A New Stage for Overseas Expansion for China’s Equipment Manufacturing Industry
China’s Equipment Manufacturing Industry is one of the country’s most important sectors and has historically focused on manufacturing construction machinery, sophisticated machine tools and power equipment. However, China’s high dependence on new core technologies as well as its internal lack of innovation capabilities are some of the main issues preventing the industry from reaching its goal of restructuring and upgrading, as well as enhancing its capacity for independent innovation, all of which have been called for under China’s 12th Five-Year plan.

Given this, equipment manufacturers have been exploring various approaches in order to encourage innovative reforms, such as investing heavily into research and development, improving innovation transformation capabilities, cultivating innovative ideas and establishing innovation mechanisms.

In fact, as the global economy increasingly integrates, China’s Equipment Manufacturing sector has begun to play a crucial role in helping allocate global resources. On the one hand, this is the result of China upgrading its equipment manufacturing technologies; on the other hand, the industry itself has benefited from a booming domestic economy which has resulted in huge market demand for equipment manufacturing industry products. Furthermore, despite the recent slowdown in the Chinese economy, such demands are likely to remain.

Since the break-out of the global financial crisis, developed economies across the world have taken a new look at their modes of economic development. At the same time, many of them have encouraged a return to manufacturing production as a way to revive previously-languid economies.

Having said that however, it is expected that such revivals will not look like previous iterations. Over the past decade, the world is begun to face an unprecedented amount of concern revolving around the over-exploitation of the world’s natural resources. Thus, the development of alternative energy and energy-saving technology has become a key consideration in order for the global equipment manufacturing industry to achieve a sustainable level of development.

As such, it is perhaps inevitable that a new round of industrial transfer will take place. Such transfers also represent a good opportunity for Chinese equipment manufacturers to “go out” and take part in the redeployment of global manufacturing resources, rather than simply look for chances to snap up bargains due to recent economic recession in Europe and the United States.

Deloitte China has conducted comprehensive, in-depth interviews within leading industry figures regarding the overseas expansion of Chinese equipment manufacturers. From these interviews, we found that overseas acquisitions have become the main way for Chinese equipment manufacturers to “go out” since the onset of the global financial crisis. Moreover, alongside larger state-owned enterprises, a rising number of overseas buyers are leading private corporations.

As to the nature of such deals, the bulk of Chinese equipment manufacturers are looking to obtain technologies – a motive which is broadly aligned with their desire to cultivate capacity for independent innovation.

Over the coming ten years, Deloitte believes that the technical competence of Chinese equipment manufacturing players will grow stronger, and that future outbound M&A deals within the sector will continue to focus on acquiring new technologies. At the same time, Chinese equipment manufacturing players will continue to move into new markets while also looking to integrate and consolidate back at home.

Lastly, Deloitte has also researched a number of outbound M&A case studies which focus on pre-deal assessment and post-deal integration. This exercise, the results of which are also found in the report, look to share with readers, the ins-and-outs of conducting an overseas transaction. We hope you enjoy reading the report and welcome your feedback on it.
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China’s equipment manufacturing industry is a general term which refers to varied manufacturing industries that produce technical equipment for all sectors in the national economy. In this report, it mainly covers the machinery equipment industry, which includes the manufacturing of the following:

• Transportation equipment including equipment for the following sectors;
  - Railways
  - Ships and Ports
  - Airports & Aviation
• Electric machinery and equipment;
• Equipment used for instrumentation and measurement;
• Equipment used in metal production;
• Other general-and special purpose equipment.

Benefiting from the accelerated urbanization of China and the rapid and constant increase of fixed asset investment of late, China’s equipment manufacturing industry has grown rapidly over the past three years. According to data from the National Bureau of Statistics of China, in 2008, overall business incomes emanating from China’s machinery equipment industry was RMB10 trillion—in 2011, this figure hit RMB21 trillion, representing a CAGR of over 20% over the period in question.

However, since then, China’s economic growth has slowed, impacting performance among local equipment manufacturers and also highlighting a number of weaknesses within the sector as a whole—namely the fact that domestic players lack best-practice technology and are lagging in terms of their independent innovation capabilities.

Given this, it is perhaps unsurprising that the industry has entered into a key period of industrial transformation as well as beginning to explore upgrading options via overseas purchases. However, although the manufacturing of railways, ships and aviation equipment accounts for the largest proportion in the whole industry by production value and operating income, outbound M&A by such players is rare, primarily because they lack the ability to conduct complex cross-border transactions, but also because of the high-sensitivity of technological transfer that is inherent during such deals.

Nonetheless, despite a recent lack of outbound M&A activity in these particular niches, does the wider outbound M&A surge undertaken by Chinese equipment manufacturers just a temporary occurrence? Or does it foretell the beginnings of a more fundamental industrial paradigm shift in the future?

In answer to this question, and others, the Deloitte China Manufacturing Group in conjunction with the Deloitte China Research and Insight Center (CRIC) conducted an in-depth study looking into the overseas expansion strategy and performance of China’s equipment manufacturing industry. The main findings of the report are summarized below:

• The overseas expansion of China’s manufacturing industry has entered into a new phase, spearheaded by the equipment manufacturing industry. In the past, the bulk of exports being produced by China’s manufacturing industry were small commodities and textiles. However, since 2000, the majority of China’s Manufacturing Industry exports were small commodities and textile products. However, since then, Chinese machinery equipment exports have been rapidly expanding, as well as diversifying, with total exports now accounting for about half of all manufacturing exports, overtaking textile metrics in the process. Ultimately, this is an obvious reflection of the shift in Chinese exports from high-volume low-value goods to high value-added products.

Meanwhile, in respect of overseas expansion routes, Chinese manufacturing enterprises favor outbound acquisitions, compared with inorganic overseas growth (a route more favored in the past). During the first three quarters of 2012, the total value of Chinese equipment manufacturers’ outbound deals accounted for 45% of the total value of outbound deals by China’s manufacturing industry while also rising from amounting to 1122 US$ million in 2011, to 2148 US$ million over the first three quarters of 2012.

Undoubtedly, the global financial crisis has provided a good opportunity for Chinese equipment manufacturers to conduct overseas M&A and this is likely to continue to occur going forward as potential outbound deals initiated by small Chinese equipment manufacturers will most likely fall into the lower-mid-market range in terms of deal size. However, this will most likely result in an uptick in outbound deal volumes.
• PE funds continue to play an active role in overseas equipment manufacturing M&A deals. In earlier times, major outbound equipment manufacturing acquirers tended to be SOEs who were able to pay for their acquisitions in cash. Since 2008 however, PE funds have increasingly acted as buyers or supported Chinese enterprises’ outbound M&A bids. Besides providing financial support, PE funds have also been able to provide professional advice and/or help enterprises to communicate with the large number of parties that make up a cross-border deal, thereby mitigating, to some extent, the weakness of Chinese enterprises deal-making overseas. (Chinese players traditionally have had difficulties dealing with foreign laws and regulations and also find it hard adapting to local cultural norms). Going forward, this trend is likely to strengthen.

• A major driver of overseas M&As by Chinese equipment manufacturers is to obtain technology, with China still being their dominant sales market. The primary reason for the majority of Chinese equipment manufacturers to pursue acquisitions overseas is to obtain technology – a very different reason compared to enterprises from developed countries, who primarily conduct outbound M&A so as to expand regionally, integrate sales channels and enrich product lines, Chinese buyers instead, continue to perceive their domestic market as their first priority, with follow on priorities being to then selectively develop international markets. This is general practice within the industry, and is a process which is chiefly determined by China’s unique market features, for example, huge market size yet also dependent on imports of key parts, components and core technologies. Such practices also embody wider policies inherent within the 12th Five-Year Plan, which encourages enterprises to enhance innovation via overseas acquisitions.

