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## INDUSTRY OVERVIEW

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*Information and statistics below are extracted from official government publications as well as an industry report prepared by Ipsos, dated 11 December 2013 (the “Ipsos Report”), which we commissioned. Except for the Ipsos Report referred to below, none of our Group, its Connected Person or any other party involved in the Global Offering has commissioned any such third-party sources. The information and statistics extracted from the Ipsos Report reflect an estimate of market conditions based on Ipsos’ research and analysis. The information and statistics may not be consistent with other information and statistics compiled within or outside the PRC. For a discussion of the sources, methodologies, bases and assumptions used in the preparation of the Ipsos Report, please refer to the section headed “—Source of Information” in this prospectus. For a discussion of risks relating to our industry, please refer to the section headed “Risk Factors—Risks Relating to Our Industry” in this prospectus.*

*We believe that the Ipsos Report is an appropriate source for the information below, including forward-looking information on the industry and our business. We have taken reasonable care in extracting and reproducing such information. We and the Sole Sponsor have no reason to believe that such information is false or misleading or that any material fact has been omitted that would render such information false or misleading. The information has not been independently verified by us or the Sole Global Coordinator, Sole Sponsor and Sole Bookrunner, any of our or its respective affiliates or advisers, or any party involved in the Global Offering. No representation is given as to its accuracy, completeness or fairness.*

### SOURCE OF INFORMATION

In connection with the Global Offering, we commissioned an independent market intelligence company, Ipsos, to conduct an industry overview and a competitive analysis of the plastic injection mold fabrication and plastic injection molding industry. Plastic injection molding is the process by which plastic components are manufactured by employing plastic injection mold. Ipsos provided a report entitled “Market Landscape and Competitive Analysis for Precision Mold and Precision Plastic Injection in the PRC” dated 11 December 2013. We have incurred a total of approximately HK\$338,000 in fees and expenses for the preparation of the commissioned report, which we believe to be in line with the market rate. The payment of such amount was not contingent upon the success of our Global Offering or upon the results of the Ipsos Report. Except for the Ipsos Report, we did not commission any other report in connection with the Global Offering.

Ipsos is a market research company that conducts research on market profiles, market size, share and segmentation analysis, distribution and value analysis, competition tracking and corporate intelligence. We have included certain information from the Ipsos Report in this prospectus because we believe that such information facilitates an understanding of the relevant market for potential investors.

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Ipsos' independent research was undertaken through both primary and secondary sources. Primary research involved detailed analysis on plastic mold and plastic injection molding industry, data and information from various governmental authorities and industry associations. Secondary research involved reviewing company reports, independent research reports and data based on Ipsos' own research database. The overall accuracy of the research results may be affected by the assumptions and choice of research parameters in Ipsos' research process.

The Ipsos Report has been prepared on the assumption that there is no external threats such as natural disasters or outbreak of diseases to affect the supply and demand of the plastic injection mold and plastic injection molding industry. It has also been prepared on the basis that the growth of the PRC economy is expected to slow down from previous periods, and its GDP would grow at an average growth rate of approximately 7.0% from 2011 to 2015 according to the "Twelfth Five-Year Plan" prepared by the PRC government.

Please refer to the section "Risk Factors—Certain industry and other information and statistics contained in this prospectus are derived from publicly available government and official sources and a market research report commissioned by us, which have not been verified by us." We cannot assure you regarding the accuracy or completeness of the factors, forecasts and statistics in this prospectus obtained from Independent Third Party sources, such as government publications, market data providers and the Ipsos Report.

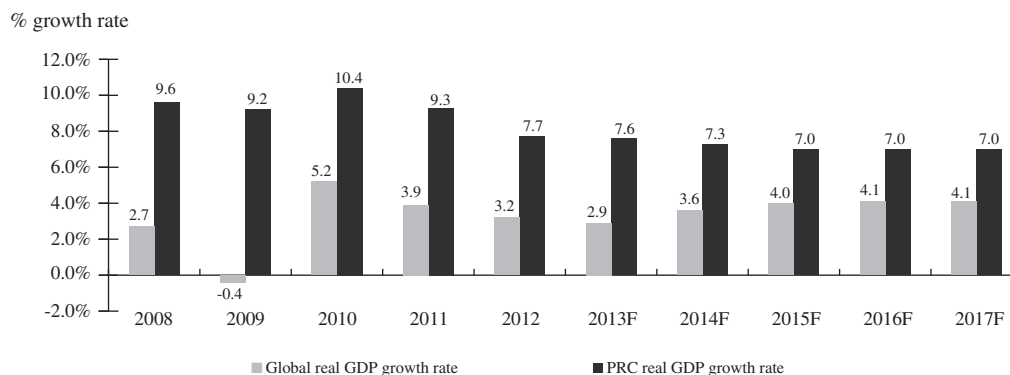
### OVERVIEW OF THE GLOBAL ECONOMY AND THE PRC ECONOMY

According to the International Monetary Fund (the "IMF"), the global real GDP recorded a recession of 0.4% in 2009 and then rebounded to 5.2% in 2010 and decreased to 3.9% in 2011 and further decreased to 3.2% in 2012. The real GDP growth of the PRC experienced a same trend during the period, but was able to record much higher growth rate than that of the global real GDP. The real GDP growth rate of the PRC during the period from 2008 to 2012 ranged from 7.7% to 10.4%.

The IMF forecasted that the global real GDP growth rate shall be 2.9% in 2013, 3.6% in 2014, 4.0% in 2015, and 4.1% in 2016 and 2017. The IMF forecasted that the PRC's real GDP growth rate shall continue to be above the global GDP counterpart and range from 7.0% and 7.6% from 2013 to 2017.

