



Executive Summary

Taiwan Semiconductor Quarterly Report Annual Review, 2011

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 Taiwan 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 trend charts and a glossary.

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

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**TAIWAN QUARTERLY SEMI CONDUCTOR ANALYSIS REPORT
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Taiwan's chip industry faced many challenges in 2011, including earthquakes, floods, and financial distress. Major events during the year included the March 11 earthquake and tsunami in Japan, and the August floods in Thailand. These two events created ripples throughout the global technology industry, and affected Taiwan chipmakers in a number of ways. Taiwan's DRAM industry, for one, will never be the same. Even though the Thai floods have receded, damage to the computer supply chain came at a time when those DRAM makers instead needed life preservers.

Nevertheless, the year also presented Taiwan companies with many opportunities. While the tragic earthquake in Japan affected technology companies by knocking out power grids and cutting off key component supplies, it also prompted Japanese companies to look overseas for new factory locations and to outsource - particularly to Taiwan.

In addition, all the hot new consumer products being developed by technology companies in Taiwan and across the world - from smartphones and tablets to the data centers that fuel them with content - will keep chip orders flowing to Taiwan foundry chipmakers for years to come. Meanwhile, another recent development - a plan by Samsung Electronics to build a chip factory in China - may be bad news for Taiwan's "Silicon Shield," but it is also likely to encourage Taiwan politicians to ease the technology restrictions that local chipmakers still face in China.

Apple has been one of the biggest stories in global technology over the past several years, and now its impact on Taiwan is expanding. Several industry watchers expect Apple to shift orders for its A6 chips from Samsung to Taiwan Semiconductor Manufacturing Corporation (TSMC) in 2012. This will be harder to do than it sounds, but Apple clearly needs to make the switch. The company cannot keep using Samsung for chip foundry services, because the company is both a competitor and a supplier. In fact, Apple has a reputation for being ruthless with competitors, especially when it has been snubbed. Moreover, Apple has already filed lawsuits against Samsung in several countries for releasing products too similar to the iPhone and iPad.

In addition to looking for a new A6 chip supplier, Apple is also seeking new suppliers for other chips, LCD screens, and additional components it currently sources from Samsung. Taiwan technology and chip companies both stand to benefit from these moves. It is likely that Taiwan companies will win Apple orders away from Samsung, as long as they can match the South Korean company's quality and price - which is not easy.

The coming year looks just as interesting as 2011. In January, Taiwan voters chose a new president, reelecting incumbent President Ma Ying-jeou without giving him the sort of clear mandate that he received in 2008. The election outcome will have a huge impact on relations between Taipei and Beijing for the next four years. In 2012, Taiwan will also have to deal with debt distress in two important industries - DRAM and LCD screens. On a more positive note, several new technology trends is likely to boost chipmakers on the island, including the expected arrival of new Apple products and refreshes of the iPad and iPhone. The launch of Microsoft Windows 8 (the x86 and ARM versions) will also have a big impact, as will an increased industry focus on Intel-based Ultrabooks - thin laptops similar to the MacBook Air.

This quarterly report will be organized slightly differently than past issues. It will start with a section on current issues in Taiwan and the presidential election, followed by a section on the state of Taiwan's chip industry. It will then discuss the potential loss of the island's "Silicon Shield," the danger of zombie DRAM makers, and finally Apple's working to transfer the A6 chip to TSMC. Following that is a rundown of five big trends in 2011 and a prediction for five upcoming trends for 2012. The report will end with conclusions and recommendations for both government and businesses.

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