Brien - SoundView Technology - Analyst

OK, thank you.

Operator

Thank you. The next question is from Prana Kumar (ph) from Sawa (ph) Institute of Research. Please go ahead.

Prana Kumar - Sawa Institute of Research - Analyst

Good afternoon, gentlemen, and congratulations for the good set of guidance for second quarter '03. I have a couple of short questions. The first one probably on your - if your comment on silicon insulator related technology development, which days you are and in 90 nanometer below (ph). Do you think that that

particular technology could be one of the getting (ph) to look at? So, like what you are doing on that particular line.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I believe SOI (ph) is probably going to be quite - maybe more - shall we say more prevalent 65-nanometer node. Ninety nanometer we're working on that also. However, we do not know now the - the business volume that will be. Cost remains major issue there.

Prana Kumar - Sawa Institute of Research - Analyst

And this could be a little bit of maybe your lack of competition, where you may lose some of the customers because of some other competitor going ahead of you on this particular node? Do you think that there is a chance of some there?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Well, our competitor have had that technology for a long time. It's not just now. And it's just not - I don't - it goes back to .13 micron and .18 micron. So, it's not that the competitor does not have the technology. So, I think the matter of the fact is that that technology is still kind of a niche technology, certain very specific to application but not suitable for mass production. It would be very difficult to get enough sub (ph) space. But whether the technology can mature enough in the next couple of generations, that - I think they have a better mass production potential in the next generation.

Prana Kumar - Sawa Institute of Research - Analyst

OK. Harvey, did you say about like the book to bill ratio is at .12 now? That is in the month of April or in the month of March?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

We have had book ratio exceeding 1.2 in the past four months now. From - this for March, yes.

Prana Kumar - Sawa Institute of Research - Analyst

That's fine with me. Thank you very much.

Operator

Thank you. The next question comes from Shelesh Jeti (ph) with Nomura Securities. Please go ahead.

TSM - Q1 2003 Taiwan Semiconductor Manufacturing Company Limited Earnings Release Conference Call

Hello, Mr. Jyati (ph)? The next question comes from Matt Gazel (ph) with Calypso Capital. Please go ahead.

Matt Gazel - Calypso Capital - Analyst

Thank you. Two questions. Number one, what did you say about trends in cell phone? Did you say they were decelerating or accelerating? And, number two, as of now are you still seeing wafer loading increasing as of now?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Harvey, you want to get that? Hello?

Matt Gazel - Calypso Capital - Analyst

Yes.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Rick, please go ahead.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes. Overall, I think it's kind of we're slowing down some - we're not accelerating. Your second question about ...

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Wafer loading.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

... wafer loading ...

Matt Gazel - Calypso Capital - Analyst

Yes.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

... we're still seeing good activities from the customers.

Matt Gazel - Calypso Capital - Analyst

OK. Is it still - I guess it's still on an up trend then?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Right now we still see that the wafer loading is on an upward trend.

Matt Gazel - Calypso Capital - Analyst

OK. Thank you very much. Congratulations on a nice quarter.

Operator

Thank you. The next question comes from Shelesh Jeti (ph) with Nomura Securities. Please go ahead.

Shelesh Jeti - Nomura Securities - Analyst

Hi. I just wanted to get an update on .13 micron. You had mentioned in the previous quarter that you do expect to break even in this - on this node by second half. Was wondering if there's any change to get that guidance.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Break - Harvey, do you know of that?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Point one three.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Break even.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

I'm sorry, I didn't get the question.

Shelesh Jeti - Nomura Securities - Analyst

Yes. In the previous conference call you had mentioned that on .13-micron node you expect to break even by the second half of '03. I was wondering if there is any changes to that guidance, given the ramp you have seen on .13.

Leon Ku - Taiwan Semiconductor Manufacturing Company - Investor Relations

Could you say it again as to what was the expectation?

Shelesh Jeti - Nomura Securities - Analyst

OK. What I was mentioning is in the previous analyst briefing, the same conference call, you had mentioned that at .13 micron node you expect to be profitable by second half of this year. I was wondering if there is any change to that guidance or you still expect that you will reach the profitability in the second half.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

To be profitable. OK, OK, OK. Yes. .13 - well, actually I think we're already profitable on the .13. But you probably specifically mentioned - referring to - for 12 inch .13. Yes, I think we are still - we think that we will see profitable in the second half, yes.

