Influence of OEMs
Addendum to chapter 1

China’s domestic OEM buying power

Table A.1 is a listing of the top 10 Chinese OEMs (original equipment manufacturers) taken from China’s Ministry of Industry and Information Technology (MIIT) report of “Top 100 Chinese Electronic Information Enterprises in 2012”. MIIT ranks these companies based upon a comprehensive assessment of revenue, profit, assets, R&D, etc. rather than revenue alone. Each of the top 10 had 2011 revenues of US$7.7 billion or more. These 10 largest Chinese OEMs had a 19% increase in their combined revenues during 2011—after a 31% increase in 2010—to reach a record total of US$160 billion. Their combined revenue increase was somewhat less than that of China’s electronic information industry which increased 26% measured in US dollars (or 20% reported in RMB) during 2011. Assuming the semiconductor content of their products was 25% (the average for all of China’s electronic systems production in 2011), these 10 Chinese OEMs could have been responsible for semiconductor consumption of US$40B, or 26% of China’s total semiconductor market.

During the past six years since 2005 the MIIT top 10 Chinese OEMs have achieved an average CAGR (compounded annual growth rate) of 19% per year.

The US$40 billion semiconductor consumption that these top OEMs could have been responsible for is usually identified as “Brand TAM” (total available market) to mean the total semiconductor devices consumed in all the products branded with any of the OEM’s brands or names even though some of those products were designed and/or manufactured by other ODM or EMS companies. For example, the motherboard of Lenovo PCs are usually made by ODM’s (original design manufacturers such as Quanta), rather than by Lenovo itself. Since 2009 we have had analysts estimate the semiconductor consumption by OEMs based upon design (semiconductor selection by OEM engineers), which is identified as “Design TAM”. We feel this provides a more meaningful insight relative to the market influence of the various Chinese OEMs. In 2011, the top 10 OEM Design TAM semiconductor consumption was reported to be US$17.7 billion an increase of almost
Table A.1: Chinese Top OEMs by revenue and semiconductor consumption 2010–2011 (US$B)

<table>
<thead>
<tr>
<th>Rank (per MIIT)</th>
<th>Name of company</th>
<th>Revenue 2010</th>
<th>Revenue 2011</th>
<th>Change %</th>
<th>Semiconductor consumption (Design TAM) 2010</th>
<th>Semiconductor consumption (Design TAM) 2011</th>
<th>Change %</th>
<th>Purchase TAM 2010</th>
<th>Purchase TAM 2011</th>
<th>Change %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Huawei</td>
<td>27.5</td>
<td>32.0</td>
<td>16.3%</td>
<td>3.4</td>
<td>4.3</td>
<td>24.9%</td>
<td>2.8</td>
<td>3.2</td>
<td>17.6%</td>
</tr>
<tr>
<td>2</td>
<td>Lenovo</td>
<td>21.6</td>
<td>29.6</td>
<td>37.0%</td>
<td>6.1</td>
<td>7.8</td>
<td>27.9%</td>
<td>4.7</td>
<td>5.9</td>
<td>24.9%</td>
</tr>
<tr>
<td>3</td>
<td>Haier Group Company*</td>
<td>20.2</td>
<td>23.7</td>
<td>17.4%</td>
<td>0.4</td>
<td>0.6</td>
<td>35.0%</td>
<td>0.4</td>
<td>0.5</td>
<td>30.7%</td>
</tr>
<tr>
<td>5</td>
<td>ZTE</td>
<td>10.4</td>
<td>13.5</td>
<td>29.6%</td>
<td>2.1</td>
<td>2.8</td>
<td>33.6%</td>
<td>2.1</td>
<td>2.5</td>
<td>20.4%</td>
</tr>
<tr>
<td>4</td>
<td>Great Wall Technology</td>
<td>15.6</td>
<td>14.9</td>
<td>-4.4%</td>
<td>0.2</td>
<td>0.1</td>
<td>-42.7%</td>
<td>0.1</td>
<td>0.1</td>
<td>-38.2%</td>
</tr>
<tr>
<td>6</td>
<td>Hisense Group**</td>
<td>8.3</td>
<td>11.2</td>
<td>35.0%</td>
<td>0.3</td>
<td>0.4</td>
<td>45.6%</td>
<td>0.3</td>
<td>0.4</td>
<td>40.3%</td>
</tr>
<tr>
<td>7</td>
<td>Changhong Electric Co.</td>
<td>8.1</td>
<td>8.2</td>
<td>0.2%</td>
<td>0.2</td>
<td>0.3</td>
<td>46.5%</td>
<td>0.3</td>
<td>0.4</td>
<td>35.6%</td>
</tr>
<tr>
<td>8</td>
<td>TCL</td>
<td>7.7</td>
<td>9.6</td>
<td>23.8%</td>
<td>0.9</td>
<td>1.2</td>
<td>25.2%</td>
<td>1.2</td>
<td>1.5</td>
<td>18.8%</td>
</tr>
<tr>
<td>9</td>
<td>Founder Group Co.</td>
<td>7.8</td>
<td>9.1</td>
<td>15.9%</td>
<td>0.4</td>
<td>-100.0%</td>
<td>-100.0%</td>
<td>0.3</td>
<td>-100.0%</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>BYD Company Ltd.</td>
<td>6.9</td>
<td>7.7</td>
<td>10.9%</td>
<td>0.3</td>
<td>0.3</td>
<td>1.5%</td>
<td>0.3</td>
<td>0.3</td>
<td>-5.0%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>134.3</td>
<td>159.5</td>
<td>18.7%</td>
<td>14.3</td>
<td>17.7</td>
<td>24.0%</td>
<td>12.5</td>
<td>14.8</td>
<td>18.3%</td>
</tr>
</tbody>
</table>

