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## Conference Call Transcript

**TSM - Q4 2004 TSMC Earnings Conference Call**

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Welcome to TSMC's fourth quarter 2004 results webcast conference call. Today's event is chaired by Ms. Lora Ho, 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 website at

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www.TSMC.com and only in audio mode. Your dial-in lines are also in listen-only mode. At the conclusion of the management 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 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. Rick Tsai.

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**Elizabeth Sun - TSMC - Head Investor Relations**

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 May 28, 2004, and such other documents as TSMC may file with or submit to the SEC from time to time. Except as required by law, we undertake no obligation to update any forward-looking statement whether as a result of new information, future events, or otherwise. And now, I would like to turn the conference call over to Ms. Lora Ho, our Vice President and Chief Financial Officer.

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**Lora Ho - TSMC - VP & CFO**

Good morning and good evening. Welcome to TSMC's fourth quarter conference call. First of all, I would like to say an early hello to everyone, that means happy Chinese New Year and wish you many happy returns in the Year of the Rooster. For the semiconductor business, 2004 has seen a good year in which TSMC achieved and propelled revenue and profits. We have prepared some slides for you to look at as you listen to the call. These slides are available on TSMC's website. During the call, I will refer to the slides by their individual numbers. To start with, let's take a look at some highlights of our fourth quarter 2004 operating results. This figures are shown on slide number four. As expected, the quarter four results were somewhat lower than the previous quarter. Our Q4 revenue was NT\$63.9 billion, 8 percent lower than that of third quarter.

Net income after tax totaled NT\$22.2 billion. Meanwhile, earnings per share reached NT\$0.96. TSMC ended the fourth quarter with 118.5 billion in cash and short-term investment, shareholder equity reached NT\$399 billion. During the fourth quarter, we shipped a total of 1.22 million 8-inch equivalent wafers, 8.5 percent lower than 1.33 million achieved in Q3 '04. Our overall utilization rate, which included TSMC fab, wafer tax and SSMC was 88 percent for the fourth quarter. ROE for the quarter was 22.8 percent, about 8 percent lower than the 30.6 percent achieved in Q3. But still 3 percent higher than that of Q4 2003. Let's go to slide number 5. Compare with the third quarter this year, revenue declined by 8 percent. Despite overall utilization rate dropped from 103 percent in the previous quarter to 88 percent this quarter, our growth margins still reached 42.5 percent, due to a continuous yield improvement for our 12-inch fab [indiscernible] for technology products.

Operating expenses were slightly higher than that of last quarter, primarily due to a continuous investment over 65 nanometer development, the percentage of total net sales. Operating expenses took up 9.6 percent for the quarter, slightly higher than the 8.6 percent achieved in the previous quarter. The nonoperating items for the quarter was an income of NT\$500 million lower than the previous quarter mainly due to lower evaluation loses over short-term investments in marketable securities and and the last royal income of Tru[ph]. Partially offset by the highest foreign tax -- foreign exchange gain from hedging activities. With the economy slowing down, utilization rate for wafer SSMC declined. Along with increased expenses at TSMC Shanghai, our investment income decreased by 56 percent to NT\$0.6 billion in this quarter. Net income before tax reached 32.1 billion, income after tax came to 22.2 billion. Both were 21 percent down in comparison to the previous quarters, while EPS also decreased 21 percent to NT\$0.90 per share.

You can see from slide number 6, that on a year-over-year basis, with increased wafer shipments and higher ASP properly affected by unfavorable exchange rate, our revenue increased by 11 percent and gross margin was 3 percent higher than Q4 2003. It is particularly worth noting that our revenue waiting for our advanced technology products went from 18 percent in 2003 up to 36 percent this year. We're presenting significant break through in production efficiency for our 12-inch fab. Total operating expenses went up marginally. However, as a percentage of net sales, operating expense was 9.6 percent, lower that the 10.5 percent for Q4 2003. Some operating items went from a loss of 0.2 billion to a gain of 0.5 billion, mostly due to higher interest income and lower hedging costs.

Our net investment income for this quarter was lower than that of Q4 '03. There was significant capital gain from a disposal of venture capital equity investment in Q4 last year. This year, despite the revenue improvements from wafer tax, SSMC and Vanguard, taking away TSMC Shanghai expenses. Total net investment income was still down NT\$5.5 million[ph]. Pre-tax income was 22.1 billion, 26 percent over the 17.6

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billion achieved in Q4 last year. As our capital expenditures this year was much higher than last year, so was the related tax credit revenue. Our profit after-tax was up 39 percent than that of Q4 '03. EPS also increased 40 percent from \$0.68 per share to \$0.96 per share.

The full year income statement comparison in slide number 7 shows TSMC achieving significant growth in the year 2004. Due to higher quality of wafers shipped partially offset by negative exchange rate, our revenue for full year 2004 was a record high of 256 billion, 27 percent higher than that of 2003. In the U.S. dollar terms, the growth rate actually reached 30.3 percent. Gross margin was 7 percent -- was up 7 percent in comparison to 2003. Operating expenses also increased. By a percentage of sales, it was down from 10 percent in 2003 to 9 percent in 2004. Our operating items were an income of 0.9 billion, rather than a loss of 2.4 billion in 2003. Investment income also increased more than 5 fold to NT\$4 billion for the year 2004.

Net income was up 95 percent from 2003, while EPS almost doubled. All this again demonstrated TSMC's ability to adopt the economical cycle and our superior operating efficiencies. Slide number 8 will provide you with a few important items from TSMC's balance sheet and some key financial ratios. First of all, our cash and short-term investments for the quarter was \$118.5 billion, which is 5.9 billion lower than the previous quarter position of 124.4 billion. Accounts receivable balance got reduced from 33.4 billion to 27.2 billion. Primarily reflect lower sales activities. Accounts receivable turnover was 45 days. Current liability at the end of the quarter was 60.6 billion, 16.4 billion lower than 44.2 billion at the end of Q3.

The difference was many increased payables to equipment vendors and the reclassification of some funds payable from an low term to current. There was A-2 90 nanometer to move in at our 12-inch fab in Q4. We anticipating of strong demand over our advanced technology products. Inventory-wise, our Q4 inventory came to 14.2 billion, this is 1.6 billion higher than that of previous quarters, many due to a increased in higher value-added technology inventories as our 12-inch fab ramping up. Overall inventory turnover days was 41 days for the fourth quarter. Current ratio for the quarter was 2.9 times. TSMC continued to maintain a very solid balance sheet.

Slide number 9 summarized TSMC's cash flow for the quarter. During the fourth quarter, with net profit of NT\$22.2 billion and depreciation amortization of 16.6 billion, cash flow generated from operating activities totaled 36.7 billion. On the investment activity front, our capital expenditures for Q4 increased to 20.5 billion which brought our capital expenditures for the whole year 2004 to US\$2.4 billion as projected. In terms of cash investments, we have increased our short-term investments by 6.9 billion in money market funds. Long-term investments also went up by NT\$17 billion. Including further investment in bonds and a structured note by NT14 billion and 2.9 billion capital injection to TSMC Shanghai. In respect of financing activities, NT\$5 billion worth of corporate bonds were redeemed in the quarter.