Shelesh Jeti - Nomura Securities - Analyst

And the way you price the point .13 micron wafers, is it a dye base pricing now or is it still a mix between dye base and wafer?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

It's still a case by case. So, it depends on customer - there's no one set formula to do it.

Shelesh Jeti - Nomura Securities - Analyst

OK. And one last question. Based on your guidance of 80 percent plus utilization going forward, what would be the estimated range of gross margins you expect in the next quarter?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

We cannot respond to that question due to restrictions from our regulatory agency. We cannot give a direct comment on margins. Sorry about that.

Shelesh Jeti - Nomura Securities - Analyst

OK. Thank you.

Operator

Thank you. The next question comes from Mike McConnell with Pacific Crest Securities. Please go ahead with your question.

Mike McConnell - Pacific Crest Securities - Analyst

Thank you. Was wondering on .13 micron on the yield side what are yields currently running right now with FSG and, more importantly, on Loquette (ph)?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yield varies a lot with chip size, but overall evidently (ph) has come down learning curve quite well. We ship now more than 20,000 wafer per month for .13, and I think we're going to go up to 30,000 wafers per month level another quarter. And with - we evidently are continuing to improve.

Mike McConnell - Pacific Crest Securities - Analyst

I'm sorry, I guess just on average, though, of .13 micron using FSG would you say it's north of 70 percent now?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes, yes, that's - yes, for - yes. I mean, some graphic guy (ph) have very large chip size.

Mike McConnell - Pacific Crest Securities - Analyst

I'm just saying on average base. I know there's different between different chips. But on just kind of a broad based average, would you say that I guess you're more comfortable now with .13 micron FSG? And where do you stand on the low K side?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Low K was still in the process of improving the yields. We believe we can go down the evidently (ph) curve probably by second half this year. We are putting quite a bit resources into low K, so - but we'll have pretty good volume production by end of the year.

Mike McConnell - Pacific Crest Securities - Analyst

Now, is Low K mandatory at 90 nanometer, or can you use FSG there?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Well, our competitor seems to say that they are going back to FSG, so FSG is global. However, we believe our low K capability is up there that we can add more value to our customers low K. We'll be able to do that.

Mike McConnell - Pacific Crest Securities - Analyst

OK. And my last question is just a couple times you dropped the word - two words - inventory build. Obviously this is something that's a lot of concern out there on our side of the equation. So, was curious just can you just talk a little bit more about the inventory build, which end markets you're seeing it in, which products? Just any more color there would be very appreciative.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

We cannot really comment that specifically about which product in the inventory build mode, which product. What we can comment - I believe for most of the computer application and the - some of the communication - most of - I think what we are hearing from customers their inventory is getting really depleted. So, they're replenishing some of them. The sell through is two, three months of - sell through of those inventory need two, three months to see (ph). In addition, I think another important factor is the new products coming out. When you have the new products being launched, usually you will build sort (ph) lower (ph) inventory. So, that's quite common practice.

Mike McConnell - Pacific Crest Securities - Analyst

So, your commentary is on inventory refresh rather than inventory build. Is that what you're saying?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think both are going (ph), for the new products and putting (ph) like (ph) refresh. What I'm saying is there is some inventory replenishment for the existing products, but there are also inventory build for the - just the new - for new product launch. That will constitute part of the demand.

Mike McConnell - Pacific Crest Securities - Analyst

Sure, sure. OK. Thank you very much.

Operator

Thank you. Our next question comes from Ashish Kumar with Credit Suisse First Boston Corp. Please go ahead with your question.

Ashish Kumar - CSFB - Analyst

Thank you. Congratulations on excellent quarter. My first question set is if you could guide us for both 2003 and 2004 on tax credit. Should we assume similar tax credit in the remaining quarters and in '04?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, that is one area very difficult to give you guidance. The tax credit is coming from capital expenditure numbers. I can't even give you a good capital expenditure number. How can I give you a tax credit number?

