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## INDUSTRY OVERVIEW

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*We have extracted and derived the information in the section below, in part, from various official government publications and commissioned reports from ABI Research and ICIS Consulting. See “—Sources of Information” below. Unless otherwise specified, information concerning the global mobile device aluminum casing industry is derived from the market research report by ABI Research, and information concerning the aluminum extrusion products industry is derived from the market research report by ICIS Consulting. We believe that such sources are appropriate for the information below, including forward-looking information for future periods as identified, and have taken reasonable care in extracting and reproducing such information. We and the Joint Sponsors have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information has not been independently verified by us, the Joint Global Coordinators, the Joint Sponsors, the Joint Bookrunners, the Joint Lead Managers, the Underwriters, any of our or their respective affiliates or advisers, or any party involved in the Global Offering and no representation is given as to its accuracy.*

### Sources of Information

In connection with the Global Offering, we commissioned research reports from two independent market intelligence companies, ABI Research and ICIS Consulting, for use in part in this prospectus to provide prospective investors with necessary information on the relevant industries. ABI Research provided a report on the global mobile device industry entitled “Mobile Device Landscape.” ICIS Consulting provided a report on the PRC and global aluminum extrusion products industries entitled “China Aluminum Alloy Extrusion Product Market Study.” ABI Research and ICIS Consulting have charged us a total fee of US\$33,000 and US\$39,500, respectively, for the preparation of the commissioned reports, which we believe are in line with the market rates for such reports.

ABI Research is a market intelligence company founded in 1990 specializing in global connectivity and emerging technology, providing services to over 500 clients annually. Its research covers a broad base of manufacturers and service companies participating in the technology market, including mobile devices and tablets, device teardowns and semiconductors, mobile carrier strategies, mobile infrastructure and others. The report from ABI Research is based on (i) primary sources, including interviews with executives, engineers and marketing professionals and (ii) secondary sources, including industry periodicals, trade group reports, government and private databases, corporate financial reports, industry directories and others. In preparing forecasts and other estimates, ABI Research (i) employed a shipment forecast model based in part on historical growth figures and input from interview subjects and other primary sources, as well as macroeconomic factors; (ii) assessed the drivers and barriers of each application and market segment in order to assess future growth potential; and (iii) analyzed announced and currently available products, among others.

ICIS Consulting is a market intelligence company focused on the global chemical, energy and fertilizer industries, covering over 120 commodity markets and upstream and downstream sectors in Europe, Africa, the Middle East, Asia-Pacific and the Americas. The report for ICIS Consulting is based on (i) regular tracking of the aluminum industry; (ii) secondary sources, including those providing market sizes for products making use of aluminum extrusions and the amount of aluminum extrusions used in such products; and (iii) primary interviews with industry experts and participants. In preparing forecasts and other estimates, ICIS Consulting assumed steady growth of China’s GDP.

### Introduction

This industry overview summarizes (i) the global mobile device aluminum casing industry, which includes products used to make mobile device casings and chassis, and (ii) the global aluminum extrusion products industry.

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### Global Mobile Device Aluminum Casing Industry

Mobile device manufacturers take into account a number of considerations when selecting the materials to be used as casings and chassis, including production scale, material properties, regulatory and industry standards, aesthetics and technology. Plastics, which score well in the decision criteria mentioned above, are currently the primary choice for device manufacturers. However, as mobile device design and consumer preferences evolve, other materials, such as aluminum, are increasingly considered for use in mobile devices.

#### ***Selection Criteria for Casing and Chassis Materials***

*Production scale.* Materials to be considered for use in these devices should be capable of meeting the scale of demand and demand growth in the mobile device industry. The smartphone and mobile device markets generate over 500 million unit shipments per year. With the increasingly rapid development cycles of mobile handsets, mobile handset original equipment manufacturers, or OEMs, must choose from developed and available materials as the development of custom materials and production equipment is not the core competency of OEMs.

*Material properties.* For inclusion in a mobile device, a material's properties such as cost, weight, strength, flexibility, customization, durability, interaction with radio signals, interactions with other device materials, toxicity, environmental impact and aesthetics are taken into account. The weight placed on these considerations can vary by device design, regional legislative mandate, product use case, product manufacturer, consumer preferences, among others. The key form factor trend for mobile devices is towards thinner and lighter products. This creates a need for materials that are strong enough to endure both impact and torsion stresses encountered in the daily use of a portable device while maintaining a low device weight.

*Regulatory and industry standards.* The mobile device market is global in nature, and products are designed in a manner that complies with the regulatory and industry standards which exist across different end markets and regions. The use of a material that prevents the import or export to a particular market would limit the revenue potential of a mobile device. Designing unique device models for each jurisdiction is not practical or efficient.

*Aesthetics.* The aesthetics of mobile devices is becoming increasingly important as a means to signal to consumers the high costs associated with increasingly complex and smaller mobile devices. Aluminum has been recognized as a material that outperforms plastics in signaling product quality and value to consumers of mobile devices. Mobile devices, particularly smartphones and handsets, have become among the most personal items of technology a consumer owns. The practical design constraints in mobile devices limit how device OEMs can visually differentiate their products. Aluminum can be engineered to deliver multiple surface finishes, looks, feels and colors and be made to resist scratching, corrosion and heat.

*Technology.* Continued advancements in metallurgy, machining and finishing technologies are driving the applicability of aluminum in mobile device design. As opposed to cold forming techniques, the use of superplastic forming techniques offers advantages in production costs, finish quality, shape design and retention. Advances in CNC lathing have enabled the creation of complex device frames from a single block of aluminum while maintaining production efficiencies, finish requirements and the high degree of precision required in mobile devices.

#### ***Aluminum in Media Tablets***

The iPad, one of the most popular media tablets, is designed with an aluminum chassis. Not only does the chassis provide the outer casing of an iPad, it also provides the internal tray used for mounting the system board and internal components. Rigidity is cited as another benefit of developing a media tablet around a solid aluminum body or enclosure. A two-piece solution using plastic or carbon fiber for the external enclosure has led to greater thickness of non-aluminum tablets.

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### ***Aluminum in Smartphones***

The use of aluminum in smartphones has become popular because the material properties and cost of aluminum match the current and future design requirements well. Aluminum is used in both the device chassis as well as finishing design elements. Smartphone designs that require the bonding of aluminum to plastics can create technical challenges and increase production complexity. Despite such complexity, the strength of aluminum and the scarcity of alternative materials are expected to keep aluminum as a primary choice in smartphone design.

### ***Aluminum in Laptop Computers***

A trend in laptop computing is the unibody, where the enclosure and the tray holding the system board are integrated or built from a single block of material. An aluminum unibody design often requires a relatively expensive CNC lathe for production. Few suppliers have the CNC lathe capacity and processing experience to yield volumes needed for all laptop computers and the growth anticipated by the introduction of more laptop computer systems.

### ***Media Tablets***

#### *Media Tablets Market Overview and Trends*

Apple Inc. established widespread consumer awareness of the media tablet market during 2010 with the introduction of the iPad. Since then, more than 100 vendors have introduced slate form-factor devices. ABI Research estimated that annual media tablet shipments worldwide surpassed 64 million units in 2011.

Some of the distinct capabilities of a media tablet are:

*Interface.* Media tablets have a touch screen interface, and the screen is the primary method of controlling the device. Some “hybrid” models have removable keypads.

*Screen size.* Media tablets have screens with diagonal length of five inches or more. Thus, media tablets are larger than smartphones, but smaller than the majority of laptops.

