

Xinyi Glass [0868.HK]

Improving supply/demand situation. Initiate with BUY

Xinyi Glass (XYG) is a leading diversified glass manufacturer and the second-largest float glass producer in China. XYG has a 20% share worldwide of the automobile (auto) aftermarket replacement glass market. Despite concerns about the outlook for XYG's float glass division, given industry-wide excess capacity, the Chinese government's supply-side reform policy might change the supply/demand dynamics of the industry, which would be positive for XYG. With resilient global aftermarket auto glass demand, the wide adoption of Low-E glass, and capacity rationalization in the float glass industry in China, we expect XYG to post a 8.2% top-line CAGR and 18.4% bottom-line CAGR in 2015-17E. We also maintain the view that the negatives for XYG have been priced-in. Details on the government's target for capacity reduction in the float glass industry, further cuts in natural gas prices, and the Xinyi Solar (XYS) development plan are share price catalysts. The XYG share price may come under pressure because of weak market sentiment, which in our view offers a good buying opportunity for investors. XYG is now trading at 8.4x 2016 PER. With its undemanding valuation, we initiate coverage on XYG with a Buy rating for a target price of HK\$5.5 (based on 10.5x 2016E PER, lower than historical average and but in line with the average of its listed peers).

- Stable auto glass market to strengthen outlook.** Based on 15.8m pieces of auto glass capacity in 2014, XYG has about a 20% share of the global auto glass replacement market, which is far less volatile in economic cycles since sales are correlated with the total number of cars in the market. Despite increasing global macro uncertainty, XYG's auto glass segment will continue to benefit from steady growth of global auto shipments given the company's leading position in the global replacement market. Revenue growth of the segment is expected to be >7% p.a. in 2016E and 2017E.
- Industry pioneer in Low-E glass and PV Glass.** XYG is a domestic industry leader in Low-E and PV glass (through YYS). Driven by China's rising environmental consciousness, we expect XYG's shipment of Low-E glass to report faster growth despite concerns about the property sector. YYS's PV glass product is also expected to report strong growth of 32% in volume terms in 2014-2017. With its increasing market share and the YYS expansion plan, we believe XYG will be one of the beneficiaries of China's energy saving and environmental development story.
- The government's supply-side reform policies** will be implemented more easily in the float glass industry than in other industries since the float glass industry is dominated by non-SOE related companies, so it does not suffer from the structural problems of SOE involvement. The new supply of float glass will be at a relatively low level starting in 2H2016, and effective production capacity nationwide is expected to decline in 2016 and 2017, given potential capacity reduction and a challenging macro environment. The utilization rate of the industry is expected to pick up in 2H2016 and 2017. The leading players, including XYG, will benefit from industry consolidation.
- Risks:** (1) lower than expected property investment, (2) faster than expected capacity expansion and (3) substantial increase in cost of production.

Key Financials (in HKDm)	2013	2014	2015E*	2016E*	2017E
Revenue	9,936.1	10,861.1	11,573.7	12,608.3	13,740.4
Change (YoY %)	17.8	9.3	6.6	8.9	9.0
Gross Profit	3,137.0	2,733.4	3,113.9	3,513.9	3,886.6
Gross Margin %	31.6	25.2	26.9	27.9	28.3
Net Profit	3,521.9	1,364.3	1,969.7	2,013.9	2,264.7
Net Margin %	35.4	12.6	17.0	16.0	16.5
EPS (Basic)	0.89	0.35	0.50	0.52	0.59
Change (YoY %)	189.9	(61.3)	44.4	4.2	12.5
DPS	\$0.240	\$0.150	\$0.217	\$0.226	\$0.254
ROE (%)	31.8	11.1	15.1	14.2	14.8
Dividend Yield (%)	5.47	3.42	4.93	5.14	5.78
PER (x)	4.9	12.7	8.8	8.4	7.5
PBR (x)	1.4	1.4	1.2	1.2	1.1
FCF Yield (%)	1.91%	-1.06%	4.74%	5.02%	6.38%
Capex (m)	(3,752.3)	(1,729.0)	(1,600.0)	(1,400.0)	(1,400.0)
Free cash flow per share	0.1	(0.0)	0.2	0.2	0.3
Net Gearing (%)	33.6	42.0	34.8	34.0	30.1

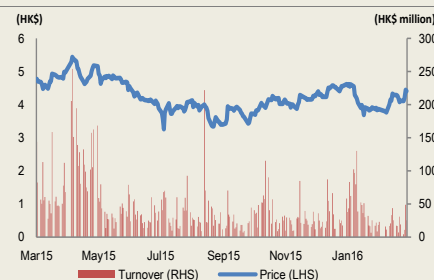
China Construction Sector - Building Materials

BUY

Close: HK\$4.39 (Mar 03, 2016)

Target Price: HK\$5.5 (+24.7%)

Share Price Performance



Market Cap	US\$2,180m
Shares Outstanding	3,862m
Auditor	Pricewaterhouse-Coopers
Free Float	45.3%
52W range	HK\$3.26-5.44
3M average daily T/O	US\$4.2m
Major Shareholder	Mr Lee Yin Yee (20.3%)

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Investment positives

1) Better supply/demand dynamics in the float glass industry

Supply-side reform might change market dynamics and attract market attention.

The Chinese government has been releasing measures and policies to tackle excessive capacity in the commodity and building materials sector since 2005. However, the results of the measures and policies have been below government expectations. Growth in additional capacity in the major commodity and building segments, including the float glass industry, has essentially outpaced the closure of outdated facilities. Excessive capacity in the commodity and building materials sector has been worsened in 2015 given the slow-down in economic activity, particularly in the property sector. Industries such as steel, coal and aluminum are reporting substantial losses, which has been a further drag on overall economic growth in China. To resolve the excessive capacity issue, the Chinese government proposed supply-side reforms, which is a focus of the 13th Five Year Plan (FYP). The government has released capacity-reduction plans for the steel and coal industries and is likely to release capacity-reduction plans for other industries, such as aluminum, cement and float glass. The capacity-reduction plan might change the supply/demand dynamics in the coming years, which would be positive for the leading players in the respective industries.

The commodity and building materials sectors are mostly oversupplied in China.

The Chinese government released policies or regulations to sort out the excess-capacity issue in the float glass industry in 2006, 2009, 2011, 2013 and 2014. The float glass industry, like the steel, aluminum and cement industries, has seen overcapacity for years. However, we have seen some recent improvement in the industry, thanks to its private-sector nature, as non-SOE investment accounts for 85% of total glass sales in China. The effective production capacity of the float glass industry dropped 3.5% YoY in 2015 to 1,055m weight cases, which was lower than the 1,094m weight cases in 2014 and 1,094.3m weight cases in 2013. Float glass output in China recorded a YoY decline of 8.6% in 2015. There were 348 float glass production lines in China as at the end of Jan 2016, but only 221 were operational. The rest were shut down (68 lines) or under maintenance (59 lines). The ratio of non-operating lines to production lines reached a historical high of 36.5% as at the end of Jan 2016.

The float glass industry has already seen improvement because of less involvement by SOEs.

According to the China Architectural Glass Industry Association, 60 to 70% of the float glass produced in China is used in construction or for building-related purposes. Automobile-related demand accounts for about 20%, and exports account for the remainder. Going forward, we believe the supply cap will be reinforced thanks to supply side reforms, higher environmental protection targets for provincial governments, tight market liquidity and slower economic growth.

We foresee more severe outdated capacity elimination in 2016 and 2017 and more new capacity transferred into high value-added fabricated glass products, like Low-E glass and solar glass. We expect the overall demand/supply situation to improve in the coming years, which will be positive for leading players like XYG.

CAPEX cut by leading players

The leading A-share listed float glass players like Kibing Group and China Southern Glass Holdings (CSG) cut their CAPEX substantially in 1H 2015 because of the industry downturn and business diversification. XYG management also indicates that the company doesn't have major float glass capacity expansion plans for 2016 and 2017. We expect more CAPEX cuts in 2016 and ahead.

The float glass segment is fragmented in China but consolidated globally.

Chinese float glass manufacturers are mostly small- and medium-sized enterprises that started operations in recent years, which may present a challenge for them to realize economies of scale. Initial-stage investment for float glass production is around Rmb200m-400m. The total cost would vary depending on the complexity of the product and fabrication methods. A typical high-quality float glass production line may cost Rmb700m-Rmb1bn due to the high technological value added. However, in China only 25% of these production lines are equipped to produce high quality float glass according to Pilkington.

Downstream is more concentrated as the leading players have a dominant market share.

Like other traditional capital-intensive industries, the float glass industry in China is highly fragmented. However, the glass industry is quite monopolistic, as several international giants have stable control of global market share. The top five float glass companies account for only 28% of the overall market share in terms of capacity, far less than 55% for Asia (ex-China), 68% for Europe, or 100% for South America.

Compared to the float glass industry, the fabricated flat glass industry has a high industry concentration rate because of higher market entry levels. In the automobile glass market, Fuyao Glass [3606.HK] and XYG have a high market share in terms of revenue. In the ultra clear patterned glass industry, the top four companies, including XYG and Flat Glass [6865.HK], have more than a 70% market share. The top five players in Low-E construction glass have an 80% market share.

The float glass industry is more market driven.

Compared with other commodity and building materials sectors, float glass manufacturing is not labour intensive, which makes closures easier, since large closures may lead to unemployment and instability. SOEs have a greater social burden as they are considered more difficult to close than private companies. The YoY decline in production output of the floating glass industry in 2015 was the third decline since 2009, which may suggest that the glass industry is quicker to react to overcapacity issues, which in our view, reflects the lower level of involvement of SOEs in this industry. Some glass manufacturers with an SOE background, such as CSG and Luoyang Glass [1108.HK], have been scaling down their float glass capacity and shifting to other product types like electronic glass. The industry's private-dominated nature will make capacity rationalization easier and will also ease supply pressure. The collapse of the Farun Group, China's third-largest flat glass producer (with about 7% of total China float glass capacity in 2014), in mid-Oct 2015 was a good example of how the glass manufacturing sector may react better to government supply-side reform policies than other commodity/building materials industries.

Resuming suspended production is difficult.

Float glass production lines run continuously during the manufacturing process. During industry downturns, therefore, weak float glass pricing puts heavy pressure on the profitability of float glass producers. The cost of resuming production is high after the production line is shut down for maintenance. If the float glass production lines are allowed to cool to room temperature, the refractory brick in the production line need to be reinstalled, which can result in six months of downtime and cost at least RMB30m. Compared with other commodities, such as coal, copper or aluminum, the float glass industry is more diversified in terms of location, so it is less concentrated, so capacity reduction for glass is not likely to lead to high domestic protection by local governments.

Float glass profitability is cyclical in nature.

