Initiating Coverage

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COMPANY BACKGROUND

A Leading Glass

Around 11% market share in domestic float glass industry with 17ktpd production capacity

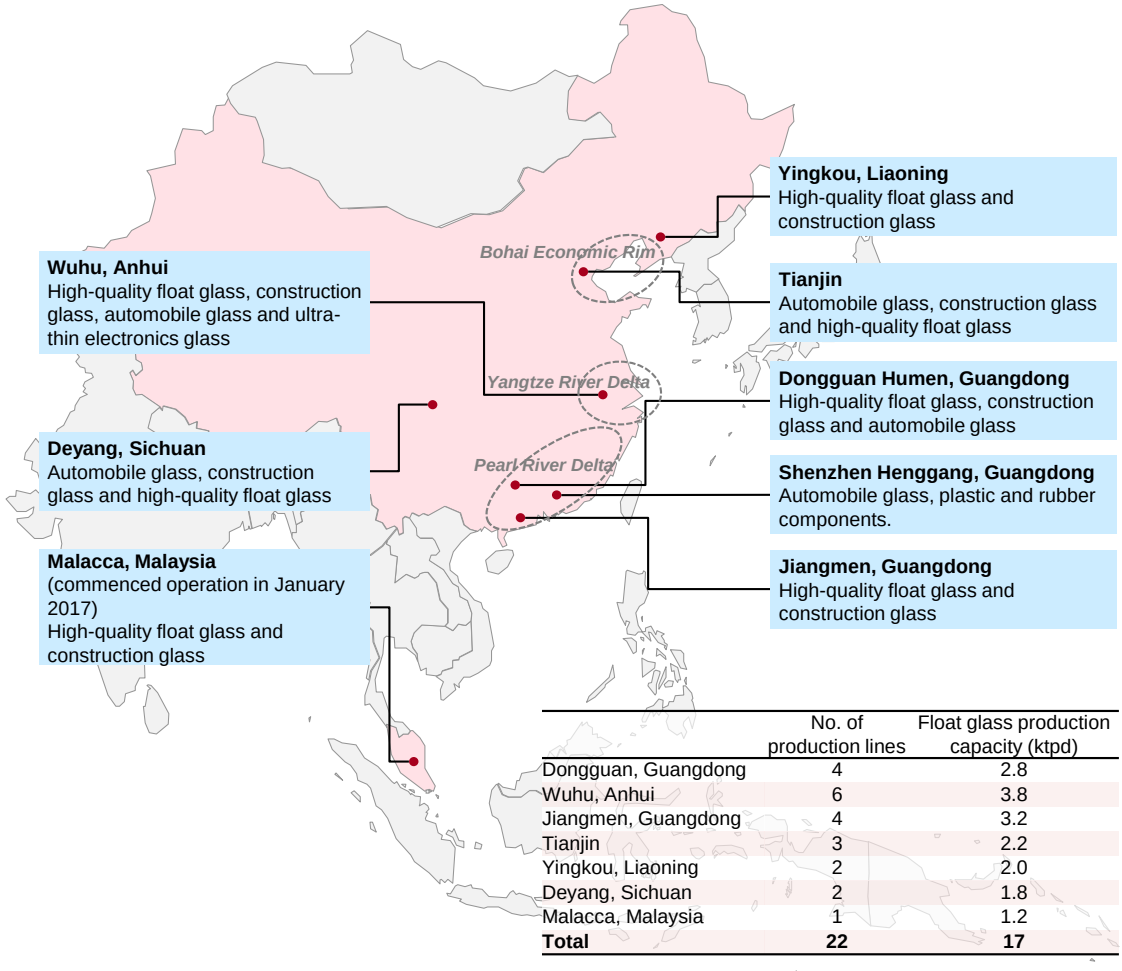
Entering the glass industry in 1988 by producing auto glass, XYG diversified into construction glass in 1998 and ventured into float glass in 2006. Over the past 10 years, XYG has grown to become the largest float glass manufacturer in China with approximately 11% market share and 17ktpd production capacity. The company is also the leading player in many market segments in the glass industry.

Starting first in Dongguan, Guangdong Province, XYG's production lines now span eight areas, with seven of these strategically-located in key economic development zones in China that are near to rivers or the sea, enabling the company to use lower-cost freight transportation to ship in raw materials and ship out glass. To tap the growing demand in SE Asia and to take advantage of cheaper fuel cost, XYG commenced operation of its first float glass production line in Malaysia early this year, and has started to construct two other lines there. Meanwhile, it is looking for opportunities in other countries in SE Asia.