Overall speaking, our cash balance reduced by 12.8 billion for the quarter, cash and short-term investment together was also down by 5.9 billion. You can see in slide number 10 that all of our US\$2.4 billion capital expenditures for 2004, US\$2.3 billion were for TSMC itself, US\$72 million for wafer tax, and 69 million for TSMC Shanghai. About 75 percent of the 2.4 billion were spent building up capacity for 12-inch fab. Now, let us look at some business analysis. Slide number 11 provides a quick look at our revenue break down by technology. Despite market slowing down in Q4, TSMC continued to achieve a significant growth in our advanced technology segment.

I'm pleased to announce that our 90 nanometer technology has started go on production as scheduled. We should start to gain importance in our sales turnover in the next several quarters. You can see clearly from the chart that the percentage of the advanced technology has reached 36 percent in the fourth quarter as opposed to 30 percent in quarter 3. We also anticipate this upward trend to continue throughout advanced technology in the foreseeable future. Slide number 12 provides a view by application. Due to a seasonal demand, computer sales revenue contributed to 35 percent of total revenue, 4 percentage points up for that of last quarter. The increases coming from the chip set, graphics, and ten disk driver and heartly[ph] to the driver segment. Communications revenue was down 1 percent to 41 percent due to inventory adjustments in which wireline suffered most. The consumer segment declined by 4 percent and it was down to a 16 percent with the fuel major segment showing decline. However, we also see hand-held games and digital cameras making positive progress.

Slide number 13 shows the geographical breakdown of our revenue. Revenue from North America, Asia-Pacific, Europe and Japan account for 75 percent, 10 percent, 7 percent and 8 percent of our total revenues for the fourth quarter respectively. Compared to the last quarter, Japan went up slightly while Asia-Pacific came down a little. Overall speaking there was no major changes. Slide number 14 provides a revenue breakdown by customer types. In the fourth quarter, revenue generated from fabless customers accounted for 66 percent of total sales. And IDM 33 percent as IDM continue to outsource even advanced technology sector, while fabless companies undertook inventory adjustment. System customer accounts for 1 percent of our total revenue. Now, let's move on to slide number 15.

This slide shows our fab transition and ASP trends. ASP transition rate for the fourth quarter slipped to 88 percent. As a matter of fact, in October '04, we were projecting a new transition rate of between 84 to 86 percent. The result actually turned out better. ASP increased by 1.7 percent this quarter, mainly due to better product mix moving forward -- moving toward advanced technologies. Let's turn to slide number 16. This slide

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summarizes our historic capacity by fab. Our total capacity during the fourth quarter was 1.32 million 8-inch equivalent wafers, 4.8 percent up from the Q3 actual. Due mainly to increasing our 12-inch fabs.

For first quarter of 2005, we expect our capacity to continue increase, Fab 12 and Fab 14 with 8-inch fab undertaking annual maintenance. Total capacity will remain around 1.32 billion 8-inch equivalent wafers. Our projection capacity for year 2005 will be 5.95 million pieces of 8 equivalent wafers. This is 24 percent higher than the 2004 capacity. The last slide, number 17, provides a recap of the major events during the fourth quarter. I will leave that for your own reference. Based on the current business outlook, management's expectations for the first quarter 2005 performance are on the following. Wafer shipments to decrease by a single digit percentage point sequentially. Overall utilization rate to be about 78 percent. Gross profit margin to be in the range of 38 to 40 percent. ASP to remain about the same sequentially. 2005 capital expenditures to be in the range of US\$2.5 to 2.7 billion.

This ends up my presentation today. Thank you very much. Operator, please open the floor for questions.

### QUESTION AND ANSWER

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#### Operator

At this time, we will open the floor for questions. If you would like to ask a question, please press star then the number 1 on your telephone keypad now. Questions will be taken in the order in which they are received. If at any time you would like to remove yourself from the questioning queue, please press star then the number 2 on your telephone keypad. Please limit your questions to 2 at a time with one follow-up to allow all participants an opportunity to ask questions to the management members. Your first question comes from Bhavin Shah from J.P. Morgan Securities. Over to you.

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#### Bhavin Shah - JP Morgan Securities - Analyst

Yes, Lora, I wanted to focus on the CapEx, what is capacity. In -- for the 2004 the CapEx dollars, is the all -- all the capacity is related to those dollars already installed? And shown as operational?

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#### Lora Ho - TSMC - VP & CFO

It is.

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#### Bhavin Shah - JP Morgan Securities - Analyst

Right. So could you elaborate on how much capacity was -- can be attributed to the \$2.4 billion or if you have to exclude Shanghai and so on. What is the attributable capacity to that CapEx number in '04?

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#### Lora Ho - TSMC - VP & CFO

Let' see. Bhavin, you're asking very detailed questions. A total of 2004 capacity was 4.78 billion pieces. The kpcs for 2004, I think, all of them are being installed in the first quarter 2005. So maybe within 2 months at the 2.4 has been reflected totally in all capacity.

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#### Bhavin Shah - JP Morgan Securities - Analyst

I see. Okay. Maybe not too specific, but in general the 2.3 billion you spent for TSMC out of that 2.4, was it all 12-inch? There a portion for 8-inch as well?

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#### Lora Ho - TSMC - VP & CFO

There is some portion for 8-inch but the major portion was for 12-inch.

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**Bhavin Shah - JP Morgan Securities - Analyst**

Do you mind just giving like a rough percentage or is it hard?

**Lora Ho - TSMC - VP & CFO**

Okay. There are around 75 percent was for 12-inch. And something close to 15 percent for 8-inch.

**Bhavin Shah - JP Morgan Securities - Analyst**

Okay. Okay. Thank you.

**Operator**

Your next question comes from Medhi Hosseini from Friedman Billings Ramsey. Over to you.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

I have 2 questions. First, if you could talk about your capacity at 90 nanometer node and where would the mix be a year from now? And also in terms of utilization rate, if you could elaborate on utilization rate for technology above 130 nanometer and below, what's the mix? If you could provide some color on the difference?

**Lora Ho - TSMC - VP & CFO**

Okay. This quarter our 90 nanometer capacity will be roughly 10K per month. In this quarter. What was your second question?

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Just on a 90 nanometer, I'm just trying to get a sense of with the CapEx going up by 7, 8 percent in '05, how are you expecting a 90 nanometer capacity ramp? Where would you see these 10K per month be a year from now?

**Lora Ho - TSMC - VP & CFO**

For 2005, by the end of this year, will give us roughly -- roughly 25K of 12-inch capacity for 90 nanometers.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Okay. And then regarding utilization rate, is there a big difference between -- below 130 nanometer nodes and above?

**Lora Ho - TSMC - VP & CFO**

Normally we don't comment vis-a-vis utilization for different technology, but as you know, we are building capacity for advanced technology. We assume that differentiation for those at the basket[ph] line will be very high.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Right. I'm just trying to get a sense of to what extent under-utilized 8-inch lines are going to be overhang on your overall profitability gross margin.