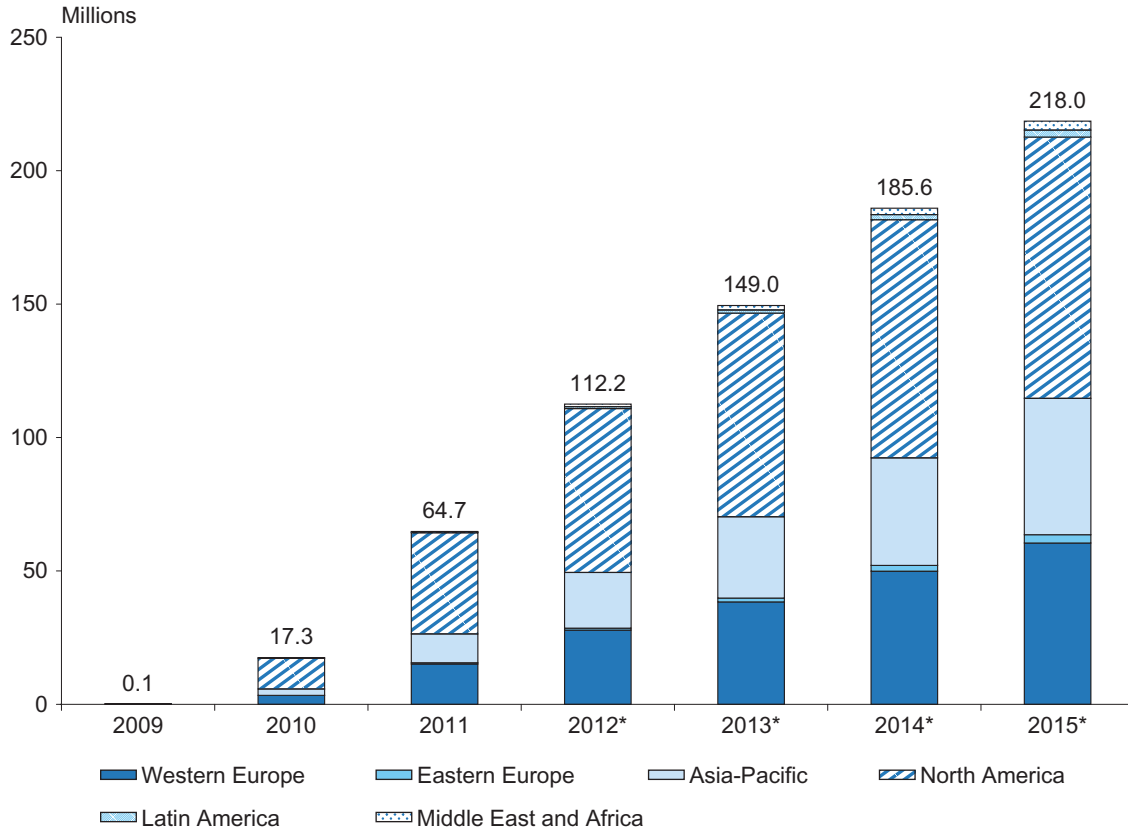
*Media-oriented.* Media tablet devices are focused on providing user access to entertainment and information. As these devices connect to the Internet, consumers will utilize that connectivity for their media usage, such as video/music download and playback and gaming.

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The table below sets forth the historical and forecast worldwide sales of media tablets:

### Total Media Tablet Shipments

#### World Market



\* Estimate  
Source: ABI Research

**Limited productivity.** Unlike laptops or the traditional “slate” computers, media tablets do not have full productivity capabilities and applications. Applications for media tablets focus on the touch experience and simplicity rather than providing the user with significant control, versatility and programmability of the software environment.

**Operating system.** Media tablets also have their own operating systems, with an emphasis on open platforms.

**Connectivity.** Connectivity is part of the media tablet package; Wi-Fi is a common feature, and will remain a mainstay of media tablets. Many models include Bluetooth, and others have built-in wireless wide area network connectivity to mobile broadband networks.

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Other features vary by device and anticipated function and use. For example, some may include cameras to allow photo and video capture, playback or conferencing or global positioning system (GPS) receivers for navigation and location-based services.

### iPad Shipments

#### World Market

	<u>2010</u>	<u>2011</u>	<u>2012*</u>	<u>2013*</u>	<u>2014*</u>
Shipments (millions) . . . . .	14.8	40.5	74.3	98.9	123.6
Year on year change (%) . . . . .		174%	84%	33%	25%

\* Estimate

Source: ABI Research

#### Media Tablet Market Drivers

The increase in the use of media tablets is primarily driven by the expansion of broadband on Wi-Fi connections, the increase in digital content information and device convergence.

*Broadband.* As broadband service moves from primarily a neighborhood-level service to a home-specific service, individual PC connections are expected to expand to multiple, connected devices. In areas where wired broadband service is not available or affordably priced, individuals and businesses will likely consider mobile broadband options.

*Wi-Fi.* Data from the Digital Home research unit of ABI Research suggests that more than one in three households in the United States now have Wi-Fi home networking. Media tablets are inherently connected devices and benefit from a wireless connection.

*Increase in digital content consumption.* The television has traditionally been the primary screen for video content, but this is changing, as more connected devices become available. These additional screens, including the media tablet, can provide high quality, high-definition experiences for personal use.

*Device convergence.* The personal computer ("PC") has been the traditional platform for a wide range of activities. Now desktop PCs and even portable laptop computers compete for attention with mobile phones that can run a variety of applications. Functions that used to be the exclusive domain of the laptop computer or the smartphone are now available in more convenient or "right-sized" formats.

Internet-enabled computing is now possible for an older generation of users that do not typically use PCs and small-screen mobile handsets.

### Smartphones

#### Smartphone Market Overview and Trends

ABI Research forecasts that shipments of smartphones will increase from 480 million in 2011 to 1.0 billion in 2015, representing a 20.4% CAGR. The iPhone was launched in 2007. In 2010 and 2011, total shipments of the iPhone were approximately 47.5 million and 93.1 million, representing approximately 15.8% and 19.4% of the total smartphone market, respectively.

Accounting for approximately 25% of total mobile handset shipments in 2011, smartphones are likely to continue to increase in popularity. Much of the smartphone industry value chain has at least a

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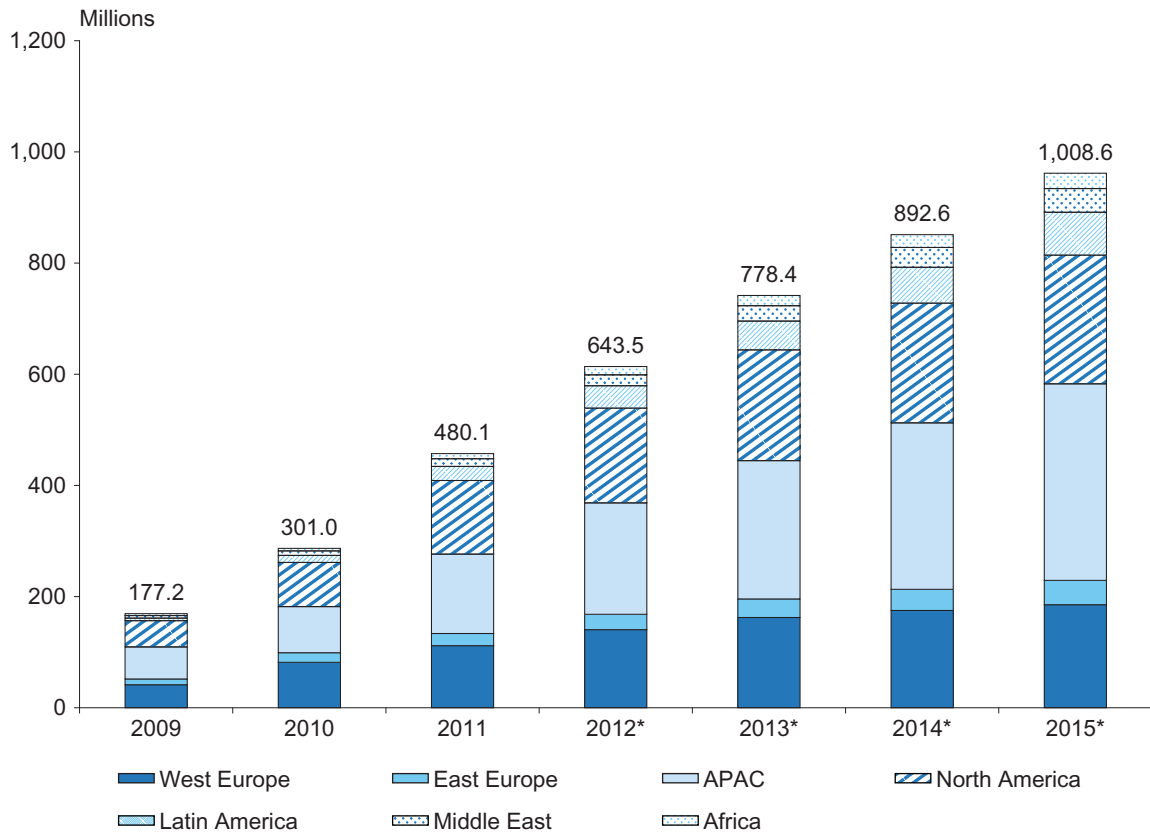
partial focus on reducing the cost of smartphones, and recent new developments could remove the mobile handset price differential between feature phones and smartphones.