Figure 1. XYG as Leading Glass Manufacturer

Sub-market	Ranking	Market share

Figure



	No. of production lines	Float glass production capacity (ktpd)
Dongguan, Guangdong	4	2.8
Wuhu, Anhui	6	3.8
Jiangmen, Guangdong	4	3.2
Tianjin	3	2.2
Yingkou, Liaoning	2	2.0
Deyang, Sichuan	2	1.8
Malacca, Malaysia	1	1.2
Total	**22**	**17**

The wholesale of float glass constituted half of XYG's revenue in 2016, with almost all other sizeable glass manufacturers being its customers, such as (5201 JP), (000012 CH) and (3606 HK).

The sales of auto glass accounted for 30% of revenue in 2016. Unlike Fuyao which specialises in auto OEM glass, XYG focuses more on ARG, which roughly contributes 85% of its auto glass sales according to management, with Pittsburgh Glass Works (PGW) in North America and Belron International in Europe as its major customers. XYG's competitiveness in the overseas ARG market comes from its superior quality, ability in making glass of different specifications (XYG has a database containing nearly 70,000 kinds of ARG glass), and lower price which is roughly at a 20% discount to those produced in North America. As a result of the large portion of auto glass targeting overseas markets, XYG has been the largest glass exporter in China for more than 10 years, with nearly 30% of its revenue from glass export sales.

The sales of construction glass contributed the remaining 20% of revenue in 2016. XYG has a comprehensive product portfolio encompassing low-E glass, insulating glass, laminated glass, tempered glass and curved glass. Its products have been used in many renowned buildings globally, including Tokyo Tower in Japan and the China Pavilion at World Expo 2010.

XYG is capable of producing all kinds of high-end specialised glass, and its production yield is one of the highest in the industry, riding on extensive experience and industry know-how. Thus, it has strong pricing power and enjoys higher-than-peer ASP.

Figure 3

EXPANDING CAPACITY DRIVES GROWTH

Float Glass as Main Focus

XYG's sales revenue registered 84% growth over the past five years driven primarily by sales volume growth following capacity expansion, with that for float glass, auto glass and construction glass enlarged by 83%, 35% and 194%, respectively. Float glass accounted for 61% of XYG's revenue growth in 2011-16, and we expect it to account for 79% of the growth in 2017, with the commissioning of a 1,200tpd production line in Malaysia in January 2017.

Float glass production capacity to increase 7%/6% YoY in 2017/18E backed by new production lines in Malaysia

The Malaysia plant is running at full utilisation now. Monthly shipments of float glass likely will reach 33,000 tonnes in June 2017. Construction works for Phase II of the Malaysia production base have recently commenced, with two lines totalling 2,000tpd of production capacity expected to come on stream by mid-2018.

Taking these into consideration, we forecast XYG's time-weighted annual float glass production capacity at 5.3m/5.6m tonnes in 2017/18, up 7%/6% YoY, respectively. We forecast a 6.6% float glass sales volume CAGR in 2016-18, factoring in the larger capacity and assuming a stable 20% internal consumption rate.

Figure 7. Float Glass was Key Revenue Growth Driver (2011-16)

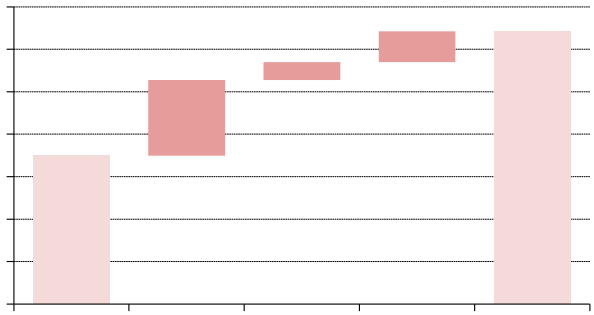


Figure 8. Float Glass to Remain Key Revenue Growth Driver (2017E)