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**Lora Ho - TSMC - VP & CFO**

I cannot give you prediction for the whole year because we are still in the early first quarter. But the utilization for tool technology, especially on 0.15 and 0.18, will be lower than fourth quarter.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Thank you.

**Operator**

Your next question comes from Robert Maire from Needham & Company Inc. Over to you.

**Robert Maire - Needham & Co, Inc - Analyst**

Thank you. Congratulations on the nice numbers, by the way. Your utilization and ASP seem to be holding up relatively well and relatively well compared to some others. Maybe you could give us a little -- is this because this beginning that we are seeing here is not as bad as others? A combination of share or what is -- what is sort of the recipe for the utilization holding up here? And I realize it is difficult to make projections further out, but in terms of utilizations going beyond Q1, if we were to apply the seasonal model that you're suggesting, any thoughts or any guesses currently as to where you think utilization will bottom out and when?

**Dr. Rick Tsai - TSMC - President & COO**

Well, we -- Chairman says in the afternoon, he foresees semicon[ph] industry to resume growth in the second quarter and TSMC being the leader in the segment, certainly, we'll believe our leader, pack.

**Robert Maire - Needham & Co, Inc - Analyst**

So, would I interpret that to mean that the first quarter will be the bottom of the utilization rate?

**Dr. Rick Tsai - TSMC - President & COO**

If we talk about revenue growth resumption, yes. Talk about revenue.

**Robert Maire - Needham & Co, Inc - Analyst**

Okay, so it may not be the bottom for utilization, but we would expect Q1 to be the bottom for revenue?

**Dr. Rick Tsai - TSMC - President & COO**

Yes, our capacity will continue to grow quarter-over-quarter because our advanced technology, AT, will be growing.

**Robert Maire - Needham & Co, Inc - Analyst**

Okay. So in terms of shipments of wafers or revenues we're expecting sort of a trough in the first quarter and then a resumption of growth in Q2. And that would follow normal seasonal patterns or that's what you're assuming?

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**Dr. Rick Tsai - TSMC - President & COO**

I think that, yes, we're assuming, yes, second quarter to have the revenue growth.

**Robert Maire - Needham & Co, Inc - Analyst**

Okay. And a follow-on question to that, if you're assuming the first quarter to be sort of the bottom and growth to start in the second quarter, I'm assuming that the 2.5 to US\$2.7 billion CapEx is more back-end loaded to the second half of the year as compared to the first half because you expect this increase coming starting in the second quarter?

**Lora Ho - TSMC - VP & CFO**

Actually, the cap ex from 2005 will be pretty much front-end loaded. You know that we need some lead time when we install the equipment so most of the equipment used for second half is to be installed in first half.

**Robert Maire - Needham & Co, Inc - Analyst**

Okay, so probably more front-end loaded at this point.

**Lora Ho - TSMC - VP & CFO**

Yes, front-end loaded.

**Robert Maire - Needham & Co, Inc - Analyst**

Okay. Thank you.

**Operator**

Your next question comes from Michael McConnell from Pacific Crest Securities. Over to you.

**Michael McConnell - Pacific Crest Securities - Analyst**

Thank you. Lora, just looking at the capacity, it looks like it is going to be up 24 percent -- roughly 24 percent year-over-year for 2005. And then in your earlier conference call you had -- the Chairman had stated that revenues were going to be down 2 percent this year and then up again 10 percent in 2006. Could you kind of reconcile the thoughts for capacity being up that high? And then also, any comments on what you think pricing is going to do between -- maybe in the first half of the year, I know your visibility is pretty limited right now.

**Lora Ho - TSMC - VP & CFO**

The capacity growth, 24 percent percent, is mainly on 12-inch and to support a 90 nanometer and 0.13 microns. On those technology we feel for TSMC, we are going to see a very significant growth in revenue. The total revenue may not grow that fast because we do see some mature technology will be under-utilized for the whole year.

**Michael McConnell - Pacific Crest Securities - Analyst**

With the capacity moving up so much your depreciation is going to be about 10 percent so should we think of this as in a way you sacrificing some profit margin, maybe over the year, for -- to take some market share and position yourself more favorably for 2006?

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**Lora Ho - TSMC - VP & CFO**

There's no logical connection of the 2 numbers. Of course, the profitability has to do a lot of factors including AO, IST and your core structure. And other matters as well. So there's no logical connection.

**Michael McConnell - Pacific Crest Securities - Analyst**

With your capacity being at 24 percent, obviously utilizations are going to be somewhat impacted but that's a pretty big number, would you agree?

**Lora Ho - TSMC - VP & CFO**

Well, I would say that 2005 is too early to say. But if you compare year-over-year, 2005 versus 2004, the utilization will be less in 2005.

**Michael McConnell - Pacific Crest Securities - Analyst**

And then --

**Dr. Rick Tsai - TSMC - President & COO**

Well, basically, the -- again, we're buying equipment for advanced technologies and we expect, as Lora said earlier, we expect the utilization for load capacity to be high, quite high, otherwise we would not have bought the equipment.

**Michael McConnell - Pacific Crest Securities - Analyst**

And then any comments on the various end markets would be helpful in terms of -- it sounded like wireline was the weakest in Q4 within communications. If we look out into Q1, I think in your earlier conference call you said all the end markets should be down. Are there any that are going to -- in terms of community stock it, in terms of what's going to be down the most, what's going to fair the best, and specifically within each end market, which products look like they're going to be holding up the best and which ones the worst?

**Lora Ho - TSMC - VP & CFO**

I can tell you on first quarter we see communication, consumer, and computer will all go down, with communication, computer go down more than the consumer.

**Michael McConnell - Pacific Crest Securities - Analyst**

Okay.

**Dr. Rick Tsai - TSMC - President & COO**

As in wireline, that's probably still the weakest. Wireless wire going down, but we do not believe it will be a severe down and we expect that to resume fairly quickly.

**Michael McConnell - Pacific Crest Securities - Analyst**

Okay. And then on the graphics side. There's been -- one of your major customers has had some capacity constraints. Could you talk about what profits look like for Q1, please?

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**Dr. Rick Tsai - TSMC - President & COO**

I think graphics is going through seasonal adjustment in first quarter. The overall picture outlook, I would say, at least normal, you know. We believe the PC segment will -- these unit shipment, Mike, will still grow, somewhat slower compared to last year, though. The growth rate.

**Michael McConnell - Pacific Crest Securities - Analyst**

Sure. Thank you very much.

**Operator**

Your next question comes from Pranab Kumar Sarmah from Daiwa Institute of Research. Over to you.

**Pranab Kumar Sarmah - Daiwa Institute of Research - Analyst**

Thank you. On your press release you had mentioned a wafer dated there could be some asset impairment charge. Could you a little bit elaborate on that?

**Lora Ho - TSMC - VP & CFO**

Actually, there is a assaying impairment charge back in 2000. So we have to comply that test a couple years ago and up to now we don't see further assaying impairment being happening, none -- either TSMC or our Ophidian[ph]

**Pranab Kumar Sarmah - Daiwa Institute of Research - Analyst**

And how do we look at your long-term investment on the first quarter '05? Wouldn't it be a significantly down from where we are now in fourth quarter?