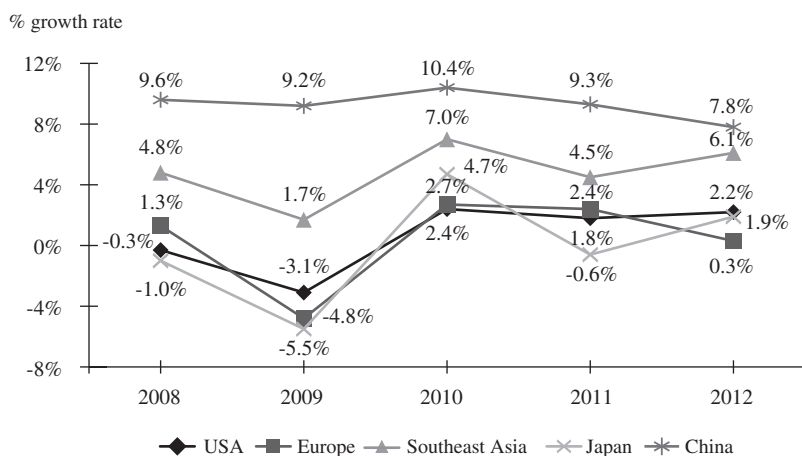
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Set out below is the historical real GDP and GDP growth rate of the PRC and the world from 2008 to 2012, respectively, and the forecasted real GDP and GDP growth rate of the PRC and the world from 2013 to 2017, respectively.



Source: IMF

Set out below is the historical real GDP growth rate of USA, Europe, China, Japan and Southeast Asia from 2008 to 2012:



Sources: World Bank; IMF; Euromonitor; Eurostat; OECD; United Nations; the Ipsos Report

As indicated in the chart above, while the PRC's real GDP growth declined from 10.4% in 2010 to 7.8% in 2012 but still exhibited a higher growth when compared with other major economies, such as that for Europe, which declined from 2.7% to 0.3%. The real GDP growth of USA, Japan and Southeast Asia all shown an upward trend from 2011 to 2012, indicating a recovery of economy from the financial crisis in 2009.

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### INTRODUCTION OF THE PLASTIC INJECTION MOLD FABRICATION AND PLASTIC INJECTION MOLDING INDUSTRY

#### Overview of plastic injection mold fabrication and plastic injection molding

According to the Ipsos Report, plastic molds can be categorised by function into six types, including plastic injection molds. A plastic injection mold is a hollowed-out block utilised in the plastic injection molding process to manufacture plastic components. Plastic liquid is injected into this mold and subsequently hardens inside the mold, with the plastic adopting the shape of the mold.

In 2012, plastic injection molds accounted for approximately 50.0% of the plastic mold market in the PRC as injection molds are necessary for plastic injection molding, and plastic injection molding is the most common method of plastic components manufacturing.

Plastic injection molding is a manufacturing process for producing plastic components by injecting melted plastic resins into a plastic injection mold. It is ideal for producing high volumes of identical objects. Plastic injection molding can be used to manufacture products such as USB drives, smartphones accessories, medical products such as disposable syringes, teleconference phone terminals, household electrical appliances such as washing machines and refrigerators, and most other plastic products.

The plastic injection molding process generally takes only 15 to 60 seconds, and is able to achieve high efficiency in production. The production operation can also be automated. Moreover, products manufactured by plastic injection molding can be varied in colour, shape and size, and can range from the smaller components such as mobile phone buttons to bigger components such as entire body panels of cars. Currently, plastic injection molding has been widely applied in industries such as transportation, packaging, telecommunications, construction, household electrical appliances, automotives, computers, aerospace, and military sectors. Because of the high cost of plastic injection molds, it is not suitable for small-volume production.

A majority of plastic injection mold fabricators and plastic components manufacturers in the PRC are located near the Pearl River Delta area and the Yangtze River Delta area. The mold industry in the Yangtze River Delta has developed rapidly since the 1990s. Certain provinces and cities in China have also become specialised in specific areas of mold development. For example, household electrical appliances mold fabricators are primarily located in Zhejiang province, the PRC.

#### Production output value of the plastic injection mold and plastic injection molding industry segments

The estimated global production output value of plastic injection molds grew from about RMB91.3 billion in 2008 to approximately RMB115.2 billion in 2012, at a CAGR of approximately 6.0%. For the same period, estimated global production value of plastic products manufactured by plastic injection molding grew from approximately RMB1,012.6 billion in 2008 to approximately RMB1,853.4 billion in 2012, at a CAGR of approximately 16.3%.

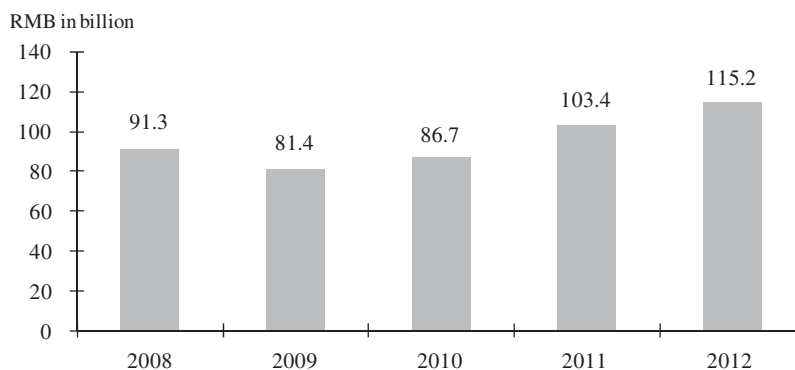
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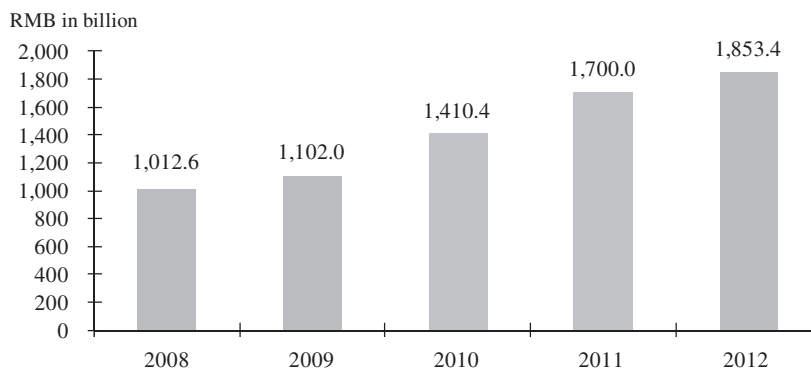
During the global economic crisis from 2008 to 2010, global production output value of both industry segments declined as global plastic consumption dropped. However, global output value of plastic products manufactured by plastic injection molding was less affected by the global economic crisis than that of plastic injection molds because the plastic injection molding industry is related to various industries so that the impact was smoothed out.