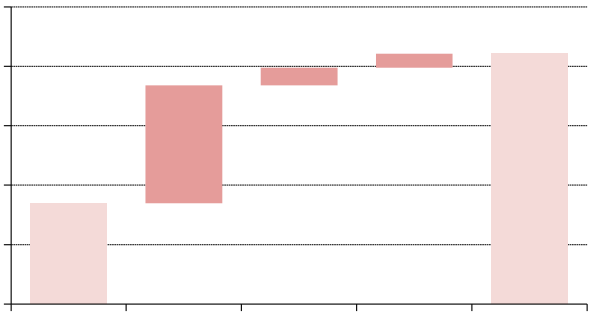


Figure 9. Annual Float Glass Production Capacity

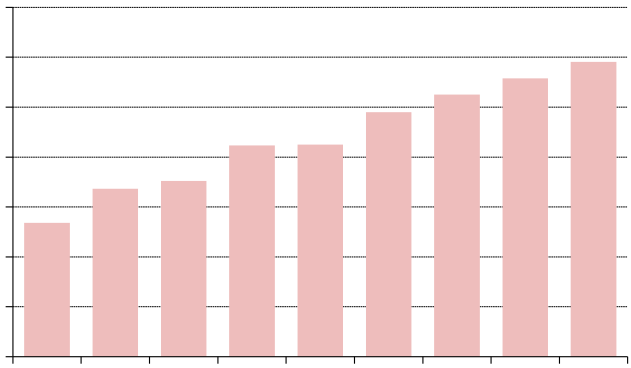
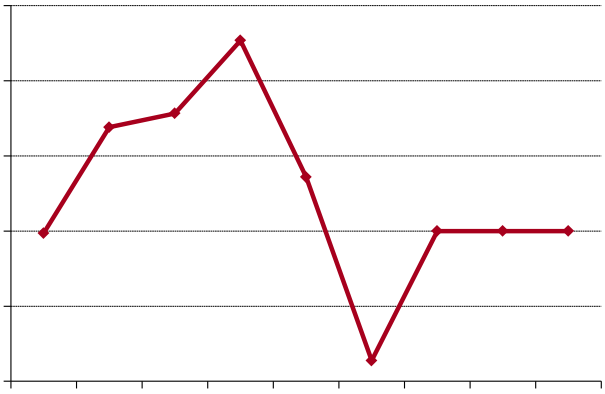


Figure 10. Float Glass Internal Sales Percentage



Seizing Market Share in Auto Glass Industry

The company endeavours to grab a larger market share in the global ARG sector, targeting to climb to 30% from 25% in the coming five years. We estimate XYG's auto glass production capacity to be 16.4m/16.7m pieces in 2017/18, up 1.5%/1.5% YoY, respectively, as well as a 4% sales volume CAGR in 2016-18.

We believe XYG will be able to achieve these as it has the following key competitive edges:

(i) XYG is the global leader of auto glass, and is the dominant manufacturer for 2mm raw auto glass. Its auto glass products are manufactured under a superior quality management system and are accredited with US Department of Transportation certification.

(ii) [illegible] and the /1

Figure 12. Annual Auto Glass Production Capacity

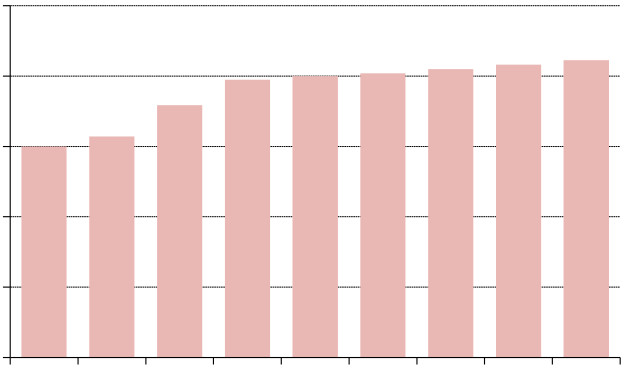
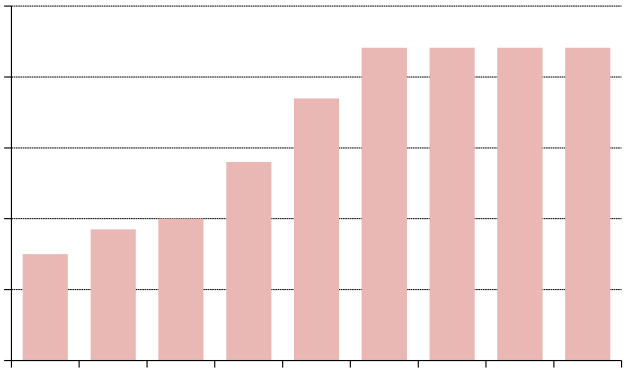


Figure 13. Annual Construction Glass Production Capacity



STRONG ASP AMID IMPROVED S/D DYNAMICS

Limited New Float Glass Supply

Unlike the cement and coal industries, the glass industry exhibits a lower degree of SOE involvement, and, thus, overcapacity is dealt with via both government initiatives and market-oriented methods such as price competition. With ASP bouncing at the low end in 2014-16 and the government's efforts in eliminating outdated and inefficient capacity, China's overall operating glass production capacity and industry average capacity utilisation rate had both gone on downtrends, before stabilising in late 2016 when float glass ASP rebounded thanks to the demand pick-up driven by the prosperity of the property market.

Limited glass supply increment provides room for strong ASP

We expect the national float glass production capacity to remain at around 155ktpd as the government has not only suspended the approval for new or replacement lines, but also disallowed production lines with changes in the controlling shareholder to resume operation. Therefore, the production lines will remain closed for companies that went bankrupt, such as Jiangsu Farun Glass, which was one of the leading float glass manufacturers in China with more than 20 production lines and around 4m tonnes of annual glass production capacity but went bankrupt in October 2015.