**Lora Ho - TSMC - VP & CFO**

Usually, when TSMC has lower utilization, our wafer tag and SSMC, they also suffer a lower utilization, so we expect the financial performance from long-term investment will not be as good as fourth quarter.

**Pranab Kumar Sarmah - Daiwa Institute of Research - Analyst**

And my last question is on the display related product segment, how do you look at on the first quarter display related product and what is your strategy on the LCD driver IC segment?

**Dr. Rick Tsai - TSMC - President & COO**

We see display -- well, let me first say we do play in the display driver business. Our number, however, doesn't necessarily reflect the whole display market situation because I don't think we are -- our penetration is not big enough, yet. So if you ask our strategy in the display area, well, we are expecting our technology effort in this area to attack both large panel and the small panel advisory market. And we expect to grow quite significantly in this area.

**Pranab Kumar Sarmah - Daiwa Institute of Research - Analyst**

Could you assume like we'll be seeing a significant distancing from the second half of '05 or maybe you have already started production sometime on the first of '05, excluding a Vanguard related production.

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**Dr. Rick Tsai - TSMC - President & COO**

We already have a significant production for large panel and some small panel drivers. I think we have -- we aspire to grow a lot more.

**Pranab Kumar Sarmah - Daiwa Institute of Research - Analyst**

Okay. Thank you.

**Operator**

Your next question comes from Dan Heyler from Merrill Lynch. Over to you.

**Dan Heyler - Merrill Lynch - Analyst**

Thank you. I had a few questions. In the diversification effort to try to build out and use more of your excess 200 millimeter capacity, you guys have highlighted CMOS image sensors, LCD drivers, x-signal, RF embedded flash, and flash memory. Were there any areas that you're currently doing work on that we would expect to potentially hear more about in the future, going forward? Or are these pretty much areas where you see most of the upside?

**Dr. Rick Tsai - TSMC - President & COO**

Yes, we still have some effort going, for instance, in the analog area in the -- you know, we're also looking at the MEMS -- but I think somewhat -- some of them may take us longer to develop compared to what the -- compared to ones the Chairman mentioned in the afternoon. But we have, yes, we have other efforts going on to penetrate more market segment.

**Dan Heyler - Merrill Lynch - Analyst**

Is the demand/effort, is that -- is that standalone nan-flash, and is that potentially high density or is it more the consumer variety?

**Dr. Rick Tsai - TSMC - President & COO**

I don't think we mentioned that.

**Dan Heyler - Merrill Lynch - Analyst**

You just said nan-flash?

**Dr. Rick Tsai - TSMC - President & COO**

No, I didn't.

**Dan Heyler - Merrill Lynch - Analyst**

I'm sorry.

**Dr. Rick Tsai - TSMC - President & COO**

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I'm sorry, MEMS.

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**Dan Heyler - Merrill Lynch - Analyst**

Oh, got it, okay. MemS. Got it.

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**Dr. Rick Tsai - TSMC - President & COO**

Oh, I'm sorry. And something we considered. We haven't -- we don't have any decision.

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**Dan Heyler - Merrill Lynch - Analyst**

Okay. And the Chairman did mention standalone flash today, did he not?

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**Dr. Rick Tsai - TSMC - President & COO**

We do have flash effort although it is more on the lower density applications.

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**Dan Heyler - Merrill Lynch - Analyst**

Okay. So, no effort to do high volume stuff there for -- for your fabs then?

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**Dr. Rick Tsai - TSMC - President & COO**

Not now.

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**Dan Heyler - Merrill Lynch - Analyst**

And then on the LCD side. You guys have emphasized this high voltage process and we've been hearing about the 0.18 high voltage process for some time at the foundries. But when we talked build to the large panel LCD driver companies, they tend to continue to say this year is predominantly 0.35 and some maybe some 0.25. So, I'm wondering at what point can we really see high voltage parts that can be used in panels going to 0.18. Is that more kind of 2006 time frame or are you seeing any of that this year?

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**Dr. Rick Tsai - TSMC - President & COO**

Dan, I think, this is a very fragmented area. I think different makers tend to use different technology. And I would agree with you, 0.35, probably still the mainstay. But, from my point, definitely going into the volume production. [inaudible] H, I think we will start some application, but the volume probably won't happen, as you said, next year. I think between 0.25 and 0.18 there will be some, you know, a tug of war type of thing.

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**Dan Heyler - Merrill Lynch - Analyst**

Right. What are the technology issues there on some current way to get there? This is the large transition. There doesn't seem like the cost benefits are there. So is it mainly just the pricing issue to move there or what are the dynamics?

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**Dr. Rick Tsai - TSMC - President & COO**

More panel integration is one issue. There will be some -- there is always memory, as well, embedded as well, there. And that really will have the major impact on the technology being utilized.

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**Dan Heyler - Merrill Lynch - Analyst**

Okay. Thank you.

**Dr. Rick Tsai - TSMC - President & COO**

Sure.

**Operator**

Your next question comes from Ali Irani from CIBC World Markets. Over to you.

**Ali Irani - CIBC World Markets - Analyst**

Yes, good morning, gentlemen. 2 related questions. One looking at the under utilized legacy capacity, it seems that some of these fabs are -- or the capacities being kept up because it is now fully decommissioned and still very -- depreciated and still very profitable rather than being decommissioned. I'm wondering what the impact to pricing is going to be through the balance of the year and if you can elaborate in more detail about your pricing outlook beyond the first quarter for the balance of the year as you add 25 percent capacity. Thank you very much .

**Operator**

Your next question comes from --

**Dr. Rick Tsai - TSMC - President & COO**

Hold on, hold on. We haven't answered the question yet.

**Operator**

My apologies.

**Dr. Rick Tsai - TSMC - President & COO**

The pricing, we -- first of all, TSMC, in our history, has not decommissioned any capacity, except for Fab 1, which the government wanted to take back, it was a lead facility from the government. So, what TSMC has always found application for those capacities, moreover, of course, just like any other company, utilization would go up and down depending on the cycle. And we don't see -- we don't see any exception this time, also. We -- and as we said earlier, we are developing different technologies, you know, with different technology nodes, so that we can get new business to fill those capacities. And we are also working very closely with our customers to have -- to enable them to get the best possible cost-effective design into our fabs. I think pricing is the last resort that we would use to fill the gap and as you can see, our -- of course, our ASP has been fairly stable during the past several quarters. We will do our absolute best to maintain that .

**Ali Irani - CIBC World Markets - Analyst**

Thank you.

**Operator**

Your next question comes from Sunil Gupta from Morgan Stanley. Over to you.

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**Sunil Gupta - Morgan Stanley - Analyst**

Thank you. I wanted to follow-up on Chairman's comments this morning about the outlook for the industry. And one of the key things that he mentioned, his revised outlook for 2006, although a bit earlier. Just wanted to understand, what change in company is taking from -- which has caused a significant revision from flat growth to 10 percent as mentioned earlier?