Ashish Kumar - CSFB - Analyst

OK. And earlier you said local regulatory norms are such that you cannot provide us gross margin guidance. Could you give us a sense, like you gave us last time in the earnings call, when you said you do expect gross margin to be less than 30 percent for the quarter that you reported? That type of broad sense could you give us for second quarter '03?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

OK. Let me give you a different cut (ph) this time. I (ph) quote (ph) more (ph) said this afternoon that he expect second quarter operating profit will grow in geometrics gross pattern versus a arithmetic. So, the way he defined arithmetic is one, two, three, four, but geometric is one, two, four, six. So, that's how he defined it. He also said that it's (ph) exponential. Exponential is one, two, four, eight, 16.

Ashish Kumar - CSFB - Analyst

OK. Thank you so much.

Operator

Thank you. The next question is from Donald Floyd with Lehman Brothers. Please go ahead with your question.

Donald Floyd - Lehman Brothers - Analyst

Hi. Thanks. Just sorry about the R&D question again. But the expense actually in the first quarter was down about 30 percent Q on Q, and that's obviously not as much as the sales. So, the expenses didn't really track sales. So, if we look forward, at least in the short term, if you look over the next couple quarters how do you think it will track versus first quarter level?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Don, I'm sorry, but your voice get blurred the first cut. You might need to repeat it again.

Donald Floyd - Lehman Brothers - Analyst

OK. Again - sorry, in terms of the R&D over the next couple quarters versus the first quarter absolute number, it dropped quite a bit in the first quarter from the fourth quarter. So, I'm just wondering how that is expected to trend.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, I think that, as we've said, the second and third quarter is - the revenue number is going to be much higher than the first quarter. So, the R&D expenses for the second and third quarter, I think, they will go up, but not as dramatic as the wafer growth. And I do think that sort of 10 or 12 percent where you see is a reasonable estimate.

Donald Floyd - Lehman Brothers - Analyst

OK. OK. And you also mentioned that Wafer Tech is kind of broke even and will start to make money. What's the status of FSMC (ph) and do you expect similar performance there?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

FSMC (ph) is different from Wafer Tech due to a number of reasons. First of all, Wafer Tech is almost 100 percent owned by us. I think we have a better control in terms of order flow, in terms of how do we get the customer qualification. FSMC (ph) is a little bit different because it's a joint venture. And so, half of the loading - more than half of the loading is depending on Philips than from us. We can help out a little bit, but I don't think we can expect to sell

on to few other loading with orders from our customer side (ph). So, the other thing is that Wafer Tech right now already, I think, is - they got a fairly complete production line. So, once it get - we either get the loading, then it's impossible (ph). So, FSMC (ph) actually they are only half - they're only half equipped with equipment. So, they probably got (ph) various other problem.

Donald Floyd - Lehman Brothers - Analyst

OK. And just the last question. In terms of the monthly revenue progression, should we kind of look at it - look at the quarter as kind of every month should be increasing a bit?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

On the second quarter?

Donald Floyd - Lehman Brothers - Analyst

Yes.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Yes. The second quarter, I think, we did indicate that we expect to see sort of growth (ph) month over month.

Donald Floyd - Lehman Brothers - Analyst

OK. OK. Thank you.

Operator

Thank you. Our next question comes from Will Davis (ph) with UBS Warburg. Please go ahead with your question. Mr. Davis (ph), your line is open.

Thank you. The next question comes from Mark Fitzgerald with Bank of America Securities. Please go ahead.

Mark Fitzgerald - Bank of America Securities

Thank you. Could you give us an idea that 10 percent customers in the quarter and if you'd have any in the second quarter 10 percent plus?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Ten percent customers. We cannot comment on that.

Mark Fitzgerald - Bank of America Securities

You don't break that out for your reports?

Leon Ku - Taiwan Semiconductor Manufacturing Company - Investor Relations

Mark, we don't usually don't comment the customer's 10 percent weighting during the quarterly releases. We do so in the 20-F disclosure annually though.

Mark Fitzgerald - Bank of America Securities

So - OK. All right. Can you give us a sense with the cap ex cuts that happened quarterly here how capacity will trend through the year here in terms of growth?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Capacity - primarily I think the capacity increase will be on the .13. And as far as the fab 12 is concerned, I think we expect fab 12 to close to roughly 10,000 wafers per month for the year.

Mark Fitzgerald - Bank of America Securities

And if you rolled that up in overall capacity growth, are we talking single digits through the balance of the year on a quarterly basis?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes, I will say so.