If the temporarily-suspended capacity comes back online and industry average capacity utilisation rate increases as ASP goes up, the oversupply may translate into ASP pressure in 2018E. We have yet to see such a trend.

Figure 14. Domestic Float Glass ASP

Figure 15. Domestic Float Glass ASP by Quarter

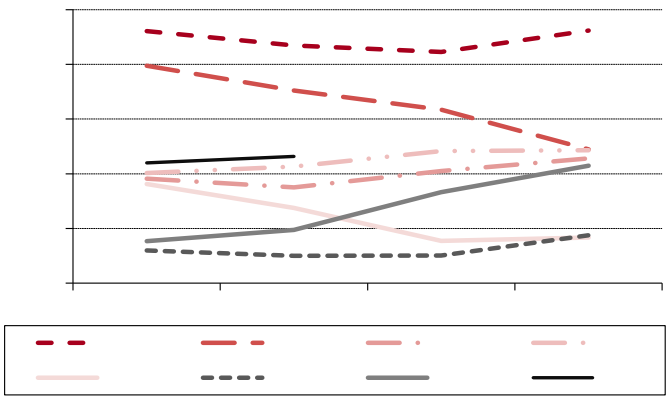


Figure 16. Total Number of Float Glass Production Lines vs. Number of Operating Lines

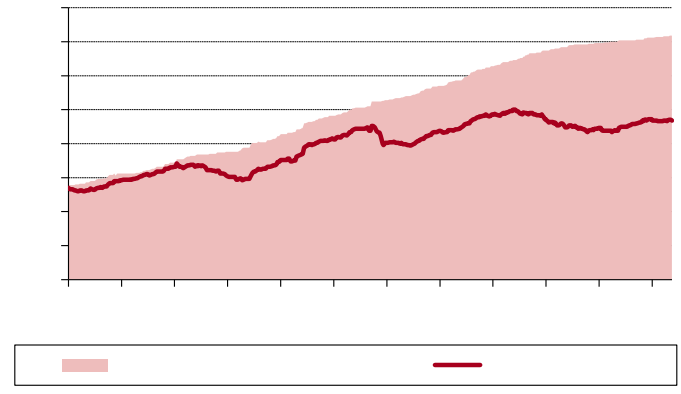


Figure 17. Industry Average Capacity Utilisation Rate

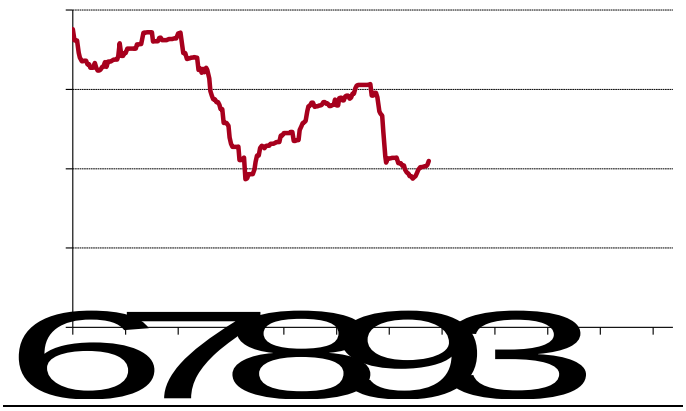


Figure 18. Float Glass Production Capacity in Operation

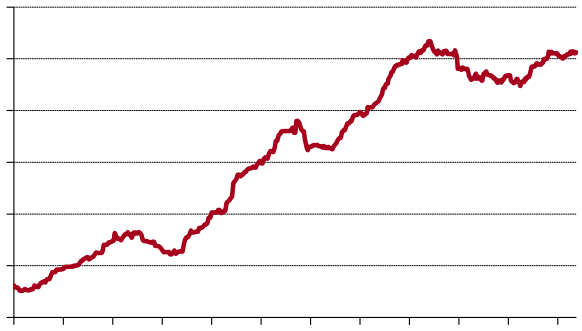
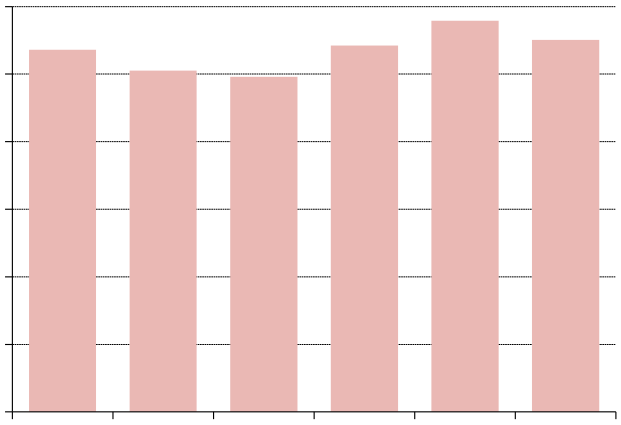


Figure 19. Market Share (2011-16)



Steady Float Glass Demand from Property Development

Property development accounts for roughly 70-80% of float glass demand in China according to our study, and glass demand is more related to GFA sold (unlike other basic materials such as cement, which have a higher correlation with GFA starts) with typical 8-12 months of delayed impact (please refer to Figure 20).