Historically, float glass is highly cyclical in terms of profitability. As market entry barriers are relatively low, oversupply is common, leading to intense competition. The float glass industry faced severe industry downturns in 2002, 2006, 2008, 2012 and 2015 because of a drop in the ASP and squeezed margins caused by capacity overbuild and weak downstream demand from the construction and automobile industries. The normal cycle for the float glass industry is around three years, which consists of a two-year up cycle and a one- to two-year down cycle.

The property sector is a drag on the sector.

With regard to glass demand, the property construction slowdown has dragged down the whole sector. Although property sales rebounded strongly in 2H15 thanks to supportive government policies, property developers have been reluctant to deploy funds to acquire more land sites. The land area purchased in 2015 dropped >30% YoY, and property investment grew only 1% YoY. It is difficult to expect the property sector to trigger demand recovery for glass if developers are not buying more land sites. Therefore, even under a more optimistic scenario, we believe glass demand growth in 2016 will be flat. Factoring in weaker sentiment in the property sector, we expect a 3% YoY decline in demand for float glass in 2016 and no growth in demand for float glass in 2017.

The automobile sector is still growing.

On the other hand, stabilization of automobile output maybe a growth driver for the glass industry. With regard to auto glass demand, we expect a 7% CAGR over 2015-17, which is supported by mid single-digit YoY growth in China new auto sales and increasing replacement demand. Overall, we expect glass demand to decline 2.4% in 2016 and remain flat in 2017.

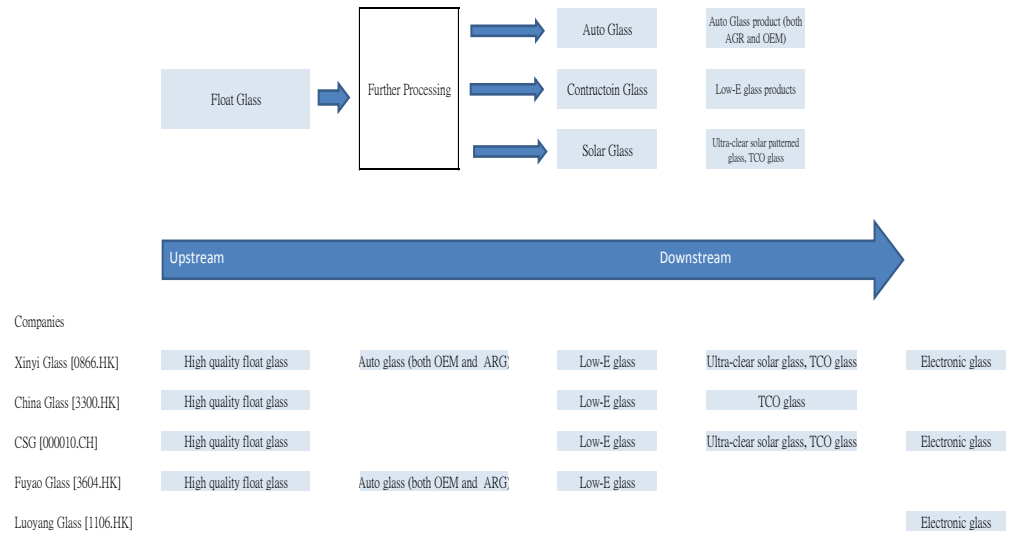
Based on industry information, there are 16 production lines under construction which are set to operate in 2016. Assuming 50% of this new capacity will have an immediate impact on the supply and demand dynamics, we estimate 33m Weight cases of new capacity increase in 2016. The remaining 33m weight cases of new capacity will come on stream in 2017.

Ten production lines which were put under maintenance are ready for resumption of production in 2016. Assuming 100% of capacity will have immediate impact on supply and demand dynamics in 2016, we estimate output of 38.4m weight cases will resume in 2016.

Supply will decline faster than demand.

As supply-side reform is one of the top priorities on the agenda of the central government, we expect it to release more aggressive capacity shutdown targets for the float glass industry. We expect 60m weight cases to be eliminated each year in 2016 and 2017. Overall we expect effective capacity in the float glass industry to decrease 3.7% YoY in 2016 and 6.1% in 2017 after a 3.5% decline in 2015. With a record capacity shutdown ratio (both outdated capacity phased out and cold repairing), float glass production is expected to decline by 5% YoY in 2016 after a 6.8% YoY decline in 2015 and to be flat YoY in 2017 vs 2016. As a result, we expect the supply/demand situation for the float glass industry to gradually improve in 2H 2016 to 2017. The leading players, including XYG, will be the major beneficiaries of the improving supply/demand situation.

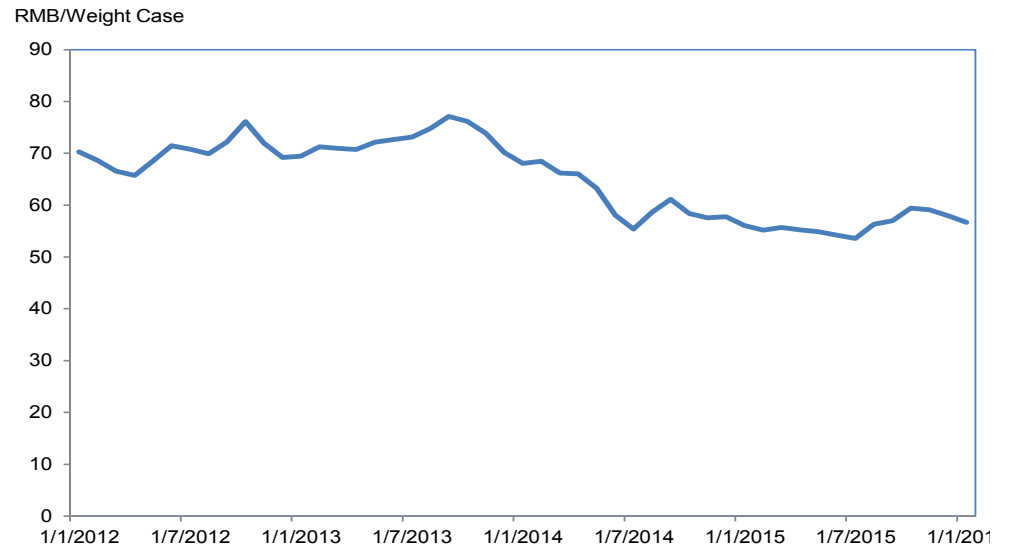
Figure 1: Glass Industry Competitive Landscape



XYG is an more integrated glass producer in China.

Sources: CGIS Research

Figure 2: Average Float Glass Price in Key Cities in China

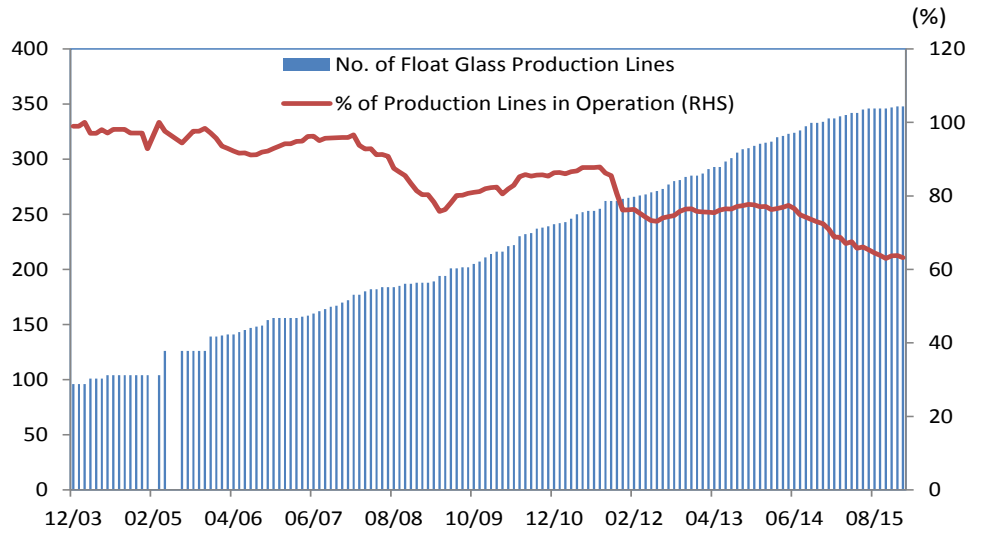


Float glass prices have stabilized after record capacity suspension.

Sources: WIND, CGIS Research

Figure 3: Number of Float Glass Production Lines in China

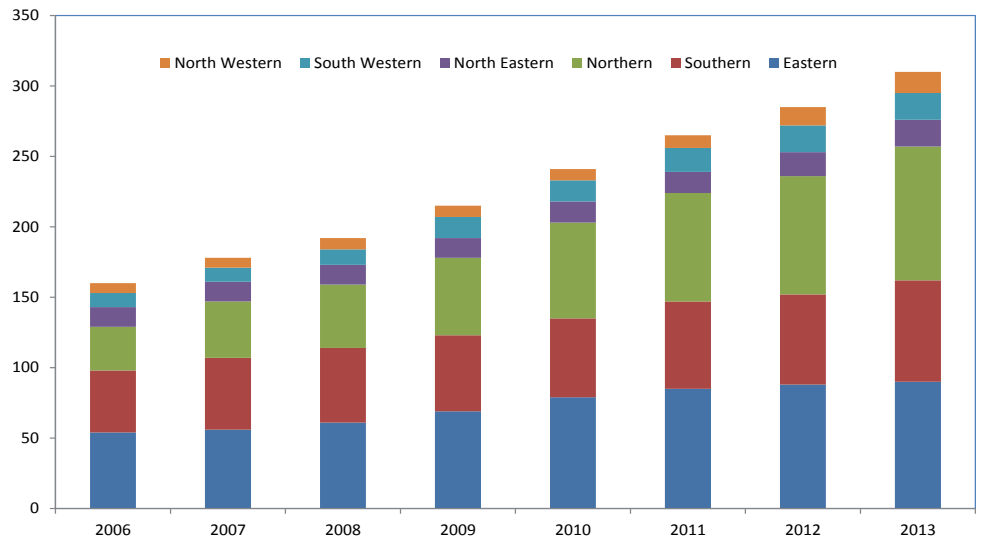
Record high suspension ratio



Sources: WIND, CGIS Research

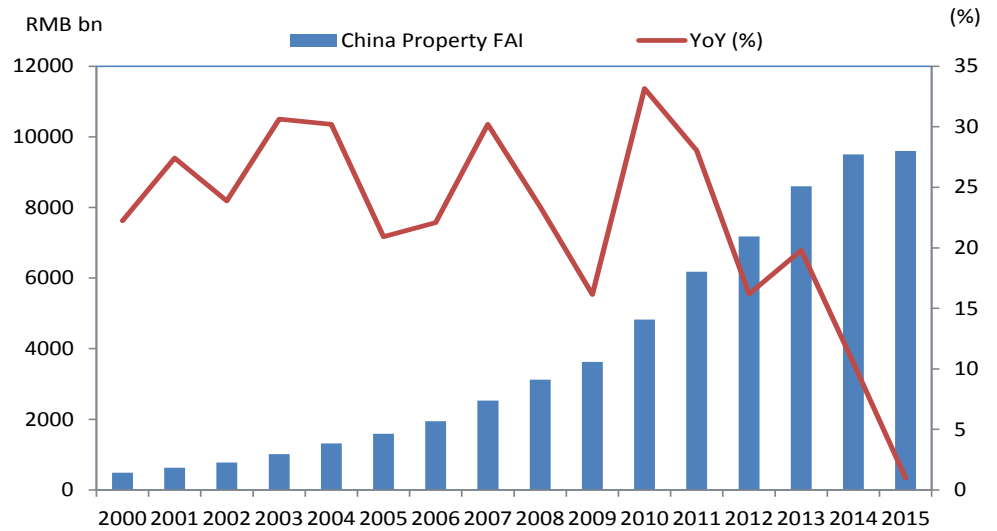
Figure 4: Location of Float Glass Production in China

Float glass capacity is more diversified in terms of location.