• Chinese equipment manufacturers are mainly targeting assets in Germany and the United States. Looking at the number of completed outbound M&A deals conducted by Chinese machinery manufacturers by target country, it is interesting to note that between 2001 and H1 2012, Germany and the U.S. accounted for 19 and 8 deals respectively. Also of interest is Hong Kong’s positioning as a regional financial center, an accolade that has meant that it has acted as the springboard for the bulk of these outbound transactions.

• Vendor distrust is the biggest obstacle faced by Chinese equipment manufacturing enterprises that intend to acquire overseas assets. In spite of their strong capital advantages, Chinese equipment manufacturing buyers often fail to convince vendors of the seriousness of their intentions. The main reason is that local enterprises and governments have doubts about Chinese buyers’ capabilities in terms of technical transformation and utilization, sustainable operational and brand management as well as the handling of local labor relations.

• The key to a successful outbound acquisition lies in the rapid and precise determination of the correct target market to enter, as well as an efficient and comprehensive post-merger integration process. Through our analysis on overseas M&A deals undertaken by Chinese equipment manufacturing players, we found that well-performed deals only truly create value 23% of the time; those that create a mediocre amount of value, 47% of the time, and those that don’t create any value at all, 30% of the time. Given this, a successful buyer should therefore pay close attention to changing target markets over the whole deal timeframe, from the initial stage of the deal to post merger integration – in order to maximize value-creation.
1. General introduction of overseas development of China’s equipment manufacturing industry

1.1 The development of the global equipment manufacturing industry

In recent years, the global equipment manufacturing industry has accounted for over 40% of sales of the wider manufacturing sector within developed countries, and over 30% of sales in newly-industrialized countries.1

Moreover, while the global financial crisis heavily impacted some industries, the equipment manufacturing sector wasn’t one of them, with wider economic stimulus packages (such as China’s multi-billion dollar package that was announced in 2008) creating favorable economic conditions for growth. This, combined with fast-growing industrial capabilities meant that the equipment manufacturing industry in countries like Brazil, India and China, all grew despite wider economic malaise.

Driven by rapid urbanization and an increase in fixed asset investments, China’s equipment manufacturing industry grew swiftly over the three years from 2009 to 2011. According to the National Bureau of Statistics of China, total revenues generated by the sector was RMB21 trillion in 2011, compared to RMB10 trillion in 2008, resulting in a Compound Annual Growth Rate (CAGR) over that period of over 20%. Furthermore, in 2010, sales generated by China’s Equipment Manufacturing Industry accounted for 25% of the industry’s global sales and thus meaning that China became the top-ranked country in terms of industry sales revenue for the first time, overtaking the U.S. and Japan (Chart 1).

However, while China’s equipment manufacturing industry is large, it is not particularly robust, suffering from low economies of scale and weak poor technological implementation. A study of 491 listed equipment manufacturers including firms locate in the U.S., Germany, Japan and China, showed that Chinese companies have a lower average market value and sales revenue relative to American and Japanese companies (Chart 2), and their average sales income is lower than the listed equipment manufacturers in the other three countries (Chart 2).

Over 2011, global and Chinese economic growth slowed somewhat, which resulted in a sharp drop in market demand across the whole equipment manufacturing sector.

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1 Source: The Blue Book of Equipment Industry 2012
China’s equipment manufacturing industry also experienced a significant drop in activity in 2012, resulting in many companies facing inventory overhangs and falling profits (Chart 3&4). Their problems have also been exacerbated by the fact that competition for many companies that operate in this sector have increased while complementary sectors (such as the Construction industry) have been hard-hit by moves to restrict investment flows into them. At the same time, many players continue to operate at low technological levels, meaning that, as a whole, the industry is lacking the capability to produce high-end manufacturing products.

Given this current situation, leading equipment manufacturers are hedging their bets on a China-based recovery, (Chart 5). The irrevocable urbanization of China, as well government’s drive to boost domestic demand clearly demonstrates that there is a great prospect for state-of-the-art equipment manufacturers in China – a situation that others are watching unfold with interest.
1.2 Gradual overseas expansion of China’s equipment manufacturing industry

China’s equipment manufacturing enterprises began expanding globally in the 1980s, when a number of state-owned enterprises began exporting construction machines overseas so as to support China’s overseas aid projects. Then, in the 1990s, some of these equipment manufacturing enterprises were granted foreign trade rights by the Chinese government and began exporting construction machinery overseas, most of them to South East Asia (Chart 6).

By 2000, Chinese enterprises were fast becoming experienced players overseas and in order to quicken their penetration of foreign markets, began making direct investments into Europe, South America and other regions, setting up factories and operations that made the most of their competitive advantages.

Overseas expansion slowed over 2008 and 2009 as Chinese investors adopted a wait-and-see approach to foreign investment before picking up again the following year, primarily due to the fact that the government introduced a large economic stimulus package in late 2008 which stimulated wider economic demand (Chart 7).

Beginning in 2008, China’s equipment manufacturing enterprises began conducting overseas M&A transactions (Chart 8), a prescient time to begin doing so given that many western corporates were finding themselves in financial difficulty after the onset of the Global Financial Crisis.

By analyzing outbound M&A activity completed by Chinese as well as global equipment manufacturing industry players over the past ten years, it is clear that the numbers of overseas deals carried out by the global equipment manufacturing industry reached its highest peak in 2007, dropped sharply the following year, and then began rebounding steadily from 2009 until 2012. However, this didn’t tally with China’s story, which saw overseas equipment manufacturing M&A activity hit new highs in 2009 and continue to remain broadly at such levels since then.

Chart 6: Proportions of exports of Chinese textiles and electromechanical products in the total export value

Chart 7: FDI of China’s Manufacturing Industry

Notes: Classified By SITC Codes
Source: General Administration of Customs, National Bureau of Statistics of China

Notes: Classified By SITC Codes
Source: National Bureau of Statistics of China

Source: National Bureau of Statistics of China
Chart 8: China’s equipment manufacturing industry leads the industrial manufacturing industry in terms of outbound M&A values

Source: Thomson Reuters, Deloitte Analysis

Chart 9: Volumes and disclosed amount of global equipment manufacturing industry cross-border M&A activity from 2001 to Q3 2012

Source: Thomson Reuters, Deloitte Analysis

Chart 10: Volume and disclosed amount of China’s machinery manufacturing outbound M&A activity of from 2001 to Q3 2012