Strong property development can help to strengthen glass demand and ASP in 2H17-2018

According to the National Bureau of Statistics (NBS), the YoY change in cumulative GFA sold of commodity housing turned positive in June 2015 and hit high double digits in February 2016; the YoY change in cumulative GFA starts returned to positive territory as well in February 2016. Both readings have remained at high growth rates up to now. Even though the YoY growth rate of new GFA sold slows this year, the fact that it is still growing means the related glass demand should continue to increase. Therefore, in our view, float glass demand, which is currently at its peak since 2012, will likely continue to show strength in 2H17-2018 after taking the time lag between GFA sold and glass demand into consideration. Steady demand should form solid support for ASP and margin during the period.

Figure 20. YoY Changes in Cumulative GFA Sold of Commodity Housing and Glass Shipments

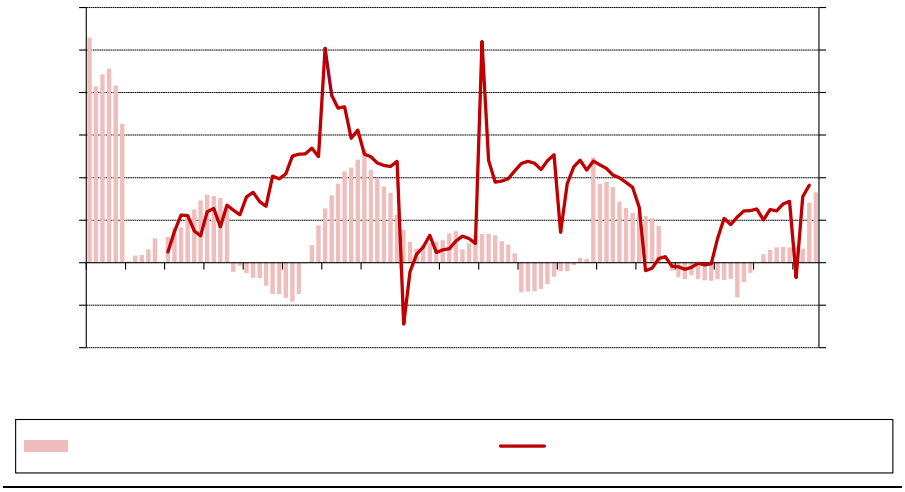


Figure 21. Cumulative Monthly GFA Sold of Commodity Housing

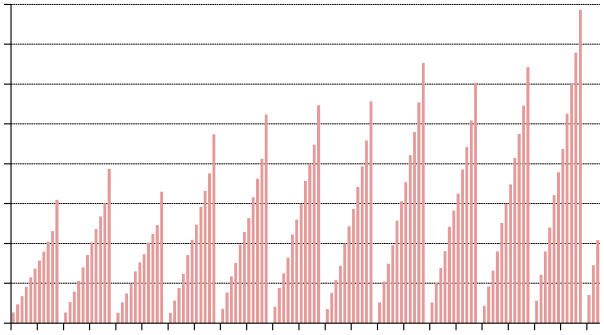


Figure 22. Cumulative Monthly GFA Sold of Commodity Housing YoY Growth

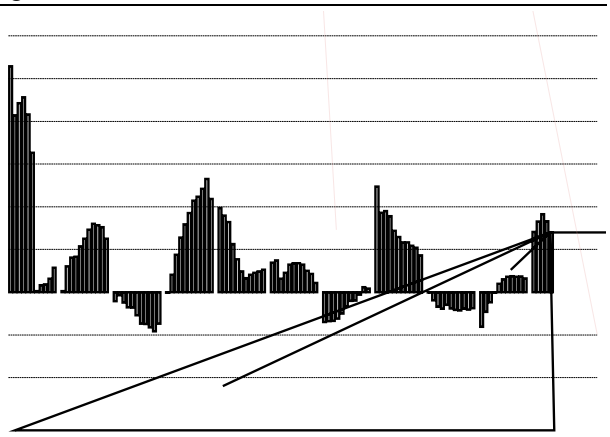


Figure 23. Cumulative Monthly GFA Starts

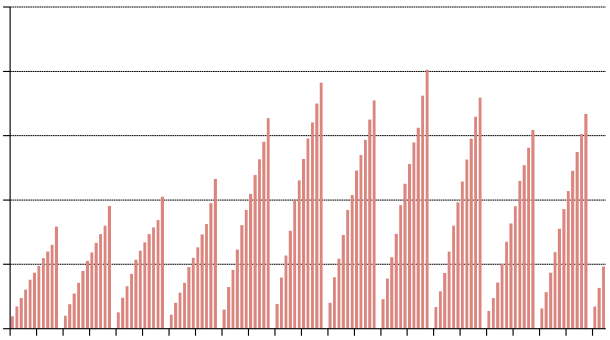
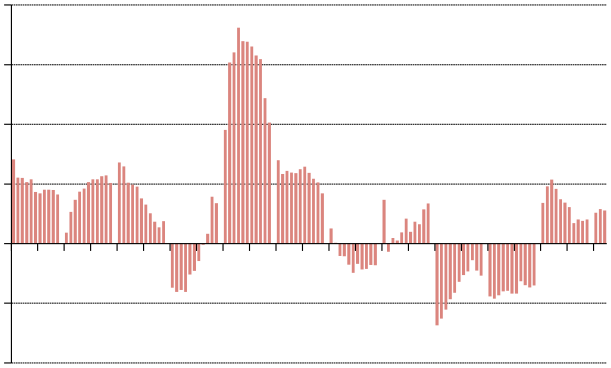


Figure 24. Cumulative Monthly GFA Starts YoY Growth



EASING COST PRESSURE SUPPORTS MARGIN

Natural gas and soda ash are the two major cost components in manufacturing float glass, respectively accounting for around 35% and 34% of XYG's production cost in 2016, according to our estimation. Float glass is the raw material for other processed glass, including auto glass and construction glass, accounting for approximately 30% and 50% of their production costs, respectively.