Set out below is the estimated global production output value of plastic injection molds from 2008 to 2012.



*Source: The Ipsos Report*

Set out below is the estimated global production output value of plastic injection molding products from 2008 to 2012:



*Source: The Ipsos Report*

### **Key players in the plastic injection mold fabrication and plastic injection molding industry segments**

Historically, the United States and Germany are the top two countries for global outputs of plastic injection molds and plastic components manufactured utilising the plastic injection molding process. In recent years, however, due to cheaper labour costs in the PRC, there is an emerging trend of foreign enterprises relocating manufacturing bases and increasing investment capital in the PRC plastic injection mold fabrication and plastic injection molding industry segments.

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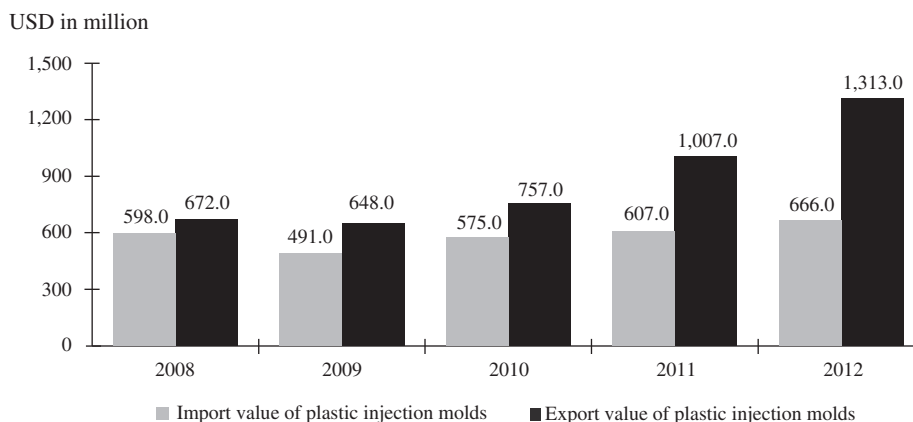
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In 2012, of the RMB115.2 billion global production output value of plastic injection molds, European countries, the Americas and the PRC contributed 31%, 30% and 22%, respectively, of the overall global production output value. In the case of global production output value of plastic components manufactured by plastic injection molding, the Americas contributed 30%, European countries contributed 27% and the PRC contributed 28% of the overall global production output value.

The import and export values of plastic injection molds in the PRC grew at a CAGR of approximately 2.7% and 18.2%, respectively, from 2008 to 2012. The import and export values of plastic injection molds dropped in 2009 because of the global financial crisis. The import and export values of plastic injection molds grew rapidly again since 2010, particularly for export value, primarily due to (i) increased demand in overseas market; and (ii) increasing competitiveness of the PRC's mold fabricators as a result of improved technology which led to increased cost-effectiveness and improved quality, and (iii) industrialised countries relocating their production bases to the PRC to lower their production costs.

Set out below is the total import and export value of plastic injection molds in the PRC from 2008 to 2012:



Source: The PRC customs

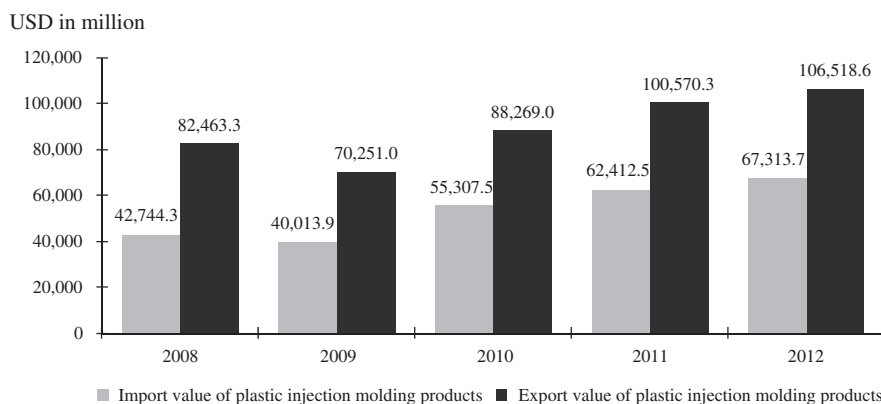
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Similar to the market of plastic injection mold fabrication, the import and export values of plastic components manufactured by plastic injection molding dropped from 2008 to 2009 respectively because of the global financial crisis. These values grew again from 2010 onward as local and export demand rebounded. Furthermore, the import value of this segment in the PRC grew faster than the export value of this segment in past years, indicating that the PRC plastic injection molding industry is still weak in the manufacturing of certain plastic products by plastic injection molding.

Set out below is the total import and export values of plastic injection molding products in the PRC from 2008 to 2012:



Source: The PRC customs

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### OVERVIEW OF THE PLASTIC INJECTION MOLD FABRICATION AND PLASTIC INJECTION MOLDING SEGMENTS IN THE PRC

#### Classification of plastic injection molds in the PRC

According to the “National Standard of the People’s Republic of China GB/T14486-2008—Dimensional Tolerances for Moulded Plastic Parts” (《中華人民共和國國家標準 GB/T14486-2008—塑料模塑件尺寸公差》), plastic injection molds may be classified in terms of precision level from MT1 to MT7, with MT1 being the most precise (lowest tolerance level) and MT7 the least precise (highest tolerance level).

According to market norms in the PRC, plastic injection molds with MT3 precision level or above may be further classified as either performance molds or standard molds, depending on the factors as summarised in the table below:

<u>Type</u>	<u>Characteristics</u>	<u>Applications</u>
Performance molds	Relatively smaller in size, have a higher number of cavities, involve a less complex structural design, used in shorter production cycles in the plastic components manufacturing process	Packaging products, digital products and medical products
Standard molds	Relatively larger in size, have a lower number of cavities, involve a more complex structural design and consist of a higher number of components per mold	Automotives, household electrical appliances, office equipment and industrial products

*Source: The Ipsos Report*



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### Classification of plastic components manufactured by plastic injection molding in the PRC

Plastic components manufactured by plastic injection molding employing plastic injection molds with MT3 precision level or above can also be further categorised into two types depending on the factors as summarised in the table below:

<u>Type</u>	<u>Characteristics</u>	<u>Applications</u>
Plastic components manufactured by performance injection molding	<ul style="list-style-type: none"> <li>• Manufactured by employing performance molds</li> <li>• Targeted and adopted for products with fast consumption rates</li> <li>• relatively smaller in size, have shorter production cycles</li> <li>• typically mass produced with relatively higher volume</li> </ul>	Medical disposables, packaging, digital cameras and mobile phones
Plastic components manufactured by standard injection molding	<ul style="list-style-type: none"> <li>• Manufactured by employing standard molds</li> <li>• relatively bigger in size, have longer production cycles</li> <li>• typically involves relatively more complex secondary processes</li> </ul>	Building materials, automotives, household electrical appliances, hardware, toys, large medical equipment and other daily necessities

*Source: The Ipsos Report*

### **Classification of plastic components manufactured by special decorative molding**

Special decorative molding entails various modifications to the typical plastic injection molding process to achieve certain desired visual and quality effects. Special decorative molding techniques include the following types:

- *In-Mold Labelling (IML)*. IML techniques allow for the desired patterns and logos to be embedded as part of the plastic components. IML is achieved by placing a film printed with the desired pattern or logo into the plastic injection mold, thereby enabling the pattern or logo to be imprinted simultaneously in the plastic injection molding process. Patterns and logos appearing in plastic components manufactured using IML techniques generally have greater wear resistance and are more colourful than patterns and logos that are spray-painted onto the surface of the plastic components.
- *Double-Shot Injection Molding*. Double-shot injection molding uses plastic resins of two different colours or two different types of plastic resins in the same plastic injection molding process, thereby enhancing the variety of visual effect options.
- *Rapid Heat Cycle Molding (RHCM)*. RHCM is a relatively new plastic injection molding technique that involves the rapid heating and cooling of the mold. This process may result in plastic components with better visual effects than traditional plastic injection molding, and is generally used to produce plastic components with glossy or silky surfaces.

Examples of products manufactured by special decorative molding include plastic components of consumer electronic products such as the casing of video game devices and smartphones.

### **MARKET ANALYSIS OF THE PLASTIC INJECTION MOLD FABRICATION AND PLASTIC INJECTION MOLDING SEGMENTS IN THE PRC**

#### **Market size of the plastic injection mold fabrication segment in the PRC**

In 2012, the production output value of plastic injection molds of MT3 precision level or above reached RMB25.3 billion, or 41.0% of the total production output value of plastic injection molds in the PRC. Out of the total production output value of plastic injection mold of MT3 precision level or above in the PRC in 2012, performance molds contributed RMB9.9 billion or 39%, and standard molds contributed RMB15.4 billion or 61%.

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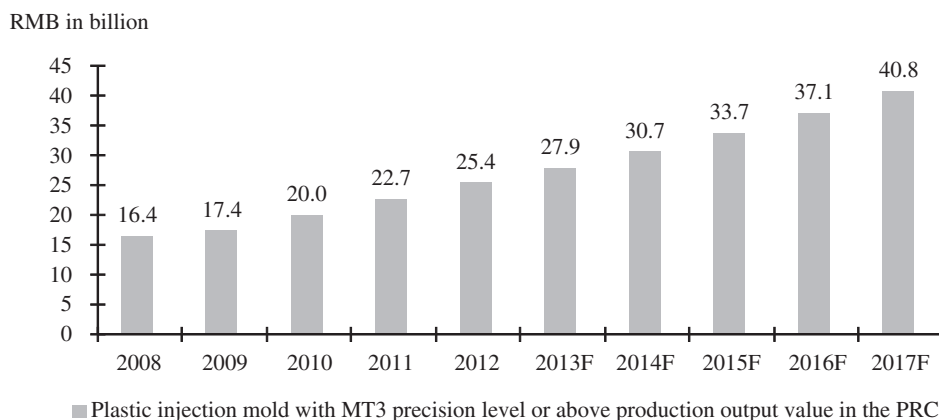
### Market size of the plastic injection molding segment in the PRC

According to the Ipsos Report, in 2012, the total production output value of plastic components manufactured by performance molding and standardised molding amounted to approximately RMB518.9 billion, representing approximately 58% of the total production output value of plastic components manufactured by plastic injection molding in the PRC. Of the total production output value of plastic components manufactured by plastic injection molding in 2012, the total production output value of performance molding products amounted to RMB180.5 billion while that of plastic components manufactured by standard molding amounted to RMB338.3 billion.

In 2012, the PRC ranked second globally in terms of performance and standard plastic injection molding products production output value, which accounted for approximately 28.0% of that of the global output value.

### Production output value

Set out below is the estimated total production output value of plastic injection molds with MT3 precision level or above in the PRC from 2008 to 2012, and the forecasted total production output value of plastic injection molds with MT3 precision level or above in the PRC from 2013 to 2017:



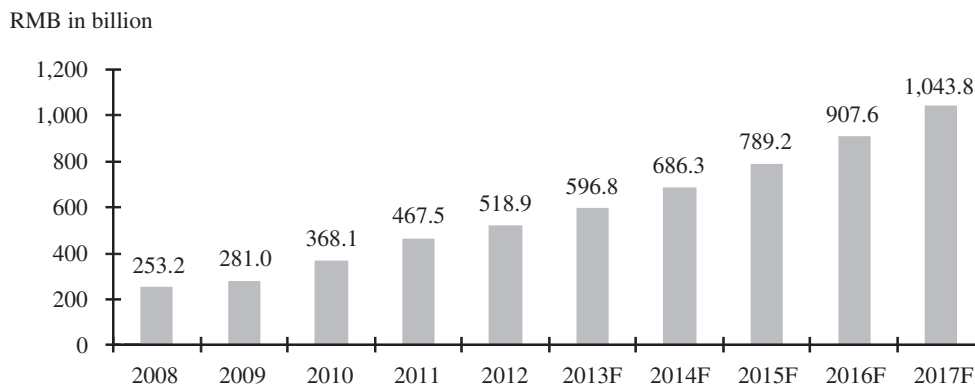
Sources: National Bureau of Statistics of the PRC, the Ipsos Report

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Set out below is the estimated total production output value of plastic components manufactured by performance and standard plastic injection molds in the PRC from 2008 to 2012, and the forecasted total production output value of plastic components manufactured by the performance and standard plastic injection molds in the PRC from 2013 to 2017:



Sources: National Bureau of Statistics of the PRC, the Ipsos Report

The total production output value of plastic injection molds with MT3 precision level or above in the PRC increased from approximately RMB16.4 billion in 2008 to approximately RMB25.4 billion in 2012, representing a CAGR of approximately 11.5%. The total production output of plastic components manufactured by performance and standard plastic injection molding in the PRC increased from approximately RMB253.2 billion in 2008 to approximately RMB518.9 billion in 2012, at a CAGR of approximately 19.7%. The industry experienced a slowdown in 2009 and 2012 due to the global financial crisis and the European debt crisis, respectively. As a result, the total production output value of plastic injection molds with MT3 precision level or above and that of plastic components manufactured by performance and standard plastic injection molding grew at approximately 10.7% and 11.0%, respectively, from 2009 to 2012, compared to a CAGR of 30.1% and 26.3%, respectively, from 2010 to 2011. The strong growth from 2010 to 2011 was primarily due to the strong downstream demand and the increase in selling price.

According to the Ipsos Report, the total production output value of plastic injection molds with MT3 precision level or above in the PRC is expected to increase from approximately RMB27.9 billion in 2013 to approximately RMB40.8 billion in 2017, at a CAGR of approximately 10.0%, while the total production output of plastic components manufactured by plastic injection molding in the PRC is expected to increase from approximately RMB596.8 billion in 2013 to approximately RMB1,043.8 billion in 2017, at a CAGR of approximately 15.0%. Such growth in the production output value of both segments are mainly attributable to the strong growth of domestic demand driven by (i) the anticipated recovery of the global economy; and (ii) the PRC government's policy aiming at upgrading and improving product quality and production technology of the plastic mold industry, as set out in the Twelfth Five-Year Plan.

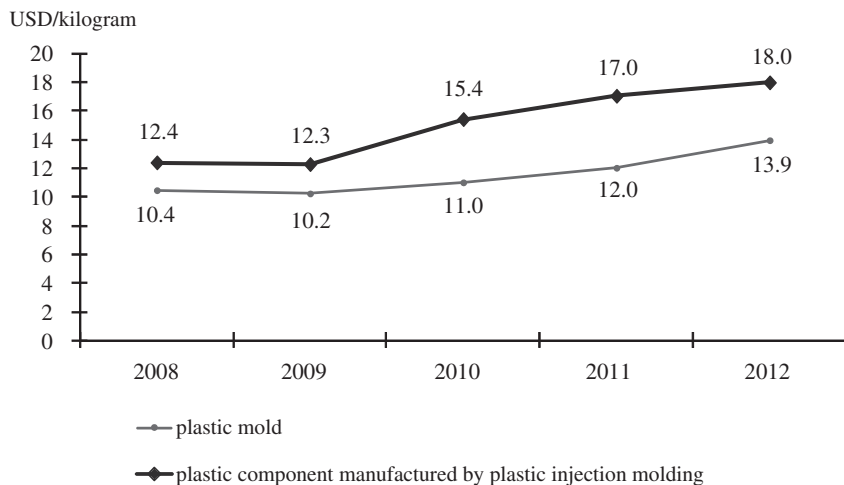
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### Average export price trend

Set out below is the average export price of plastic injection molds and plastic components manufactured by plastic injection molding in the PRC from 2008 to 2012:



Sources: *The PRC customs, the Ipsos Report*

The average per unit price of plastic injection molds and plastic components manufactured by plastic injection molding have been increasing in recent years. The average price of exported plastic injection molds increased from approximately USD10.4 per kilogram in 2008 to approximately USD13.9 per kilogram in 2012, at a CAGR of approximately 7.5%. During the same period, the average price of exported plastic components manufactured by plastic injection molding grew from approximately USD12.4 per kilogram in 2008 to approximately USD18.0 per kilogram in 2012, at a CAGR of approximately 9.8%. Such increases were primarily due to increasing production costs and a shift to higher priced products by the PRC manufacturers.

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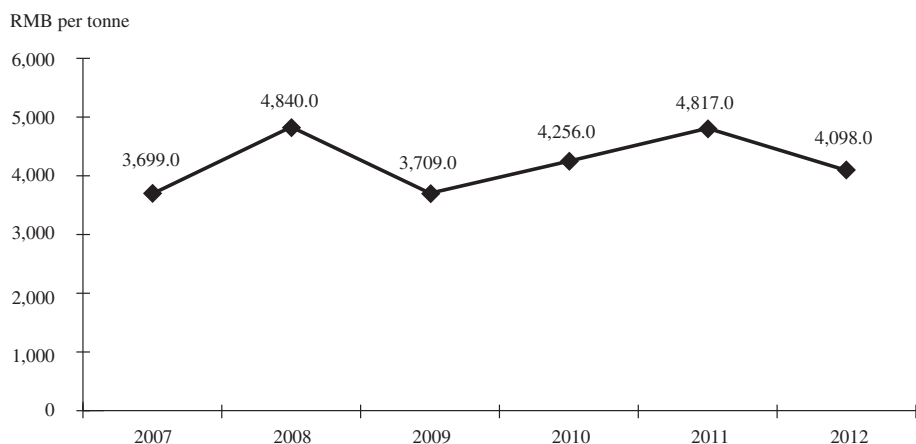
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### Key raw materials price trend

A key raw material for producing plastic injection molds is steel.

Set out below is the average price of steel in the PRC from 2007 to 2012:



*Notes:* Price trend represents high-speed wire-rod –  $\phi$ 6.5mm (全國普通高速綫材  $\phi$ 6.5mm 價格走勢), one of the many types of steel products in the PRC.

*Source:* Ministry of Commerce of the PRC

The average annual price of steel increased from approximately RMB3,699 per tonne in 2007 to approximately RMB4,098.0 per tonne in 2012, at a CAGR of approximately 2.1%. From 2007 to 2008, the surge in the price of upper-stream raw materials such as iron ore, coupled with a strong demand for steel, caused the price of steel in the PRC to increase by 30.8% to approximately RMB4,840.0 per tonne in 2008. In 2012, as a result of the global economic recession and with a slowing demand for industrial production, the average annual price of steel declined by approximately 14.9% to approximately RMB4,098 per tonne.

