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10 reasons to be bullish and worried

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SAN JOSE, Calif. -- So far, the signs are positive in the chip sector this year. Still, I have some concerns. Here's 10 reasons why I'm bullish--and worried--about 2010:

1. The economy

Why I'm bullish? "Low interest rates, low oil prices, and the stimulus packages that were instituted around the world are all contributing to a stabilizing economy and upturn. Purchases were less than the replacement market in 2009, and pent up demand is pulling the market in a positive direction," according to New Venture Research, formerly Electronic Trend Publications.

"The economy is stabilizing, which is easing fears of spending on consumer goods. The housing market, which took down the economy by taking the credit markets down with it, is stabilizing, and the ratio of income to housing expenditure is more balanced than it was previously. The automotive market, which is host for numerous ICs, had fallen substantially during the downturn. This market did benefit from the cash-for-clunkers program, although automotive sales fell back after the program ended. But it became a booster to spending, which helped. And automotive is expected to turn up in 2010 and beyond, particularly in areas such as China," according to the firm.

Why I'm worried? The job losses continue. In California, for example, thousands of government and city employees will get pick slips. I also keep hearing about a "bubble" in China, which is about to explode. That will send shock waves worldwide. I am also hearing about labor shortages in China. Greece is in bad shape, which may impact the EU. Many economies worldwide are awful.

Let's not forget the U.S. Job losses, budget deficits and the sub-prime mess are concerns.

2. IC demand

Why I'm bullish? Gartner, IC Insights, iSuppli, Semico have all separately made new and bullish IC forecasts in 2010.

"Believe it or not, the good times are here!" That's the recent message delivered by Jim Feldhan, president of Semico Research Corp., who predicts a two-year growth cycle for ICs.

IC revenue will grow at 18.8 percent in 2010, with unit growth at 18 percent, according to New Venture Research. This is considerably better than the 8.8 percent decline in revenue and 6.9 percent decline in units in 2009.

Actel, LSI, RF Micro, TriQuint and others have recently raised their forecasts. LSI's "management sees stronger than anticipated growth across the board in IT spending as expectations are being exceeded in enterprise servers, data storage, and networking infrastructure," said Daniel Amir, an analyst at Lazard Capital Markets.

"While we are expecting successive sub-seasonal quarters of growth (likely 2HCY10 or early-CY11), we anticipate that

both the timing and magnitude will prove to be better than feared," said analyst Doug Freedman of Broadpoint AmTech. "We maintain our investment thesis that fears of a material cycle overshoot are overblown. Our view remains that the recovery will moderate as sequential growth slows, limiting the magnitude of the inventory overshoot."

"Our recent trip to APEC (Power Electronics Conference) in late February affirms our thesis that analog demand should remain strong through the next few quarters. Checks reveal that particular areas of strength will be driven by growing demand for power management (particularly in portable electronic devices servicing the medical and industrial end-markets) and the increasing need for low-power solutions," Freedman said.

Why I'm worried? Taiwan Semiconductor Manufacturing Co. Ltd. chairman Morris Chang has said he expects chip market growth to slow in the second half of 2010, before picking up again in 2011, according to a *Taiwan Economic News* report.

"Inventories are obviously building due to unsustainably lean levels exiting 3Q09, higher component lead times, concerns about 2H component supply, and, in some cases, OEM bullishness about likely robust 2H10 end demand (particularly for PCs, smartphones, and corporate spending)," according to FBR.

"Currently, visibility into 2H component shipment trends remains limited, though OEMs are largely constructive on end demand. Subject to much debate is whether contracting lead times will cause a soft landing in 3Q or 4Q with muted 2H seasonality, or whether contracting lead times will cause a hard landing with component shipment shrinkage in 2H," according to FBR.

3. Consumer mania

Why I'm bullish? Worldwide per capita income in 2009 declined by 2 percent to \$10,500, marking the first annual decrease during the post-World War II era, according to U.S. government data. In contrast, iSuppli estimates global revenue from shipments of smart phones rose by 9.6 percent for the year, while LCD-TVs experienced a 14 percent increase and netbook PCs surged by a stunning 90 percent.