We expect to see expanding float glass margins from 2Q17 with drops in raw material prices

According to our estimation, despite a drop during December 2016 to February 2017 due to both soda ash price hike and seasonal city-gate gas price adjustments, the national average float glass spread (calculated by ASP – cost of soda ash – cost of natural gas) at around RMB580/tonne still marks a high level since mid-2013. Given our stable natural gas price outlook and the normalised soda ash price, we think float glass spread pressure has been largely relieved.

Figure 25.
(2016)

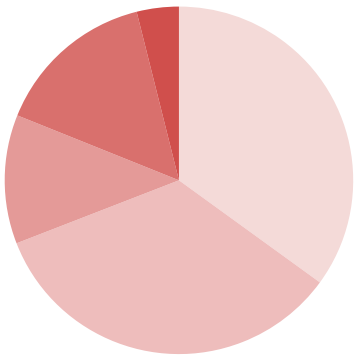


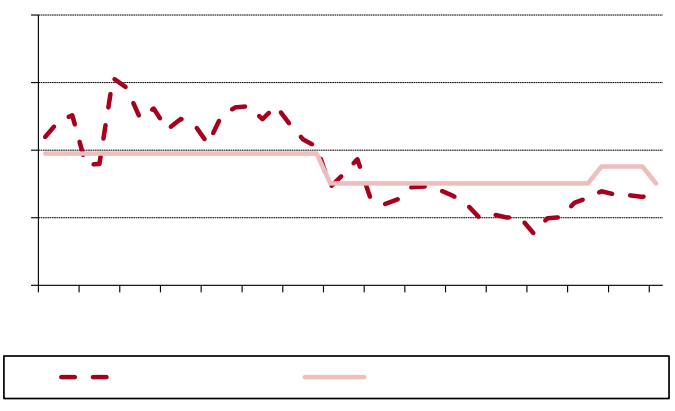
Figure 26. National Average Float Glass Spread (ASP Cost of Soda Ash Cost of Natural Gas)

Stable Natural Gas Price

XYG uses natural gas as its major fuel source in making glass, and some LNG at its production plant in Guangdong Province. It has been able to purchase natural gas directly from upstream suppliers, and thus, generally at a discount to retail prices. With international oil prices still lingering at low levels, and given Chinese government's determination to lower the utility costs for industrial users, we see natural gas price hike as unlikely going forward.

Figure 27. Brent Oil Price

Figure 28. Natural Gas City-gate Tariff vs. Imported LNG Price



Soda Ash Price Retreated after Winter Hike

In late 2016, the soda ash price surge driven by supply shortage due to environmental restrictions was a cause for concern among many investors regarding float glass production cost. However, soda ash price has now dropped nearly 30% from the peak in February 2017 to a similar level to the average of 2016. According to our market research, with inventories at a comparably high level, soda ash price is still facing some downward pressure in the near term, thus largely alleviating margin pressure from 2Q17 onwards.