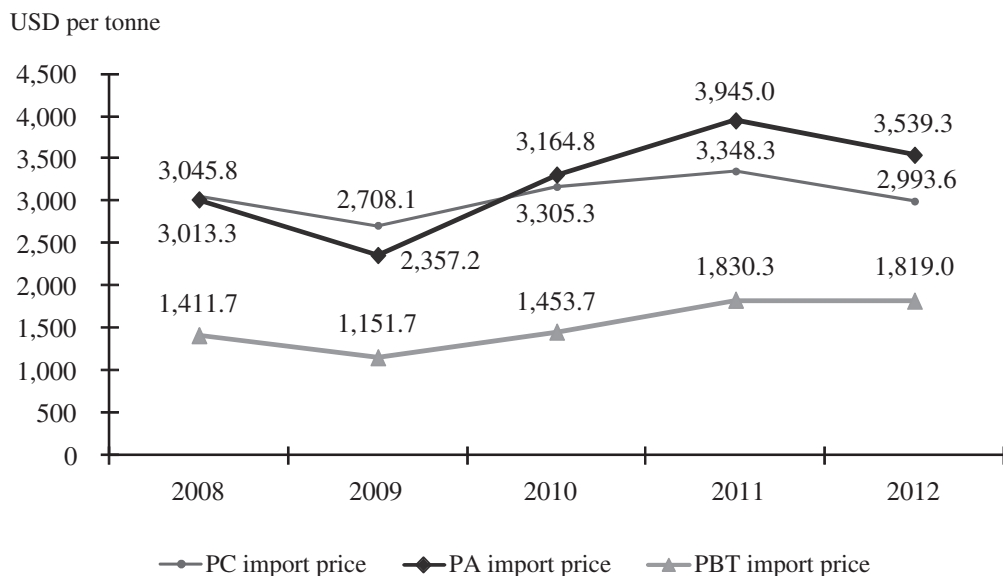
Commonly used key raw material for plastic components manufactured by employing performance and standard plastic injection molds is plastic resins namely polycarbonate (“PC”), polyamide (“PA”, also commonly known as nylon), and polybutylene terephthalate (“PBT”).

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Set out below is the average price of PC, PA and PBT in the PRC from 2008 to 2012:



Source: China plastic price index (中國塑料現貨價格指數)

The market price of these key raw materials is highly correlated to the global economy. In 2009, affected by the global financial crisis, the demand for durable goods was weak as a result of the global financial crisis, and this caused an adverse impact to the global engineering plastics industry. As a result, the price of PC, PA and PBT declined from 2008 to 2009. During 2010 to 2011, as a result of the rising raw material prices and a strong demand from downstream industries, the price of PC, PA and PBT rebounded to approximately USD3,348.3, USD3,945.0 and USD1,830.3 per tonne, respectively, in 2011. In 2012, due to the European debt crisis and the global economic downturn, the price of PC, PA and PBT dropped again.

### OVERVIEW OF THE DOWNSTREAM INDUSTRIES OF THE PLASTIC INJECTION MOLD FABRICATION AND PLASTIC COMPONENTS MANUFACTURED BY EMPLOYING PLASTIC INJECTION MOLDS

Plastic injection molds and plastic components manufactured by plastic injection molding are intermediate products that depend heavily on demand from downstream industries, such as the household electrical appliances industry, automotive industry, mobile phones industry, digital devices industry, commercial telecommunication industry, video game devices industry, pachinko industry and medical devices industry. As product life cycle becomes shorter, there is an increasing demand for molds with higher precision and dimensional accuracies to eliminate the need for fine-tuning products that would otherwise be required if a low quality mold is used. Customers of plastic injection molds and plastic components manufactured by plastic injection molding are mainly original equipment manufacturers (OEM), original design manufacturers (ODM) and original brand manufacturers (OBM) within these industries. Therefore, if the downstream industries are growing rapidly, it will significantly increase the demand for the plastic injection molds and plastic components manufactured by plastic injection molding.

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Set out below is a brief description of certain key downstream industries of the plastic injection mold fabrication and plastic injection molding:

### Household electrical appliances

According to statistics from the China Household Electrical Appliances Association (中國家用電器協會), televisions, air conditioners and other appliances used an average of approximately 1.5 to 2.5 kilogram of plastics per item.

Set out below is a summary of the production volumes and the number of plastic injection molds needed for new product models/product lines of household electrical appliances in the PRC in 2012:

<b>Product</b>	<b>Production Volume for the year ended 31 December 2012 (approx.)</b>	<b>No. of plastic injection molds needed for new product model/ product line</b>
Refrigerators (including freezers)	84.3 million units	150-200
Washing machines (automated)	68.2 million units	60-70
Air conditioners	132.8 million units	50-60
Television sets	128.2 million units	10-20

*Source: The Ipsos Report*

The demand for plastics in the household electrical appliances sector is over one million tonnes each year. The use of plastics is expected to continue to expand in the field of household electrical appliances as plastic components are able to substitute metal components in the production of household electrical appliances due to the improvement of materials and production technologies. The household electrical appliances industry is, however, subject to general economic conditions, which may have an impact on disposable income and thus demand for the addition and/or replacement of household electrical appliances.

### Automotive

For the automotive industry, a large range of functional parts of automobiles are produced using the plastic injection molding process. Production of an automobile generally requires more than 200 units of interior plastic components.

The plastic consumption volume in the automotive industry accounted for approximately 8.0% to 10.0% of the total consumption volume of plastics in the PRC in 2012. Automotive plastic products are one of the industry sectors with huge growth potential for the plastics industry in China. As the trend of automotive development is moving towards lightweight, energy-saving and environmentally friendly vehicles, plastic materials are expected to be more