Over the last three years, incumbent market leading mobile platforms have been discontinued or lost relevance as Apple Inc.'s mobile operating system and Google's Android mobile operating system have reset market expectations for mobile operating systems. The efforts of leading market participants to develop new competitive mobile operating systems have yet to impact significantly the dominance of the smartphone and media tablet device systems. Due to the uncertainty of these developing mobile operating systems, ABI Research expects consolidation of leading mobile platforms over the next several years.

The table below sets forth the historical and forecast worldwide sales of smartphones:

### Total Smartphone Shipments

#### World Market



\* Estimate  
Source: ABI Research

### iPhone Shipments

#### World Market

	2009	2010	2011	2012*	2013*	2014*
Shipments (millions) . . . . .	25.1	47.5	93.1	140.1	176.5	211.8
Year on year change (%) . . . . .		89%	96%	50%	26%	20%

\* Estimate  
Source: ABI Research

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### *Smartphone Market Drivers*

Increasingly, more consumers are demanding the ability to download applications and enjoy a full browsing experience on their mobile phones. Consumers appreciate and demand wireless data services. Wireless subscribers were slow to move to content and service offerings beyond voice communications and text messaging, but usage quickly spiked once awareness of the technology's possibilities rose. Population densities, computer usage, use of mass transportation and other expenses will continue to affect the rate at which various regions adopt the content services that push demand for smartphones.

Smartphone demand is being met with supply. With minor exceptions, smartphone OEMs have kept pace with growing user demand. The smartphone segment is currently experiencing the fastest growth in the mobile handset market, and it is expected to continue to outpace the overall mobile handset market over the next several years. In 2010 and through 2011, component suppliers experienced strain to fill such growing user demand.

Economic conditions remain a present concern for OEMs. As a result of the current tough economic conditions, vendors involved in all aspects of the mobile handset industry have been under pressure to modify and reassess their business models to remain competitive. However, smartphones have proven to be more resilient to slow macro-economic conditions and are expected to maintain a growth trend.

Content and application demand also pushes smartphone demand. Services such as mobile Internet access, online gaming, mobile blogging, video on demand, live video, webcasts, improved browsing, instant messaging, mobile music and video downloads are prompting users to adopt smartphones. In addition, location-based services that allow users to locate the nearest ATM, restaurant, gas station and so on are becoming increasingly popular, and smartphones with GPS are now being pitched as substitutes for in-car navigation systems. These services and the declining prices of smartphones are contributing to rising user demand for the devices. Smartphones are becoming not only more attractive, but also more affordable.

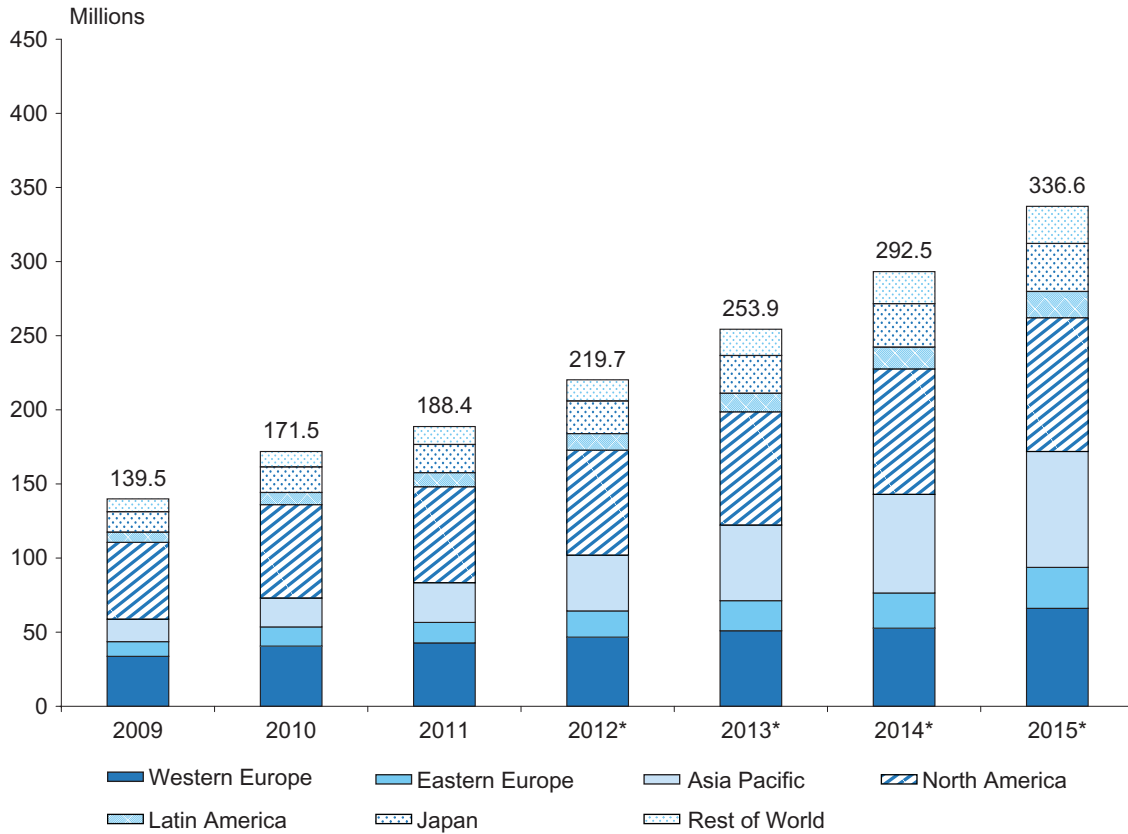
### ***Laptop Computers***

#### *Laptop Computer Market Overview and Trends*

ABI Research forecasts that shipments of laptop computers will increase from 188.4 million in 2011 to 336.6 million in 2015, representing a CAGR of 15.6%.

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The table below sets forth the historical and forecast worldwide shipments of laptop computers:



\* Estimate  
Source: ABI Research

### Aluminum Extrusion Products Industry Overview

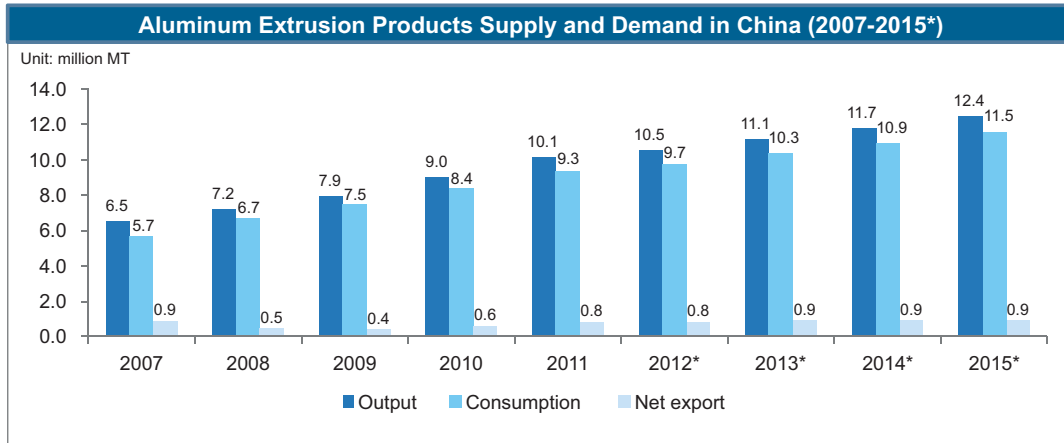
With the rapid development of the PRC real estate, construction and other industries driven by urbanization since 2000, the production capacity, scale and technology of the PRC aluminum extrusion industry have made significant progress. Currently, China is the world's number one producer and consumer of aluminum extrusion products in terms of volume.

Benefiting from economic growth in China, the rapid development in the industrial, construction and real estate sectors, aluminum extrusion product output and demand in China have managed to grow despite the global financial crisis. In addition, increased demand from the construction and industrial sectors is partially due to the effects of the Chinese government's economic stimulus policies. Aluminum extrusion product output in China increased to approximately 10.1 million MT in 2011, with a CAGR of 11.7% since 2007. Approximately 92% of the PRC aluminum extrusion product output was consumed domestically due to high demand from the construction and industrial sectors in China, and net exports were only approximately 800,000 MT in 2011.