That said, due to soda ash's nature of being a commodity, we cannot rule out the possibility for price hike to resume in the next winter. Based on our calculation, a price increase of RMB100/tonne for soda ash (c.6.25%) will lead to around RMB20/tonne increase in float glass production cost (c.2%). For XYG, according to our sensitivity analysis, 1% change in float glass production cost would have 1.2% impact on net profit.

Figure 29. National Average Price of Dense Soda Ash

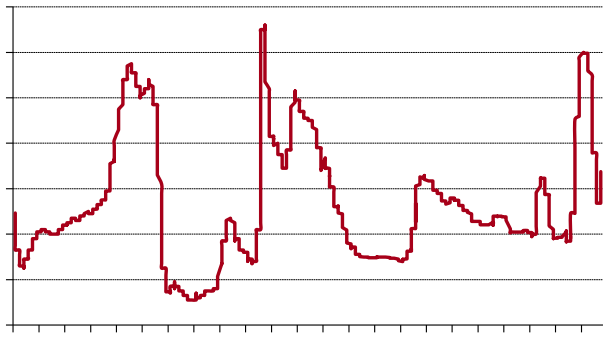


Figure 30. National Price of Dense Soda Ash by Quarter

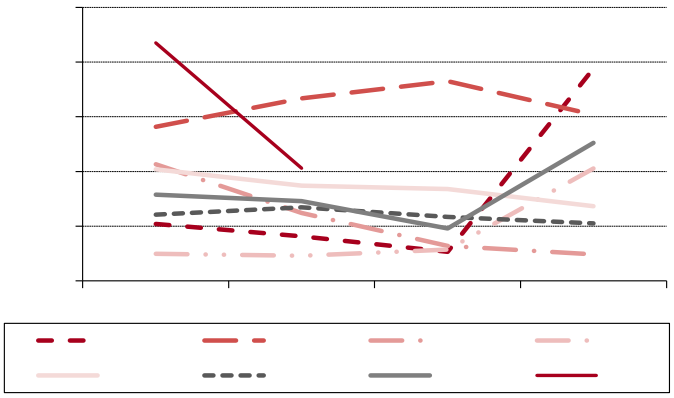


Figure 31. National Average Float Glass Spread (ASP Cost of Soda Ash)

COMPETITIVENESS AT THE HIGH END

XYG's float glass competitiveness lies not only in its high yield at over 90% (vs. industry average of 80%) and high quality with superior-grade products accounting for 80% of output, but also in its ability to manufacture high-end differentiated products such as ultra-thin, ultra-clear or tinted glass. The company has production lines dedicated to these special types of glass (unlike other smaller players that frequently shift production lines between products), which ensures stable quality and colours and thus improves customer stickiness.

30% of XYG's float glass sales from high-end products, which is why XYG enjoys around 20% ASP premium over industry average

According to management, while XYG's domestic float glass market share is around 11%, it is predominant in the high-end segment with up to 40-50% share.

XYG's product quality and large volume endow it with strong pricing power to enjoy a 10% ASP premium over industry average for the same type of products. Its exposure to high-end products, which account for around 30% of volume, further lifts its blended ASP. Based on our calculation, XYG's float glass ASP has enjoyed almost 20% premium over industry average during the past five years.

Moreover, high-end products also have better profit margin than regular float glass, as the improvement in ASP (at hundreds of RMB) more than offsets the extra cost (at less than RMB100). This, in our view, is one of the key reasons why XYG enjoys higher-than-peer returns and margins (please refer to Figure 33 for details).

Figure 32. Quality of Float Glass Produced

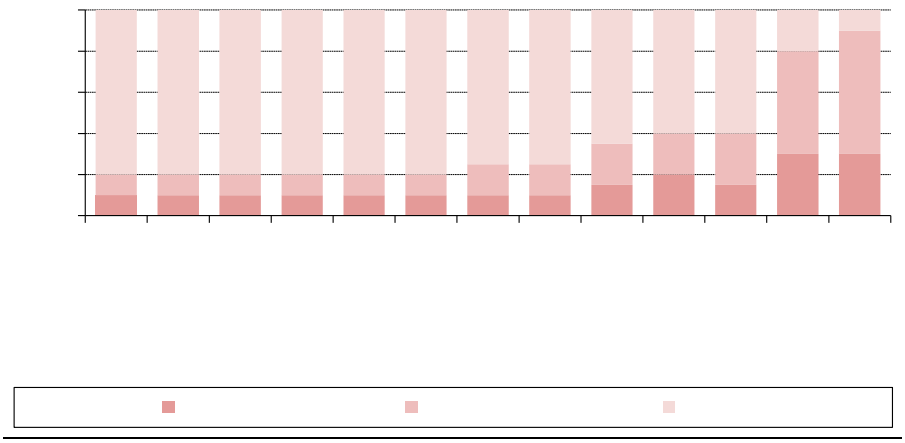


Figure 33. Key Ratios Comparison

Code	Company	ROE (%)			ROA (%)			Gross margin (%)	Net margin (%)	Net debt to equity (%)
		2014	2015	2016	2014	2015	2016			