Sources: WIND, CGIS Research

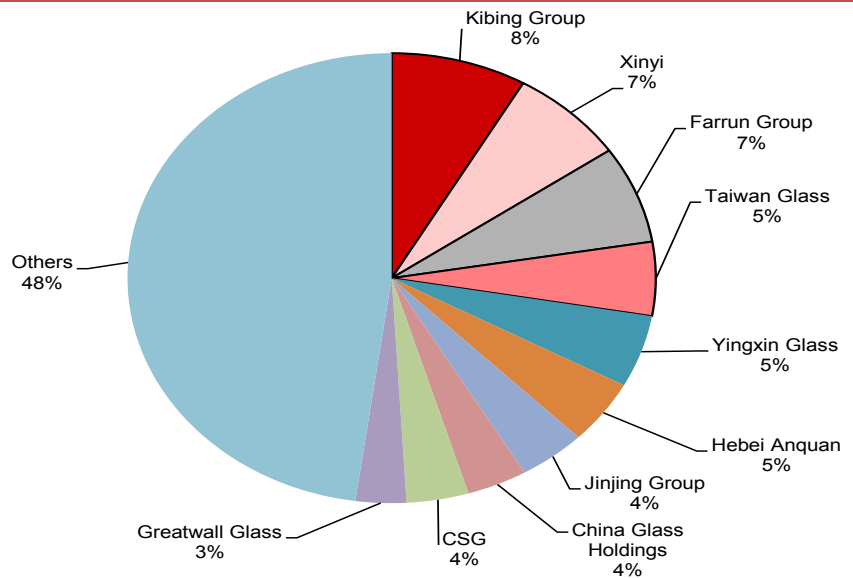
Figure 5: China Property Fixed Asset Investment



The property FAI fall-off triggered concerns.

Sources: WIND, CGIS Research

Figure 6: China Float Glass Market Share in 2014



There are no dominant players in the industry.

Sources: Company Data, CGIS Research

Figure 7: Supply/Demand Situation in the Float Glass Industry In China

Supply										
(m weight case)	2008	2009	2010	2011	2012	2013	2014	2015F	2016F	2017F
New addition		88.0	123.6	117.0	89.5	308.7	126.3	62.1	33.0	33.0
Phased-out capacity by Government	6.0	6.0	18.4	30.4	58.6	28.0	37.6	40.0	60.0	60.0
Capacity shut down/cold repairing	94.4	106.4	90.0	172.0	179.5	217.8	344.5	444.8	516.4	614.8
Total capacity	585.4	673.4	797.0	914.0	1003.5	1312.2	1438.5	1500.5	1533.5	1566.5
Effective capacity	491.0	567.0	707.0	742.0	824.0	1094.3	1094.0	1055.7	1017.1	951.7
Actual production	551.8	560.7	630.3	737.9	714.2	779.0	792.6	738.6	701.7	701.7
Actual Production YoY (%)	1.1	1.6	12.4	17.1	-3.2	9.1	1.7	-6.8	-5.0	0.0%
Average price (RMB/ton)		1985.7	1828.4	1418.4	1381.6	1401.7	1155.6	1158.4	1158.4	1159.4
Utilization rate (%) (Actual Production/Effective Capacity)	112.4%	98.9%	89.1%	99.4%	86.7%	71.2%	72.5%	70.0%	69.0%	73.7%
Year end inventory	21.05	12.3	14.4	27.2	28.1	29.2	32.5	32.4		
Year End Inventory YoY (%)		-41.8%	17.8%	88.3%	3.3%	4.1%	11.1%	-0.3%		
Demand										
(m weight case)	2008	2009	2010	2011	2012	2013	2014	2015F	2016F	2017F
Sector										
Real Estate	320	321	371	422	475	525	560	548	531	530
Automobile	16	20	24	24	25	28	30	30	32	34
Export	30	31	35	37	35	39	44	43	43	43
Others	44	51	48	54	60	66	70	69	67	67
Total demand	410	423	478	537	595	658	704	690	673	674
Sales/Production Ratio (%) (Demand vs Supply)		75.4%	75.8%	72.8%	83.3%	84.5%	88.8%	93.4%	95.9%	96.1%
Demand YoY (%)										
Real Estate		0.4%	15.5%	13.7%	12.6%	10.5%	6.7%	-2.1%	-3.2%	-0.2%
Automobile		20.3%	21.2%	0.0%	4.2%	12.0%	7.1%	0.0%	7.0%	6.3%
Export		3.0%	13.1%	5.7%	-5.4%	11.4%	12.8%	-2.3%	0.0%	3.0%
Others		16.0%	-5.2%	12.5%	11.1%	10.0%	6.1%	-1.4%	-2.9%	0.0%
Total demand		3.1%	13.1%	12.3%	10.8%	10.6%	7.0%	-2.0%	-2.9%	0.0%

Sources: WIND, China Glass Industry Association, CGIS Research

2) Stable auto glass segment

The global auto glass segment is stable.

Auto glass includes windshields, and side and rear windows, which are laminated and tempered glass products. The automotive glass market can be divided into two segments: the Original Equipment Manufacturer (OEM) market for glass products sold to automobile manufacturers, principally for installation on new vehicles, and the Aftermarket Replacement Glass (ARG) market for glass products sold to aftermarket suppliers for replacement purposes. Demand for auto glass is highly correlated with the development of the automobile industry. According to Roland Berger, as the world's economy recovered from the global financial crisis in 2008, global demand for auto glass increased from 294m sqm in 2009 to 415 million sqm in 2013, representing a CAGR of 9.0%. Berger expects global auto glass demand to increase to 528m sqm in 2018, representing a CAGR of 4.9% from 2013 to 2018. The global OEM auto glass market grew to 331m sqm in 2013, representing a CAGR of 10.1% from 2009 and accounting for 79.8% of the global auto glass market. Growth in the global OEM auto glass market outpaced the global automobile market in 2009-2013, mainly because of increased market demand for larger windshields and the increasing popularity of vehicle sunroofs. The global OEM auto glass market is expected to grow to 423m sqm in 2018, representing a CAGR of 5.0% from 2013 to 2018. The global ARG auto glass market grew to 84m sqm in 2013, representing a CAGR of 5.0% from 2009, and is expected to grow to 105m sqm in 2018, representing a CAGR of 4.6% from 2013 to 2018.

Global auto glass sales increased at a CAGR of 7.6% from US\$10.7bn in 2009 to US\$14.2bn in 2013. The average price of auto glass decreased from US\$36.30 per sqm in 2009 to US\$34.10 per sqm in 2010, primarily reflecting the impact of the global financial crisis in 2008. The average price of automotive glass has stabilized at US\$34 per sqm since 2010, primarily as a result of the recovery in the global automotive market and the closure of several unprofitable automotive glass manufacturing facilities. The global automotive glass market is highly concentrated, with the top four players accounting for approximately 77% of total global auto glass sales volume in 2013.

Demand for vehicle sunroofs is expected to grow, driven by the increasing emphasis on driving comfort. Auto glass usage per vehicle increased at a CAGR of 1.4% over the past decade, and is expected to continue to increase in the future, driven primarily by the increase in tilt angle on front windshields for improved vision and demand for larger sunroofs. Smart glass products with value-added features and functions to improve energy efficiency and driving comfort and safety, such as electrically switchable smart glass, water-repellent glass, and head-up displays (HUD), are becoming widely used in vehicles. Demand from leading global automobile manufacturers for auto component modularization is increasing as they seek to reduce production costs, optimize supply chains and enhance quality control. This is expected to drive auto glass manufacturers to increase the value added to automotive glass products by incorporating additional value-added processes, such as pre-assembly and encapsulation.

Barriers to entry to the automotive glass industry include: a) manufacturing and sales network, b) strong R&D capability, c) upfront capital investment and d) customer certification.

High entry barriers

The difficulty of quickly establishing a manufacturing network covering major automobile production bases and a comprehensive sales network presents a significant entry barrier to the automotive glass market. A manufacturing and sales network is crucial to meeting OEM customer delivery requirements cost-effectively and expanding the customer base in the ARG auto glass market. The rapid evolution of glass functions has intensified competition among manufacturers and presents another entry barrier to new players with insufficient research and development capability. In addition, auto glass manufacturers must meet the stringent technological requirements imposed by the regulatory authorities.

XYG is the largest supplier of AGR glass.

In Europe, the US and China, the establishment of an automotive glass manufacturing facility with annual production capacity of approximately 4m sqm generally requires investment of Euro 40m to 60m, US\$70m and RMB200m, respectively. In addition, to ensure the adequate and timely supply of high-quality float glass for automotive glass production, automotive glass manufacturers generally establish high-quality float glass production lines near their automotive glass manufacturing facilities, which requires additional investment of approximately Euro 100m to 150m, and RMB300m for each facility in Europe and China, respectively. Automotive glass manufacturers must obtain various national safety and quality certifications for their automotive products in the countries and regions where they sell products, including China's CCC, the US DOT, the EU ECE, Japan's JAS and Brazil's INMETRO.

XYG is the largest supplier of ARG glass globally, with a worldwide market share of about 20%. According to XYG management, the company is the largest windshield exporter in China. XYG can produce about 60,000 different specifications of auto glass and about 80% of its auto glass business focuses on the after-market. The company also supplies auto glass on an OEM basis to automakers in China, including Chery, BYD [1211.HK] and Zhengzhou Yutong Bus [600066.CH]. Auto replacement glass is sold mainly through its distributor network.

Fuyao Glass [3606.HK] (Fauyao) is another listed auto glass manufacturer, but there is limited competition between XYG and Fuyao. Fuyao focuses on the OEM market and sells its products directly to automakers, while XYG concentrates more on the export market and serves mainly the global auto replacement glass market. The steady auto glass business provides downside support to XYG during downturns in the float glass industry.