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ICIS Consulting estimates that the PRC aluminum extrusion product demand will continue to increase to approximately 11.5 million MT in 2015, with a CAGR of 5.4% since 2011, mainly driven by the development of the domestic construction and industrial sectors. China's aluminum extrusion product output is estimated to increase to over 12 million MT with net exports of approximately 900,000 MT in 2015. The chart below sets forth China's historical and forecast aluminum extrusion product consumption and production volumes for the periods indicated:



\* Estimate

Source: China NIA, China Customs, ICIS Consulting

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### PRC Aluminum Extrusion Industry

#### *PRC Aluminum Extrusion Product Consumption*

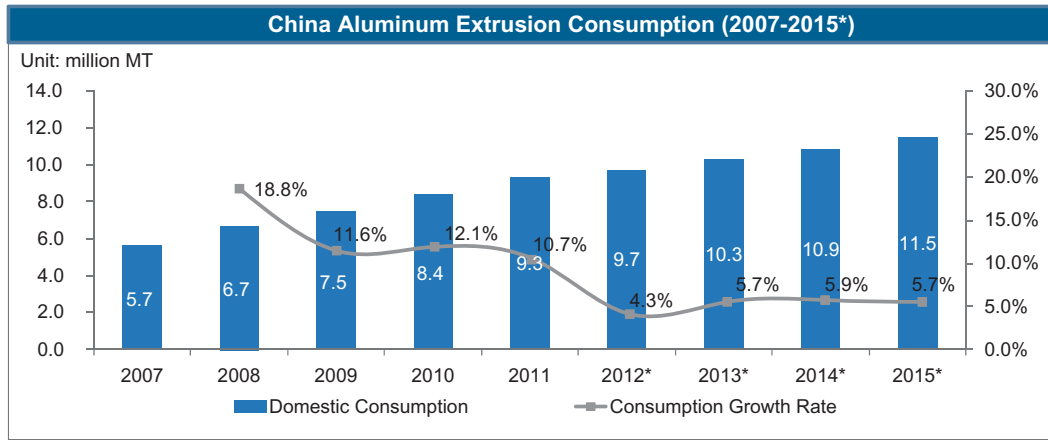
Aluminum extrusion products may be classified as for construction or industrial use. Aluminum extrusion products for construction are mainly used in windows, doors, guardrails and curtain walls for buildings, or as structural components for stadium roofs, airport departure halls, warehouses and similar buildings. Aluminum extrusion products for industrial use are typically used in transportation, machinery and equipment, consumer durable goods, aviation and aerospace, the energy industry, agriculture, military machinery and equipment and other downstream sectors. The following table illustrates major products and their respective classifications:

Applications		Major products
<b>Construction</b>		Window and door frames
		Curtain walls
		Others (guardrails, directional signs, etc.)
<b>Industrial</b>	<b>Transportation</b>	Rail
		High-speed rail
		Metro rail
		Electricity supply lines
		Truck
		Car
		Shipping container parts
		Others (ships, aircraft, etc.)
	<b>Mechanical and electrical equipment</b>	Heat sinks
		Elevators and escalators
Assembly lines		
Solar panel frames		
Others (medical equipment, light boxes, etc.)		
<b>Consumer durable goods</b>	Electric appliance shells	
	Display frames	
	Furniture	
	Others	

China's aluminum extrusion product consumption has increased in tandem with the development of China's construction and industrial sectors. Due to strong downstream development in the first three fiscal quarters of 2008, aluminum extrusion product consumption in China increased by approximately 18.8% from approximately 5.7 million MT in 2007 to approximately 6.7 million MT in 2008. The growth rate decreased to approximately 11.6% in 2009, mainly due to the global financial crisis, which resulted in slower growth of China's construction and industrial sectors. In 2010, due to the recovery of downstream industries, China's aluminum extrusion product consumption increased to 8.4 million MT, with a growth rate of approximately 12.1% against 2009. In 2011, domestic aluminum extrusion demand in the PRC increased to 9.3 million MT, representing a growth rate of 10.7% compared to 2010.

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By 2015, ICIS Consulting estimates that the consumption of aluminum extrusion products in China will increase to more than 11 million MT, with a CAGR of 5.4% from 2011 to 2015, mainly due to slower development of the construction and industrial sectors. The chart below sets out China's aluminum extrusion consumption and annual growth rate for the periods indicated:



\* Estimate  
Source: ICIS Consulting

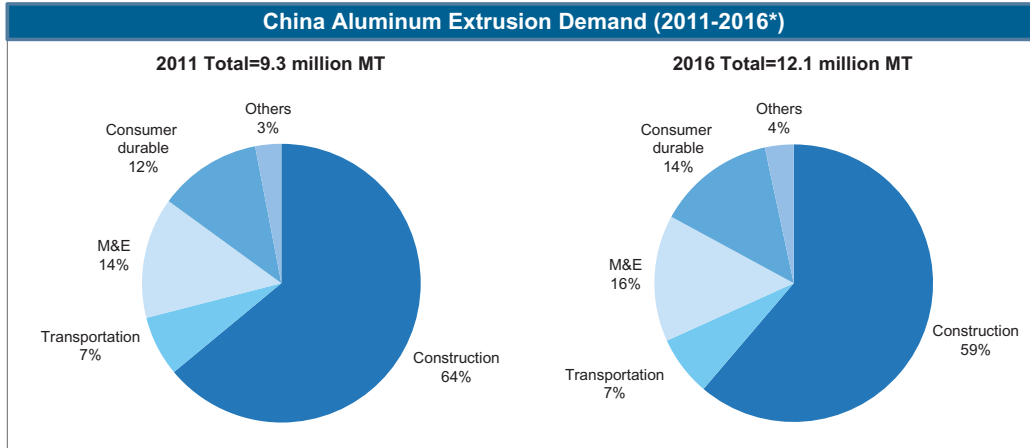
The majority of China's aluminum extrusion products are for construction use, accounting for approximately 64% of total consumption in 2011 based on ICIS Consulting estimates. The other approximately 36% is for industrial use, among which approximately 14% are for mechanical and electrical equipment, approximately 12% are for consumer durable goods and approximately 7% are for the transportation industry.

Compared with developed countries, aluminum extrusion product consumption in the construction sector is relatively high in China. According to CRU, a global mining, metals and fertilizers consulting company, consumption in the construction and real estate sectors in North America only accounted for approximately 41% of total consumption, compared with approximately 64% in China. Meanwhile, the transportation and logistics sectors consume approximately 31% of aluminum extrusion products sold in North America, compared to only approximately 7% in China.

The difference in aluminum extrusion product consumption in China and developed countries reflects the rapid development of China's construction and real estate sectors in the last few years. China's aluminum extrusion product producers have recently increased investment in the industrial sector, which has resulted in changes in the consumption structure of aluminum extrusion products since 2007. The share of aluminum extrusion products consumed by China's industrial sector has increased from approximately 30% in 2007 to approximately 36% in 2011.

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ICIS Consulting estimates that the share of aluminum extrusion products consumed by the Chinese industrial sector will continue to increase to approximately 41% in 2016, with expectations of relatively fast development for the mechanical and electrical equipment and consumer durable goods industries. The charts below sets forth the breakdown of China's aluminum extrusion product consumption in 2011 and expected consumption in 2016:

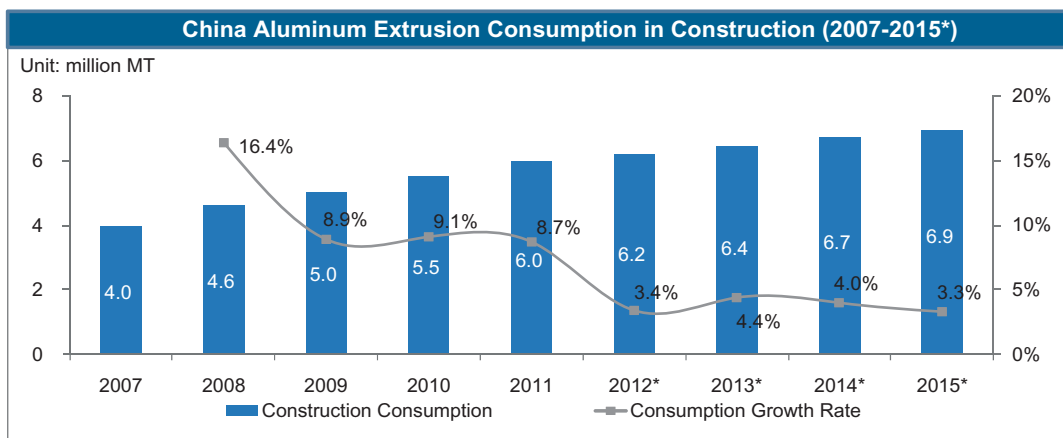


\* Estimate

Source: ICIS Consulting

### Construction Products

Aluminum extrusion products for construction are mainly used in windows, doors, guardrails and curtain walls for buildings, or as structural components for roofs of stadiums, airport terminal halls, warehouses and similar buildings. In addition to aluminum extrusion products, other key raw materials for windows and doors include steel, plastic and wood. Aluminum extrusion products, due to their light weight, corrosion resistance, durability and malleability, are generally considered the preferred raw material for windows and doors. The following chart sets forth China's aluminum alloy extrusion consumption in construction and annual growth rate for the periods indicated:



\* Estimate

Source: ICIS Consulting

Driven by China's property development, consumption of aluminum extrusion products from the construction industry developed quickly prior to 2009. The growth rate reached approximately 16.4% from 2007 to 2008, when the Chinese economy was very strong, prior to the global financial crisis beginning in the third quarter of 2008.