"There's been a measurable shift in how consumers are spending their disposable income," said Derek Lidow, president and chief executive of iSuppli. "In a time of great economic distress, when people had less money and spending on essentials like food and rent declined, consumers surprisingly used a disproportionate amount of their money to purchase new consumer electronics products."

"The 2010 economic recovery will bring rising sales of PCs," said Fang Zhang, analyst for storage systems at iSuppli. "The notebook sector is expected to be particularly strong, with shipments outgrowing those of desktops. This will drive the robust increase in HDD shipments."

Global IT expenditure is expected to rise slightly this year for the first time since the onset of the global economic downturn, according to industry analyst Ovum. "A survey of IT decision makers revealed that one third expect their budgets will increase in 2010. Despite this cautious optimism, there are signs that CIOs do not yet view IT as an engine for growth and that 2010 will mostly be a year of reckoning," according to the firm.

New and low price points for LCD TVs. 3-D TVs are coming. DisplaySearch raised its 2010 LCD TV unit forecast from 171 million units to 180 million units.

"Avian's latest monthly survey of smartphones sell-through indicates continued outperformance in penetration versus the overall handset market," said Dunham Winoto, an analyst with Avian Securities LLC, in a report.

MEMS microphone technology has grown from less than 1 percent of the 1.2 billion microphones sold worldwide in 2003 to 20.1 percent of the 1.7 billion microphones sold in 2009, according to The Information Network. In 2010, MEMS microphones will reach 25.5 percent of the worldwide microphone market, as shipments increase 35 percent to nearly 500 million units.

Why I'm worried? "PC build checks downtick slightly as China labor shortages impact desktop builds. Interim update on 1Q PC builds with top five notebook ODMs and top four desktop motherboard makers is slightly worse than our month ago checks," according to FBR.

"LCD TV sales slightly missed expectations, or there was slightly too much inventory in channel. The one area we heard a bit of choppiness was for large sized LCD TVs, where sales fell slightly short of elevated expectations, or where there was slightly too much inventory in the channel, depending on whom one believes. AUO possibly reduced TV panel forecast slightly for 1Q," according to FBR.

According to WitsView's latest survey, global large-sized panel shipments fell by 12 percent to 44.34 million units in February 2010. The decline was mainly due to the effect of Chinese New Year holiday. Second, this year, China faces serious labor shortage problems both before and after the holiday. Tight supply of several panel components, such as polarizers and ICs, continued.

"The LED market phenomena reminds us a bit of the excitement in the solar space a few years back, which ended badly after polysilicon spot prices hit as much as \$400/kilo in early 2008; today's prices are sub-\$50. Supply dynamics matter, perhaps even in LEDs," said Hans Mosesmann, an analyst with Raymond James.

4. Capex boom

Why I'm bullish? Semiconductor capital spending is hot. Fab-tool spending is up. One vendor, Novellus, is seeing demand. "We expect (Novellus') management to tighten March quarter guide to the high end of the range with likely upside to bookings, possibly aided by Samsung pull-ins," said C.J. Muse, an analyst with Barclays Capital. "Note that spending is led by Samsung (both Korea and Austin), TSMC, Intel and, to a lesser extent, Nanya/Inotera, UMC, Hynix, and Global Foundries."

MOCVD demand is hot for new apps like LEDs. "We believe MOCVD tool demand is still mainly driven by demand for LED backlighting in TVs, notebooks, and computer monitors. We believe incremental LED orders are mainly coming from Taiwanese and Chinese players and Samsung. Specifically in Taiwan, Epistar, AUO, and Chimei are placing tool orders. These companies are mainly targeting the backlighting market," said Daniel Amir, an analyst with Lazard Capital Markets.

"In China, San'an, Lattice, and GPI are smaller players that are mainly targeting general illumination. Samsung is targeting both backlighting and general illumination. In the U.S. market, LEDs for general illumination continue to slowly gain traction in certain areas such as outdoor/ street/parking lot lighting, and in retail and hospitality," he said.

Why I'm worried? Not all are benefitting. "We believe spending on test equipment continues to be lower than normalized levels. We see spending of more than \$2.0 billion-\$2.5 billion by CY11, versus the spending level of \$1 billion in 2009," said C.J. Muse, an analyst with Barclays Capital.

