Executive Summary

Semiconductor Quarterly Report
First Quarter, 2007

INTRODUCTION

The US-Taiwan Business Council is committed to providing our members with tactical and strategic advice on how to succeed in the Taiwan market. As part of a suite of information products distributed to our members, the Council publishes several analysis reports each year. These reports are published each quarter, with an expanded report in the fourth quarter that covers the entire previous year.

The Semiconductor report focuses on the semiconductor industry as it relates to Taiwan, China, and the U.S., and provides up-to-date analysis of developments during each quarter. Each report also contains contact information valuable in initiating and maintaining a relationship with Taiwan private and government entities, as well as other useful information including organization charts and a glossary.

The US-Taiwan Business Council's Semiconductor Report has been published since the first quarter of 2002. Although these reports are distributed exclusively to members and to U.S. government employees, this executive summary provides some insight into the focus and contents of the report.

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QUARTERLY SEMICONDUCTOR ANALYSIS
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The Taiwan semiconductor industry was drawn into the world of leveraged buyouts late last year through a multi-billion dollar proposal by The Carlyle Group to buy Advanced Semiconductor Engineering (ASE), the largest chip assembly company in the world.

The proposed deal represents a microcosm of a global movement in the semiconductor industry, one that is putting financial decisions ahead of engineering/technology decisions and thereby changing the face of the entire industry. Dutch chipmaker NXP Semiconductor and U.S. based Freescale Semiconductor have also been bought out by private equity firms, and their recent moves to change their spending on R&D and new fabs are creating huge opportunities for Taiwan.

Both NXP and Freescale are ending their participation in major chip R&D alliances, and NXP has already said it will align with a Taiwan chipmaker, Taiwan Semiconductor Manufacturing Company (TSMC), on process R&D and manufacturing going forward. ASE is likely to benefit because as private equity firms move to further specialize the work performed by their acquisitions, one strategy would be to sell off chip assembly operations around the world - potentially to ASE. When the dust settles, NXP and Freescale will likely be chip design firms, without any chip manufacturing or assembly operations, and the move will force other companies with similar finances to do the same.

Taipei could help cement the potential benefits for Taiwan by moving forward and giving its consent, should a formal Carlyle bid materialize for ASE. It could also boost the chances of Taiwan foundries wining more China-bound chip work by releasing its stranglehold on the chip industry and working to depoliticize the chip/China issue.

Unfortunately for chipmakers, politics are the greatest potential risk in their efforts to grab the new business emerging from the leveraged buyout trend. With key legislative elections slated for the end of 2007, and with the presidential election following in March of 2008, work by Taipei on chip-related issues is in real danger of stalling, leaving chipmakers in limbo again as politicians battle over China-related issues. Taiwan President Chen Shui-bian, leading the ruling Democratic Progressive Party (DPP), remains overtly anti-China, and attempts by the main opposition party, the Kuomintang (KMT), to move the China issue to the center have stumbled recently. A resurgence by Chen, and an insistence by him to keep the DPP patently anti-China, would be entirely negative for Taiwan and for Taiwan semiconductor companies.

This report will examine the state of Taiwan politics as they relate to the semiconductor industry. It will discuss in more detail the leveraged buyout offer by Carlyle for ASE and why Taipei should view it as an opportunity, a discussion that will also briefly examine the leveraged buyout trend as it pertains to global and Taiwan chip interests, and how it could change the world of semiconductors. Finally, the report will highlight the massive investments Taiwan chipmakers are putting into the local economy, a forecasted US$12.7 billion (NT$420.23 billion) this year, as proof that they plan to stay in Taiwan and that Taipei has nothing to fear from opening the doors to China a bit wider.

In light of the current semiconductor industry situation in Taiwan, the US-Taiwan Business Council puts forth the following recommendations:

- Taipei is simply moving too slow on technology issues, and needs to find a way to reduce the political sensitivity surrounding its decisions on semiconductor investment and technology transfer to China.

  It is a noteworthy achievement that Taipei followed through on its promise to allow Taiwan chipmakers to transfer 0.18-micron technology to China, but this step really should have been taken a year ago. Taipei remains the greatest friend to Chinese foundries struggling to survive, as those Chinese foundries are free to use more advanced chip production technologies than their Taiwan counterparts in China. TSMC Shanghai became the first Taiwan chipmaker to win approval to use 0.18 micron processes in China. ProMOS and Powerchip, which have both won approval to build fabs in China, still have to apply for permission to use the technology. It is an unreasonable demand, and only highlights how politically charged the issue has become in Taipei, to the detriment of the Taiwan chip industry.

The recent decision by Intel Corporation to spend US$2.5 billion (NT$82.72 billion) on a 12-inch plant in China should be a wake up call to Taipei. Washington DC has approved the Intel plan, and the plant is slated to open in 2010. Taiwan chip makers are nowhere near winning approval for such high tech fabs in China, and at the current pace they are not likely to see such approval until 2015, when it is far too late.

Taipei needs to reassess its chip industry regulations with regard to China, regulations that actually expired at the end of 2005 and have not yet been formally replaced. It also needs to find ways to reduce the heavy political rhetoric surrounding the issue. The chip industry is in Taiwan to stay, and it will continue to grow. However, current regulations are having the adverse effect of helping Chinese chip foundries instead of helping Taiwan chipmakers. Unfortunately, Taiwan politicians are far more concerned with using China as a political weapon than in creating a coherent policy that will ensure the long-term health of its vital chip industry.

- The Taiwan government should make all haste to finish its internal discussions and crafting of new regulations on leveraged buyouts in the chip industry, thereby paving the way for the potential Carlyle Group purchase of ASE. A swiftly finished deal would not only show off the ability of Taiwan companies to build attractive, global businesses, but also shows that Taipei is friendly to leveraged buyouts, which stand to greatly increase the value of its stock market and economy.

  The Carlyle proposal for ASE has already increased the value of the Taiwan Stock Exchange, despite the fact that a formal offer has not yet been made and the government has not given its okay on such a deal. Carlyle would likely add substantial value to ASE, and to build it into a far larger, more powerful company than it is today. ASE's access to Carlyle portfolio businesses, and a move by companies to sell off their chip assembly operations to ASE (with the apparent help of Carlyle), stand to transform not only the company but the industry itself.

- U.S. semiconductor equipment vendors should take advantage of the up to US$12.7 billion (NT$420.23 billion) market for their machinery in Taiwan this year.

- US companies should also look carefully at their R&D and chip fab needs, and consider partnering with Taiwan chipmakers. Taiwan's chip foundries and memory chipmakers have a long history of respecting intellectual property and of maintaining high standards of quality work. The changes leveraged buyout firms are making in the companies they take over need not be limited to those companies only. Other companies could take advantage of the same opportunities to improve their finances and industry position by teaming up with Taiwan chipmakers.

REPORT TABLE OF CONTENTS