**Dr. Rick Tsai - TSMC - President & COO**

Well, basically, this is the macro -- this analysis came from a macro analysis. Looking at the cycle of the industry and the -- if you look at the cycle and the 2005 being flat to slightly down year, and we -- we believe the -- that from our macro analysis, the 2006 will have roughly 10 percent growth. But to the detailed segment analysis, I think still too early to tell now.

**Sunil Gupta - Morgan Stanley - Analyst**

Is the company able to see any specific applications or application categories which might drive this double digit growth? Or is it too early for that right now?

**Dr. Rick Tsai - TSMC - President & COO**

Well, I think, in general, we believe the consumer application and also the -- again, the cell phone application will continue to drive the silicon usage, you know, in the end market.

**Sunil Gupta - Morgan Stanley - Analyst**

Okay. And I also wanted to follow-up on the other comment that the Chairman made about near-term industry trends where, and you also mentioned this earlier, that you expect your Q2 revenue to be somewhat higher than what you expect in Q1. And I was wondering, what gives you the confidence that you would have higher revenue in Q2 which I guess if you compare it with what you normally see sanity is that's usually not the case.

**Dr. Rick Tsai - TSMC - President & COO**

We believe our -- I mean there's certainly -- the fourth quarter, you can see that there has been a decline in fourth quarter plus another decline in the first quarter. And we all know that the -- one of the major culprit is the inventory that's in our customers' area. And the -- we are -- we believe those inventory are being consumed in this 2 quarters, the fourth quarter and first quarter. And then the -- that will bring up the orders from our customer base. So I think that's the main -- we believe that will be the main drivers for that. We do recognize, of course, the seasonality factor in there. So that will mean, basically, maybe the magnitude of the growth.

**Sunil Gupta - Morgan Stanley - Analyst**

So it sounds like based on a view that most inventory digestion would be over by end of Q1 and hence maybe bit of a snap back in Q2. Is that what is going to drive that?

**Dr. Rick Tsai - TSMC - President & COO**

Yes, that's what we are saying, yes.

**Sunil Gupta - Morgan Stanley - Analyst**

Thank you.

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**Dr. Rick Tsai - TSMC - President & COO**

Sure.

**Operator**

Your next question comes from Shailesh Jaitly from Nomura Securities. Over to you.

**Shailesh Jaitly - Nomura Securities - Analyst**

Hi, thanks. Firstly would want to understand this better than expected utilization in the fourth quarter, because earlier you were expecting 84 to 86, came in at 88 percent. So, do we take it that you had significantly better terms business towards the end of the quarter and that means you ended the quarter at relatively better utilizations than what you were expecting?

**Lora Ho - TSMC - VP & CFO**

Shailesh, actually it's not far from our guidance of 84 to 86, just 1 or 2 percent is something do not consider unusual. I think we're talking about output utilization, so there are a few customers that --they serrate their ordering so that is why.

**Shailesh Jaitly - Nomura Securities - Analyst**

I wanted to understand a bit more the linearity of the first quarter. From this, do we take it that the first quarter, second half, is a lot more weaker than the first half? Or how would the linearity of this quarter would prove this?

**Lora Ho - TSMC - VP & CFO**

Can you explain more about your linearity?

**Shailesh Jaitly - Nomura Securities - Analyst**

The utilizations in January, February, versus March, when you are guiding these numbers, are you expecting March utilizations to be lower than where we are right now in January?

**Lora Ho - TSMC - VP & CFO**

We do not cover the monthly utilization, actually it is not that important, because if you consider our cycle time for 8-inch and 12-inch is more than one month, so we don't think that is important to differentiate each monthly utilization.

**Shailesh Jaitly - Nomura Securities - Analyst**

Okay. Your capacity additions for this year, if you could help explain the timing of these capacity additions, would it be front-end loaded? And if so, what would be a capacity say in the second quarter, what would be the percentage increase?

**Lora Ho - TSMC - VP & CFO**

Okay. The kpcs will be front-end loaded as I explained earlier. As far as capacity --

**Shailesh Jaitly - Nomura Securities - Analyst**

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I just wanted to understand the capacity additions. You would be adding roughly about 13 percent capacity this year. Should we assume that your biggest increases are going to come in the second quarter of this year?

**Lora Ho - TSMC - VP & CFO**

Yes, pretty much, the biggest increase comes in the second quarter.

**Shailesh Jaitly - Nomura Securities - Analyst**

Okay. Thank you.

**Operator**

Your next question comes from Tim Arcuri from Citigroup Global Markets Inc.. Over to you.

**Tim Arcuri - Citigroup Global Markets, Inc - Analyst**

Hi, thanks. I had actually 2 questions. Number 1, if I look at your CapEx, you're saying that the 2005 CapEx will be front-end loaded. However, I believe that your order rates for equipment are pretty far below that \$650 million CapEx run rate. So it kind of implies that you have to start ordering more tools relatively quickly here. Is that the right way to look at it?

**Dr. Rick Tsai - TSMC - President & COO**

I do not know why you think we are behind in our ordering. I think we are ordering fairly regularly the equipment to meet our current capacity. So --

**Lora Ho - TSMC - VP & CFO**

We are bringing up our Fab 14 capacity quite significantly. So usually we're the first fab in the very beginning phase of ramping up, usually we will order more equipment as a part of the advanced technology.

**Tim Arcuri - Citigroup Global Markets, Inc - Analyst**

Okay. I guess let me ask it this way, then. Out of the entire 2005 CapEx budget, let's say you spending, say, the middle of the range say 2.6 billion. Out of that entire budget, how much of the -- how many of those tools have been ordered today?

**Lora Ho - TSMC - VP & CFO**

Can you repeat your question again?

**Tim Arcuri - Citigroup Global Markets, Inc - Analyst**

Okay. So if you just take the mid range of your '05 CapEx budget, at roughly 2.6 billion, how many of those tools have been ordered today?

**Dr. Rick Tsai - TSMC - President & COO**

I don't have the number, no.

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**Tim Arcuri - Citigroup Global Markets, Inc - Analyst**

Is it half, is it less than half? Can you just give us kind of a ballpark.

**Dr. Rick Tsai - TSMC - President & COO**

No.

**Tim Arcuri - Citigroup Global Markets, Inc - Analyst**

Okay. So would I be wrong in concluding that your orders should start to ramp, that you're going to have to start to order more tools or do you feel like you're ordering at a pretty consistent level right now.

**Dr. Rick Tsai - TSMC - President & COO**

We are ordering at a very consistent level.

**Tim Arcuri - Citigroup Global Markets, Inc - Analyst**

Okay. Thanks a lot.

**Operator**

The next question comes from Ashis Kumar from Credit Suisse First Boston. Over to you.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

Thank you. Good evening. My first question is perhaps in the current weak environment, your book to bill for each month might be earning below 1, but, ma'am, if you could just run through how the trend is in book to bill over the previous few months.

**Dr. Rick Tsai - TSMC - President & COO**

We're running a BB ratio of below 1 for -- for a few months but I think the -- it has started to come back up during the past couple of months. We're still -- but, of course, January is not done yet. We are still -- I think it is a bit too early.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

You said it was bit early, but it seems from what you say that Jan. might be touching a book to bill of 1? And that is the estimate?