Can industry recover after two years' of darkness? The weak are getting weaker. The big are getting bigger. Lithography tools for semiconductor manufacturing dropped 47 percent in 2009, according to The Information Network. "Revenues dropped 47 percent in 2009 on top of a 25 percent drop in 2008," notes Robert Castellano, president of The Information Network, in a report. "On a unit basis, shipments dropped a combined 54 percent, with 248-nm DUV tools taking the biggest hit with nearly a 70 percent drop.

5. Memory lane

Why I'm bullish? Stable environment for memory. "Overall, I'm bullish. NAND will be mildly strong in 2010," said Alan Niebel, CEO of Web-Foot Research, Inc. "The only thing that could bring (the market) down" is a problem in the economy.

Joseph Unsworth, an analyst with Gartner, said: "The end of the quarter is typically when volume purchases and deals can be made (for NAND), depending, of course, on availability of supply. Given the supply-side constraints, many customers have been wary about making large purchases until prices start to slide further in the second quarter.

While channel checks indicate that inventories are still lean across most major customers, the 'buy ahead' activity and its impact on pricing in the second quarter remain an unknown; this is especially true regarding Apple's NAND procurement needs. While Gartner maintains that prices are expected to soften further during the second quarter by about 15 percent on a price-per-gigabyte average, it is conceivable that buying by customers intent on securing deals could be responsible for a much-more stable pricing environment than expected."

"With PC OEMs forecasting high-teens PC box growth in 2010 (up from about 11 percent recently), it is becoming increasingly evident that their 3.3 GBytes per box content, up from current 2.8 GBytes and last year's 2.3 GBytes, will be a challenge to achieve. The issue with both 18 percent PC unit growth in 2010 and 3.3 GBytes of content is that it implies 69 percent bit demand growth, much higher than the 45 percent to 50 percent DRAM bit supply growth anticipated by industry analysts," said Hans Mosesmann, an analyst with Raymond James.

Why I'm worried? "In terms of causality, DRAM content per box may come down in 2010, not because of high prices but because of DRAM supply. The problem is particularly acute, we believe, in the enterprise area where compromises in the DRAM content arena are not acceptable with a move to 64-bit Win7," Mosesmann said.

"As has been well telegraphed for a while now, DDR3 supply continues to be tight, helped by both the industry's inability to source enough equipment as well as better than expected PC demand. New are assertions from dealers, memory users, and manufacturers that this tightness is getting more severe," said Analyst Dunham Winoto of Avian Securities LLC.

My take: Hynix, Intel, Micron, Samsung and Toshiba keep racing each other in terms of NAND scaling. More bits are flooding the market. But is the demand real?

6. Baseband blues

Why I'm bullish? "Qualcomm, MediaTek, ST-Ericsson, Infineon and Broadcom will dominate in basebands over the next five years, a market that will grow to more than \$15 billion by 2014. These companies will continue to offer the most highly-integrated, power-efficient baseband processors capable of supporting high-rate wireless, new applications and cloud computing, either through integrated applications processing or partnerships with suppliers of external applications processors," said Christopher Taylor, an analyst for Strategy Analytics.

Why I'm worried? Fewer players in baseband. TI's exit. And China's grey cell market. I'm told a no-name brand in China can roll out a handset in two months with little R&D, compared to six-to-eight months for Nokia, Moto, etc.--with high R&D.

Stuart Robinson, an analyst with Strategy Analytics, added, "In 2009, MediaTek moved up to second in market share terms of revenue on the strength of its presence in China and the grey market, passing ST-Ericsson and Texas Instruments. At the same time, market share leader, Qualcomm, made gains in W-CDMA, pushing farther ahead of its competitors in terms of revenue."

7. Disk drivers

Why I'm bullish? Hard disk drive (HDD) manufacturers repositioned themselves in this Great Recession, managing to show growth in 2009, according to The Information Network. The market grew nearly 11 percent on a unit basis in 2009 and is slated to grow another 11 percent in 2010, according to the firm.

Worldwide revenue from shipments of HDDs used in computer applications is expected to amount to \$27.7 billion in 2010, up 18.4 percent from \$23.4 billion in 2009, according to iSuppli.