Source: Thomson Reuters, Deloitte Analysis
### Figure 1: Top 10 overseas M&A transactions of China’s equipment manufacturing enterprises, 2008 - 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Acquirer</th>
<th>Industry</th>
<th>Target</th>
<th>Target territory</th>
<th>Acquired share %</th>
<th>Transaction amount (US$m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Sany</td>
<td>Mine and construction machinery</td>
<td>Putzmeister</td>
<td>Germany</td>
<td>100</td>
<td>698</td>
</tr>
<tr>
<td>2012</td>
<td>Weichai Power</td>
<td>Mover equipment</td>
<td>KION</td>
<td>Germany</td>
<td>25</td>
<td>584</td>
</tr>
<tr>
<td>2012</td>
<td>Shandong Heavy Industry</td>
<td>Mine and construction machinery</td>
<td>Ferretti</td>
<td>Italy</td>
<td>75</td>
<td>484</td>
</tr>
<tr>
<td>2008</td>
<td>Zoomlion</td>
<td>Mine and construction machinery</td>
<td>CIFA</td>
<td>Italy</td>
<td>100</td>
<td>325</td>
</tr>
<tr>
<td>2010</td>
<td>Shanghai Electric</td>
<td>Electric machinery</td>
<td>Goss International</td>
<td>The United States</td>
<td>100</td>
<td>140</td>
</tr>
<tr>
<td>2011</td>
<td>Taiyuan Heavy Machinery</td>
<td>Mine and construction machinery</td>
<td>Valley Longwall</td>
<td>Australia</td>
<td>100</td>
<td>135</td>
</tr>
<tr>
<td>2011</td>
<td>Hengtian Group</td>
<td>Textile Machinery</td>
<td>Fong’s Industries Group</td>
<td>Hong Kong</td>
<td>37.7</td>
<td>134</td>
</tr>
<tr>
<td>2011</td>
<td>Wolong Electric</td>
<td>Electric machinery</td>
<td>ATB</td>
<td>Austria</td>
<td>100</td>
<td>130</td>
</tr>
<tr>
<td>2010</td>
<td>Jinsheng Industry</td>
<td>Textile Machinery</td>
<td>EMAG Group</td>
<td>Germany</td>
<td>51</td>
<td>129</td>
</tr>
<tr>
<td>2008</td>
<td>Goldwind Science &amp; Technology</td>
<td>Electric machinery</td>
<td>Vensys Energy</td>
<td>Germany</td>
<td>70</td>
<td>61</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters, Deloitte Analysis
1.3 The Characteristics of major overseas markets

China’s foreign direct investment (FDI) flows have been grown rapidly since 2004. The World Investment Report 2011\(^2\), published by The United Nations Conference on Trade and Development (UNCTAD), shows that Global FDI in 2011 reached USD1.69 trillion, among which China’s FDI accounted for 3.8% of the total, meaning that it ranked ninth globally.

From the perspective of export or investment in building factories, Chinese enterprises generally believe that the first step for expanding overseas is to target emerging countries at a similar development stage and with similar needs to China.

**Brazil**

Brazil is a market with the world’s fifth-largest population and replaced Britain as the world’s sixth-largest economy in 2011. Due to this rapid economic rise, Brazil should not be underestimated by Chinese enterprises. The country is even more attractive to foreign investors given that Brazil has signed agreements on double taxation avoidance with many countries, in order to attract foreign investors. The 2014 Football World Cup and 2016 Olympic Games in Brazil will also stimulate market demand for construction machinery in Brazil. According to statistics\(^3\), it is expected that Brazil’s Construction Equipment and Machinery Industry will increase annually by 7.5 till 2016 and by 2012, the demand for construction machinery to reach USD27.84 billion. Furthermore, the existence of rich mining resources within Brazil has resulted in strong growth within the country’s Heavy Construction and Mining Equipment Industries. Furthermore, it is estimated that over the next five years, a record-breaking growth rate of 46% is expected within these industries.

**Russia**

Since 2000\(^4\), Russia’s construction sector has grown at an average rate of between 10-15% per year. Furthermore, despite the fact that Russia suffered a severe financial crisis in 2009, with the industry shrinking in size by 13.2% in that year alone, the Russian market still has huge amounts of investment potential. Given the expected uptick in demand from wider CIS markets (including Russia), over the 2012 to 2016 period, sales of construction machinery is expected to grow at an average annual rate of 12.2%.

**India**

As a nation with the second-largest population in the world, India’s\(^5\) domestic equipment manufacturing industry shows great potential. From 2001 to 2005, its annual sales of construction machinery amounted to 12,960 units in average, while from 2006 to 2010, the average annual sales rose to 43,340, a threefold rise. From 2011 to 2015, the average annual sales of construction machinery in India are expected to reach about 86,510. China and India are at a similar stage of development, with a similarity in terms of market demand and is thus favorable for overseas expansion of Chinese enterprises.

**Germany**

Over the years, Europe has been the top destination for Chinese enterprises looking to carry out cross-border M&A deals. According to the Statistical Communiqué of 2011 on China Direct Investment Overseas\(^6\) recently issued by China’s Ministry of Commerce, direct outward investment of Chinese enterprises into EU countries amounted up to USD5.963 billion in 2011, a year-on-year growth rate of 101%.

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\(^3\) Source: http://www.gcjx888.com/

\(^4\) Source: http://china.machine365.com/

\(^5\) Source: China Machinery Today (今日中国机械)

\(^6\) http://hzs.mofcom.gov.cn/article/date/201109/20110907741156.html?25786889876=328579020
Germany, as a manufacturing power among European countries, has become the first choice of China’s equipment manufacturing industry for overseas M&A. Between 2010 and Q3 2012, China’s equipment manufacturing enterprises completed a total of 19 acquisition transactions, far more than that in any other European countries and North America combined.

Germany’s Machinery and Equipment Industry has a strong competitive advantage. There are 6,300 machinery and equipment enterprises, of which 87% are small and medium sized enterprises (SMEs). Most demands of machinery equipments in Germany come from electronics, automotive, chemical and food industry. These four industries have over 11,400 enterprises, and employ about 2.2 million people. Hit by the sluggish economy worldwide and European debt crisis, many enterprises are facing operational difficulties, or wish to sell their businesses due to withdrawal of corporate financial investors.

In Germany, green manufacturing technology lays solid foundation for the development of its manufacturing industry, minimizes the environmental pollution caused by production process and product life cycle and reduces energy consumption at the same time. In order to promote industrial upgrade in equipment manufacturing industry, it is crucial for Chinese enterprises to take into consideration the factors of environmental and ecological protection as well as utilization efficiency of energy and resources.

The U.S. is a world leader in the fields of electrical equipment, construction machinery and automatic control system, thus accumulating its strength in the automotive, aerospace, construction and medical equipment industries. Due to the massive applications of the electronics and information technology, the U.S. equipment manufacturing industry becomes characterized by electronics, high speed and precision. In addition to the strength of traditional equipment manufacturing industry, the U.S. government launched a series of initiatives that allowed “to return to the manufacturing sector”, to encourage the research, development and application of new technologies in its manufacturing industry, including intelligent automation and 3D printer manufacturing.

In the view of market, through scale advantages as well as excellent commercial operation of large enterprises, the U.S. has expanded the sales networks of the equipment manufacturing industry all over the world, especially in the Americas where the U.S. is, which is an abundant market for U.S. equipment manufacturing enterprises. The fact that Chinese equipment manufacturing enterprises acquire U.S. companies also helps expand their sales channels in the Americas.

The equipment manufacturing industry in the United States is mainly divided into two categories. One category involves large enterprises manufacturing high- technology and high value-added products, including aircrafts, large electrical equipments, construction machinery (e.g. Boeing, General Electric, Caterpillar),; the other category refers to SMEs mainly focuses on manufacturing machine tools and mechanical parts. Some companies, when interviewed, said they were more concerned about the acquisition of U.S. companies. Compared with European enterprises, US equipment manufacturing enterprises are larger in scale, which increases the difficulties of undertaking an M&A deals as well as its subsequent integration. For those Chinese equipment manufacturing enterprises still at the initial stage of development, a more viable option is to buy SMEs to accumulate more experience.
Japan
Japan is one of the world’s most important construction machinery markets in addition to the United States and Europe. According to statistics released by Japan’s Ministry of Economy, Trade and Industry, in 2010, the output value of Japan’s Construction & Mining Machinery Manufacturing Industry (including construction machinery and mining machinery) was JPY 1,144.6 billion. Meanwhile, the construction machinery manufacturing industry and mining machinery manufacturing industry accounted for 98.8% and 1.2% of the total output value of the country’s construction machinery manufacturing industry.

