

RESEARCH BULLETIN

DECEMBER 18, 2008

2009: A Recovery Year for the IC Industry and Worldwide Economy?

*Absolutely, if you think **Quarterly!**.....*

Tired of all the gloom-and-doom annual forecasts for the worldwide economy and IC industry? It's true that, when viewed on an *annual* basis, the 2009 worldwide economy will be classified as a global recession and the 2009 IC industry will register negative growth.

However, when viewed on a quarterly basis, a "bottom" and "recovery" period are highly likely to be encountered within the next 9 months.

Before we all go looking for tall buildings to jump off of, let's step back, take a deep breath, and look at some very powerful and *positive* forces that will be at work in 2009.

MORE INFORMATION CONTACT

Bill McClean
President
IC Insights, Inc.
Phone: +1-480-348-1133
Email: bill@icinsights.com

Stimulus Packages:

China has announced a \$586 billion economic stimulus program to take place throughout 2009 and 2010, the Euro-zone recently announced a \$256 billion stimulus package, the U.K. could have a \$45 billion package itself, and the U.S. is expected to announce up to an \$850 billion stimulus package in late January or early February of next year. There is little doubt that, in total, worldwide stimulus packages (including from Taiwan, Singapore, Japan, Australia, Brazil, etc.) will likely approach \$2 trillion over the next two years. This is *powerful medicine* for a sick economy!

Interest Rates:

U.S. interest rates are at an historic low (now 0.0%-0.25%) and are expected to remain at these levels for some time. Moreover, the rest of the world is also moving to significantly lower interest rates, sometimes reaching all-time lows (e.g., U.S., South Korea, etc.). In addition to record low interest rates, the U.S. Federal Reserve is initiating a *massive* purchase program for mortgage-backed securities. Already, 30-year fixed loans have dropped below 5.0%. Many economists now expect 30-year fixed rate mortgages in the U.S. to drop to as low as 3.5% over the next six months! This could easily cause the biggest surge in refinancing of mortgages the U.S. has ever seen and will surely have a major *positive impact* on the U.S. housing market in the second half of 2009!

Oil Prices:

A strong positive factor for the worldwide economy heading into 2009 is the relatively low price of oil. As of this writing, the price per barrel of oil was about \$40, down from \$147 per barrel in July of this year. As a result, U.S. gasoline prices averaged only \$1.65 in early December 2008 after reaching a high of \$4.11 this past summer. This is an extremely important factor for the future of the worldwide economy since for every one cent (\$0.01) of decline in gasoline prices, an annualized savings of \$1.0 billion is realized!

Having the exact opposite effect of rising oil prices, low oil prices have historically set the stage for a *rebound* in the worldwide economy. With the average price per barrel of oil expected to decline by over 30% in 2009 as compared to 2008, the price of oil will transition from being a "headwind" on the fortunes of the 2008 worldwide economy to a "tailwind" next year.

IC Industry Comparisons to 2001

The abrupt decline in the IC market in 4Q08 has many people comparing the current situation with the 2001 IC market. While the recent swift change from a positive to a negative IC market is similar to 2001, IC Insights believes that there are some significant differences.

In 2001, the IC industry encountered the perfect storm of *four* negative influences, which included: 1) a huge IC inventory build, 2) excess IC industry capacity, 3) a global recession, and 4) a severe decline in electronic system sales. For 2009, IC Insights believes the IC industry is facing one of these same factors and a portion of another. In 2009, the IC industry will face a global recession and a decline in electronic system sales, but the decline in system sales next year is expected to be a single-digit decline as compared to a steep 14% decline in 2001.

Also, there have been some comparisons made recently that the excess semiconductor inventory expected in 4Q08 would begin to approach the excess inventory level of 1Q01. It should be remembered that the semiconductor industry was at a \$150 billion run rate in 2001. Thus, it would take a lot longer to burn off a similar amount of inventory in 2001 than in today's \$250 billion industry. Moreover, in 2001, there were 945 million cell phone subscribers. Today, there are 4 billion cell phone subscribers! The semiconductor and electronics industries are much bigger and broad-based today than they were 8 years ago.

With all of the comparisons between the worldwide economic recession of 2001 and the downturn in 2009, one key difference will be the positive economic force of China in this downturn that was not present in 2001. In addition to the economic stimulus that China will inject into the worldwide economy next year, the country has recently implemented a program to subsidize the purchase of cell phones and flat screen TVs (remember, China has the world's largest base of cellphone subscribers).

Why You Should Adopt a Quarterly Outlook

By far the worst year ever for the IC market was in 2001 (-32%). However, consider the following story of how TSMC, the largest pure-play foundry in the world, fared during the 2001 global recession and brutal IC market decline.