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At the beginning of 2009, the general expectations for China's real estate sector were pessimistic due to the global financial crisis. With the implementation of a real estate stimulus policy by the PRC government, including lowered interest rates, loosened restrictions on second house purchases, decreases in capital reserve ratios and others, China's real estate sector was not severely hit by the global financial crisis compared to many industrialized countries, although the growth rate of China's investment in construction decreased from approximately 23% in 2008 to approximately 16% in 2009, and the growth rate of consumption of aluminum extrusion products for construction applications dropped to approximately 9% as well.

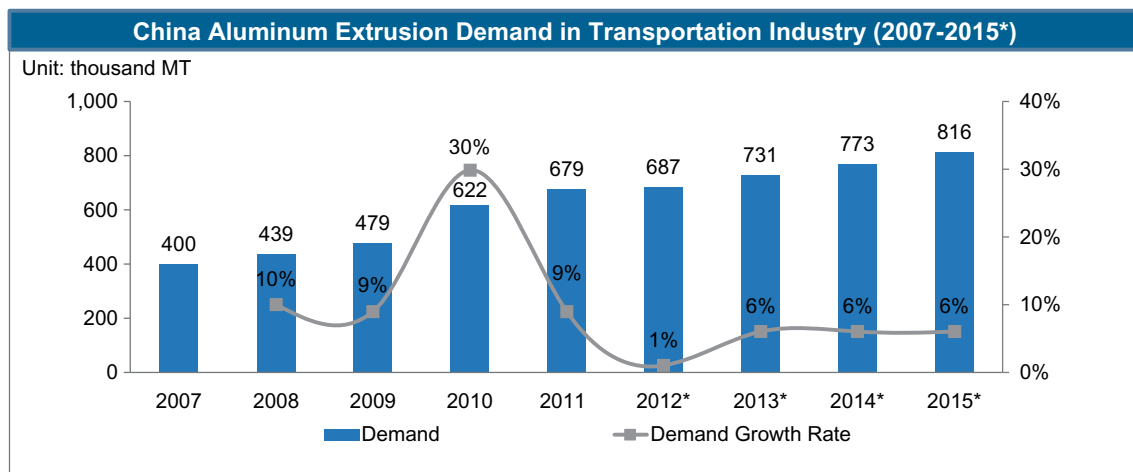
The amount of aluminum extrusion products used for construction applications increased to more than 5 million MT in 2010 with a growth rate of approximately 9.1%. In 2011, the consumption for aluminum extrusion products increased to 6 million MT with a growth rate of approximately 8.7%.

ICIS Consulting estimates that the consumption of aluminum extrusion products for construction applications will keep growing at an annual rate of approximately 3.6% for the next five years, based on the development of China's real estate sector and trends in the application of aluminum extrusion products in construction.

### Industrial Products

#### Transportation

Driven by PRC government policies regarding energy savings and weight reduction, use of aluminum in transportation applications has been growing quickly. Aluminum extrusion products are applied in the automobile, container, rail, bicycle, aircraft, ship-building and other industries. In 2011, consumption of aluminum extrusion products in the transportation sector in China had reached approximately 678,600 MT. The following table shows China's aluminum extrusion demand in the transportation industry and annual growth rate for the periods indicated:



\* Estimate

Source: ICIS Consulting

**Automobile industry.** Aluminum extrusion products in the automobile industry are mainly used for heat-exchange systems, chassis hanging systems, door and window frames, bumpers and others. According to ICIS Consulting, globally, the average aluminum material volume used in a passenger vehicle reached approximately 150kg in 2011. In the PRC domestic automobile industry, average aluminum material use was approximately 127kg per passenger vehicle in 2011, of which aluminum extrusion products accounted for approximately 7% to 8% (10kg). For commercial vehicles, including heavy trucks and large buses, aluminum extrusion product usage reached approximately 100kg per vehicle in China, where it is used for door and window frames, seats, top/bottom beams and others. China has become the largest vehicle producing country in the world. In 2011, PRC vehicle

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production reached approximately 18.4 million, amounting to a CAGR of approximately 20% since 2007. In 2011, use of aluminum extrusion products in the PRC automobile industry reached approximately 286,500 MT.

According to China's "Energy Saving and New Energy Vehicle Development Plan (Proposed)" (《節能和新能源汽車發展規劃(草案)》), the PRC automobile industry should focus on improving fuel consumption and reducing vehicle weight. As a result, and given the relatively light weight of aluminum, use of aluminum extrusion products is expected to grow in the next five years. In 2011, the PRC government withdrew its policy of providing subsidies for small vehicles, resulting in slower growth in the number of cars produced by the PRC automobile industry, with growth from 2012 to 2015 estimated to only be approximately 4%. Use of aluminum extrusion products in the PRC automobile industry is expected to reach approximately 309,000 MT in 2015.

*Shipping container industry.* Aluminum containers are mainly used for refrigerated containers and specialty containers in the container industry, typically for inner container floors for refrigerated containers and for hinges and other parts. China produces more than 90% of containers globally, with 117,600 MT of aluminum extrusion products used in the container industry in 2011.

*Rail industry.* Benefitting from significant investments in the rail industry by the PRC government, use of aluminum extrusion products in the PRC rail industry has grown rapidly in recent years. The main applications for aluminum extrusion products include car bodies for high speed trains and urban metro trains; electricity conveying systems; and aluminum freight trains. In 2011, approximately 2,300 high speed rail cars and 2,500 metro cars were manufactured in the PRC, with use of aluminum extrusion products accounting for approximately 22,900 MT and 10,100 MT, respectively.

The PRC Government has implemented plans for a large expansion of its urban metro rail systems and high speed inter-city rail systems. As a result, under the future rail transportation plans of the PRC government, ICIS Consulting forecasts that production of urban metro trains and high-speed trains to continue to enjoy steady growth, resulting in the steady growth of aluminum extrusion products. ICIS Consulting estimates that from 2011 to 2015, a total of approximately 320,600 MT of aluminum extrusion products will be used by the rail industry.

*Bicycles.* Aluminum is widely used for all kinds of metal bicycle parts. Aluminum extrusion products are mainly used for bicycle rims: over 80% of bicycle rims in the PRC are made of aluminum extrusion products. In 2011, the volume of aluminum extrusion products used in the manufacture of bicycles was approximately 72,000 MT. ICIS Consulting expects that aluminum extrusion product consumption in the bicycle industry will grow at an annual rate of at least 3% from 2011 to 2015. In 2015, ICIS expects the volume to reach approximately 82,180 MT.

*Ships.* China has become one of the world's leading ship builders. According to the China Association of the National Shipbuilding Industry, China obtained new orders totaling approximately 36.2 million deadweight tons in 2011. In terms of total orders under construction, China is also number one in the world with total orders of approximately 160 million deadweight tons in 2011. By the end of 2011, China had completed approximately 76.7 million deadweight tons. Aluminum extrusion products are used in ship hulls, bulwarks, gangways and other parts. ICIS Consulting estimates that 68,000 MT of aluminum extrusion products were used in the PRC shipbuilding industry in 2011.

Although exports of some transportation equipment were affected by the global financial crisis, ICIS Consulting expects that, with the recovery of the global economy, consumption of aluminum extrusion products in the transportation sector in the PRC will grow steadily. ICIS Consulting expects that in 2015 the total consumption of aluminum extrusion products in the PRC transportation equipment manufacturing industry will reach approximately 816,000 MT.