Although Japan has a strong competitive advantage in technological terms as well as design, while Chinese companies also appreciate Japanese companies for their comprehensive strength when seeking overseas targets, years of experience means that Chinese enterprises with acquisition intentions often find Japanese companies unwilling to sell their businesses.

Figure 2: European machinery manufacturing enterprises that have publicly announced asset disposals, January 2011-August 2012

<table>
<thead>
<tr>
<th>Sold business/asset</th>
<th>Main products</th>
<th>Sold business/asset territory</th>
<th>Seller</th>
<th>Seller territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manroland AG</td>
<td>newspaper rotary press and screen printing machine</td>
<td>Germany</td>
<td>Allianz Capital Partners GmbH</td>
<td>Germany</td>
</tr>
<tr>
<td>MAG Europe GmbH</td>
<td>numerically-controlled machine tool</td>
<td>Germany</td>
<td>MAG Europe GmbH</td>
<td>Germany</td>
</tr>
<tr>
<td>OKU GmbH</td>
<td>industrial machinery for production</td>
<td>Germany</td>
<td>OKU GmbH</td>
<td>Germany</td>
</tr>
<tr>
<td>BARD Holding GmbH</td>
<td>wind power generating equipment</td>
<td>Germany</td>
<td>BARD Holding GmbH</td>
<td>Germany</td>
</tr>
<tr>
<td>Ingeteam SA</td>
<td>turbo generator</td>
<td>Spain</td>
<td>Kutxabank SA</td>
<td>Spain</td>
</tr>
<tr>
<td>Infarm A/S</td>
<td>Industrial system for environmental protection</td>
<td>Denmark</td>
<td>Grundfos DK A/S</td>
<td>Denmark</td>
</tr>
<tr>
<td>Agroma Kutno Sp zoo</td>
<td>machine tool for agriculture</td>
<td>Poland</td>
<td>Polish State Treasury</td>
<td>Poland</td>
</tr>
<tr>
<td>DynaWind AB</td>
<td>wind power generating equipment</td>
<td>Sweden</td>
<td>Morphic Technologies AB</td>
<td>Sweden</td>
</tr>
<tr>
<td>Norman SA</td>
<td>food industry machine</td>
<td>France</td>
<td>Breteche Industrie SA</td>
<td>France</td>
</tr>
<tr>
<td>Pipnskiy OMZ</td>
<td>mould and pump</td>
<td>Belarus</td>
<td>Gosudarstvennyi Komitet Po Imushchestvu Respublik Belarusi</td>
<td>Belarus</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters, Deloitte Analysis
2. Overseas M&A trend and direction of China’s equipment manufacturing industry

2.1 Overview of overseas M&As of China’s equipment manufacturing industry

China’s Equipment Manufacturing Industry began undertaking M&A in 1992 and undertook deals 4 times during the 1990s.

However, from 2001 to the end of Q3 2012, domestic equipment manufacturing enterprises initiated 74 overseas acquisitions, with 2009 being the high point in terms of overseas M&A.

From the perspective of regions of acquisitions, Chinese enterprises showed strong interest in Europe and the U.S. The overseas M&A target companies are located as below.

From Chart 11, we can see that global industrial leaders like Germany, the U.S. and Italy are still the most sought-after M&A destinations for Chinese enterprises, while Hong Kong is a favorable springboard for domestic enterprises to go overseas due to its special political environment and its position as a regional financial center.

Looking at the market at a sub-sector level (Chart 12), electric machinery, mining and construction machinery and mechanical tools were all active sectors in terms of outbound M&A, with electric machinery and mechanical tools being where the bulk of outbound M&A activity took place between 2001 to 2012. Deal activity within the mine and construction machinery began to take place in earnest in 2008, as the sector grew rapidly off the back of the domestic economic stimulus plan as well as from overseas M&A opportunities brought about by the financial crisis.

Chart 11: Number of overseas M&A completed by China’s machinery manufacturing enterprises from 2001 to the first three quarters of 2012 - by the country of the target

Chart 12: Number of overseas M&A deals completed by China’s machinery manufacturing enterprises from 2001 to the end of Q3 2012 - by sector

Source: Thomson Reuters, Deloitte Analysis
2.2 Different stages and development trends of overseas M&As of Chinese equipment manufacturing enterprises

To illustrate the evolution of overseas M&A trends by Chinese equipment manufacturing enterprises, Deloitte selected some representative cases from those overseas M&A transactions completed by Chinese enterprises between 2001 and the end of Q3 2012. The following figure represents these deals:

**Figure 3: Representative M&A cases of Chinese equipment manufacturing enterprises**

<table>
<thead>
<tr>
<th>Year</th>
<th>Buyer</th>
<th>Nature of bidding company</th>
<th>Target</th>
<th>Target territory</th>
<th>Acquired share %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Shanghai Electric Group</td>
<td>State-owned</td>
<td>AIC</td>
<td>Japan</td>
<td>100.00</td>
</tr>
<tr>
<td>2002</td>
<td>DMTG</td>
<td>State-owned</td>
<td>Ingersoll Production</td>
<td>The United States</td>
<td>100.00</td>
</tr>
<tr>
<td>2004</td>
<td>Shanghai Electric Group</td>
<td>State-owned</td>
<td>IKEGAI</td>
<td>Japan</td>
<td>72.22</td>
</tr>
<tr>
<td>2004</td>
<td>Shenyang Machine Tool Co., Ltd.</td>
<td>State-owned</td>
<td>SCHIESS GmbH</td>
<td>Germany</td>
<td>100.00</td>
</tr>
<tr>
<td>2005</td>
<td>BYJC</td>
<td>State-owned</td>
<td>Waldrich Coburg</td>
<td>Germany</td>
<td>100.00</td>
</tr>
<tr>
<td>2007</td>
<td>Shenyang Heavy Machinery Group</td>
<td>State-owned</td>
<td>French NFM</td>
<td>France</td>
<td>70.00</td>
</tr>
<tr>
<td>2008</td>
<td>Goldwind Science &amp; Technology</td>
<td>Private</td>
<td>VENSYS Energy</td>
<td>Germany</td>
<td>70.00</td>
</tr>
<tr>
<td>2009</td>
<td>XEMC Windpower Co., Ltd.</td>
<td>State-owned</td>
<td>Darwind Holding BV</td>
<td>Netherlands</td>
<td>100.00</td>
</tr>
<tr>
<td>2010</td>
<td>Shanghai Electric Group</td>
<td>State-owned</td>
<td>Goss International Corporation</td>
<td>The United States</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>Taiyuan Mining Machinery Group Co., Ltd.</td>
<td>State-owned</td>
<td>Valley Longwall International</td>
<td>Australia</td>
<td>100.00</td>
</tr>
<tr>
<td>2011</td>
<td>Jiangsu Jinsheng Industry Co., Ltd.</td>
<td>Private</td>
<td>EMAG Group</td>
<td>Germany</td>
<td>50.00</td>
</tr>
<tr>
<td>2011</td>
<td>LiuGong</td>
<td>State-owned</td>
<td>Poland HSW</td>
<td>Poland</td>
<td>100.00</td>
</tr>
<tr>
<td>2011</td>
<td>Dalian Rubber &amp; Plastics Machinery Co., Ltd.</td>
<td>Private</td>
<td>捷克布祖卢科公司 (Local Chinese Company)</td>
<td>Czech</td>
<td>90.00</td>
</tr>
<tr>
<td>2012</td>
<td>XCMG Construction Machinery Co., Ltd.</td>
<td>State-owned</td>
<td>SCHWING</td>
<td>Germany</td>
<td>52.00</td>
</tr>
<tr>
<td>2012</td>
<td>Sany</td>
<td>Private</td>
<td>Putzmeister</td>
<td>Germany</td>
<td>100.00</td>
</tr>
<tr>
<td>2012</td>
<td>Huayi Compressor</td>
<td>State-owned</td>
<td>Cubigel Compressors S.A.</td>
<td>Spain</td>
<td>100.00</td>
</tr>
<tr>
<td>2012</td>
<td>Weichai Power</td>
<td>State-owned</td>
<td>KION</td>
<td>Germany</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters
By analyzing outbound M&A cases by Chinese equipment manufacturers, we can identify different characteristics and trends throughout each stage.