Why I'm worried? Fewer players in HDD controller business. "LSI is gaining share in HDD's at Seagate (enterprise and client) and at Hitachi (notebooks). Surprisingly, LSI announced it now has wins at Western Digital, Toshiba, and Samsung (formerly sole sourced customers for Marvell)," said Hans Mosesmann, an analyst with Raymond James.

8. Solar is cloudy

Why I'm bullish? Edwin Mok, an analyst with Needham & Co. LLC, said: To be fair, we acknowledge that the solar industry will experience slower demand, falling prices and margin headwinds in mid-2010.

Based on current installation rates in Germany, we believe the slowdown in 2H10 will not be as bad as what we saw in 4Q08/1Q09, when both Spanish and Germany markets shutdown. Additionally, if we assume the market will remain at 3.0-3.5 GW in 2011, the lower installation in 2H10 could setup for better Q/Q growth in 2011. We remain optimistic that Italy, the U.S., Japan, Ontario and even China will be growth drivers this year, as we are seeing signs that the "red-tapes" in some of these markets are lifting. While Germany is approaching a plateau in terms of solar installations, we believe the solar industry will become less concentrated in 2010, and we expect newly forming solar markets to experience meaningful growth in the next few years."

Why I'm worried? "Recent announcements by major Chinese solar PV manufacturers regarding year-over-year growth in megawatt shipments in 2009 point to signs of improvement in the PV industry. Just about every one of them has made it clear that their production capacity for 2010 will increase significantly. One big concern is whether the solar market will eventually be able to absorb all that capacity and continue to achieve high growth in 2010 and into 2011," according to Gartner.

9. State of fab tool market

Why I'm bullish? IC Insights Inc. has raised its forecast for IC capital spending. The firm forecasts that 2010 spending will

rebound and hit \$40.7 billion, a 57 percent increase over 2009. This is up from its previous forecast of plus 45 percent. In 2009, capex fell 30 percent, it was noted. In 2011, IC capital spending is expected to reach \$48.6 billion, up 20 percent over 2010, according to the firm.

Why I'm worried? Fewer players in key markets. Ion implantation has one strong player (Varian). DRAM test has only one vendor (Advantest). CMP, RTP and others only have two.

Litho is also a concern. "We believe '10 and '11 are 2 key years in which ASML could consolidate its market share as we see pervasive adoption of immersion lithography amongst all types of customers. In terms of competition for immersion, we see Nikon's presence only at Intel and do not expect any major penetration by Nikon. This despite having evaluation tools at TSMC and Samsung in '10, especially given TSMC has already completed its 28-nm selection and Samsung has already started its 4xnm ramp," said Jagadish Iyer, analyst at Arete Research LLC.

"Nikon's aims to take share at the memory makers, where it has lost its edge in the past 5 years. Apparently 3-4 of the leading chipmakers are evaluating Nikon and ASML's double patterning (DP) steppers currently. Nikon expects over 10 units in DP orders next fiscal year, with Intel as the largest customer. The memory makers will be the swing factors for the DP tool next year, in our view," said David Motozo Rubenstein, an analyst with MF Global FXA Securities Ltd.

The last statement from Nikon during (a recent Q&A session) summed up the scenario nicely for us: 'There isn't much downside risk (that we lose market share) in the (193-nm immersion) S620D tool,' (since they've lost a lot of share outside of the Intel business in the past few years)," he said.

10. Foundry hype

Why I'm bullish? "Major foundries have robust demand trends as their customers (fabless chip firms) are concerned about their own inventory levels," according to FBR.

Why I'm worried? "There is only one foundry offering 40-nm," according to FBR. That's TSMC.

TSMC's 40-nm process--12 percent of capacity mix in 1Q10 to 22 percent-plus in 4Q10. UMC's 40-nm process--1 percent of capacity mix in 1Q10 to 3 percent in 4Q10.

GlobalFoundries: "Chartered Semi late with Fab 7 ramp; N.Y. fab not even fully constructed until late 2010. "Samsung & Toshiba are not interested in foundry services given the required 2x-plus capital intensity," according to FBR.

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