In the boom year of 2000, TSMC reached its peak sales level in December of that year. However, the foundry market, and the total IC market, rapidly fell apart beginning in 1Q01. ***Though TSMC's sales decline was swift and steep, the "bottom" was quickly reached in June of 2001, just six months after its peak sales level in December 2000!***

It should be noted that in 4Q01, TSMC registered a big **23% increase** in sales over 3Q01 (and its sales continued to climb throughout 2002). Although its 4Q01 sales were still significantly below the level of one year earlier, in 4Q00, TSMC's *quarterly pattern of sales*, even during the worst year in the history of the IC industry, illustrates that an IC supplier can demonstrate rapidly changing fortunes, up or down, in a matter of a quarter or two! This is something to keep in mind as the IC industry heads into 2009.

If TSMC's sales follow a similar pattern to that displayed in 2001, the company will show steep sequential sales declines in 4Q08 and 1Q09 but begin a shallow recovery in 2Q09 with a strong rebound in 3Q09. Consider the December 16, 2008 quote from UMC vice chairman and CEO John Hsuan: *"the second quarter of 2009 semiconductor industry will see demand rising to the same level of the fourth quarter of 2008, and demand will pick up further in the third quarter."*

Annual Doom, Quarterly Encouragement

We are sure most everyone has seen the dour forecasts for the 2009 IC market from various market research firms—forecasts that currently range from -6% to -16%. The gloomiest forecast, an annual decline of 16%, sounds very bad. However, if you examine this forecast on a *quarterly* basis, you would likely see a very different picture.

Let's examine one possible *quarterly* scenario for a -16% IC market forecast for 2009. Given the extremely low 4Q08 starting point and the low expectations for 1Q09, if 1Q09 registered a 7% sequential IC market *decline*, followed by a 2% *decline* in 2Q09, a 15% *increase* in 3Q09, and a 5% *increase* in 4Q09, a year-over-year decline of 16% would result! Thus, even when examining a gloomy full-year forecast of -16% for the 2009 IC market, one could still expect to see significant *quarterly growth* beginning in 3Q09 and the second half of 2009 register a 17% *increase* over the first half of the year!

It should be noted that when using a low 4Q08 starting point and assuming a weak 1Q09, all annual IC market forecasts you see for 2009, down to about -18%, would realistically need to include a double-digit IC market *rebound* in the second half of the year as compared to the first half!

According to the 2009 edition of IC Insights' McClean Report, to be released next month, the IC market is forecast to decline by at least 10% next year. However, on a quarterly basis, IC Insights is forecasting a significant rebound in the IC market beginning in the third quarter of the year!

Summary

Overall, the economic issues facing the world at this point are unprecedented and massive. However, the *worldwide response*, thus far, is also unprecedented and massive. While nobody knows what the future will hold, it is a safe bet that things will not be stagnant. A number of new programs, laws, stimulus packages, tax-breaks, and incentives, etc. are likely to be enacted worldwide throughout next year.

There is little doubt that the next two quarters will be very challenging for businesses worldwide. However, the worldwide economy in the second half of 2009 is also likely to begin showing some traction from the economic programs that are currently in place or in the pipeline, and a recovery from the recessionary gloom that is now so pervasive will begin. Given the typical seasonal strength in the electronics industry in the second half of the year, pent-up demand for electronics during the worst part of the global recession (i.e., 3Q08-2Q09), and a recovering worldwide economy, the second half 2009 IC market could surprise on the *upside*.

The best holiday gift we can offer you is the realistic expectation for a better business environment next year. If you consider the worldwide economy and IC market on a *quarterly* basis instead of annual one, you can then begin to form a positive outlook about the "other side" of this downturn, in the second half of 2009 and beyond.

Report Details

Additional details about IC market forecasts through 2013 can be found in the 2009 edition of *The McClean Report (released in January 2009)*, IC Insights' complete analysis and forecast of the integrated circuit market. Packed with 400 tables and graphs, the report is available in three-ring binder, CD-ROM, and on-line formats, and also comes with free monthly updates by e-mail from March through November. A single copy of the report in CD-ROM or binder format is priced at \$2,890. A bundled CD-binder set is priced at \$3,385. An Internet access password is available as a \$695 option. The report is also available under a multi-user corporate license for \$5,990.

About IC Insights

IC Insights, Inc., based in Scottsdale, Arizona USA, is dedicated to providing high-quality, cost-effective market research for the semiconductor industry. Founded in 1997, IC Insights offers coverage of global economic trends, the semiconductor market forecast, capital spending and fab capacity trends, product market details, and technology trends, as well as complete IC company profiles and evaluations of end-use applications driving demand for ICs.

Web Site: www.icinsights.com • **Phone:** +1-480-348-1133 • **E-mail:** info@icinsights.com