Mark Fitzgerald - Bank of America Securities

OK. And can you give us a sense of mass (ph) revenues as a percent of the quarter?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Mass (ph) revenue is roughly eight percent.

Mark Fitzgerald - Bank of America Securities

OK. And just one last question. When you're working with customers on .13 micron, how important is the fact that these guys design for your process technology? And how do you in order to optimize yields?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Can you explain the question? I'm sorry, I missed that.

Mark Fitzgerald - Bank of America Securities

Sure. When you're working with, say, a graphic chip company, how important is it that they - when they're sitting down and designing their chips, let's say you're designing with your process technology in mind in order to maximize yields on that part?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

That's getting more and more important for the advanced technology. The - we need to work with - closely with our customers. Our side can sometimes still refine our models or design rules to improve the manufacturability, their side also. So, we need to give them guidelines on how to design (ph) for manufacturability. But it's kind of a interactive work. It's - it cannot be just one-sided.

Mark Fitzgerald - Bank of America Securities

Has that been some of the yield gains that you've had at .13 as those programs being implemented?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think in both ends. Or the design once done. So, once in mass production usually people do not change their design much. So, once a product is in mass production, then you improve (ph) will see account (ph) from the big process (ph) control we (ph) then (ph) see (ph) reduction, that type of thing. But certainly from generation to generation for new products, I think some of which is implement new design.

Mark Fitzgerald - Bank of America Securities

And does it make - does some design trends make no sense in terms of going from .18 to .13 because of the lower yields or costs associated with that? Have you seen that in the last year or so?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think it's a matter of time. Any new generation technology will go through a learning period when the price - when the wafer cost is higher and dividends (ph) also is higher. But with TSMC for .13 now we have - we are down the learning curve for both wafer costs and evidently (ph). So, I think the crossover will be justifiable quite soon.

Mark Fitzgerald - Bank of America Securities

So, you're encouraging all your customers at this point, whoever wants it, do shrinks to .13 to move ahead with those, that you can meet their price points?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

We still talk to them in some details to understand their requirement. Every customer has different requirement instead (ph) of the analog circuits or those kind of thing. And analog doesn't (ph) shrink as much as the digital. Where they are now, some customers see .35 and .6 (ph) or .425 (ph). So, I think there's no one generic way of doing it. We just have to work very closely with many different customers and kind of find a value proposition for them.

Mark Fitzgerald - Bank of America Securities

OK, thank you.

Operator

Thank you. Our next question comes from Ivan Goh (ph) with Dresdner Kleinwort & Wasserstein. Please go ahead.

Ivan Goh - Dresdner Kleinwort Wasserstein

Hi. Just got a question on kaypacks (ph). I know you have not changed your kaypacks (ph) guidance, but I also remember that in the last quarter you said that you were working towards the lower end of that range. I just wanted to find out with tomorrow's afternoon (ph) thing (ph) that .13-micron capacity is tripling between the first quarter and the fourth quarter this year. And also, there was a report a few days ago saying that fab (ph) capacity is going to increase to 14,000 wafers per month by the end of the year. Does that - is that - are these already incorporated in the previous statement that you're working towards the lower end of the range or does that involve some increase from the lower end of the range?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

That is still more on the lower end side.

Ivan Goh - Dresdner Kleinwort Wasserstein

OK. And so, you're still working on that lower end of the range guidance, yes?

My second question is regards to the customer concentration into the second quarter. Earlier you said that in the first quarter it was about 56 percent of your revenues coming from top 10. Can you probably make a stab at what that concentration will be in the second quarter?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

It's almost impossible.

Ivan Goh - Dresdner Kleinwort Wasserstein

Yes?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Yes. We can't ...

Ivan Goh - Dresdner Kleinwort Wasserstein

Would you say it's ...

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

... go (ph) on pure (ph) after (ph) facts (ph). But a little trend, I would say they will be close to the first quarter level. I really can't give you a number.

Ivan Goh - Dresdner Kleinwort Wasserstein

OK. All right. Thank you so much.

Operator

Thank you. Our next question comes from Shekhar Pramanick (ph) with Prudential Securities. Please go ahead with your follow-up question.