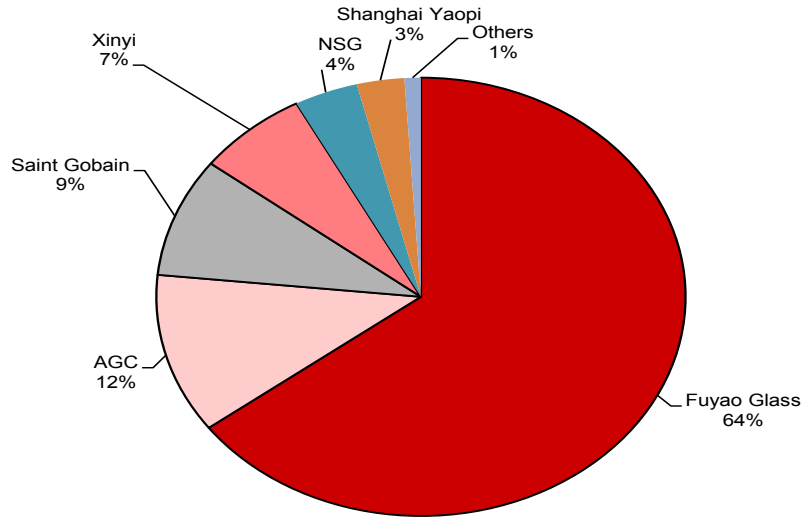
The Organisation Internationale des Constructeurs d'Automobiles (OICA) estimates the CAGR for vehicles in use worldwide at 3.58% for 2008–13 for a totaled of 1.2bn units in 2013. Depending on the proportion of heavy vehicles in use and speed limits on expressways, 5–7% of vehicles in use each year need windshield replacement due to accidents, according to OICA data. Based on OICA estimates, there is annual replacement demand for 59-83m windshields, which implies a steady market for XYG.

On 16 December 2015, XYG announced plans to spin off Xinyi Automobile Glass Hong Kong (XYAG) by listing it on the GEM board of the Hong Kong Stock Exchange by way of introduction. The spin-off would not involve raising new capital. Following the IPO, the existing shares of XYAG would be distributed to XYG shareholders in specie through a special dividend, with a distribution ratio of 1 XYAG share for every 8 XYG shares held.

Spin-off of XYAG which is the second largest automobile replacement glass service provider in Hong Kong

According to XYG's filing with the Hong Kong Stock Exchange, XYAG reported a net profit of HK\$9.93m in 2014 and of HK\$3.795m in the Jan-Sep 2015 period. The draft prospectus indicates that XYAG is the second largest automobile replacement glass service provider in Hong Kong, with a market share of 19.5%. XYAG provides services to customers either at its service centres or by motorcade service teams at locations requested by its customers. XYAG commenced business operations when the company's first service centre in HK opened in Dec 1996. In 1997, XYAG introduced motorcade service teams to provide vehicle glass repair and replacement services to its customers. According to the prospectus, XYAG had four service centres and 19 motorcade service teams to provide these services. According to XYG management, the spin-off will facilitate future business development.

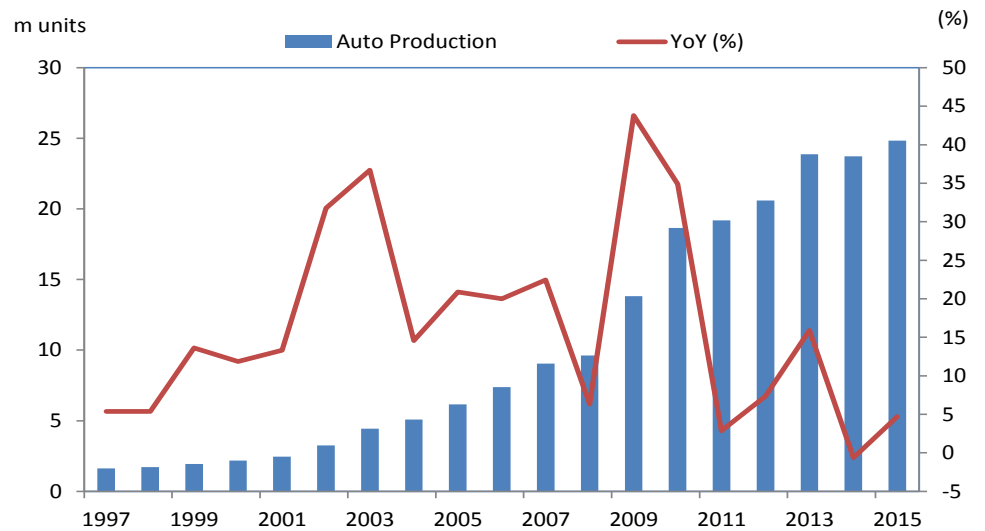
Figure 8: China Auto Glass Market Share



Fuyao Glass is the dominant auto glass player in China.

Sources: Company Data, CGIS Research

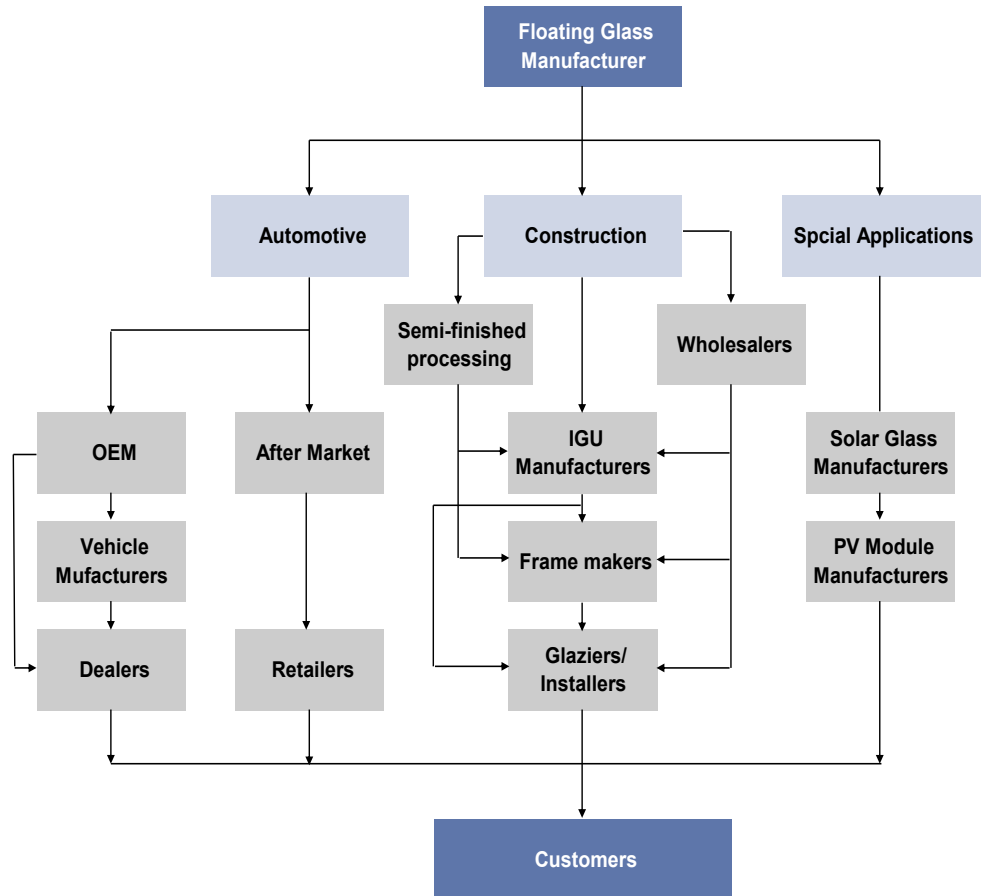
Figure 9: China Automobile Production



Automobile production is still growing in China.

Sources: WIND, CGIS Research

Figure 10: Glass Industry Supply Chain



Sources: CGIS Research

3) Leader in energy-saving building materials

Increasing penetration of low-E glass in China

In construction glass, XYG focuses on the production of energy-saving Low-E glass products. According to management, XYG has the second largest production capacity for Low-E glass in China, after CSG. Low-E glass is a type of glass that is coated with a thin film to reduce the emission of radiant infrared energy. Low-E glass and Low-E composite glass are generally used in buildings to improve energy efficiency by reducing thermal exchange between the building and the outside environment. The Chinese government is determined to improve energy efficiency and has a multi-stage plan to improve the energy-saving ratio. Up to 2010, over 95% of new buildings in China had an energy-saving standard of 50%. The target is to increase this standard to 65% for most of new building from 2016. The energy saving standard is benchmarked against general energy consumption in 1980 and 1981 in China. The Low-E glass industry has been growing fast in China, with the penetration rate reaching about 10% in 2014, up from 2% in 2010. However, this level is still low compared to the level of developed countries such as Germany, Japan, the UK and the US. According to the Chinese government's plan for urbanization (2014-20), the percentage of green architecture is supposed to increase from 2% in 2012 to 50% in 2020, which is expected to drive demand for Low-E glass.

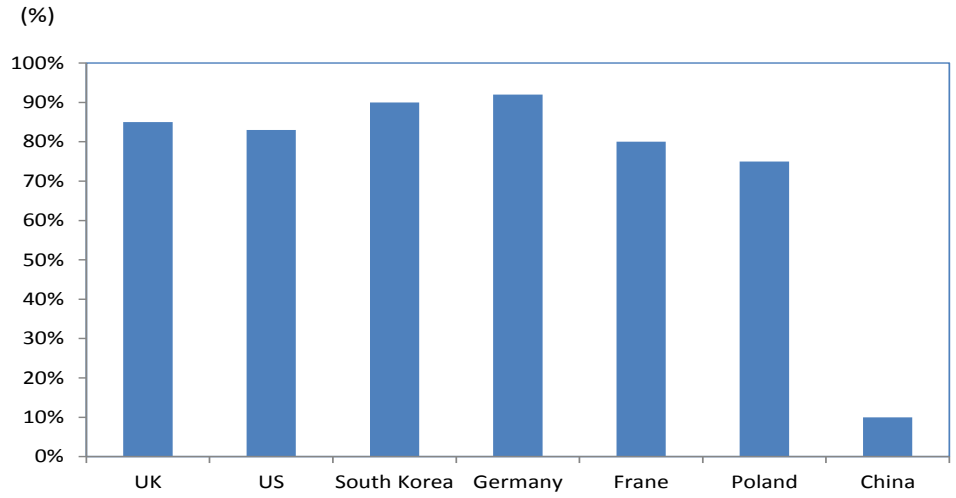
XYG has the largest market share.

Sales volume of Low-E glass in China in 2014 amounted to 158.2m sqm, with the top five players accounting for 66.2% of total sales volume. The top five players are XYG, Kibing, CSG, Taiwan Glass and SYP, with a market share of 18.0%, 14.2%, 13.3%, 11.4% and 9.3% respectively, based on sales volume. The other 33.8% of sales volume of Low-E glass in 2014 in China went to numerous other producers. With the rising standards of building energy efficiency in China, the use of Low-E glass in new buildings is expected to increase. Sales volume of Low-E glass in China is expected to reach 280.9m sqm in 2020, according to the Frost & Sullivan.