% Semi penetration 10.7% 11.1%

Companies tracked from previous years

| Skyworth        | 14 | 3.1 | 3.6 | 6.2% | 0.2 | 0.3 | 51.7% | 0.3 | 0.4 | 38.3% |
| Konka Group     | 19 | 2.5 | 2.5 | 31.1%| 0.2 | 0.3 | 76.6% | 0.2 | 0.3 | 76.6% |

It is worth noting that Haier Group Company and Hisense Group each own a portfolio of companies. We believe that Haier Electronics (Haier Group Company) and Hisense Electric Co. (Hisense Group) are the actual semiconductor consumers in those portfolios. To help give a deeper glimpse at the actual penetration, we are including a separate table detailing their revenues. Unfortunately, Design and Purchasing TAM were only available for the parent companies.
24% from 2010, but still only 11% of China’s total semiconductor market which is up fractionally from 2010 but up by almost two percentage points from slightly more than 9% in 2009. The calculated Design TAM semiconductor content of the combined revenues of these top 10 OEMs increased from 9.3% in 2009 to 10.7% in 2010 and to 11.1% in 2011.

Another way of measuring the influence of these OEMs on semiconductor consumption is based upon their direct purchases. This is identified as “Purchasing TAM”. The top 10 OEM 2011 Purchasing TAM semiconductor consumption was reported to be US$14.8 billion, an 18% increase from their 2010 reported Purchasing TAM. These values are less than their Design TAM because some of the OEMs (for example Lenovo) will design a product specifying specific key components and then consign manufacturing and purchasing to an EMS (electronic manufacturing services) company.

As a result of this analysis, we continue to believe that Chinese OEMs influence and/or purchase a significant and increasing number of semiconductor devices. They could be important customers for many of the international semiconductor companies intending to participate in China’s economic stimulus projects and the continuing growth of the Chinese semiconductor market. As a result, the strategies of these OEMs could affect the design and sales operations of several international semiconductor companies.
If your company is facing challenges doing business in China, or you just want to have a deeper discussion about what’s happening in the market and how we can help, please reach out to one of the technology industry leaders listed below.

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