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widely used for the manufacturing of automotive parts. According to the China Die & Mould Industry Association (中國模具工業協會), two to three kilogram of metal materials can be substituted by one kilogram of plastic, making vehicles lighter and more economical to run; fuel consumption can be reduced by approximately 6.0% to 8.0% when the weight of an automobile is decreased by approximately 10.0%. In fact, parts of automotive power systems, intake and exhaust systems, electronic systems, fuel tanks and transmission are also shifting towards the use of plastics instead of metal. As a result of the global trend of fuel saving, it is expected that the use of plastic injection molds and plastic components manufactured by plastic injection molding would be increased in the automotive industry. In the PRC, the production value of automotive industry is expected to grow from an estimated RMB6,147.4 billion in 2013 to an estimated RMB10,482.5 billion in 2017, at a CAGR of approximately 14.3%; meanwhile, the production volume of automotive industry in China will increase from an estimated 21.0 million units in 2013 to an estimated 28.6 million units in 2017, at a CAGR of approximately 8.0%. Such growth will mainly be driven by the increasing disposable income, urbanisation, and share of young cohorts in buyers, and the comparatively lower automotive penetration in the PRC compared to developed countries. Although the automotive industry in the PRC has gone through a rapid development, the market is still underpenetrated compared to other developed countries such as the United States and Japan. For example, the passenger vehicle penetration in the PRC was about 4.4% in 2012, which was significantly lower than that of the United States and Japan with penetration of about 42.0% and 46.0%, respectively, in the same year. However, as automobiles are regarded as luxury goods, the automotive industry is subject to general economic conditions, which may have a significant impact on the demand for addition and/or replacement of automobiles.

### **Mobile phones**

Plastic injection molding can also be applied in the production of mobile phone cases and packaging. For example, the production of a mobile phone requires 30 to 40 sets of molds. According to the Ipsos Report, the production volume of mobile phones in the PRC reached approximately 1.18 billion units in 2012.

In particular, the sales value of smartphones is expected to continue increasing in China. There is also an increasing demand from the Chinese consumers for high quality and sophisticated mobile phones in recent years. As a result, mobile phone manufacturers are keen on improving the colour, texture and features of mobile phones, which in turn increases the demand for plastic injection molds and plastic components manufactured by plastic injection molding. Notwithstanding the high demand for mobile phones, mobile phone companies are competing amongst themselves vigorously. As such, suppliers for any particular mobile phone companies might be subject to risks that the respective mobile phone companies to which they supply products may lose market share and in such cases, the relevant suppliers to the mobile phone companies losing market share may be materially and adversely affected.

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### **Digital devices**

Approximately 60.0% to 80.0% of digital devices components are plastic component manufactured by plastic injection molding. For example, a MP3/MP4 music player requires approximately 20 to 30 sets of molds; and a desktop computer requires approximately 30 sets of molds. According to the Ipsos Report, the PRC accounted for approximately 30.0% of the total global production value of digital devices in 2012. The increase in the production value of digital devices in the PRC drives the demand for the plastic injection molds and plastic components manufactured by plastic injection molding in the country. As with other fast moving consumer goods, digital devices are subject to fast changes in customer tastes and trends so that a popular product or model may become unpopular within a short period of time. As such, a supplier of parts or components for any particular product may be subject to risks that such a product might become unpopular within a short period of time.

### **Commercial telecommunication equipment**

According to the Ipsos Report, commercial telecommunication equipment has been widely used in the PRC market as well as the global market. The production value of commercial telecommunication equipment in the PRC reached an estimated RMB756.1 billion in 2012, an increase of 35.2% compared to 2008.

With the rising domestic demand for commercial telecommunication equipment coupled with the continued economic growth of the PRC, the production value of commercial telecommunication equipment in the PRC has increased. This has boosted the demand for plastic injection molds and plastic injection molding in China.

Moreover, telecommunications, networking, and e-government are the focuses announced in the 12th Five Year Plan of the PRC. Therefore, the PRC government's support of and investment in the commercial telecommunication equipment manufacturing industry are expected. This is also expected to drive the demand for plastic injection molds and plastic injection molding in the PRC. However, as the demand for commercial telecommunication equipment is primarily driven by general economic conditions and business environment, an economic downturn or gloomy business outlook would decrease commercial spending and thus the demand for commercial telecommunication equipment.

### **Video game devices**

According to the Ipsos Report, the production value in the PRC (in terms of processing trade) of video game devices was approximately RMB50.0 billion in 2012. "Processing trade" in the context of the PRC means a kind of business activities in which a company imports all or part of the raw materials, parts, components, packaging materials, and then re-exports the finished products after processing or assembly.

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Video games for smartphones and tablets have proliferated in the recent three to five years and the trend of playing video games on smartphones and tablets has adversely affected the production and sales of video game devices globally during this period. However, both the production value (in terms of processing trade) and the export value of video game devices picked up in 2012 in the PRC. Compared to 2011, the production value (in terms of processing trade) of video game devices increased by about 32.3% and reached approximately RMB50.0 billion in 2012. Such increase was mainly due to the introduction of new video game devices by prominent designers and producers of video game devices. This has driven the demand for the plastic injection mold fabrication and plastic injection molding in the PRC. The outlook of video game devices industry is, however, highly dependent on whether it can compete successfully with video games for smartphones and tablets.

### **Pachinko**

According to the Ipsos Report, the production value (in terms of processing trade) of pachinko grew significantly from approximately RMB2.6 billion in 2008 to approximately RMB7.3 billion in 2012, at a CAGR of about 29.4%. “Processing trade” in the context of the PRC means a kind of business activities in which a company imports all or part of the raw materials, parts, components, packaging materials, and then re-exports the finished products after processing or assembly.

In early 2012, the entertainment industry, including the electronic game arcades, was named as one of the major industries for future development in the 12th Five Year Plan of the PRC. It is expected that the relevant government policies will assist the pachinko manufacturing industry (in terms of processing trade) in the PRC, and thus boosting the demand for plastic injection molds and plastic injection molding in the PRC. As the demand for pachinko is mostly driven by the Japan market, the outlook of pachinko is also highly dependent on general economic conditions and customers tastes for pachinko in Japan.

### **Medical devices**

In 2012, approximately 75.0% of the total plastic medical devices produced in the PRC involved plastic components manufactured by plastic injection molding. Plastic injection medical devices can be broadly divided into medical containers, health and fitness equipment, surgery equipment as well as testing and detection instruments. According to the Ipsos Report, in the first half of 2012, the medical devices industry in the PRC reached a total sales revenue of approximately RMB687.0 billion, with a growth rate of approximately 20.3% from 2011 to 2012. It is expected that the medical devices industry will grow at a CAGR of over 20.0% for the next five to ten years due to increasing medical consumption from the ageing population and an increase in the income level of the PRC residents.