**Dr. Rick Tsai - TSMC - President & COO**

Well, I think we have passed the bottom. I think we're -- you know, because each month is a very volatile number and the -- at this stage, we would have numbers sometimes above 1, sometimes below 1, but we have passed the bottom.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

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Okay. And I think to answering to an earlier question, it seemed that in terms of percentage increase in sequential capacity second quarter is the maximum buildout that we are seeing. Is it possible to, you know, quantify that. How much -- like, currently we're at 1.3 million wafer per quarter. What will we expect in second quarter, end of second quarter, that is?

**Lora Ho - TSMC - VP & CFO**

We said the second quarter capacity increased the most, but usually we do not quantify that. And we have to give you some qualitative number.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

The reason to ask you that, I think earlier, you know, we hesitated in answering the question whether your transition rate will bottom in the second quarter.

**Lora Ho - TSMC - VP & CFO**

Okay, let me tell you this. The second quarter capacity versus first quarter will be increased more than 10 percent.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

Thank you. That's so useful. And my final question is, that, you know, in this year, shall we build a higher R&D expense to revenue because of 65 nanometer, than what we had in 2004?

**Lora Ho - TSMC - VP & CFO**

Yes.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

And any sort of number, you know, something that you can guide us to as R&D is a portion of your revenue.

**Lora Ho - TSMC - VP & CFO**

Specific to revenue but you have 2 variables. One is the R&D spend and the other one is the revenue. So, I think normally our R&D expense representing 5.6 percent of our revenue.

**Ashis Kumar - Credit Suisse First Boston - Analyst**

Thank you very much.

**Operator**

Your next question comes from Donald Lu from Goldman Sachs Asia. Over to you.

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

Hi, Lora. Just want to clarify a couple of things. One is in the afternoon you mentioned that for this year you expect the ROE for '05 to be -- not too deviate too much from your ROE goal, which I believe is 20 percent. Is that correct?

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**Lora Ho - TSMC - VP & CFO**

Correct.

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

Okay. And just to cover, you just mentioned that for the 90 nanometer, you expect the -- to represent about 10 percent of total revenues by what time, Q4 or Q3?

**Lora Ho - TSMC - VP & CFO**

I think I said its 90 nanometer revenue will -- in the second half of 2005, will represent double digits. And of course the double digit doesn't mean 80, 90 percent. I say that you won't believe it.

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

Sure. Okay. Great, thank you.

**Operator**

Your next question comes from Ivan Goh from Dresdner Kleinwort Wasserstein. Over to you.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

Hi, good evening. Thank you. I've got a couple of questions. Firstly, I think Chairman in the afternoon session did say that he expects immersion lithography to be used only at 45 nanometer. But, I think, instead a Mr. Bum Lin, who is your VP of Micropatterning, disclosed sometime in December saying that immersion lithography could be deployed at 65 nanometer to increase the e-depth of 45's. Just wanted to find out if there has been any change in your technology road map.

**Dr. Rick Tsai - TSMC - President & COO**

This is no change. Really, I think Chairman said earlier, basically, we'll main for 45 but we will start using the 65. The extent of which will depend on manufacturers, the process margin, the cost, all those things. So -- but I think, you know, we already have the machine in our fab and we have done some pretty good work there already.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

Okay. My second question regards the capacity increase this year. I would like to ask it in a different way. I think you pretty much said earlier that utilization in 2005 would be lower than 2004. Given that 2004 average utilization was about 100 percent and if you were to take perhaps 10 to 20 percent decrease from that in 2005 on average, what do you think that would do to your margins or is there no impact at all since the -- since the capacity under-utilization occurring at fabs that has depreciations has been fully run out?

**Lora Ho - TSMC - VP & CFO**

I will not comment the whole year, but if you look at our first quarter guidance, which we said utilization will be about 78 percent, and that will give a 38 to 40 percent margin. So if anything goes above that, the margin will be higher.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

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Okay. And I have a question on the taxes for 2005. Given that your kpcs is increasing significantly in 2005, what is the impact on your -- on your corporate tax for this year?

**Lora Ho - TSMC - VP & CFO**

I think for your model purpose, it seems the kpcs for 2005 is roughly only about 10 percent higher than 2004. You can just assume it is going to be a 10 in terms of a tax credit. As far as the tax expenses, you can use the tax rate of 13 percent.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

13?

**Lora Ho - TSMC - VP & CFO**

13, yes, in your model.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

And I have one last question. It seems as if the reduction in the 8-inch capacity in the first quarter was due to fab maintenance. So my question is, if you were to ignore fab maintenance and just consider installed capacity, what would be the sequential increase in install capacity, that means capacity that actually could have gone into production if not for the maintenance in Q1?

**Lora Ho - TSMC - VP & CFO**

Okay. Let me take a look.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

Thank you very much .

**Lora Ho - TSMC - VP & CFO**

If we take out the factor that Q1 we're going to have some maintenance for 8-inch, our advanced technology capacity will actually goes up in first quarter in the magnitude of approximately 25K 8-inch equivalent in the first quarter.

**Ivan Goh - Dresdner Kleinwort Wasserstein - Analyst**

Okay. Thank you very much.

**Operator**

We have a second question from mat Medhi Hosseini from Friedman Billings Ramsey. Over to you.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Thank you. Just 2 follow-up questions. Regarding 90 nanometer, could you help us understand the kind of customers you have for that particular technology node. The kind of -- the diversity among customers and the total number of customers on aggregate. And also in terms of the yields, if you could elaborate on where the yields are at 90 nanometer and are you seeing any problem -- in other words, is there a big difference between wafer starts and wafer shipments for that particular technology node? Thank you.

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**Dr. Rick Tsai - TSMC - President & COO**

We have the application for the 90 nanometer, basically covers a cell phone application, the base [inaudible], chips, graphics chip -- I mean, of course, PC graphic chips, programmable logic, consumer products such as the DVD recorder. We also expect some income for applications. You know, so it covers a fairly wide range of application. The mass -- the production going on right now has yields I would say better than we expected to have a year ago. It was, I think, our customer also is quite satisfied, quite happy with the yield. I would say this yield, it's definitely leading in the -- in our industry segment. The fab performance is also -- I would say, it is better than the, at the same time, for the 0,13 microns generation.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Sure. Obviously, there are some product upgrades coming up in mid year in the game console area. If I were to look at all of these different types of products that you mentioned with the 90 nanometer, is the game console going to be a major driver?

**Dr. Rick Tsai - TSMC - President & COO**

It is one of the drivers.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Understood. But if you could -- going back to early 2002, when we had kind of similar situation, graphics, gaming was very -- demand was very good and it was on the application demanding high end project technology, So I'm just trying to figure out the differences now compared to 2002.