XYG enjoys several competitive advantages in the construction glass segment over some of its peers. First, it is one of the largest float glass manufacturers in China, which enables it to operate in a vertically integrated mode, resulting in lower transportation costs and steady raw material supply. Second, it has diversified geographical coverage, with production facilities in southern China, eastern China, the Bohai Bay Region and western China. This minimizes transportation costs and enables the company to respond quickly to client needs, especially large-scale property developers. Third, XYG's in-house float-glass production line supports the production of large-size float glass. The company can apply Low-E coating to this large-size float glass to produce Low-E glass, which can be sold to glass-processing companies to make glass curtain walls. Large sheets of low-e glass generally result in less waste during processing compared with small sheets, which provides XYG's customers with a cost advantage. Fourth, XYG has a good track record in providing high-quality glass for high-profile symbolic projects, such as the Shanghai Expo. The cost of switching suppliers for construction glass supply is high, so a good track record is important for glass suppliers in securing future construction contracts.

The China market for Low-E glass has growth potential.

Figure 11: Penetration of Low-E Glass



Sources: WIND,, CGIS Research

4) Further natural gas price cut is a catalyst

Float glass is a major raw material for laminated glass, which is produced by placing a sheet of float on each side of a layer of polyvinyl butyral (PVB) so that the glass pieces can stick to the PVB layer in case of an accident. Float glass is also the raw material for auto glass and construction glass. Float glass manufacturing involves mixing silica sand, soda ash and lime at very high temperatures of above 1,600°C. The melting furnace temperature has to be maintained above 1,600°C during the entire production process, which requires a huge amount of energy. The mix of raw materials used in the production of flat glass is known as the batch, which is composed mainly of three components: silica sand, sodium carbonate (soda ash) and dolomite/limestone. The remaining ingredients aid the melting and refining (bubble removal) reactions and impart colour. Water is added during batch mixing to prevent segregation. Silica sand is the main component of the batch, constituting about 62% of batch weight, excluding recycled glass. As China has vast territory and abundant resources, limestone and silica sand are relatively easy to obtain for glass manufacturing. Thus, glass manufacturers usually have strong pricing power over upstream limestone and silica sand providers. The major cost components for float glass manufacturers are raw materials (especially soda ash) and energy, followed by overhead and prime labour.

Energy is the major cost component.

The most important fuels used in glass-melting furnaces are gas and heavy oil. As heavy oil usually contains high sulphur content, burning it emits high amount of sulphur oxide and nitrogen oxide. The use of natural gas results in negligible sulphur dioxide emissions compared to heavy oil. In China, most glass companies use heavy oil as the main fuel to melt glass. Some advanced glass makers use natural gas, or even coke oven gas instead, to emit fewer pollutants. In addition, the energy costs of producing glass vary. Although the retail heavy oil price in China varies from region to region, the medium-term trend basically follows crude oil prices. Natural gas prices in China are regulated by the NDRC.

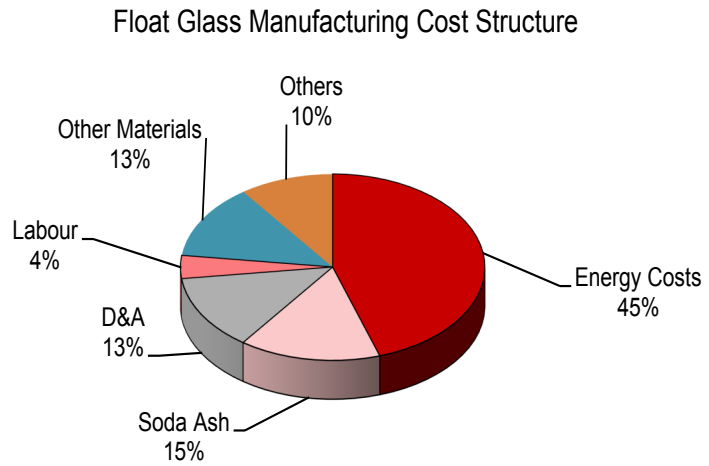
On average, 11m³ of natural gas is needed to produce one weight box (50 kilograms) of float glass. Natural gas costs accounted for about 40% of production costs for float glass in eastern China. On 20 Nov 2015, the Chinese government cut pipeline natural-gas prices by Rmb0.7 per m³, which resulted in cost savings for XYG, as 60% of the company's natural gas supply is based on pricing set by the NDRC. The remaining 40% of XYG's gas supply (mainly for production facilities in Guangdong province) is imported liquefied natural gas (LNG), which tracks global oil prices. The full impact of the natural gas price cut will be felt in 2016. The market is expecting the Chinese government to cut natural gas prices further in late-2016 given sluggish natural gas sales in 2015. XYG will be one of the major beneficiaries of further reductions in natural gas prices. According to WIND, soda ash prices dropped from about RMB1,650 per tonne in early 2014 to about RMB1,380 per ton in Jan 2016. Because of its buying power, XYG's actual transaction prices are RMB1,250–1,300 per tonne. Savings of RMB200 per ton on soda ash is equivalent to 3.5% of the current float glass price of RMB57.65 per weight box, which means that XYG has a cost advantage over its smaller competitors. If soda ash prices stay at current levels, there should be no concerns about cost movement for float glass manufacturers.

The impact of cuts in natural gas prices will be fully reflected in 2016.

There is concern that lower energy prices will delay the consolidation process, as smaller players using heavy oil as their energy source may be able to survive with less capital tied up. However, XYG management reiterated its view that increasing environmental protection controls by the central government will continue to put pressure on the smaller players, which will be required to make investments in emissions reduction. Environmental protection regulations in China require all glass producers to install desulphurization, de-dusting and de-nitration systems, which could result in an extra increase in cost of about RMB60 per ton for float glass producers using petroleum coke and coal tar.

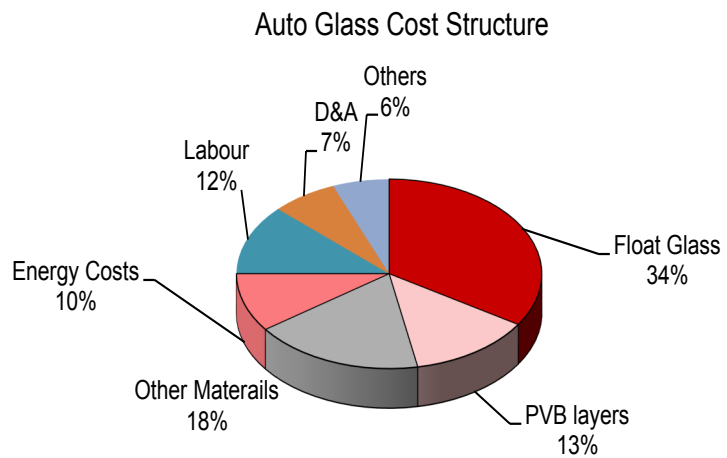
Smaller players are unlikely to enter the market despite lower energy costs.

Figure 12: Float Glass Manufacturing Cost Structure



Sources: Company Data CGIS Research

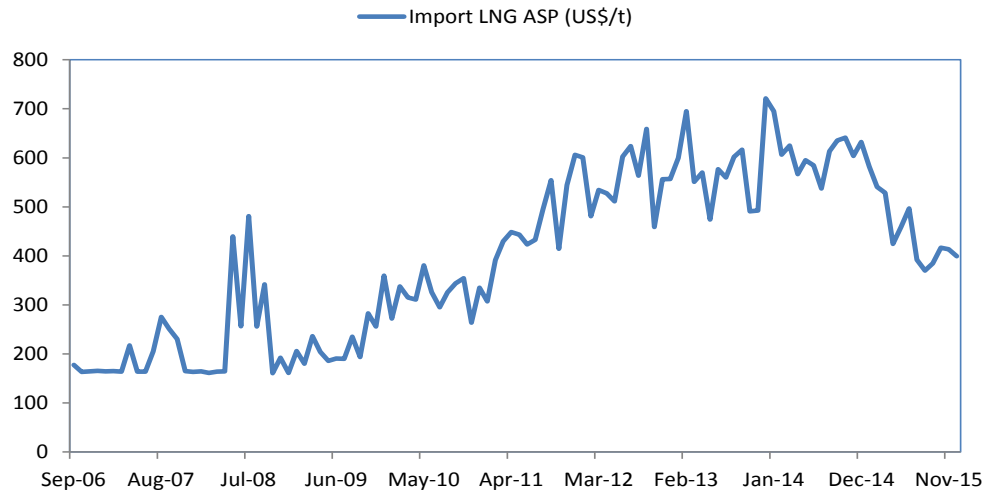
Figure 13: Auto Glass Manufacturing Cost Structure