**Figure 4: Four stages of overseas M&As by Chinese equipment manufacturing enterprises**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Period</th>
<th>Buyer</th>
<th>Industry</th>
<th>Main sources of funding</th>
<th>Targets</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>2001 – 2004</td>
<td>Large SOEs</td>
<td>Textile and printing</td>
<td>Loans under governmental support and self-owned funds</td>
<td>Industry to be locally phased out and on the verge of bankruptcy and liquidation</td>
<td>Shorten the time needed for underdeveloped domestic industries to catch up with international practices</td>
</tr>
<tr>
<td>Stage 2</td>
<td>2004 – 2007</td>
<td>Medium and large sized SOEs, including local SOEs</td>
<td>Machine tools</td>
<td>Loans under governmental support, self-owned funds and funds raised from stock market</td>
<td>Declining foreign enterprises but catering to domestic development over the next 5 years</td>
<td>Seize overseas market share of foreign high-end products in the domestic market, rapidly obtain advanced foreign technologies and build up R&amp;D teams</td>
</tr>
<tr>
<td>Stage 3</td>
<td>2007 – 2010</td>
<td>SOEs, private enterprises</td>
<td>Energy equipment and sophisticated machinery</td>
<td>Funds raised from stock market</td>
<td>Distressed foreign enterprises, and potential future competitors with slight technological advantages compared with domestic players</td>
<td>Obtain global market share, eliminate potential competitors and achieve the rapid integration of research, production and distribution among both local and overseas subsidiaries</td>
</tr>
<tr>
<td>Stage 4</td>
<td>2010 – Present</td>
<td>Diversified buyers, including SOEs, private enterprises and PE funds</td>
<td>Construction machinery, etc.</td>
<td>Funds raised from stock market and investment institutions</td>
<td>Enterprises that are internationally reputable, with sound sales markets, complete production, supply and distribution chains and established core technologies</td>
<td>Focus on global strategic goals, build up a complete production, supply and distribution chain overseas, construct second production bases overseas and also pay attention to the sustainable development of parent companies</td>
</tr>
</tbody>
</table>

Source: Deloitte Analysis
Stage 1 (2001 – 2004): Based on their understanding of the market, state-owned enterprises initiate mergers and acquisitions to seize control of the domestic market by introducing foreign advanced technologies. Due to the relatively backward domestic technologies available in China during this stage, foreign enterprises on the verge of bankruptcy were generally purchased, and their technologies were welcomed in the domestic market.

Example: In 2001, Shanghai Electric Group and Morningside Group purchased Japanese Akiyama Printing Machinery Company, a leading company in offset machine industry, with USD9 million, and subsequently renamed the company Akiyama International Co., Ltd. Later that year, the acquisition stopped loss and made a profit of USD1.5 million. Guanghua Printing Machine, a subsidiary of Shanghai Electric Group, soon introduced new technologies from Akiyama, immediately improving the technological skills of Guanghua.

Stage 2 (2004 – 2007): Acquire foreign enterprises either in decline or enterprises whose foreign parent companies have stopped making additional investment. The purpose of such type of acquisitions is to satisfy domestic production or export products.

Example: In 2005, Beijing No. 1 Machine Tool Plant (BYJC) launched a bid to acquire Waldrich Coburg ("Coburg"), a world famous heavy-duty machinery tool company. To achieve a smooth acquisition, BYJC employed a Hong Kong investment bank, an American accounting firm, and a German law office, complete with an international team to work on the merger. In the end, BYJC was able to pay a lower price than Coburg’s free cash flow. From operating data after the takeover, BYJC’s sales revenue had tripled within three years with order contracts tenfold and total profits quintupling. The number of Coburg’s employees increased from around 500 to 700, while retaining all of the target company’s original German staff. At the headquarters, BYJC designated three Chinese employees to act as coordinators between the two sides.

Stage 3 (2007 – 2010): Private enterprises join the race and begin to acquire either businesses with advanced technologies or enterprises that match their current development needs.

Example: In 2008, Goldwind Science & Technology Co., Ltd. (Goldwind) successfully acquired a 70% stock holding in Germany’s VENSYS Energy for EUR41.24 million. VENSYS has strong high-end wind power technology research and development capabilities, and is a pioneer in the development of permanent magnet direct drive technology. The acquisition made Goldwind the first Chinese wind power machine manufacturer with independent research, development and design capabilities, as well as complete and independent intellectual property ownership. This is especially crucial as 80% of the world’s wind power market is located in Europe, of which the Netherlands and Germany make up over 60% the production capacity and research and development. According to Goldwind’s technical report, in 2009 its generator set had achieved an overseas sales growth from RMB30 million in 2008 to RMB140 million in 2009.

Stage 4 (2010 – Present): Seek enterprises with superior technologies and make the acquired company the main processing base for domestic enterprises, so as to build its global production and marketing channels in a short term. During this stage, in addition to Western Europe and North America, companies located in Eastern Europe, including Poland and the Czech Republic, were also targeted.
Example: Founded in 1937, HSW manufactured iron and steel and national defense equipment before turning to construction machinery in 1952 and developing into one of the largest construction machinery manufacturers in Eastern Europe over the next 40 years. Its bulldozer ranks the third in the world, after American Caterpillar and Japanese Komatsu. Following the loss in technological competitiveness in China’s low-end market in 2009, the Polish government decided to dispose of its shareholdings through privatization. Seeking a “second home market” in the four emerging markets of Southeast Asia, Eastern Europe, Latin America and India, the acquisition of HSW by LiuGong provided a platform for LiuGong to establish an effective service network of research and development, creating channels for the development of local markets in the four emerging regions.

These four stages illustrate the basic trends of outbound M&As activity of domestic enterprises, from simply looking narrow technological gaps, seeking technological improvements, obtaining access to overseas marketing channels and gaining world-class technologies, integrating competition, and obtaining overseas production bases and rapidly setting up global production and marketing networks.

In the recent phase of the Chinese manufacturing enterprises’ overseas acquisitions, private equity (PE) investment funds have joined Chinese enterprises to assist in the completion of several large transactions:

- In 2008, the collaboration between Hony Capital, Mandarin Capital Partners, Goldman Sachs, and Zoomlion successfully acquired a 100% equity interest in Italian CIFA;
- In early 2012, Sany acquired Germany’s Putzmeister, with the support of CITIC Industrial Fund, which held 10% of the shares in this transaction;
- In August 2012, Wuhan Indus Silicon Valley Paradise Investment, on behalf of a domestic enterprise, acquired 100% shares of Austrian Steyr Power Co., Ltd.