Shekhar Pramanick - Prudential Securities - Analyst

Yes. Just a question on .13 capacity. After the December quarter call, I think, Rick, you had talked about that you had .13 capacity about 23,000 per month and the goal was to take it to 47,000 or 48,000 per month by yearend. Can you give us an update where you are at the end of the March quarter the .13 capacity which (ph) operating (ph) to give us? And give us an update where the number would be at the end of '03.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

End of March our .13 capacity total is roughly 30,000 wafers, eight inch equivalents.

Shekhar Pramanick - Prudential Securities - Analyst

And the expectation where the number would be by end of the year?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

End of the year, I think they will be somewhere between 50,000 plus to 60,000 wafers.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes. That's about right. Fifty - I would say 50,000 plus, yes.

Shekhar Pramanick - Prudential Securities - Analyst

One more question. If the strategy is to convert some of the .18 aluminum lines into copper lines, or is it to - meaning just adding the backend metal capacity, or is it a strategy to add the full capacity from start to finish?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

We do not really have plan to do that now. I think we may be able to do that somewhat later on in fab 12, but eight inch fab - we do have - I think our business models calls for to utilize our old generation technologies. By now, .15, .18 actually has quite a robust demand. We must meet those demands also.

Shekhar Pramanick - Prudential Securities - Analyst

Right. But, you know, six months fast-forward when a lot of these - let's say part of the graphics chip guys all move to .13, the question is can those .13 capacity be filled. So, at that point you might convert just the metal portion of it into copper?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

That's a strong function of the demand. We (ph) do (ph) satisfy (ph) the somewhat graphics products will migrate from .15 to .13. But we also have quite a bit of other customers and the products migrating from .25 to .18 or .15. So, our feeling is for these - for the - well, no. The (ph) reason (ph) the (ph) future (ph) we will need those .15, .18 capacity.

Shekhar Pramanick - Prudential Securities - Analyst

OK. Thank you.

Operator

Thank you. Our next question comes from Michael Holfelder (ph) with HVB Corporates End (ph) Markets. Please go ahead with your question.

Michael Holfelder - HVB Corporate End Markets

Hi. It's Michael Holfelder (ph) from Munich. The questions have already been answered. Thank you.

Operator

Thank you. Our next question comes from Shelesh Jeti (ph) with Nomura Securities. Please go ahead with your follow-up question.

Shelesh Jeti - Nomura Securities - Analyst

Yes. Hi. I had a follow-up question regarding the utilization calculations. When you calculate utilizations, is it the commercial wafers divided by the available capacity? That means the wafer shutdowns are what you had in the - for the maintenance of the plants in the first quarter do you include that, or is it excluded in the available capacity?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

They are excluded.

Shelesh Jeti - Nomura Securities - Analyst

It is included?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

They are excluded. If there's a maintenance shutdown they will be excluded.

Shelesh Jeti - Nomura Securities - Analyst

OK. OK, thank you.

Operator

Thank you. Our next question comes from Dan Heyler with Merrill Lynch. Please go ahead with your follow-up question.

Dan Heyler - Merrill Lynch - Analyst

Thanks. I just had a follow-up on IBM outsourcing. Your .13 product cycles clearly are maturing and ramping fairly steeply. Do you anticipate potential IBM business coming in as a function of one year your excellent execution and the lack of capital spending at IBM? Do you have any visibility there? It looks as though much of the growth has been fabless driven here so far.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

We have - let me see here.

Dan Heyler - Merrill Lynch - Analyst

I know you've been doing a number of .13 customers already.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes, with IBM customers.

Dan Heyler - Merrill Lynch - Analyst

Right.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

On the .13 certainly, I think, we have very good participations from the IBM side.

Dan Heyler - Merrill Lynch - Analyst

Right.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

In the interest of time, we're probably going to take two more questions and then we're going to adjourn this session.

Operator

Yes. The next question comes from Ashish Kumar with Credit Suisse First Boston Corp. Please go ahead with your question.

Ashish Kumar - CSFB - Analyst

Thank you. Three months back I think some (ph) Chang suggested that TSMC expects semiconductor industry revenue growth rate at about eight percent for the year. I was wondering if there is any update to that, any change in your estimate for the industry. Thank you.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think we stand by the number.

Ashish Kumar - CSFB - Analyst

Thank you.