Sources: Company, CGIS Research

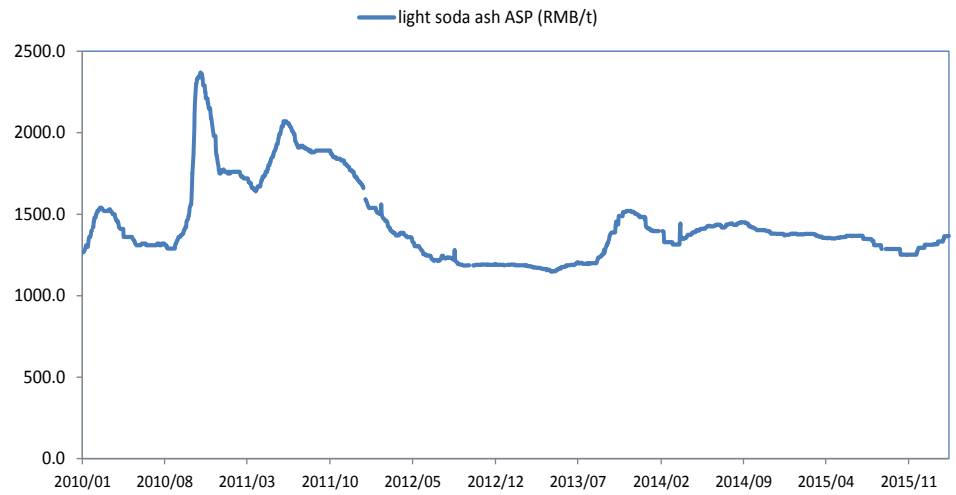
More favourable input costs environment

Figure 14: Import LNG Price in China



Sources: WIND, CGIS Research

Figure 15: Soda Ash Price



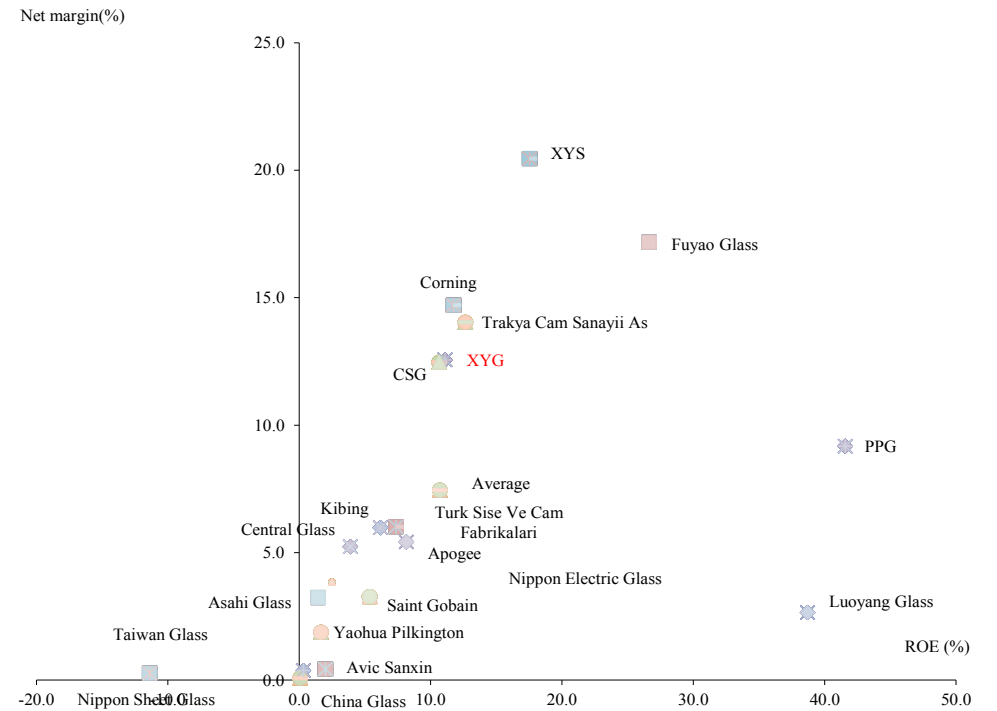
Sources: WIND,, CGIS Research

5) Higher profitability despite strong cyclical nature of the industry

XYG achieves higher than average profitability.

Given its scale and lower raw material prices through better logistics infrastructure, XYG has cost advantages over its competitors. According to our analysis, XYG maintained its gross margin at 25-45% in the last 10 years, while the gross margin of listed industry peers in China remained at around 18-28%. XYG also posted the highest profitability among its global peers, reflecting strong cost controls, quality improvement and distribution efficiency. From the long-term perspective, although the industry goes through strong short cycles, XYG has maintained strong profitability. Its gross margin and ROE have been higher than the industry average for 10 years, so we believe XYG is one of the best choices in the glass manufacturing sector with regard to the supply-side reform theme.

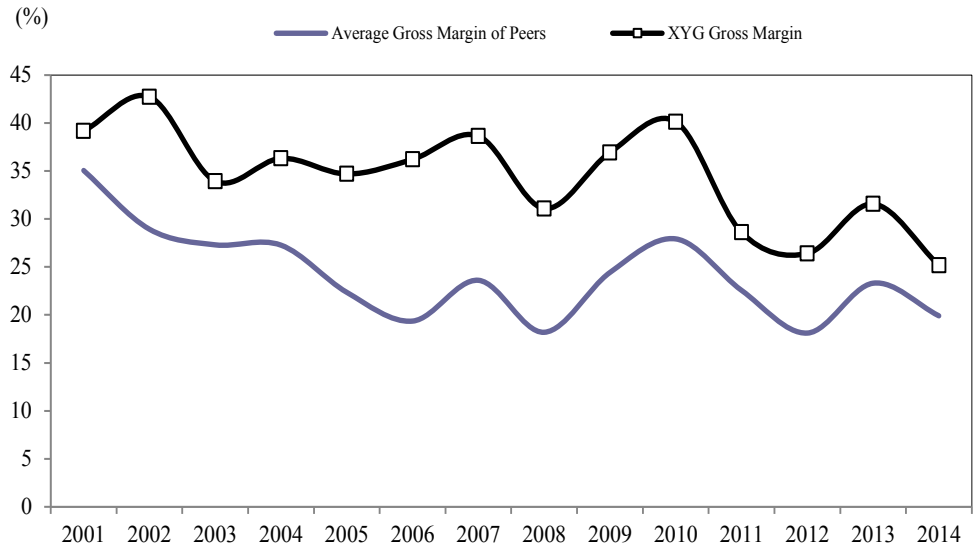
Figure 16: XYG Ranks High In Profitability and ROE



Sources: Bloomberg, CGIS Research

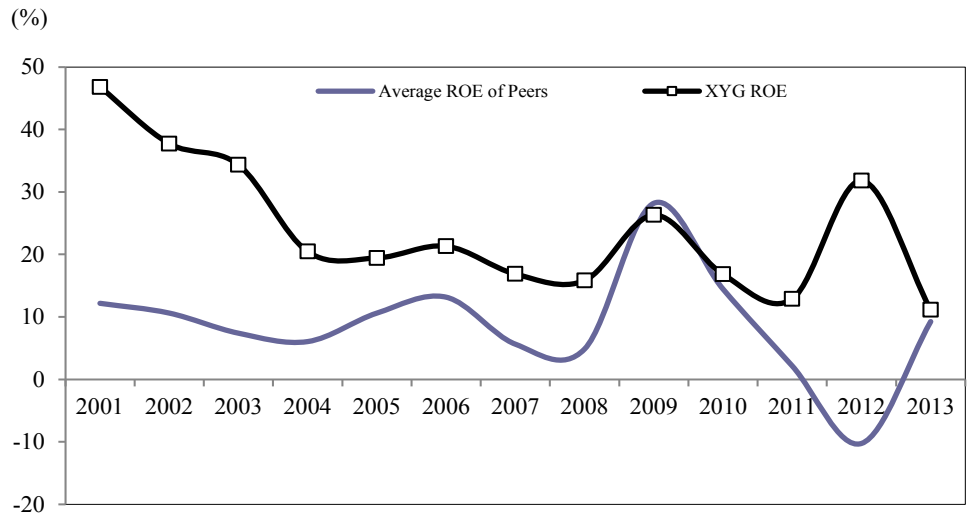
Figure 17: Gross Margin—XYG vs Average of Listed Peers

Higher than average gross margins among listed peers in the past 10 years



Sources: Bloomberg, Company Data, CGIS Research

Figure 18: ROE—XYG vs Average of Listed Peers



Sources: Bloomberg, Company Data, CGIS Research

Figure 19: Key Assumptions for XYG

	2012	2013	2014	2015F	2016F	2017F
Turnover (HKDm)						
Automobile glass	3,077.8	3,287.2	3,593.2	3,854.6	4,135.1	4,435.9
Construction glass	1,574.6	2,154.5	2,555.5	2,875.0	3,234.3	3,638.6
Float glass	3,780.6	4,494.3	4,712.4	4,844.1	5,238.9	5,665.9
Total	8,433.0	9,936.1	10,861.1	11,573.7	12,608.3	13,740.4
YoY Change (%)						
Automobile glass		6.8	9.3	7.3	7.3	7.3
Construction glass		36.8	18.6	12.5	12.5	12.5
Float glass		18.9	4.9	2.8	8.1	8.2
Total		17.8	9.3	6.6	8.9	9.0
Volume						
Automobile (piece)		12,110.0	12,889.0	13,826.8	14,832.8	15,912.0
Construction (sqm)		16,363.0	19,380.0	21,802.4	24,527.7	27,593.5
Float glass (tonne)		2,927.0	3,510.0	3,720.0	3,906.0	4,101.3
YoY Change (%)						
Automobile (piece)			6.4	7.3	7.3	7.3
Construction (sqm)			18.4	12.5	12.5	12.5
Float glass (tonne)			19.9	6.0	5.0	5.0
ASP						
Automobile (HKD/piece)		271.4	278.8	278.8	278.8	278.8
Construction (HKD per sqm)		131.7	131.9	131.9	131.9	131.9
Float glass (HKD per tone)		1,535.5	1,342.6	1,302.2	1,341.2	1,381.5
YoY Change (%)						
Automobile (HKD/piece)			2.7	0.0	0	0
Construction (HKD per sqm)			0.1	0	0	0
Float glass (HKD per tone)			(12.6)	(3.0)	3.0	3.0
Gross margin (%)						
Automobile glass	42.8	43.3	41.8	44.4	44.4	44.4
Construction glass	37.2	39.9	35.3	32.5	32.5	32.5
Float glass	8.6	19.0	7.0	9.7	12.0	13.0
Blended	26.4	31.6	25.2	26.9	27.9	28.3
Net margin (%)	14.1	35.4	12.6	17.0	16.0	16.5
Cost (HKDm)						
S,G&A	(1,056.7)	(1,250.9)	(1,638.0)	(1,665.8)	(1,751.6)	(1,908.9)
Financial Expenses	(57.3)	(59.7)	(38.1)	(75.1)	(28.7)	(40.5)
YoY Change (%)						
S,G&A		18.4	30.9	1.7	5.2	9.0
Financial Expenses		4.2	(36.2)	97.4	(61.8)	41.1
CAPEX (HKDm)	1,435.3	3,752.3	1,729.0	1,600.0	1,400.0	1,400.0
Net Gearing (%)	35.8	33.6	42.0	34.8	34.0	30.1

Sources: Company, CGIS Research

Earnings forecast

- **XYG should deliver core net profit growth of 31.7%/11.8%/12.5% in 2015E/2016E/2017E (excluding HK\$200m gains from the dilution of interest in XYS in 2015E). The growth drivers are: a) steady performance of the auto glass segment; b) increasing penetration of LOW-E glass; c) margin recovery in the float glass segment; and d) the increasing contribution from XYS.**
- We expect automobile glass sales volume to increase steadily at a 8.2% CAGR in 2015-17E, driven mainly by the resilient auto glass aftermarket and stable auto shipments. With XYG's strong capacity expansion in construction Low-E in 2014 and 15, we forecast robust sales growth of 12.5% in 2015-17. However, we believe it might need to accept a lower margin of 32.5% in 2015-2017 vs 35%-39% in 2012-2014, on the overall capacity ramp-up because of the sluggish property market. We expect float glass sales volume to grow at 5-6% CAGR in 2015-17 partly due to the ramp-up of its production line in Malacca, Malaysia, with a capacity of 900ton/day. We expect float glass margins to improve into 2016 on the NDRC natural gas price cut and improving demand/supply dynamics.
- Although we expect the supply/demand dynamics to become more favourable, we don't expect XYG's float glass ASP to improve significantly, as we expect the leading players to keep ASP unchanged to keep the most of the suspended capacity out of the market.
- **Limited CAPEX for future expansion.** XYG management maintains the view that the industry is under consolidation, which will lead to a substantial portion of the capacity to be phased out. As XYG's CAPEX peaked in 2013 and 2014, the company will report positive cash flow in 2015 and beyond given the slowdown in expansion. The financial position of XYG will continue to improve, and the risk of dilution from new equity issues is low. Consequently, we expect its net gearing to remain at a healthy level of below 40% in the coming years.
- XYG's reporting currency is the HK\$, and the RMB is its major functional currency. About 70% of XYG's revenue is denominated in RMB, and the rest is mainly denominated in US\$. RMB depreciation may drag down XYG's overall top line growth, as the HK\$ is the reporting currency. However, about 95% of XYG's production costs are denominated in RMB; therefore, XYG will be an overall beneficiary of RMB depreciation.
- XYS used to be a wholly owned subsidiary of XYG. Following the spin-off in Dec 2013, allotment in 2014 and placement in March 2015, XYG now holds about 26% of XYS. The contribution of XYS is thus recorded as a "share in the profit/loss of an associate". XYS is treated as the best proxy to play the solar power sector growth story. Positive drivers will come from: a:) the potential increase in the Chinese government's solar installation target for 2020E; b) XYS's fast growing solar glass capacity from the current 3,900t to 6,800t in 2017; c) weak oil prices and more potential gas price reductions to help lower glass production costs; and d) the increase in the renewable energy surcharge, which should speed up tariff payments to solar farm operators, thus helping improve the cash flow of XYS in 2016.