**Dr. Rick Tsai - TSMC - President & COO**

Well, actually, I think your statement on 2002 is not entirely correct. I think at that time, of course, the game console chip, which was a X box chip, was the -- a important product at the time for 0.15 microns generation. But the other graphic chip, actually, outnumbered the game console usage by quite a bit. Plus -- of course, right now, we have added more applications in addition to PC segment.-- communication segment, cell phone really has come in very significantly.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Sure. And if I may, just one follow-up. If I just do a basic calculation, 90 nanometer by the year-end will account for about 10 percent of your total capacity and your CapEx up by maybe 8 to 10 percent. Could you help me understand to what extent this increasing CapEx or the mix of CapEx has to do with putting in place the initial equipment, what it needs to get -- get some initial volume brand. And then you just wait for the additional volume from -- the volume ram from other customers. So, just trying to understand the capacity versus development part of the 90 nanometer ramp.

**Lora Ho - TSMC - VP & CFO**

Sorry, I don't quite understand your point of your question but I do want to clarify that we said the 90 nanometer will account for more than 10 percent of our revenue. It is not more than 10 percent of capacity.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Right, right, right. Right. But earlier, you said it is probably going to be -- 90 nanometer is going to be about 25K per month 12-inch equivalent, right?

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**Lora Ho - TSMC - VP & CFO**

I'd say that by the end of this year.

**Medhi Hosseini - Friedman Billings Ramsey - Analyst**

Right, right, right. Okay. Thank you.

**Operator**

Your next question comes from Fayad Abbasi from Prudential Equity Group. Over to you.

**Fayad Abbasi - Prudential Equity Group - Analyst**

Hi, I just had a couple of questions. One, this last quarter you saw a nice sequential increase in your business coming from IDMs and recognizing that there is certainly some inventory correction happening with some of your fabless customer, maybe you could talk about what your outlook is over the course of 2005. Do you think that your IDM mix would be changing from where it has been in the past, so increasing, or maybe you could provide some color on that. And I have a couple of other questions.

**Dr. Rick Tsai - TSMC - President & COO**

Well, over those many years, we -- amazingly, the ratio has been about one-third, two-thirds. You know, plus/minus a few points. Really haven't -- out of that range over the past. Maybe even 10 years if you go back. But, certainly, do not expect to see a major shift in this year. But, a couple of points shift is to be expected from quarter to quarter.

**Fayad Abbasi - Prudential Equity Group - Analyst**

Okay. And then on the consumer -- when you had talked about some of the areas of decline into Q1, you had mentioned communications and computer would be down and consumer would be down maybe slightly less. Is this more a function of the fact that consumer had declined more drastically in Q4? Or maybe you can provide a little bit of color on what you're seeing from your consumer-related customers going into Q1 .

**Dr. Rick Tsai - TSMC - President & COO**

I think -- compared to fourth quarter, fourth quarter as a consumer application did go down, especially compared to other segments, computer in the market and the communications. So, what you said in general are correct, that is so from percentage point of view. The base in the fourth quarter was lower to begin with. DVD, I think DVD application continued to be weak. However, camera, digital camera and MP 3 have done pretty well, even in the first quarter.

**Fayad Abbasi - Prudential Equity Group - Analyst**

Okay. And one last question. Maybe if you can comment about -- I don't know if you've broken out how your CapEx for 2005 looks relative to TSM, your own versus wafer tech and your Shanghai fab. If you could maybe give a little bit of breakout on how that looks over 2005. Thanks.

**Lora Ho - TSMC - VP & CFO**

Okay. On the 2005 kpcs roughly 200 million for TSMC Shanghai and nothing for wafer tech. Other than Taiwan. that that it is all TSMC in Taiwan.

**Fayad Abbasi - Prudential Equity Group - Analyst**

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Okay. Thank you very much.

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**Operator**

Your next question comes from Nilcount Mishra from Credit Suisse First Boston. Over to you.

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**Nilcount Mishra - Credit Suisse First Boston - Analyst**

Thank you. Most of my questions have been answered. Just 2 quick questions. One, what should we model for depreciation 2005?

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**Lora Ho - TSMC - VP & CFO**

I said this afternoon 2005 depreciation will be roughly 10 percent higher than 2004.

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**Nilcount Mishra - Credit Suisse First Boston - Analyst**

Thank you. And the next question is, the Chairman in the afternoon mentioned that there would be severe price -- there is severe price decline on 0.18 and 0.15 technology nodes. I wanted to understand what is the cost reduction possibility that have you on such nodes?

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**Unidentified**

He did not say that.

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**Dr. Rick Tsai - TSMC - President & COO**

He did not say the prices were moving down severely for 0.15 and 0.18. However, the utilization is lower for that technology node. There's certainly a price pressure. From a cost point of view, I think we have -- we have both -- we have both continuing to lower our cost from regular -- well, how should I say this? What we usually do every year, but we're also looking -- we're also looking to some more drastic measures once and looking to our profit steps and trying to review the cost more fundamental way. On the other hand, of course, our depreciation, I think we -- we started the year technology earlier than almost everyone else in our segment and of course, we are going into the over-depreciation period sooner than they are.

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**Nilcount Mishra - Credit Suisse First Boston - Analyst**

Thank you. Could you elaborate a bit more on what other fundamental improvements that you can bring about to reduce costs?

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**Dr. Rick Tsai - TSMC - President & COO**

Well, this is not something we like to discuss in public. After all, this is our trade secret.

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**Nilcount Mishra - Credit Suisse First Boston - Analyst**

Okay. Thank you.

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**Elizabeth Sun - TSMC - Head Investor Relations**

Operator, is there any more questions?

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**Operator**

We have a follow-up question from Bhavin Shah from J.P. Morgan Securities. Over to you.

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**Bhavin Shah - JP Morgan Securities - Analyst**

Yes, thank you. 90 nanometer more than 10 percent of revenues, you said it's in second half '05 or really specify any further than that?

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**Lora Ho - TSMC - VP & CFO**

'05.

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**Bhavin Shah - JP Morgan Securities - Analyst**

For the full year '05, you saying?

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**Lora Ho - TSMC - VP & CFO**

Yes. Well, for the full year '05? I'm saying from third quarter 2005 we are going to expect more than 10 percent

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**Bhavin Shah - JP Morgan Securities - Analyst**

Okay. You mentioned the depreciation up 10 percent, would that be the same for the depreciation in the cost of goods sold? Yes, you assume that. Because the majority of depreciation goes to cost of goods sold. Right. And the 110 nanometer node do you expect it to -- in relation to how big your 0.15 micro node became, at one point it was 16 - 17 percent of revenues. How would you describe the growth prospects for 110 nanometer node as a percentage of revenues?

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**Dr. Rick Tsai - TSMC - President & COO**

Bhavin, that the -- you're comparing to -- back to 2002, roughly that time frame. Isn't that right?

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**Bhavin Shah - JP Morgan Securities - Analyst**

That's right.

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**Dr. Rick Tsai - TSMC - President & COO**

I think the, percentage-wise, it would lower compared to that period of time because the graphics application at the time was the main driver for that node. But the -- now we have other applications going into a different -- people are going to 0.13, 0.11, 90 nanometer, it's more spread out. So the -- the percentage will be lower compared to the 16, 17 percent numbers.

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**Bhavin Shah - JP Morgan Securities - Analyst**

Okay. Thank you.