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### *Mechanical and electrical equipment*

Aluminum extrusion products used in the PRC mechanical and electrical equipment sector have increased significantly in recent years, corresponding to rapid growth in investment in the mechanical and electrical equipment sector. The value of the total output of the PRC electrical equipment manufacturing industry rose significantly from approximately RMB2,402 billion in 2007 to approximately RMB5,024 billion in 2011, representing a CAGR of approximately 20%. In the mechanical and electrical equipment sector, aluminum extrusion products are widely used in heat sinks, assembly lines, casings and other parts for mechanical and electrical instruments and others. Aluminum extrusion product consumption in the manufacture of mechanical and electrical equipment in the PRC is estimated by ICIS Consulting to be approximately 1.3 million MT. Benefiting from the bright prospects of the mechanical and electrical equipment manufacturing industries, ICIS Consulting estimates that the use of aluminum extrusion products for mechanical and electrical equipment in the PRC will reach approximately 1.8 million MT in 2015.

*Heat sinks.* With good heat conductivity and a lower price compared to copper, aluminum has become a major material in the heat sink industry. Industrial heat sinks mainly include electrical appliance heat sinks, LED lighting heat sinks and other electrical equipment heat sinks (such as for motors, frequency converters and others). Aluminum heat sinks are mainly categorized into extrusion heat sinks, casting heat sinks and fin-style heat sinks, of which extrusion heat sinks account for the largest share, though fin-style heat sinks have gained greater market share due to better heat conductivity. The amount of aluminum extrusion products used in the PRC for heat sinks was approximately 253,000 MT in 2011.

*Solar panel frames.* The rapid growth of the PRC solar panel industry has provided an opportunity for aluminum extrusion products, which are used as solar panel frames and support scaffolding. China has the largest production capacity for solar panels. In 2011, the global volume of newly installed solar panels reached 28.0 gigawatts, of which 50% was produced in China. The same year aluminum extrusion products used as solar panel frames totaled approximately 85,900 MT.

Due to the European sovereign debt crisis beginning in 2011, demand for solar panels in Europe fell, causing a sharp fall in the price of solar panels, which in turn reduced exports of solar panels from China to Europe. Though exports to Europe may slow in the near future due to its weak economy, the PRC Government has planned over 20 demonstration solar projects over the next five years which would lead a significant increase in demand for the domestic solar energy market. ICIS Consulting expects that after 2012, the PRC solar panel industry will recover and maintain a growth rate of approximately 10% through 2015. ICIS Consulting expects that with the expected rebound of the PRC solar panel industry, the sector's aluminum extrusion product consumption may increase to approximately 102,900 MT in 2015.

### *Consumer durable goods*

Aluminum extrusion products in the consumer durable goods sector has sharply increased between 2007 and 2011. Aluminum extrusion products are mainly used in manufacturing furniture, home appliances and other consumer durable goods. In 2011, consumption of aluminum extrusion products in the PRC durable goods sector reached 1.1 million MT. Considering the global economic situation, consumer durable goods exports may see slower growth in the near term, though increased domestic demand in the PRC may provide an alternative market for aluminum extrusion products in the consumer durable goods sector. ICIS Consulting estimates that consumption of aluminum extrusion products in the PRC consumer durable goods sector will reach approximately 1.6 million MT in 2015.

*Furniture.* In the PRC furniture sector, aluminum extrusion products are mainly used for metal parts of wood and metal furniture. According to ICIS Consulting interviews with experts from the China National Furniture Association, approximately 5% of the total value of wood furniture is comprised of metal parts. Aluminum extrusion products account for approximately 10% of total metal



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usage. Aluminum extrusion products are mainly used as furniture edging, posts/bars and desk and chair supports. In 2011, the total value of PRC wood and metal furniture output reached approximately RMB314 billion and RMB117 billion, respectively. ICIS Consulting estimates that total use of aluminum in furniture in the PRC was approximately 141,500 MT in 2011.

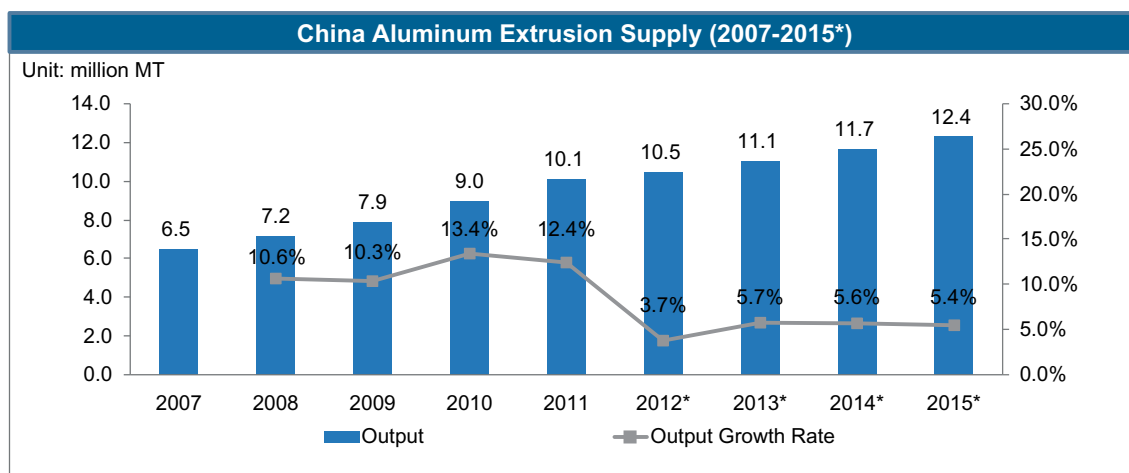
### *Others*

Aluminum extrusion products are widely used in other sectors, including military devices, general semi-processed aluminum extrusion products for use in downstream industries and others. These uses accounted for approximately 278,500 MT of aluminum extrusion products in 2011. This volume is expected to increase at an annual growth rate of 10% and reach approximately 407,800 MT in 2015.

### **PRC Aluminum Extrusion Production**

Because of the development of China's property market and other industries, China's aluminum extrusion product manufacturing capacity has increased significantly to meet demand, with many aluminum extrusion product manufacturers having entered the market or expanded their production capacity. In 2011, following the completion of a large number of expansion projects, total aluminum extrusion product production capacity in China reached approximately 13.5 million MT, an increase of approximately 73% compared to 7.8 million MT in 2007. Along with the rapid increase in demand, actual output of aluminum extrusion products in China increased to approximately 10 million MT in 2011, representing a CAGR of approximately 11.7% since 2007. The aluminum industry has grown steadily recently since 2012, driven by downstream demand. In the first half of 2012, the output of aluminum, aluminum semis and aluminum alloy extrusion in China reached 9.49 million MT, 13.58 million MT and 4.95 million MT, respectively, increasing by 9.77%, 11.29% and 8.8%, respectively, compared with the first half of 2011.

The following table shows China's aluminum extrusion supply and annual growth rate for the periods indicated:



\* Estimate

Source: ICIS Consulting

### *Major PRC Aluminum Extrusion Product Manufacturers*

China's aluminum extrusion product industry is fragmented. Based on statistics from the China Nonferrous Metal Industry Association, there are more than 600 aluminum extrusion product manufacturers in China, among which approximately 85% are small plants focusing on construction products with a production capacity below 10,000 MT per year. Due to the fragmented market, most



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companies have a relatively low market share. Our Company is a mid-sized manufacturer with a production capacity of 80,000 MT per year. Further, our Company does not typically directly compete with traditional aluminum extension companies, as our Company has diversified its product offerings across Electronic Parts, Branded OPLV Products and Construction and Industrial Products.

Most PRC aluminum extrusion product manufacturers have small-scale operations that produce low-end extrusion products based on simple designs. Only approximately 15 aluminum extrusion products manufacturers in China have an annual production capacity of over 150,000 MT.

### *Major China Aluminum Alloy Extrusion Producers in 2011*

Item	Company Name	Province	Production Capacity (2011)	Actual Production (2011)
			(thousands of MT)	
1	Zhongwang Aluminum	Liaoning	640	443
2	Asia Aluminum Holdings Limited	Guangdong	310	280
3	GuangYa Aluminum Co., Ltd.	Guangdong	300	230
4	Guangdong Fenglu Aluminum Industry Co., Ltd.	Guangdong	300	216
5	Shandong Huajian Aluminum Co., Ltd.	Shandong	200	140
6	Guangdong Jianmei Aluminum Profile Factory Co., Ltd.	Guangdong	170	130
7	Taishan Aomei	Shandong	170	108
8	Guangdong Weiye Aluminum Profile Factory Co., Ltd.	Guangdong	200	141
9	Guangdong Huachang Aluminum Profile Factory Co., Ltd.	Guangdong	150	120
10	Guangdong Haomei Aluminum Co., Ltd.	Guangdong	150	110

Sources: public information, ICIS Consulting

According to ICIS Consulting estimates, we are among the top 50 aluminum alloy extrusion producers in China.