According to Deloitte’s statistics, in 2011, overseas mergers and acquisitions supported by VC/PE numbered 20, with the total disclosed transaction amount reaching USD6 billion, an increase of 100% compared to the deal volume in 2010, while the total value of transactions increased by 58%. In addition to providing financial support, PE funds tend to have more efficient information channels, a broader international perspective, and more overseas investment experience. Their involvement in M&A acquisitions is intended to make up for the lack of experience and management skills of Chinese businesses in overseas mergers and acquisitions. It is therefore expected that PE funds will continue to remain important partners as domestic enterprises look to carry out overseas acquisitions.

Figure 5: Some overseas acquisitions by Chinese equipment manufacturing enterprises backed by VC/PE

<table>
<thead>
<tr>
<th>Year</th>
<th>Acquirer</th>
<th>PE</th>
<th>Target</th>
<th>Target territory</th>
<th>Amount (US$m)</th>
<th>Acquired share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Zoomlion</td>
<td>Hony Capital</td>
<td>CIFA</td>
<td>Italy</td>
<td>317</td>
<td>100%</td>
</tr>
<tr>
<td>2011</td>
<td>Tianye Tolian</td>
<td>Jingcheng Investment</td>
<td>Eden Technology</td>
<td>Italy</td>
<td>6</td>
<td>56%</td>
</tr>
<tr>
<td>2011</td>
<td>ChunXing Precision Mechanical</td>
<td>National Development Investment, Guorun Investment, Saijie Investment</td>
<td>Mitec Telecom</td>
<td>Canada</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>2012</td>
<td>Sany</td>
<td>CITIC Private Equity Fund</td>
<td>Putzmeister</td>
<td>Germany</td>
<td>218</td>
<td>100%</td>
</tr>
<tr>
<td>2012</td>
<td>Undisclosed</td>
<td>Wuhan Chinese Parosol Happy-silicon Capital</td>
<td>Steyr Motors GmbH</td>
<td>Austria</td>
<td>43</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters, zero2ipo
2.3 Obstacles for overseas M&As of Chinese equipment manufacturing enterprises

Compared to the downturn experienced by the global M&A market since the financial crisis, Chinese equipment manufacturing enterprises have remained fairly active. It is believed that the biggest obstacles for Chinese companies looking to engage in M&A transactions are target businesses unwilling to sell due to the uncertainty of unproven operation abilities of Chinese enterprises, and the fear of compromising “national security”.

Chinese enterprises have long been regarded by Western businesses as companies that suffer from inefficient management teams, low product prices, and a completely different set of cultural norms. During the acquisition process, the target company’s management and employees will often question whether Chinese enterprises have the ability to continue to operate and manage the brand, and deal with existing labor relations. Most of the investment review agencies in the West, including the U.S. Committee on Foreign Investment, the Australian Foreign Investment Review Board and Canada’s Ministry of Industry, will carry out strict reviews on the sensitivity of inbound investments as it relates to national security. Additionally, difficulties in integration, differing management cultures, lack of reliability of target information pre M&A transactions, convertibility of currency and financing constraints may be the other obstacles likely to arise.

Many Chinese companies, in addition to making use of overseas acquisitions for technology upgrades, should establish modern enterprise management systems and cultivate abilities to integrate resources, as well as work on strengthening communication channels with foreign governmental officials and the public. As target countries are highly sensitive to Chinese investment, China’s state-owned enterprises should strive to convince the public that such M&A deals are driven more by market factors rather than political factors. A typical case reflecting the local public skepticism occurred when Obama administration prevented Rolls, U.S. subsidiary of China’s Sany, from buying a wind power project in America on the premise that the transaction would be “a threat to national security”.
3. Integration priorities for overseas M&As of Chinese equipment manufacturing enterprises

3.1 Assessment on overseas M&As of global equipment manufacturing industry

Capacity building and strategic transformation through mergers and acquisitions are the main appeal for many Chinese equipment manufacturing enterprises looking to “go out”. However, difficulties are inevitable. In an overseas mergers and acquisitions, Chinese companies have to face more diversified customer requirements, more complex product portfolios, and more challenges from organizational structure and operation. As for overseas mergers and acquisitions, China’s machinery manufacturing enterprises are still in their infancy. While some of the industry’s transactions created value and enhanced the companies’ market share and brand name, the majority of such transactions were regarded as failures as they did not add value to the shareholders or meet the expected M&A objectives.

To judge whether an M&A transaction is successful or not depends on the contrast between financial performances pre and post-merger, as well as whether the enterprises achieve their strategic goals after the merger. As for the enterprises at different development stages with different goals, their selected targets and integration directions will also be different. Their strategic objectives may include technology transfer, integration of production management, brand building, and expansion of marketing channels. For example, when a company encounters technical bottleneck and acquires another company with mature technology or strong research and development capabilities, the ability to integrate the products and technologies can lead to a successful M&A transaction. When a company intends to acquire a seller in a target market with the purpose of expanding markets, the ability to make full use of the marketing channels or the brand effect of the acquired company in the local market to take advantage of its market presence will become the key to measure M&A results.

From 2001 to 2008, of the 147 transnational M&A transactions completed within 3 years, with disclosed transactions valued at over USD100 million. 53 transactions undertaken by listed companies were selected with the following findings (Chart 13):

- **23% of transactions performed well post acquisition.** Three years after the transaction closed, 23% of buyers noted that they had achieved stable and high growth, with more than 20% CAGR of sales revenue, which is higher than the growth rate prior to company’s transaction. The company is in the leading position in the market.

- **47% of transactions performed satisfactorily post acquisition.** Three years after the transactions closed, the buyer company grew to a certain extent, with CAGR of sales revenue between 5% and 20%, remaining at roughly the same level with the industry average.

- **30% of transactions underperformed post acquisition.** Meanwhile, 30% of respondents said that three years after their acquisition, CAGR of sales revenues were less than 5%.

**Chart 13: Evaluation on the performance of overseas M&As of equipment manufacturing industry**

Source: Deloitte Analysis
3.2 Integration priorities for overseas M&As

Chinese manufacturing enterprises face increasing integration difficulties when initiating overseas M&A transactions. The success of any M&A deal depends largely on the complete integration of the two party’s supply chains, manufacturing facilities, internal operations as well as brands. The post-deal integration priorities are as follows:

Priority I: Integration of supply chain

The integration of suppliers is the first part of any post-deal supply chain optimization process. As it relates to vertical M&A deals, the integration of suppliers is required to recognize the interests of both parties, trading by simulating market price mechanism, and achieve a high degree of collaboration with the acquired company under the coordination of authorities to reduce supply chain transaction costs. Regarding horizontally-integrated M&As, the integration of suppliers is required to integrate the existing complex supplier systems, to achieve combined purchase and share the price under different protocols.

In early 2012, Sany teamed up with CITIC Industrial Fund to acquire Putzmeister, the global concrete pump technology leader. From a supply chain perspective, Sany pursued the model of “whole industry chain”, while Putzmeister focused on the assembly and production of concrete pumping products while outsourcing the supply and sale of spare parts. After the integration, Sany’s supply chain system managers supported Putzmeister’s production line to help reduce their costs. Both sides also publicly expressed that Putzmeister would transfer a part of its role in the procurement and production of spare parts to China, while Sany would purchase its spare parts via Putzmeister. On the other hand, as Putzmeister adopts the high standards for global parts procurement, Sany will also improve manufacturing standards by adopting Putzmeister’s production standards.