Operator

Thank you. The next question comes from Piari Menar (ph) with Deutsche Bank. Please go ahead with your question.

Piari Menar - Deutsche Bank

Yes. Thanks a lot. Just a question on how your 90 nanometer - if I'm going to compare, I think you're doing about - you've got about 20 projects or so on 90 nano. If you're going to compare how this is versus .13 was at a similar stage, the kind of interest that you're seeing from your customers, how do you compare it? Is it more, less or quite similar?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

You mean customer projects?

Piari Menar - Deutsche Bank

Yes. I mean, basically design projects that you're doing. What I'm doing (ph) is the kind of interest that you're getting from your customers on 90 nanometer, if you're going to compare it with how it was at a similar stage with .13. Do you see it quite similar?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Well, I think for 90 nanometers obviously the customer with the - with volume are the ones who are doing serious work with us.

Piari Menar - Deutsche Bank

What I was trying to get a feel of is the willingness or the interest the customer is showing, like when they migrated from .18 to .13 in the initial stages, the kind of interest that you saw versus the interest that you see ...

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

I think - to be very - in fact, I think it's getting very - it's getting more and more - the discussion has been very good actually, especially recently it has been very good, open. And we see a lot of willingness from our key customers to work on 90 nanometer with us. I think the .13-micron progress (ph) had a major impact.

Piari Menar - Deutsche Bank

OK. Thank you, sir.

Operator

Thank you. Our next question comes from Mike McConnell with Pacific Crest Securities. Please go ahead with your follow-up question.

Mike McConnell - Pacific Crest Securities - Analyst

Thank you. One last question I have is obviously on the SARS outbreak. What are you seeing? Obviously you're stationed in Asia. There was an article coming out of a Taiwanese newspaper, saying that this could cause delay in your Senjian facility plans for that.

Could you just give us an update there and what you're seeing and any type of effect it's having on your production or your customer's production, anything like that?

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

Well, actually right now as far as the China plant is concerned, we haven't really made any commitment to any customer. So, we don't see any impact on the customer side.

As far as the fab progress is concerned, it really depends on how the SARS situation in China will go. Certainly, right now how much traveling involved has stopped people going to China for almost a month now.

Mike McConnell - Pacific Crest Securities - Analyst

OK, thank you.

Operator

Thank you. Our next question comes from Prana Kumar Samal (ph) with Sawa (ph) Institute Events (ph) Research. Please go ahead with your follow-up question.

Leon Ku - Taiwan Semiconductor Manufacturing Company - Investor Relations

Operator, we will have this as the last question.

Operator

Thank you, sir.

Prana Kumar - Sawa Institute of Research - Analyst

Thank you very much. Would it be possible to elaborate a little bit about mass cost for the 90 nanometer and 130 nanometer and how you are attracting customers to migrate to that higher mass cost level, whether you are subsidizing some of the mass cost at this point? Or there are some more multiple debt (ph) wafer you are looking at, if you can give us some idea on that side.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Yes. There's no question the cost is going up from 130 to 90. We - as you also know that we have already started the 90 nanometer fiber shuttle and BW (ph) projects for our customers. And quite a few of them are using them to lower the mask issue. And we

continue to work from the business point of view with customers to reload (ph) the potential hurdle. It will not be the showstopper for the 90-nanometer generation.

Prana Kumar - Sawa Institute of Research - Analyst

Is it possible to give us some idea like how much a 90 nanometer must cost compared to how many times are more expensive than, say, 130 nanometer given the particular maybe nine metal layer sort of mask - rough estimate?

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Sorry, we do not have that data at the top of my head.

Prana Kumar - Sawa Institute of Research - Analyst

Thank you very much.

Operator

Thank you. Mr. Chang, please go ahead with any closing statements.

Harvey Chang - Taiwan Semiconductor Manufacturing Company - SVP and CFO

OK. I just want to thank everyone for joining us. And I also want to thank Rick, who is out (ph) in California. We shall see you next time on the next conference call. Thank you. Good night.

Rick Tsai - Taiwan Semiconductor Manufacturing Company - President and COO

Thank you.

Operator

Thank you, sir. Before we conclude TSMC's first quarter 2003 earnings Webcast conference call today, please be advised that the replay of the conference call will only be accessible through TSMC's Web site at www.tsmc.com. Thank you, all.

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