The Pearl River Delta, the Yangtze River Delta and the Pan-Bohai Rim Region are China's major aluminum production regions, among which the Pearl River Delta is the largest aluminum extrusion industry cluster, with more than 200 aluminum extrusion product manufacturers, accounting for approximately 40% of total aluminum extrusion product manufacturing capacity in China.

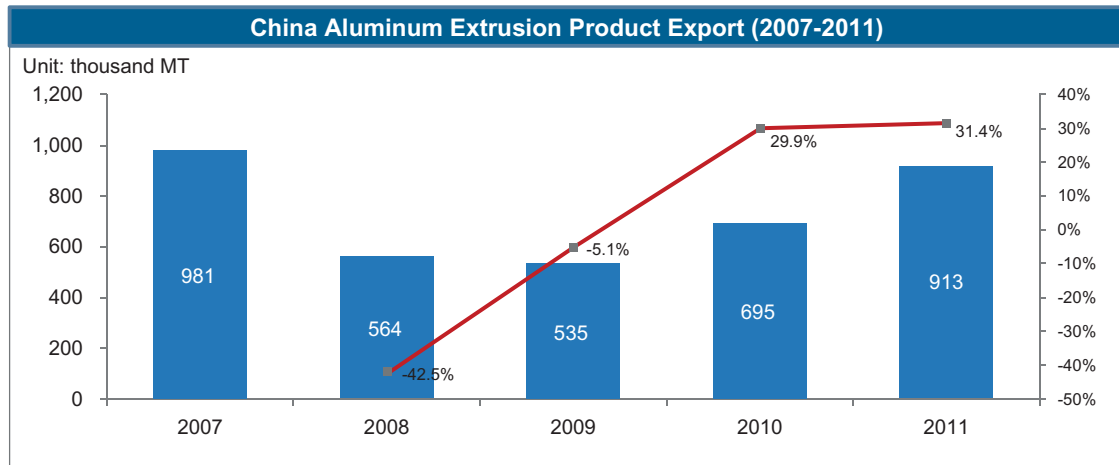
### *Estimated Future Production Capacity Expansion*

According to ICIS Consulting estimates, China's aluminum extrusion product manufacturing capacity increased by approximately 1.5 million MT in 2011, resulting in a total production capacity of approximately 13.5 million MT. In 2012, ICIS Consulting estimates that total aluminum extrusion product manufacturing capacity in China will increase by more than 1 million MT.

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### PRC Exportation of Aluminum Extrusion Products

The following chart shows China's aluminum extrusion product export volume from 2007 to 2011:



Sources: China Customs, ICIS Consulting

According to ICIS Consulting, in 2001, China became an aluminum extrusion product net exporter with net exports of under 10,000 MT. Subsequently, exports of Chinese aluminum extrusion products increased rapidly to more than 980,000 MT in 2007. In 2008, due in part to the global financial crisis, exports of aluminum extrusion products from China decreased significantly to approximately 564,000 MT, a decrease of approximately 42%.

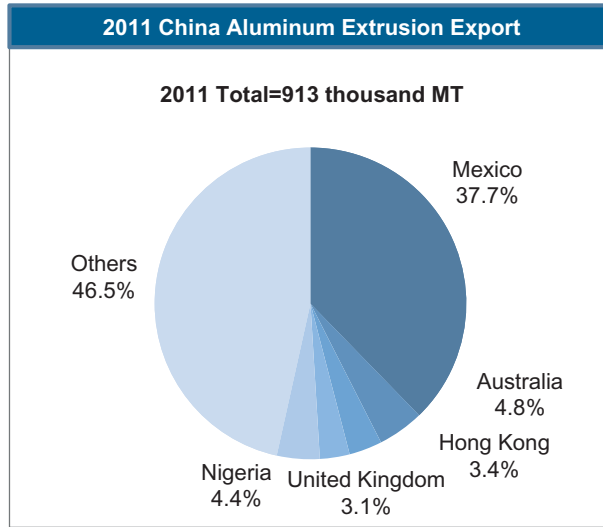
After 2009, with the beginning of the global economic recovery and the implementation by the Chinese government of a stimulus policy to grow exports in June 2009, part of which set the Chinese aluminum extrusion product export tax rebate at 13%, China's aluminum extrusion product exports increased to approximately 695,000 MT in 2010, up by approximately 30% compared to 2009, according to ICIS Consulting. China became the largest aluminum extrusion exporter in the world with total volume of approximately 695,000 MT in 2010, according to ICIS Consulting. In 2011, exports increased to 913,000 MT, an increase of 31.4% compared to 2010.

China's aluminum extrusion product export market is very fragmented with hundreds of exporters participating in the market. Based on statistics from China Customs and the Company, the Company's exports accounted for approximately 4.8%, 6.6% and 5.8% of China's total aluminum extrusion product export market by volume in the Company's financial year of 2010, 2011 and 2012, respectively.

China exports aluminum extrusion products to more than 100 countries, with major destinations including the United States, Australia, Hong Kong, the United Kingdom and Nigeria. These major destinations imported a total of approximately 489,000 MT of Chinese aluminum extrusion products, accounting for approximately 44% of total Chinese aluminum extrusion product exports, in 2011.

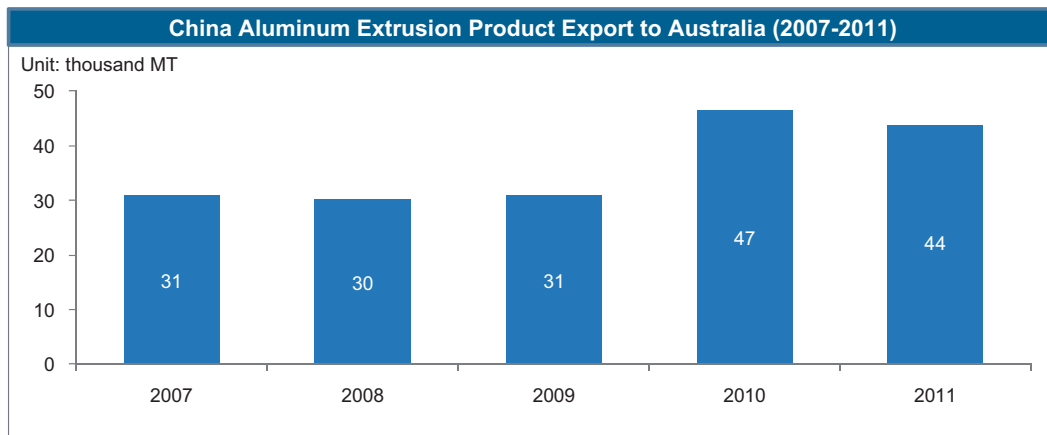
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Mexico is the largest importer of Chinese aluminum extrusion products with a total volume of 344,000 MT in 2011. The following chart shows the breakdown of China's aluminum extrusion exports by country for 2011:



Source: China Customs, ICIS Consulting

Australia is the second largest importer of Chinese aluminum extrusion products. Since 2007, China's aluminum extrusion product exports to Australia have remained stable at approximately 30,000 MT. In 2010, due to increased demand from Australia, Chinese exports of aluminum extrusion products increased to approximately 47,000 MT, an increase of over 50% compared to 2009. In 2011, however, exports to Australia slightly decreased to 44,000 MT due to the confirmed imposition of anti-dumping and countervailing duties by the Australian government in 2010. According to ICIS Consulting, our market share was estimated at approximately 51%, 43% and 55% of Chinese aluminum extrusion product imports to Australia by weight for 2010, 2011 and 2012, respectively. The following chart shows total exports to Australia of Chinese aluminum extrusion products for the years indicated:



Source: China Customs, ICIS Consulting

The demand for aluminum extrusion products in Australia is strongly driven by the construction and industrial sectors. The Australian construction and industrial sectors have recently encountered challenging conditions with subdued demand and rising input costs, exacerbated by a high Australian dollar and negative consumer sentiment, according to ICIS Consulting. Despite these headwinds, according to the Australian Bureau of Statistics, the construction sector has achieved a year-on-year

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growth of 3.1% in the second quarter of 2012, which is lower than the 4.0% growth rate in the second quarter of 2011 but on par with the 3.1% growth rate in the first quarter of 2012. A primary reason for the continued growth during the second quarter of 2012 was the relatively robust activity in the engineering construction sector, which includes construction works in the transport and utilities infrastructure sectors as well as the commodities sectors. Notwithstanding the second quarter performance, the real growth of the overall Australian construction sector is expected to slow down to 2.1% for the full year 2012, as estimated by ICIS Consulting, from 6.2% in 2011. Negative performance has affected the housing sector, and is expected to dampen construction and industrial activity in the second half of 2012. ICIS Consulting predicts that the construction sector could see a 3.0% real growth in 2013, primarily due to interest rate cuts by the Reserve Bank of Australia, residential building recovery and commodities demand recovery. Aluminum extrusion demand is expected to benefit from the growth of construction industry.