Margin improvement to drive net profit growth

CAPEX peaked and gearing is coming down.

RMB depreciation beneficiary

XYS is also a major growth driver.

Figure 20: Earnings Projections

Income Statement (HKDm)	FY2013	FY2014	FY2015F	FY2016F	FY2017F	Cash Flow Statement (HKDm)	FY2013	FY2014	FY2015F	FY2016F	FY2017F
Revenue	9,936	10,861	11,574	12,608	13,740	Net Income	3,282	1,227	1,594	1,657	1,838
<i>Growth yoy%</i>	17.8%	9.3%	6.6%	8.9%	9.0%	Depreciation & Amort.	609	615	761	833	900
Gross Profit	3,137	2,733	3,114	3,514	3,887	Change in Working Capital	190	(296)	64	(240)	(255)
<i>Growth yoy%</i>	40.9%	(12.9%)	13.9%	12.8%	10.6%	Cash from Ops.	4,082	1,546	2,419	2,251	2,482
Selling General & Admin Exp.	(1,251)	(1,638)	(1,666)	(1,752)	(1,909)	Capital Expenditure	(3,752)	(1,729)	(1,600)	(1,400)	(1,400)
Others Operating Expenses/Items	326	178	487	194	211	Sale of Property, Plant, and Equipment	-	-	-	-	-
Operating Income	2,212	1,274	1,935	1,956	2,189	Change in Investing Activities	80	53	53	99	87
<i>Growth yoy%</i>	n.a.	(42.4%)	51.9%	1.1%	11.9%	Cash from Investing	(3,673)	(1,676)	(1,547)	(1,301)	(1,313)
Interest Expense	(59.7)	(38.1)	(75.1)	(28.7)	(40.5)	Net increase in bank borrowings	874	873	348	0	0
Interest and Invest. Income						Issuance of Common Stock	0	0	0	0	0
Income/(Loss) from Affiliates	297.6	137.6	377.5	448.4	561.7	Common Dividends Paid	(945)	(590)	(852)	(871)	(980)
Other Non-Operating Inc. (Exp.)	0	0	0	0	0	Special Dividend Paid	-	-	-	-	-
Impairment of Goodwill	0	0	0	0	0	Other Financing Activities	0	0	0	(264)	0
Gain (Loss) On Sale Of Invest.	1,453	220	38	54	59	Cash from Financing	(70)	282	(504)	(1,135)	(980)
Gain (Loss) On Sale Of Assets						Net Change in Cash	339	152	367	(186)	190
Income Tax Expense	(381)	(228)	(303)	(324)	(369)						
Minority Int. in Earnings	(0)	(1)	(2)	(92)	(135)						
Net Income	3522	1364	1970	2014	2265						
<i>Growth yoy%</i>	196.4%	(61.3%)	44.4%	2.2%	12.5%						

Balance Sheet (HKDm)	FY2013	FY2014	FY2015F	FY2016F	FY2017F	Ratios	FY2013	FY2014	FY2015F	FY2016F	FY2017F
ASSETS						Profitability					
Cash And Equivalents	1,042	831	1,562	1,376	1,566	Return on Assets %	19.7%	6.7%	8.9%	8.5%	9.0%
Receivables	2,255	2,487	2,589	2,783	3,015	Return on Capital %	11.6%	5.9%	8.5%	7.5%	7.8%
Inventory	1,232	1,478	1,539	1,654	1,792	Return on Equity %	31.8%	11.1%	15.1%	14.2%	14.8%
Other Current Assets	7	9	9	9	9	Margin Analysis					
Total Current Assets	4,537	4,805	5,697	5,821	6,382	Gross Margin %	31.6%	25.2%	26.9%	27.9%	28.3%
Net Property, Plant & Equipment	11,849	12,581	13,423	13,993	14,496	SG&A Margin %	12.6%	15.1%	14.4%	13.9%	13.9%
Long-term Investments	-	-	-	-	-	EBIT Margin %	22.3%	11.7%	16.7%	15.5%	15.9%
Other Intangibles	-	-	-	-	-	EBITDA Margin %	28.4%	17.4%	23.3%	22.1%	22.5%
Deferred Tax Assets, LT	-	-	-	-	-	Net Income Margin %	35.4%	12.6%	17.0%	16.0%	16.5%
Other Long-Term Assets	3,265	3,649	4,035	4,481	5,040	Asset Turnover					
Goodwill	-	-	-	-	-	Total Asset Turnover	0.5x	0.5x	0.5x	0.5x	0.5x
Accounts Receivable Long-Term	-	-	-	-	-	Fixed Asset Turnover	0.7x	0.7x	0.7x	0.7x	0.7x
Total Long Term Assets	15,114	16,229	17,458	18,474	19,536	Accounts Receivable Turnover	4.5x	4.6x	4.6x	4.7x	4.7x
Total Assets	19,651	21,034	23,156	24,295	25,917	Inventory Turnover	8.1x	7.3x	7.5x	7.6x	7.7x
LIABILITIES & EQUITY						Liquidity					
Accounts Payable	1,744	1,978	2,257	2,426	2,629	Current Ratio	1.1x	1.0x	1.1x	1.1x	1.2x
Accrued Exp.	-	-	-	-	-	Quick Ratio	0.8x	0.7x	0.8x	0.8x	0.8x
Short-term Borrowings	2,116	2,529	2,529	2,529	2,529	Avg. Days Sales Out.	82.9	83.6	81.6	80.6	80.1
Curr. Port. of LT Debt	-	-	-	-	-	Avg. Days Inventory Out.	45.3	49.7	48.5	47.9	47.6
Curr. Income Taxes Payable	-	-	-	-	-	Avg. Days Payable Out.	85.9	83.6	91.4	94.0	93.6
Unearned Revenue, Current	-	-	-	-	-	Avg. Cash Conversion Cycle	84.9	83.5	76.8	76.7	76.7
Other Current Liabilities	219	294	344	344	344	Net Debt to Equity	34%	42%	35%	34%	30%
Total Current Liabilities	4,079	4,801	5,130	5,299	5,502	Growth Over Prior Year					
Long-Term Debt	3,024	3,483	3,832	3,832	3,832	Total Revenue	17.8%	9.3%	6.6%	8.9%	9.0%
Def. Tax Liability, Non-Curr.	160	159	159	159	159	Net Income	196.4%	(61.3%)	44.4%	2.2%	12.5%
Other Non-Current Liabilities	180	255	255	255	255	Payout Ratio %	26.8%	43.3%	43.3%	43.3%	43.3%
Total Liabilities	7,442	8,699	9,376	9,545	9,748						
Common Stock	7,100	5,940	7,058	7,936	9,221						
Additional Paid In Capital	-	-	-	-	-						
Retained Earnings	5,108	6,393	6,718	6,718	6,718						
Treasury Stock	-	-	-	-	-						
Comprehensive Inc. and Other	-	-	-	-	-						
Minority Interest	1.1	2.0	3.7	95.6	230.5						
Total Equity	12,209	12,335	13,780	14,750	16,170						
Total Liabilities And Equity	19,651	21,034	23,156	24,296	25,918						

Sources: Company, CGIS Research

Valuation

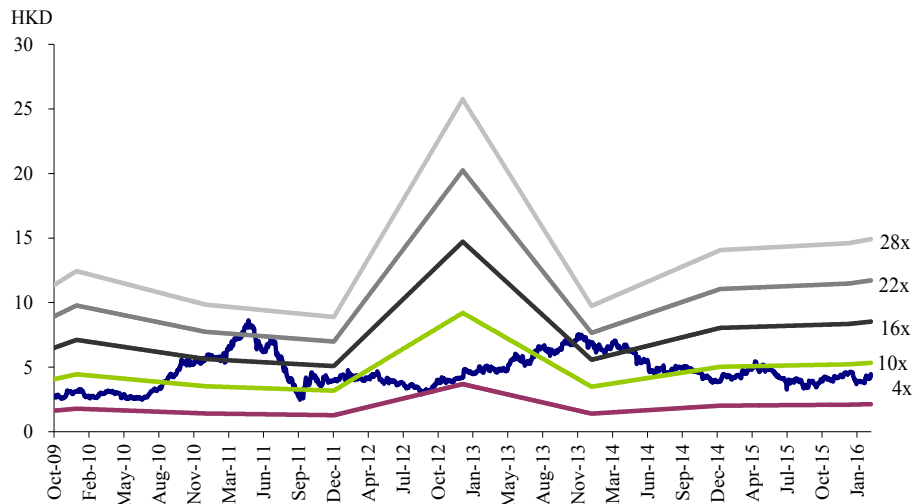
XYG is leading glass producer with a 20% global market share in the auto glass aftermarket segment. XYG is trading at 8.8x 2015E PER, which is a discount to the average of its HK-listed and A-share listed peers.

We maintain the view that XYG is a solid industrial name with a recovery story. It is trading at 8.8x 2015E PE and 8.4x 2016E PE, which we think is undervalued compared to its listed peers (12.8x and 10.1x on average). We are initiating coverage on XYG with a **BUY** rating and target price of HK\$5.50 based on 10.5x 2016E PER (in line with its peer average of 10.1x, but lower than the historical average).

Share price catalysts include details on the government's target for capacity reduction in the float glass industry, further cuts in natural gas prices, and the XYS development plan.

