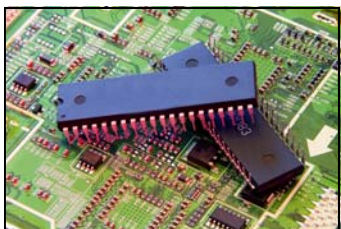


Perspective on the European Semiconductor Market

It is no secret that Europe has been hit by the recession. There are, however, signs that a recovery is starting to take hold in the semiconductor sector. According to recent European Semiconductor Industry Association (ESIA) numbers, August chip sales grew 3.9% over July, calculated on a three month rolling average.



Industry veteran Bob Cutter, president of Advent Advisors, LLC, recently traveled to the UK and brings back a fresh perspective of the European semiconductor market. He sees four drivers in the European semiconductor industry that in many ways reflect what's happening in the U.S.

- Continued consolidation and formation of strategic partnerships and alliances
- Emergence of dominant players with critical mass to shoulder the cost of continuously investing in manufacturing and process technology
- Continued success for technology-specific niche players who can sustain a viable business due to the lower cost inherent in their required technology
- Continued scaling back or elimination of European manufacturing operations by American and foreign semiconductor companies over the last few years, including National Semiconductor, Freescale, NEC, Infineon, Fujitsu, Atmel and Zarlink

“Overtime, most U.S. manufacturing operations in Europe will shrink and ultimately disappear,” projects Cutter.

(See page 2, col. 1)

Optimism Resurfaces for Tech M&A

Optimism has been creeping up in the media lately relating to current and future M&A activity. The numbers don't show it just yet. But the numbers report past history. The optimism is centered around future activity.

The *Wall Street Journal* reports that two recent announcements have brought some hope for M&A activity – SunEdison, a strong IPO candidate among solar panel companies, agreed to sell to MEMC Electronic Materials for more than \$200 million, while wireless networking company WiChorus will sell to Tellabs for \$180 million in cash.

(See page 2, col. 1)

Solar's Forecast: Sunny to Partly Sunny

The push for alternative energy sources to replace a portion of this country's power creation continues. Yet, many of the individual types of alternative energy battle for investment capital and to reduce costs.

Currently there is a dichotomy in the market. State and federal governments are passing legislation pushing utility companies to find alternative energy sources and reduce their carbon footprint. At the same time, utility companies, driven by customer demand, are unwilling to buy alternative energy at significantly higher costs than traditional sources.

Add to that the investment community's resistance to buy into alternative energy and the result is a challenge for alternative energy companies to move beyond fringe providers into the main stream.

This is particularly true in the solar energy sector.

“There have been some significant improvements made in the cost of generating solar energy. For example, the price of large commercial and utility scale solar power systems has dropped more than 50% in the last year to the \$4 - \$5 range down from \$6 - \$8,” commented Bill Bush CFO with Solar Semiconductor. “The long term goal is to bring the cost of solar energy to \$2 per installed watt. Currently, the cost is \$3 - \$4 per installed watt, so we are getting close.”



ITC grants, which allow investors to take a cash grant of 10% to 30% of facilities costs in lieu of the investment tax credit for renewable energy projects, have helped attract investors. But more capital is still needed. “For solar to successfully attract capital it needs to be viewed as another asset class offering steady cash flow and high

(See page 2, col. 2)



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European Semiconductor *(From page 1, col. 1)*

The world-wide business model for semiconductor companies is being forced to adapt and change due to escalating cost of building or upgrading wafer fabs. For example, at the 45nm or 32nm nodes the cost is approaching \$4 billion per fab. The foundry model enables semiconductor companies to shift manufacturing costs from fixed to variable and allows companies to pay for manufacturing capability and capacity incrementally.

Innovation in wafer foundry process technology is also being consolidated and will soon be driven by three companies, TSMC, UMC and Global Foundries. "This shift has left semiconductor companies to laser focus their efforts and business on markets, applications and design," Cutter commented. "When semiconductor companies no longer have to focus on manufacturing they can pay more attention to the sharp end of the stick and develop innovative designs to solve real world problems. This is where the value-add is in the industry today -- leaving Moore's law and its brutal roadmap to larger foundries."

The continued consolidation of European semiconductor companies has depleted the rich pool of larger companies ready to acquire emerging start-ups. The likely exit scenario for many European design driven start-ups going forward is to be acquired by U.S. and Far East companies who have the resources and capital required to invest.

Cutter sees the greatest future investment opportunities in wireless, MEMs, sensor technologies, analog/mixed signal and to some degree photonics.

Optimism *(From page 1, col. 1)*

Mark Zandi, chief economist of Moody'sEconomy.com, is quoted in *BusinessWeek* as predicting an increase in US Tech spending of 4% in 2010 and 10% in 2011 after dropping 10% in 2009.

Many tech companies have strong balance sheets and cash flow, credit markets are improving and buyers and sellers are better able to agree upon a price. All factors that suggest more buyers are looking for the right tech company.

Pricewaterhouse Coopers US Technology M&A Insights Q2 2009 Update reports a move away from the opportunistic distressed transactions of the first quarter toward a number of high-profile strategic transactions – headlined by Oracle's announced acquisition of Sun, the bidding war between NetApp and EMC over Data Domain, and the announced takeover of Wind River Systems by Intel.

The report also states that overall tech transactions restarted in the second quarter.

PE Groups have been sitting on large war chests of cash and have not been significant players in M&A activity this year. The questions remain – When do they jump in and what impact the infusion of needed investment capital will have on deal flow?

Solar *(From page 1, col. 2)*

returns – comparable to other asset classes. There needs to be REIT-like structures created where you pool securities backed by power generating assets. This type of structure could minimize risk by distributing it geographically and attract pension funds and other institutional investors," Bush said.

There has been an emergence of alternative energy funds showing up in the market. However, fund managers are not as excited about solar as wind and geo thermal.

"Many investors have prematurely dismissed investing in solar," according to Loren Lancaster, managing director for Core Capital Group's Electronic and Semiconductor Group. "There are many applications where solar is a better fit even if it may cost a bit more to produce. It just requires an expanded view."

Solar doesn't require connectivity to receive raw material resources or to transmit power generated. This makes solar particularly well-suited for rural and geographically difficult areas such as many parts of rural India. "Think of what wireless technology has done for rural and challenging parts of the U.S. for cellular and broadband service," Lancaster added.



Bush believes that hitting the key benchmark of producing solar energy for \$2 per installed watt is very achievable in the next five years with the help of disruptive technologies. First, in addition to cost improvements being achieved in the solar panels, there is tremendous room for driving costs out of the other components in a solar array such as the racking systems, inverters and other components. The solar panel only represents 50% of the cost of a solar array.

Second, there is a significant opportunity in improving the predictability and efficiency of solar systems. For example, if you can increase the efficiency of a solar panel to 40% from its current 10 – 20% efficiency, you can more than double the power output per array.

To achieve the bright future solar experts tout, the industry needs to continue to improve the cost equation and continue to attract greater amounts of investment capital. The government cannot simply mandate and stimulate the country into solar and other alternative energy.

Now may be the time to look at solar from an investment perspective. While it has been somewhat ignored by investors, it won't stay overlooked for much longer.

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Our website contains additional information about Core Capital Group's Electronic and Semiconductor Group and the investment banking services we provide. Please take a moment to visit us on the web! You can also sign up to receive this newsletter by writing to info@esgibank.com.