From 2001 – 2008, the majority of mergers and acquisitions carried out by the equipment manufacturing companies have been by in North American and European companies. Asian companies instead focused mainly on acquiring technology and extensive production lines. Despite this, Asian enterprises have still managed to achieve impressive results in overseas outbound M&As. Although the number of transactions is lower than that of their American and European counterparts, Asian companies still accounted for more than 40% of the overall equipment manufacturing deals by value.

Analysis on those successful transactions reveals that successful buyers have some common characteristics that enable them to succeed in the midst of a variety of risks and costs. On the basis of Deloitte’s experience in cross-border mergers and acquisitions and enterprise case analysis, we summarize four priorities for M&A integration of Chinese equipment manufacturing enterprises.

![Chart 14: Performance of overseas M&As of equipment manufacturing industry - by geographic location of the buyer](chart14.png)

Source: Deloitte Analysis

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Priority II: Integration of products and services
To determine which products and services should be integrated following a transaction, it is necessary to evaluate an enterprise's previous market opportunities. On this basis, the enterprise must also consider its short-term and long-term product strategies. As short-term strategies are relatively easy to implement, an enterprise often repackages the solutions to expand market shares, leverage the cost advantage of either the buyer or seller to reduce the overall costs, or quickly absorbs the acquired target's technology to improve existing products. Nevertheless, it is crucial for both sides to develop long-term product strategies as early as possible, which may guide the enterprise to organize and allocate research and development resources more effectively so as to drive the synergy effect of deeper-level integration of products and technologies.

In September 2008, a consortium consisting of Zoomlion (a large Chinese leading enterprise engaged in the construction machinery and equipment manufacturing), Hony Capital, Goldman Sachs and Mandarin Capital Partners spent EUR271 million (RMB2.39 billion) to acquire Italy's CIFA. Upon the completion of this transaction, Zoomlion was given control of 60% of the target. Compared with its industry competitors, CIFA is the only provider that can offer a full-range of concrete equipments. Therefore, the merger greatly helped Zoomlion expand and improve its construction machinery products. Following the completion of the deal, Zoomlion focused on integrating their product manufacturing capabilities with CIFA, and subsequently built a plant within its PWP(Plant Within a Plant) plant at its Changsha headquarters, migrating CIFA’s whole production line from Europe to China. After the integration, Zoomlion gained CIFA’s technological skills and R&D practice, and was able to further expand its production volumes. Meanwhile, by leveraging the cost advantage of producing in China, Zoomlion had become a technologically-advanced enterprise, with the ability to produce a variety of concrete equipment at lower costs than its competitors. As a result, its market share in both the Chinese and Asian markets increased rapidly within a short period.

Priority III: Adjustment of brand strategies
A new brand strategy is the most obvious signal reflecting the integration direction of a new enterprise. Some acquirers choose to adopt a unified brand strategy to leverage the advantages of the original brand in order to reduce the barriers for new products to penetrate the market. Other enterprises select multi-brand strategy because the two brands have comparative market size and reputation, or the two brands are complementary in terms of product positioning and/or geography. Chinese enterprises generally continue to use the acquired brands in the international market to help realize overseas expansion, while also continuing to retain their own brands within domestic markets.

In October 2011, Haier announced a bid to acquire Sanyo Electric's washing machine and household refrigerator business in Japan, as well as its household white goods business in four countries in Southeast Asia. In 2012, Haier launched products in AQUA series in Japan. AQUA had previously been Sanyo’s high-end brand of washing machines with global leading processing technologies. After entering the Japanese market in 2002, Haier positioned itself as mid-range brand. After the acquisition of Sanyo, Haier adopted a “dual brand” strategy in considering customer acceptance of its brand positioning. Haier still adhered to its mid-range brand positioning and operated mid-market with its high performance/low price products. On the other hand, Haier entered into the Japanese high-end appliance market by leveraging AQUA’s high-end brand image. By doing so, Haier expanded AQUA’s product lines to create a comprehensive high-end brand covering different appliances such as washing machines and refrigerators. Via the "dual brand” strategy, Haier made full use of the available customer base of AQUA in Japan.
Priority IV: Integration of intangible resources

The post-merger integration of the enterprises includes the integration of both sides' tangible resources, such as corporate culture, human resources, management systems and finance. Compared to domestic M&A transactions, the overseas post-merger integration imposes more arduous challenges due to the difference in corporate culture, organizational management and labor quality. In particular, the integration of culture and human resources are the biggest challenges faced by enterprises after overseas M&A deals are completed.

The synergy effect of internal system integration can be verified by unit or cross units. Synergy opportunities may exist in each unit within the enterprises, as indicated in the table below.

### Figure 6: Synergy opportunities in each unit

<table>
<thead>
<tr>
<th>Unit</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology (IT)</td>
<td>Reduce IT costs through integrating IT systems and expanding their applications</td>
</tr>
<tr>
<td>Customer relationship management (CRM)</td>
<td>Expand product/service categories and improve management channels to strengthen customer relationships</td>
</tr>
<tr>
<td>Finance and administration</td>
<td>Reduce management costs by expanding financial and administrative service scopes</td>
</tr>
<tr>
<td>Product research and development</td>
<td>Develop products and services that provide one-stop solutions</td>
</tr>
<tr>
<td>Tax</td>
<td>Pursue tax cut opportunities through adjusting transactional and corporate structure</td>
</tr>
<tr>
<td>Human resources (HR)</td>
<td>Reduce HR costs by integrating and improving HR processes</td>
</tr>
<tr>
<td>Valuation</td>
<td>Constantly track and adjust valuations</td>
</tr>
<tr>
<td>Corporate real estate</td>
<td>Integrate real estate holdings of both parties, adopt short-term measures for cost reduction and long-term measures for cost optimization</td>
</tr>
</tbody>
</table>

Luoyang YTO Group (YTO) and Foton Lovol Group are China’s largest and second largest agricultural machinery enterprises. As a state-owned enterprise, YTO has a solid R&D foundation and is often on the cutting edge of high-end agricultural machinery. The private company Foton Lovol, on the other hand, has a flexible business strategy and provides unique services. Both enterprises concurrently bid for a well-known agricultural machinery enterprise in France. Drawing on governmental support and favorable conditions, YTO was able to win the bid in 2011. However, the post-merger integration resulted in numerous complications. The acquired manufacturing and production technology, solely dependent on information systems not part of the acquisition, led YTO to fail to develop a corresponding system migration, forcing the company to pay expensive system lease charges to the original parent company.
4. Lessons learned from industry leaders

4.1 Caterpillar

Company profile
Caterpillar (CAT) is the world’s largest manufacturer of earthwork and construction machinery and mining equipment, as well as a major global supplier of diesel and natural gas engines, industrial gas turbines and diesel-electric hybrid units.

Business strengths and best practice
Caterpillar first entered the international markets in the 1950s. In addition to establishing international branches, Caterpillar entered into Joint Ventures and implemented outbound M&A transactions to access new markets. Caterpillar focused on carefully selected strategies such as brand management and control over the Joint Ventures when deciding whether or not to enter into a market.

- Due to Japan’s restriction on foreign direct investment, in 1963, Caterpillar set up a joint venture with Mitsubishi Heavy Industries in Manufacturing plant and Sales, named Caterpillar Mitsubishi Co. Ltd in 1963. The venture was successful and gradually, from 2007 Caterpillar began to acquire the JV shares of Mitsubishi Heavy Industries, and was ultimately being able to integrate the JV as a part of Caterpillar and, gaining gain direct control Mitsubishi Heavy Industries’ product development and manufacturing process.

- In 1995, Caterpillar entered the Chinese market and established Caterpillar Xuzhou Co., Ltd., holding a 60% stake. From there, Caterpillar was able constantly to increase its holding stake to a current 84.4% holding at the time of writing.