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**Operator**

We have a follow-up questions from Michael McConnell from Pacific Crest Securities. Over to you.

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**Michael McConnell - Pacific Crest Securities - Analyst**

Thank you. Just looking at the comments on Q2 capacity being up more than 10 percent, I think was your comment. Unless I'm mistaken here, I mean, that reasonably implies that utilizations will not be troufed[ph] in Q1. Would you agree with that or do you think it's just too early to really get into that.

**Dr. Rick Tsai - TSMC - President & COO**

I think we actually discussed that earlier. I think you're right in saying it's still somewhat early to talk about -- to say whether that will be the trough in first quarter or not. I think we have a chance but it's really not clear, yet.

**Michael McConnell - Pacific Crest Securities - Analyst**

Okay. And then looking, just for our modeling purposes, on the 2 line items, they're always a little bit tough to model. The net nonoperating income and the investment income. If you could just kind of give us an idea where that going to be tracking sequentially.

**Lora Ho - TSMC - VP & CFO**

Nonoperating income?

**Michael McConnell - Pacific Crest Securities - Analyst**

Yes. The net nonoperating income line and the investment income.

**Lora Ho - TSMC - VP & CFO**

Okay. This is, I think, the most difficult to model.

**Michael McConnell - Pacific Crest Securities - Analyst**

For us too.

**Lora Ho - TSMC - VP & CFO**

I think you probably can assume it's less than 1 percent of revenue.

**Michael McConnell - Pacific Crest Securities - Analyst**

Less than 1 percent of revenue. And then I won't even - I might as well try, I mean, I know this is even tougher, the tax rate for roughly -- ?

**Lora Ho - TSMC - VP & CFO**

Use 13 percent. Actually 13 percent for Q1? Yes, 13. 13. Thank you very much.

**Operator**

There's another follow-up question from Dan Heyler from Merrill Lynch. Over to you.

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**Dan Heyler - Merrill Lynch - Analyst**

Thanks. Just 1 quick one on 90 nanometer. As you look as though you have a fair amount of confidence in this capacity ramp for 90 nanometer and wireless seems to be the first driver. Since normally these are a new product cycle, wondering how much flexibility do you have in your CapEx and whether or not -- and you have a whole lot of confidence as to whether or not those new products will fold or not. Or is it that you're seeing kind of existing products in your fab that are migrating over that gives you a lot of confidence to do the products that you can already see. Or third, potentially is -- is there IDM business or products out there that you see are definitely coming over from other fabs into your absymus[ph]. Kind of wondering, can you give us a little color where that confidence in the volume needs there is coming from. I imagine there is various possibilities.

**Dr. Rick Tsai - TSMC - President & COO**

Well, Dan, basically -- with the -- with sort of industry samplings, you will see new products being developed. Demographic's[ph] a good example. They have a new product every -- almost every quarter and they -- naturally they will migrate from 0.13 to 0.11 to a 90 nanometers. We're seeing the tapeouts[ph]. We're seeing the tapeouts for other applications. The applications we just mentioned earlier. We have product tapeouts and we are -- some of them are being verified and qualified. And we saw past experiences with those customers. We are pretty know the ramp pattern. So, that's how we view this -- this outlook for this year. And you know we're been working on this for the past -- for over 18 months. It's not something I just happened out of the blue.

**Dan Heyler - Merrill Lynch - Analyst**

Sure.

**Dr. Rick Tsai - TSMC - President & COO**

Color enough for you, Dan?

**Dan Heyler - Merrill Lynch - Analyst**

Well, I mean, you've got, obviously aside from the normal product migration that's pretty natural. I wonder if it's exposing you into some new applications that you guys have been graded as being able [Inaudible-bad tape] new applications on new technology nodes. Are you seeing that you're opening up some new doors? Carlos has been strong, does not -- is wireless pro is the larger percentage of your business as a result of that?

**Dr. Rick Tsai - TSMC - President & COO**

Oh, wireless. I think if you look at a past year or 2 quarterly every quarter has increased from a percentage point of view of our revenue.

**Dan Heyler - Merrill Lynch - Analyst**

Is that where the incremental, you think, growth is -- the highest growth is where 90 nanometer is coming from and that's likely to be the case in '06?

**Dr. Rick Tsai - TSMC - President & COO**

Incremental. What do you mean by incremental?

**Dan Heyler - Merrill Lynch - Analyst**

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I mean, is that -- of that pie, of that piece of the pie that's growing, right, 90 nanometer is the fastest growth. The main drive there is it wireless? And do you expect that to continue to be a big part of the pie in '06? Is it [audible]. Is it performance, is it low power? I'm just trying to get a sense of what is really going to drive them forward.

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**Dr. Rick Tsai - TSMC - President & COO**

Without having an exact number, but I assume, Dan, that maybe a 50/50 may be a good number out of going forward -- going forward.

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**Dan Heyler - Merrill Lynch - Analyst**

Right. Okay, thank you.

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**Dr. Rick Tsai - TSMC - President & COO**

Sure.

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**Elizabeth Sun - TSMC - Head Investor Relations**

Operator, we will only be open for 1 last question.

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**Operator**

We have a follow-up question from Sunil Gupta from Morgan Stanley. Over to you.

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**Sunil Gupta - Morgan Stanley - Analyst**

Thank you. I wanted to follow-up on the earlier comments about inventory digestion largely over by end of Q1. And I wanted to get your impression on -- do you think this excess inventory digestion is going to be largely over just for your customers or the product that TSMC's making or do you see that as an industrywide phenomena that bulk of this excess would be digested by end of Q1.

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**Dr. Rick Tsai - TSMC - President & COO**

Sunil, I think you just have to go to everyone's own conference to ask the question of them. We can only answer for ourselves. On the other hand, [inaudible] of course, actually we have broad customer base also -- it brought us the applications. So, until you can make your assumption your model from that point of view.

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**Sunil Gupta - Morgan Stanley - Analyst**

Would you from your perspective -- do you think you have succeeded in taking share of business from some of your other traditional foundry customers or some of the hybrid foundry providers?

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**Dr. Rick Tsai - TSMC - President & COO**

It is certainly our goal to increase our market share every year and the last year, 2004, we had -- I mean, in the first 3 quarters we had the capacity constraint. So, we probably lost some business. This year we have the capacity and we're definitely going to -- we are, actually, working to get every share that we can get our hands on.

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**Sunil Gupta - Morgan Stanley - Analyst**

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And you think in last quarter and the current quarter you are beginning to take the share away? Is it already showing?

**Dr. Rick Tsai - TSMC - President & COO**

Well, we'll have to look at the numbers.

**Sunil Gupta - Morgan Stanley - Analyst**

Okay.

**Dr. Rick Tsai - TSMC - President & COO**

I think we will let the number speak.

**Sunil Gupta - Morgan Stanley - Analyst**

All right. Thank you very much.

**Dr. Rick Tsai - TSMC - President & COO**

Thank you.

**Operator**

Miss Ho, we have cleared the question queue. Thank you.

**Lora Ho - TSMC - VP & CFO**

Okay, thank you very much for attending the conference and we should have a good year. Good night.

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