In recent years, certain countries have initiated anti-dumping and countervailing investigations of Chinese aluminum extrusion products to protect domestic industry. In 2011, the United States government set higher anti-dumping and countervailing duty rates for Chinese aluminum extrusion products, which are expected to cause exports of Chinese aluminum extrusion products to the United States to decrease significantly. The following table shows the details for anti-dumping and countervailing policies in Australia, Canada and the United States for imports of Chinese aluminum extrusion products as of January 2012:

Country	Investigation	Investigation Date	Preliminary Decision Date	Preliminary Decision Duty Rate	Final Decision Date	Final Decision Duty Rate
United States	Anti-dumping	April 20, 2010	October 27, 2010	6.18-137.65%	March 28, 2011	32.79%-33.28%
	Countervailing	April 20, 2010	August 30, 2010	137.65% (One company) 6.18-10.37% (Others)	March 28, 2011	8.02%-374.15%
Australia	Anti-dumping & Countervailing	June 24, 2009	November 6, 2009	16%	October 28, 2010	6.9%-16.2% (31 companies) 44.1% (Others)
Canada	Anti-dumping & Countervailing	August 18, 2008	November 17, 2008	37.09-43.43%	February 16, 2009	1.7%-42.4%

Sources: Public information, ICIS Consulting

Although these anti-dumping and countervailing investigations have in some instances resulted in higher duty rates for Chinese aluminum extrusion products in certain countries and affected exports to these countries (especially the United States), Chinese exports of aluminum extrusion products still increased by more than 218,000 MT in 2011, having increased by approximately 31% compared with 2010, mainly due to significant increases in demand from other countries, such as Mexico. With the increase in demand from these countries driven by development of downstream industries, ICIS Consulting estimates that exports of Chinese aluminum extrusion products will continue to increase.

### **Aluminum Pricing Mechanisms and Pricing Outlook**

#### *Pricing Mechanism*

The traditional pricing mechanism of aluminum extrusion products is on a so-called “cost-plus” basis measured by weight, comprising the price of aluminum per kilogram at prevailing benchmark rates and a negotiated per kilogram processing fee. This pricing mechanism is an international practice in the aluminum extrusion industry and is used to avoid the risk of rapid raw material cost changes, which are typically triggered by significant fluctuations in the prices of aluminum raw materials.

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Aluminum extrusion market participants purchase aluminum from the spot market. The benchmark prices are the Changjiang spot market price in East China and the Nanchu spot market price in South China.

Processing fees differ depending on the application, size, processing requirements, brand and quality, among other factors. Generally, aluminum extrusion products for industrial applications enjoy higher processing fees due to the high technical requirements and lower competition compared with construction applications, especially with regard to transportation applications. Accordingly, the processing fees for industrial application producers generally enjoy a higher profit margin, leaving them less susceptible to spot market price fluctuations. Processing fees for construction applications enjoy lower profit margins and are more susceptible to spot market price fluctuations.

### Raw Material Cost

The following chart shows monthly spot prices of aluminum in China for the periods indicated:

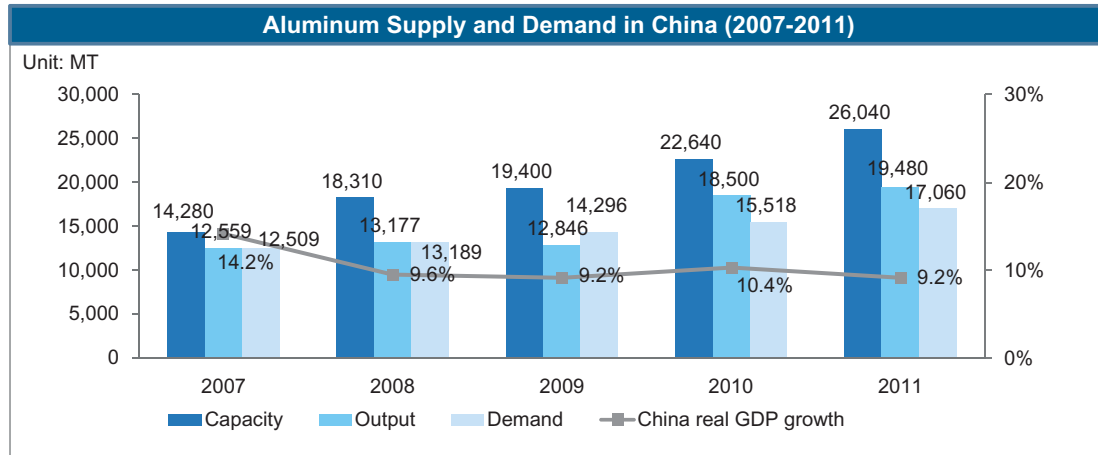


Source: ICIS Consulting

Commodity prices are mainly influenced by market participants' forecasts, which are driven by supply and demand, as well as the overall macroeconomic environment. The price of aluminum, as an international commodity which is widely traded, fluctuates significantly. The behavior of investors, traders and end users in the futures market all have a large impact on the futures prices of aluminum. The spot market is usually strongly aligned with the futures market.

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Because the commodity futures market is sensitive to GDP expectations, GDP expectations are a meaningful indicator for aluminum futures prices, which in turn serve as indicators for the spot market price. Additionally, supply and demand are also important factors affecting the aluminum spot market price. The following table illustrates China's aluminum capacity, output and demand volume and their respective annual growth and China's and the world's GDP growth for the periods indicated:



Source: ICIS Consulting

As a result of its forecasts predicting continued growth of China's GDP, ICIS Consulting forecasts that aluminum demand will continue to increase accordingly, as aluminum is a major raw material used by various industries. By analyzing China's GDP and aluminum supply and demand in China, ICIS Consulting forecasts that the price of aluminum will increase from an estimated RMB16,872 per MT in 2011 to approximately RMB21,324 per MT in 2015. ICIS Consulting forecasts that in 2013, aluminum prices will recover to their historical highs of 2007. ICIS Consulting also expects that the period of rapid production capacity expansion period has ended. Whether certain production capacity expansion plans for 2012 will be delayed depends on expectations of future demand.

### *Processing Fee and Forecast*

Processing fees for industrial applications are typically higher compared to other applications because of the greater value added for industrial processing, as well as having a generally higher profit margin than for other applications. Higher profit margins provide significant protection from market price fluctuations. Processing fees for construction applications generally have a lower profit margin, and as a result are more susceptible to market price fluctuations. In the past three years, processing fees have decreased due to a shrinking export market.

The market for aluminum extrusion products for construction applications is too competitive to provide large profit margins. Furthermore, the demand growth for aluminum extrusion products for construction applications is forecast by ICIS Consulting to stabilize at approximately 4% annually from 2011 to 2015. ICIS Consulting estimates that processing fees for construction applications are likely to increase by RMB100 per year through 2015, with an annual growth rate of approximately 1%. ICIS Consulting forecasts that, in the long term, aluminum extrusion product manufacturers will be subject to consolidation through mergers and acquisitions and the elimination of outdated production capacity, which it believes will cause processing fees for construction applications to increase.

Aluminum extrusion products for industrial applications are generally more profitable than for other segments. Although more new participants are entering the market and production capacity continues to expand, high technical barriers and strong downstream demand, forecasted by ICIS Consulting to grow by at least 10% annually, is expected to support continued growth in processing

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fees for industrial applications. ICIS Consulting estimates that processing fees for industrial applications will grow by approximately 3% annually from 2012 to 2015.

After the recovery of processing fees for both construction and industrial applications in 2009 and 2010 following the global financial crisis, the processing fees for both applications are estimated to have remained stable in 2011. The continued processing fee stability is a result of continued production capacity increases in 2010, which ICIS Consulting believes to have increased competition and further restrained any increase in processing fees in 2011. After 2011, ICIS Consulting forecasts an economic recovery which would drive increased demand for aluminum extrusion products. Additionally, recent delays in production capacity expansion plans are a signal of entering a more tempered period of production capacity expansion. ICIS Consulting believes that aluminum extrusion product supply and demand will continue to become more balanced, which it expects to drive continued moderate increases in processing fees.