Trading at a discount to its HK-listed and A-share listed peers

Figure 21: XYG PER band



Sources: Bloomberg, CGIS Research

Figure 22: Peer Comparison

Ticker	Company	Price Lcy	Market Cap US\$m	PE			EV/EBITDA			P/B		ROE		ROA		Div yield	
				2015F x	2016F x	2017F x	2015F x	2016F x	2017F x	2014 x	2015F x	2014 %	2015F %	2014 %	2015F %	2014 %	2015F %
868 HK	Xinyi Glass Holdings Ltd	4.39	2180.0	8.8	8.4	7.5	3.2	3.2	2.9	1.4	1.2	11.1	15.1	6.7	8.9	3.4	4.9
968 HK	Xinyi Solar Holdings Ltd	2.3	2013.4	12.3	8.7	7.0	10.0	6.4	4.7	3.1	2.6	17.6	26.4	14.9	14.7	2.8	3.4
3300 HK	China Glass Holdings Ltd	0.8	193.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.6	n.a.	0.1	n.a.	-2.8	n.a.	n.a.	n.a.
1108 HK	Luoyang Glass Company Ltd-H	4.4	1415.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	38.7	n.a.	-10.6	n.a.	0.0	n.a.
3606 HK	Fuyao Glass Industry Group-H	16.6	5315.9	13.3	11.5	10.2	8.6	7.1	6.3	3.2	2.1	26.6	19.9	14.1	13.2	0.0	4.4
Average				12.8	10.1	8.6	9.3	6.8	5.5	2.3	2.3	20.7	23.1	3.9	13.9	0.9	3.9
600660 CH	Fuyao Group Glass Industr-A	13.8	5315.9	13.3	11.6	10.3	8.6	7.1	6.3	2.2	2.2	26.6	21.0	12.4	14.0	n.a.	4.3
000012 CH	Csg Holding Co Ltd- A	10.6	2747.5	37.6	25.9	20.9	14.5	11.7	9.5	2.9	2.5	10.7	6.8	3.5	3.4	n.a.	2.4
601636 CH	Zhuzhou Kibing Group Co Lt-A	3.9	1516.7	30.2	14.6	18.3	n.a.	n.a.	n.a.	2.1	0.6	6.2	3.7	2.6	n.a.	0.0	n.a.
002163 CH	Avic Sanxin Co Ltd-A	7.9	971.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.6	n.a.	2.0	n.a.	-0.3	n.a.	n.a.	n.a.
600819 CH	Shanghai Yaohua Pilkington-A	6.5	868.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.0	n.a.	1.7	n.a.	-0.8	n.a.	n.a.	n.a.
600876 CH	Luoyang Glass Company Ltd-A	30.1	1415.7	n.a.	130.9	143.4	n.a.	n.a.	n.a.	304.8	71.7	38.7	-87.5	1.4	n.a.	0.0	n.a.
Average				27.0	45.8	48.2	11.6	9.4	7.9	53.6	19.2	14.3	-14.0	3.1	8.7	0.0	3.3
1802 TT	Taiwan Glass Ind Corp	13.45	1023.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.7	n.a.	0.3	n.a.	-2.6	n.a.	n.a.	n.a.
SISE TI	Turk Sise Ve Cam Fabrikalari	3.52	2285.9	10.0	10.7	9.2	7.1	6.3	5.8	1.1	0.9	7.4	9.4	4.5	5.2	n.a.	1.8
TRKCM TI	Trakya Cam Sanayii As	1.85	565.9	9.2	7.7	n.a.	5.8	4.9	3.8	0.6	0.6	12.6	5.9	4.9	3.4	n.a.	3.0
APOG US	Apogee Enterprises Inc	40.41	1167.2	19.0	14.9	12.5	8.4	6.9	5.7	2.9	n.a.	8.2	n.a.	9.6	n.a.	1.1	1.1
5201 JP	Asahi Glass Co Ltd	584.00	6083.0	20.4	16.7	14.6	5.1	4.9	5.0	0.6	0.6	1.4	2.8	2.1	2.0	n.a.	3.1
5214 JP	Nippon Electric Glass Co Ltd	570.00	2489.6	18.9	17.8	18.0	4.1	4.0	3.9	0.6	0.5	2.5	3.0	1.3	2.5	n.a.	2.8
4044 JP	Central Glass Co Ltd	659.00	1242.9	13.3	12.5	11.9	7.4	6.7	6.3	0.8	0.8	3.9	6.7	4.4	3.9	n.a.	1.5
5202 JP	Nippon Sheet Glass Co Ltd	76.00	602.7	n.a.	31.9	12.6	7.9	7.3	7.1	0.4	0.4	-11.4	-4.7	-1.8	-0.3	n.a.	0.0
SGO FP	Compagnie De Saint Gobain	36.87	22474.3	15.1	12.6	11.4	6.3	5.7	5.1	1.1	1.1	5.4	7.1	2.9	2.9	n.a.	3.4
PPG US	Ppg Industries Inc	99.33	26497.8	15.9	14.4	13.1	10.3	9.7	9.3	5.3	5.3	41.6	32.0	8.1	9.7	1.4	1.5
GLW US	Corning Inc	18.80	20921.3	13.6	11.9	11.5	7.5	7.2	7.9	1.3	1.3	11.8	9.7	4.6	5.9	2.6	2.8
Average				15.0	15.1	12.8	7.0	6.4	6.0	1.4	1.3	7.6	8.0	3.5	3.9	1.7	2.1

Sources: Bloomberg, Company, CGIS Research estimates for covered stocks

Major risk factors

Strong policy risks over monetary market. We believe the tight monetary situation caused by the global economic crisis may lead to a substantial drop in investment. We think this may cause an economic hard landing with tremendous demand contraction in China, resulting in reduced pricing power and squeezed margins for glass players.

Oversupply risks in the float glass industry. Oversupply may be caused mainly by increasing new capacity and the slower pace of outdated capacity elimination because of weak execution. Glass prices are highly dependent on regional industry dynamics, and slower than expected industry consolidation may delay the pace of recovery of the float glass industry.

Energy cost risks as XYG benefits from lower energy costs. We believe a substantial rise in the price of oil and natural gas would result in cost pressure for glass manufacturers.

Company background

XYG is an integrated flat glass manufacturer with almost the entire supply chain of flat glass production. XYG started in the automotive glass business in 1988 in Shenzhen, and has been an automotive glass products provider in the aftermarket for more than 10 years. The group entered construction glass market in 1998, seeking market opportunities in the robust real estate industry in China. In 2005, the group was listed in Hong Kong and subsequently moved into the upstream float glass industry. The company has become one of leading integrated flat glass manufacturers in China, with products ranging from upstream float glass and photovoltaic glass to downstream automobile glass and construction glass.

XYG has six major production bases in China, in Dongguan, Shenzhen, Jiangmen, Wuhu, Tianjin, and Yingkou, and another in Malaysia (which should go into full operation in 2017).

XYG has over 20 years experience in the automobile aftermarket, and its focus in the automotive field continues to be on the auto glass replacement (AGR) aftermarket, which accounts for 85% of XYG's auto glass revenue. The OEM market accounts for the remaining 15%. XYG's automobile glass products are sold in approximately 80 countries. The export market accounts for 70% of the group's auto glass revenue.

With a third of XYG's total sales coming from auto glass (mainly ARG), XYG ranked No.4 (~7% of total) among the major auto glass players in China in 2014. In terms of float glass, XYG ranked No.2 in 2014 with 7%+ market share .

XYG's sales of construction glass includes architectural glass, insulated glass, silk-screen printed glass, laminated glass, tempered glass and coated glass. The thickness of these glass products ranges from 5mm to 9mm. They are used mainly in curtain wall projects. XYG's construction glass product, known as Low-E glass, is float glass with a Low-E coating and is used in insulated glass. Low-E is a specialty glass with excellent functional performance characteristics for solar control.

In 1H15, float glass, Low-E and automobile glass sales accounted for 41%, 23% and 36% of its total sales, respectively. With regard to gross profit contribution, almost ~59% was from the auto glass sector, ~27% from construction, and the remaining ~13% from float glass .

XYG is one of few glass manufacturers in China that can produce the ultra-thin electronic glass used in touch panels. It holds a 26% stake in XYS, the largest solar-glass manufacturer in China. Founded in 1988 by Lee Yin Yee and his partners, XYG started its first auto-glass production line in Shenzhen in 1989, diversifying into construction glass in 1998 and solar glass in 2008. The group moved towards vertical integration by moving upstream and establishing its own float-glass production line in 2006.

XYG procures patterned PV glass and TCO glass, which are key components in c-Si type solar panels and thin film solar panels. The company is rapidly expanding its capacity to capture the strong domestic demand potential.

XYG's shares are largely controlled by the LEE family and the TUNG family. The Chairman and founder LEE Yin Yee holds 20.56% of the company's shares, while CEO TUNG Ching Sai holds 8.71%. Another 6.94% of company shares are held by Mr. LEE Sing Din, brother-in-law of Mr. LEE Yin Yee.

Appendix—Selected management profiles

Mr LEE Yin Yee, M.H., Chairman and founder, has 25 years' experience in the automobile glass industry. Prior to establishing the group, he was involved in the trading of automobile parts. Mr LEE is a National Committee Member of the Twelfth Chinese People's Political Consultative Conference and an Honorary Citizen of Shenzhen, China. In December 2003, Mr LEE was appointed the first Chairman of the Shenzhen Fujian Corporate Association and Life Honorary Chairman of the Hong Kong Quanzhou Clans United Association and the Fukienese Association Limited in Hong Kong. He was appointed Executive Director on 25 Jun 2004. Mr LEE is the Chairman and Non-Executive Director of Xinyi Solar Holdings Limited.

Mr. TUNG Ching Bor, Vice-Chairman and Chief Purchasing Officer, had over 14 years' experience in automobile parts purchasing before joining the company in Jan 2000. Mr TUNG has been a Member of The Tenth Chinese People's Political Consultative Conference of Anhui Province since 1 January 2011 and also a Member of the Nanping Committee of Fujian Province. He was appointed Executive Director on 25 Jun 2004.

Mr TUNG Ching Sai, Executive Director and Chief Executive Officer, has been with the company for 25 years, since its inception in November 1988. Mr TUNG is a Committee Member of The Chinese People's Political Consultative Conference of Fujian Province, Vice Chairman of the China Architectural and Industrial Glass Association, Chairman of the Shenzhen Federation of Young Entrepreneurs, winner of the Third Shenzhen Municipal Ten Outstanding Young Entrepreneur Award, and recipient of the "Young Industrialist Awards of Hong Kong 2006". Mr TUNG was appointed Executive Director on 25 June 2004 and is currently a Vice Chairman and Executive Director of Xinyi Solar.

Mr LEE Shing Kan, Executive Director, joined the company in Jan 2005. He is a Member of the Fujian Province Committee of Chinese People's Political Consultative Conference. He is also a Director (2012/2014) of Tung Wah Group of Hospitals. Mr LEE was appointed Executive Director on 15 Oct 2008.

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SELL : share price will decrease by >20% within 12 months in absolute terms

HOLD : no clear catalyst, and downgraded from BUY pending clearer signal to reinstate BUY or further downgrade to outright SELL

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