- In 2004, Caterpillar China successfully acquired a 40% stake in Shandong Engineering Machinery Co., Ltd. (SEM) and subsequently entered the Shandong market. In 2008, Caterpillar announced the completion of the acquisition of the remaining 60% stake in SEM. This laid a solid foundation for its strategic base move into for its spare parts and machine production base in Shandong and its surrounding areas.

- However, not all of Caterpillar’s acquisitions have been a success. Caterpillar’s negotiations in the acquisition of XCMG ended in failure mainly due to the unwillingness of XCMG to give up the original XCMG brand and the significant change that the deal would have brought to its management. The Chinese government also strengthened the protection of its equipment manufacturing industry which caused Caterpillar to slow down its plan of establishing strategic bases in China and capture market share by taking advantage of local enterprises. As a result, Caterpillar decided to directly build its own factories and has thus far established 17 factories in China.

Conclusion
Caterpillar’s willingness to expand into local markets by forcing acquired companies to give up their own brands along with its desire to be involved in the management of the acquired company has played an active role in promoting the integration of enterprises and market channels. However, due to this aggressiveness, Caterpillar has encountered strong resistance in its subsequent forays into M&A transactions in China. Insistence on controlling power may actually reduce the chance of success in an M&A transaction.
4.2 Komatsu

Company profile
Komatsu Ltd. (Komatsu) is the world’s largest construction machinery and mining machinery manufacturer. Founded in 1921 and based in Tokyo, Komatsu produces construction machinery (e.g. excavators, bulldozers, loaders and dump trucks), industrial machinery (e.g. various large presses and cutting machines), logistics machinery (e.g. forklifts), and underground construction machinery (e.g. Tunnel Boring and shield machines).

Business strengths and best practice
Komatsu is Caterpillar’s main competitor in both technological advances and scale. Komatsu successfully expanded into the overseas markets by combining production with R&D, creating products of technological superiority, effective agency networks, and localizing overseas management teams.

Komatsu has established a number of ‘mother’ or development plants with R&D and production capabilities around the world. Under this model, the R&D department can closely observe and understand the manufacturing process, and more efficiently improve product design or production process.

At present, these mother plants are mainly located in traditional, mature markets such as America, Europe and Japan. Komatsu fully recognizes that it does not have the ability to overwhelm the competitors technologically by equipping with state-of-the-art technologies. Therefore, Komatsu proposed the DANTOTSU projects to create and develop technologies in which they have a comparative advantage over their competitors. In addition, the development of the DANTOTSU project has helped to significantly reduce the current production costs of Komatsu by over 10%.

Compared with general commodities, machinery equipment usually requires a great deal of after-sales maintenance services. The establishments of sound and efficient marketing coupled with a solid service network are the key steps necessary for Komatsu to expand into the overseas markets.

Komatsu established its business presence in China in 1980 with an office in Beijing. Since then, Komatsu has gradually increased its foothold, in the region, establishing 33 offices across the country, far surpassing the 4 offices its major competitor Caterpillar has set up. Komatsu has established a nation-wide marketing and service coverage with the perfect agency network.

One of Komatsu’s strategies has been in developing good relationships between agents and manufacturers through its technical support and training programs provided to the agents. It also adheres to the principle of localized management, reflected by hiring local management staff, which has been a very effective way to avoid conflicts due to cultural differences.

Conclusion
Komatsu’s business philosophy is to establish stations for R&D and production in those areas with specific market demand, developing massive agency channels in order to maintain harmonious relationships, and benefit from favorable local business environments. Although this way of penetrating the market may not be as efficient and direct as an M&A transaction, in the long run it establishes market relationships that are relatively more solid and stable.
4.3 Spark

Company profile
Spark Machine Tool Co., Ltd. (“Spark”) is a traditional Chinese state-owned enterprise. Its headquarters are in Tianshui City, Gansu Province in west China. Its major products include large numerically controlled lathes, numerically controlled face lathe, large horizontal lathe, computer-controlled roll lathe, precision roll grinding machine, double column vertical lathe, face lathe, roll lathe, special machinery, heavy duty horizontal lathe and automatic precision low-pressure casting machine, etc.

Business strengths and best practice
Among Chinese equipment manufacturers, Spark began engaging in overseas M&A deals earlier than its competitors. With a steadily-developing acquisition strategy, it was able to rapidly expand in terms of size and capability.

Prior to engaging in an acquisition, Spark would define its strategic goals, such as absorbing advanced technologies, and would then identify the potential M&A targets accordingly to ensure a successful acquisition. During the process of a transaction, Spark always targeted companies and areas that they were already familiar with. Furthermore, they followed a number of simple guidelines:

• The acquired company should be controllable following the acquisition;
• Both sides should be compatible and complementary in business;
• The leadership of the target company should possess a good reputation in the profession;
• The target should have its own advanced patent technologies.

In 2008, Spark acquired Somab, a French company. The acquisition helped Spark improve its technology, market channels as well as management. After the acquisition, Somab became Spark’s overseas R&D center, so as to realize the model of domestic manufacturing and overseas R&D. As a successful player in the global market for many years, Somab had extensive experience and diverse channels in business operation in global markets, allowing Spark to accelerate its business into the overseas markets.

Prior to this acquisition, Somab and Spark had been in cooperation for a while. During this period, Spark gained in-depth knowledge of Somab’s product technology and operation management, building up an effective communication mechanism which would later prove beneficial to removing the obstacles for a successful M&A deal The acquisition helped Spark improve its technology, market channels, and its management. Spark managed to successfully master Somab’s five-axis linkage technology providing opportunities to complete three scientific research projects in collaboration with Somab. After the acquisition, Somab became Spark’s overseas R&D center, realizing a domestic model of manufacturing and overseas R&D.

Conclusion
Although, Spark is much smaller than Komatsu and Caterpillar in terms of scale, it was able to complete a successful acquisition of an overseas company. By defining strategic objectives, developing standards within these objectives, and continuously liaising with the target, Spark was able to achieve its goals in line with its corporate mantra of “steady development with clear goals.”
Conclusions

Chinese equipment manufacturing enterprises have made tremendous progress in just a few years, most of which can be attributed to the explosive growth of the Chinese market. Ten years ago, Chinese enterprises were still learning how to manufacture products, whereas today, they are the ones acquiring the companies they consider to be industry leaders.

In order to prepare this Report on the overseas expansion of China’s equipment manufacturing industry, we visited a number of well-known enterprises in the industry. Multiple senior executives shared their company’s forward-looking plans, but were also aware of potential difficulties arising. They also understood that China’s rapid economic growth was not sustainable, and that the industry would experience a steady and slow developmental pace. For the sake of long-term sustainable development and dominant position in future competition, it is imperative for Chinese enterprises to accelerate the development of their own technical strengths R&D capabilities.

As with any overseas M&A transaction, difficulties will be inevitable, from the cooperation required between the buyer and seller, to buyers not conducting due diligence on their target company. Lack of planning and research will lead to huge risks and immense uncertainties post M&A integration. To help mitigate or minimize the potential difficulties, it is wise for Chinese enterprises to engage with experienced international institutions that have the ability to help identifying many significant problems that should have been avoided. Cooperation with international institutions will not only provide Chinese enterprises insights into target companies, but also gain valuable information into the country and social environment where the target companies reside.

The potential for overseas growth for Chinese equipment manufacturing enterprises is expanding, and with the funds available to engage in M&A transactions, we believe that Chinese enterprises will continue to bring more value to this industry.

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