According to the Ipsos Report, in 2012, the PRC mold manufactures did not satisfy the domestic demand for performance plastic molds due to equipment and mechanical capacity constraints. In 2012, 40.0% of the domestic demand for performance plastic injection molds, or close to an amount of USD1.3 billion, was met by imports. However, with the universal trend of using environmentally-friendly products, the demand for medical devices made of fibreglass may increase, and may adversely affect the demand for medical devices made of plastics.

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### **Life cycle stage of the plastic injection mold fabrication and plastic injection molding industry segments**

According to the Ipsos Report, from 2013 to 2017, the total production output value of plastic injection molds with MT3 precision level or above in the PRC is expected to increase at a CAGR of approximately 10.0%; and from 2013 to 2017, the total production output of plastic components manufactured by plastic injection molding in the PRC is expected to increase at a CAGR of approximately 15.0%. According to the Ipsos Report, (i) growing demand for certain downstream industries, such as household electrical appliances, automotive, mobile devices, digital devices, medical devices, commercial telecommunication equipment and pachinko, and (ii) changes in technology and/or new products in such downstream industries, would lead to further growth in demand for products of both plastic injection mold fabrication and plastic injection molding. Therefore, Ipsos considers that both injection mold fabrication and plastic injection molding industry segments are in their growth stage.

### **COMPETITIVE LANDSCAPE IN THE PRC**

Both the plastic injection mold fabrication and the plastic injection molding industry segments are highly fragmented in the PRC. There were approximately 30,000 plastic injection mold fabricators and 150,000 plastic injection molding manufacturers in the PRC as at the end of 2012. Out of the approximately 150,000 plastic injection molding manufacturers, only approximately 13,000 of them have an annual sales value of over RMB20 million.

#### **Plastic Injection Mold Fabrication**

##### *Competitive factors & barriers to entry*

The following are certain competitive factors and barriers to enter into the plastic injection mold fabrication industry segment:

##### *Level of technology and technical expertise*

The plastic injection mold fabrication process is highly complicated, and advanced skill is needed for the design, processing and assembly of plastic injection molds. Since the desired product may be in various complicated shapes, it is essential to obtain exact data of every surface of the desired product, and the corresponding molds must match these exact dimensions to ensure accuracy of the desired end product. Since the usual means of measurement does not satisfy the above requirement, computers that employ ultra-precise three-dimensional measurement and control technology are used.

Particularly, the high-precision plastic injection mold fabrication industry segment requires a relatively high level of technical expertise. Quality control and production management techniques and experiences are also important. Plastic injection mold fabricators also need to keep updated with the latest production technology and trends, and this may in turn pose an entry barrier for new entrants who lack market experience.

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### *Amount of capital investment and scale of operations*

A large amount of capital investment is required for mold fabricators for the following reasons. First, mold fabricators need to purchase a large amount of machineries, equipment and apparatus. Second, mold fabricators need to recruit a group of professional and technical staffs. Additionally, mold fabricators often serve as part of the supply chain for multinational companies, and therefore large-scale production capability is also crucial for mold fabricators to reduce procurement and operation at costs.

### *Flexibility and service efficiency*

The current production lead time and product life cycle of plastic injection mold, and performance and standard plastic injection molding industry has been significantly shortened when compared with the past. Reduction in mold production time can in turn shrink the product research and development phase, allowing the client's product to enter the market in a timely manner. Furthermore, companies' profitability can also be increased through improving product quality and value-added services.

### *Ranking and market share by mold fabrication revenue*

According to the Ipsos Report, for 2012, total revenue generated by all mold fabricators located in the PRC was approximately RMB25.4 billion. Set out below is the ranking by revenue from mold fabrication of plastic injection mold fabricators in the PRC in 2012:

<b>Rank</b>	<b>Company name</b>	<b>Headquarters location</b>	<b>Revenue in 2012 in the PRC (RMB million) (note)</b>	<b>Share to total industry revenue in the PRC (%)</b>
1	Qingdao Haier Molds Co., Ltd. (青島海爾模具有限公司)	Qingdao, Shandong	349	1.4%
2	Our Group	Shenzhen, Guangdong	282	1.1%
3	Shenzhen Silver Basis Technology Co., Ltd (深圳市銀寶山新科技股份有限公司)	Shenzhen, Guangdong	267	1.1%
4	Changzhou Huawei ARRK Mold Co., Ltd (常州華威亞克模具有限公司)	Changzhou, Jiangsu	228	0.9%
5	Hisense Mold Co., Ltd (青島海信模具有限公司)	Qingdao, Shandong	160	0.6%

*Note:* Revenue for this table represents mold fabrication revenue only

*Source:* The Ipsos Report

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### **Plastic Injection Molding**

#### *Competitive factors & barriers to entry*

The following are certain competitive factors and barriers to enter into the plastic injection molding industry segment:

#### *Flexibility and ability to meet the production schedule of the downstream customers*

Especially at the early stages of product life cycle, customers may make changes to their design delivery schedule. They expect manufacturers to be flexible and responsive to their changes. In addition, the ability to deliver according to schedule is important to ensuring regular order placing.

#### *Product quality*

Customers, particularly multinational companies, impose stringent requirements on product quality and look for business partnerships that can maintain consistent product quality. Therefore, plastic injection molding manufacturers with advance technology have a clear advantage because multinational companies are willing to offer a higher price for better and stable product quality.

The quality of plastic components manufactured by plastic injection molding is closely associated with the quality of plastic injection molds. According to the Ipsos Report, the critical factors for plastic components manufactured by plastic injection molding are quality and production efficiency, which are associated with the quality of the underlying mold.

#### *Track record and size of customer base*

Securing orders from multinational companies or suppliers of multinational companies are important for plastic injection molding manufacturers. Multinational companies and suppliers of multinational companies normally maintain an approved supplier list. In order to be included in such a list, plastic injection molding manufacturers normally need to meet the qualification and quality control standards set by the relevant companies. In order to ensure product quality, multinational companies would not change their respective mold suppliers easily. Therefore, new entrants without a track record would find it difficult to enter into the market.

#### *Ranking and market share*

According to the Ipsos Report, total production output value of products manufactured by the plastic injection molding process amounted to RMB774.5 billion in 2012. As the background of the plastic injection molding companies in the PRC are highly diverse, there are no reliable and available sources sufficient for the purposes of compiling a ranking table.