

2005 Economic Forecast - Semiconductors: Oversupply to affect computer chip sales

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The two major metrics by which the semiconductor industry measures itself, semiconductor chip and equipment sales, were up substantially last year over 2003.

The World Semiconductor Trade Statistics (WSTS) organization expects the final 2004 tally of sales of semiconductors to come in at \$213 billion, a healthy 28 percent increase over the prior year. Not to be outdone, the trade organization SEMI, which tracks the semiconductor equipment market, reported a very robust 59 percent growth in equipment sales over 2003 to \$35.3 billion.

Both of these indices are clear evidence that the semiconductor industry has officially recovered after three tough years following Y2K and the dot-com implosion. Regionally, Japan led the way in semiconductor equipment purchases in 2004, while the Asia Pacific region consumed the most semiconductors. The top three semiconductor suppliers in 2004 were Intel, Samsung and Texas Instruments, respectively.

Weakness noted

Despite healthy gains last year, the chip market started to show weakness in the fourth quarter, with a marked deceleration in sales in the last three months of the year. A marked decrease in the production of electronic equipment, which started midyear, led quickly to a semiconductor oversupply, forcing the brakes on ramping the substantial semiconductor manufacturing capacity that was put into place earlier in the year.

So at the end of 2004, the industry was in an oversupply situation with understandable lower average selling prices for chips. The slowdown in two very large ubiquitous end user markets: cell phones and personal computers, were major contributors to the anticlimactic end of 2004. A leading electronics industry research firm, iSuppli, estimates excess inventory in the electronics supply chain more than doubled to \$1.6 billion in the third quarter of 2004 and ended the year only slightly lower.

In trying to glean any good news from what is widely considered a premature end to the silicon business cycle upswing, many analysts are speculating that the decline may not be as deep as past historical patterns would suggest (see chart). Hence the start of a "healthy" correction would be a fair way to classify the semiconductor industry, going forward.

If this is indeed a downturn due to an oversupply and resulting inventory correction, then look for cuts in wafer starts and capital expansion plans especially in the first half of 2005, although it must be noted that the first quarter is notoriously slow in this industry. Accordingly, industry research forecasts for 2005 semiconductor sales are tightly clustered from a low of minus 5.5 percent from Semico Research to a high of 4.7 percent from iSuppli.

Take your pick; they are a far cry from 2004's 28 percent growth. Similarly, SEMI is forecasting a 5 percent drop in semiconductor equipment revenues in 2005, but is quick to point out that 2005 forecast

equipment sales would be the "third-highest on record despite the expected contraction." That may be, but compared to 2004's 59 percent gain, even zero growth will feel like an industry depression.

### Modest rebound

Not surprisingly, most all major forecasters are calling for a modest industry rebound in both chip and equipment sales in 2006 after a 2005 that will be noted as a year of digesting industry capacity increases and inventory correction, as well as cost cutting and further innovation.

End user markets that will lead the electronics sector recovery in 2006 will be wireless communications and further increases in broadband applications, especially voice-over IP (the use of the internet to make phone calls). The personal computer industry will see further consolidation in 2005, as evidenced by IBM's recent announcement of the selling of its PC business to China's Lenovo Group.

Of interesting note, Roger Kay, an analyst with IDC, is predicting a future PC industry that looks very much like the automobile industry, "which plays host to a handful of giants that see relatively slow growth and often steal market share from one another."

While not what the industry would like to see, but what consumers have been waiting for, the flat-panel TV market, particularly LCD TVs, will see substantial drops in prices in 2005 as a result of new factories coming online and consumer acceptance of new competing technologies such as digital light processing (DLP) and the hopeful and long awaited market introduction of liquid-crystal-on-silicon (LCOS).

If these are not enough acronyms to keep track of, SED (surface-conduction electron-emitter display) TV will make its debut with the promise of CRT type of clarity and should be less expensive than LCD and plasma technology.

The semiconductor industry in 2005, barring some unforeseen macroeconomic development, will most likely be noted for its relative lack of volatility. However, behind the scenes, cost cutting and innovation will continue to be the norm with a fair share of mergers, consolidations and acquisitions mixed in just to keep things interesting.

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