Figure 38. Operating Cash Flow and Net Gearing Ratio

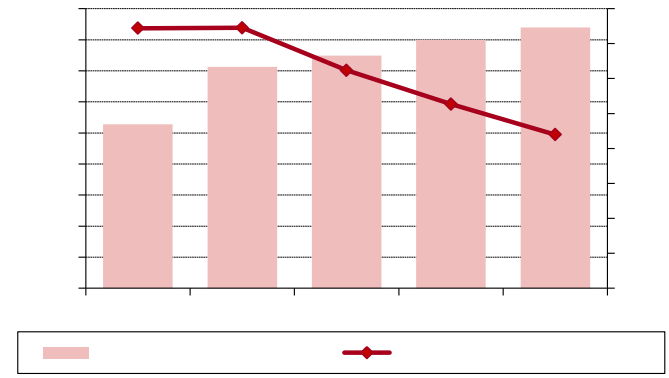


Figure 39. FCF and FCF Yield

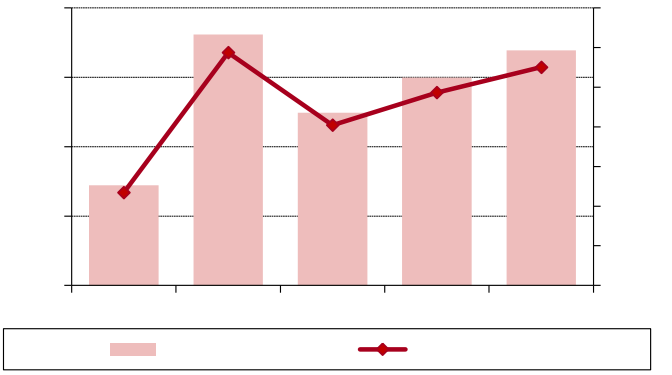
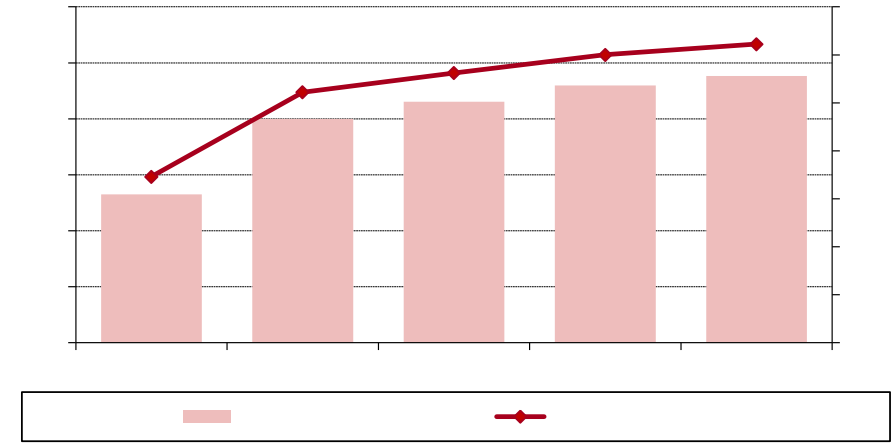


Figure 40. DPS and Dividend Yield



VALUATION

SOTP-based TP at HK$8.88 represents undemanding 9.8x 2017E P/E

We initiate coverage on XYG with a rating and a SOTP-based target price of HK$8.88, derived using (i) 10x target P/E multiple for its non-solar business, and (ii) market valuation for its solar business.

Implying 16% upside potential from XYG's current share price, our target price translates into a blended 9.8x 2017E P/E, which we think is undemanding as it is on par with XYG's historical average 1-year forward P/E since 2007 and at discounts of 13%/43%/45% to the current trading P/E of its H-share/A-share/global peers. We regard XYG's decent ROE at 25% and 5.6% dividend yield in 2017E as the cushion against downside.

Stably-increasing ASP can fuel further share price upside

As shown in Figure 42, we think national average float glass ASP is a driver for change in its 1-year forward P/E. Their correlation coefficient was at 74% during 2014-9M16, although ASP hikes since 4Q16 did not result in further P/E multiple expansion. We think XYG is able to see further P/E multiple upside if float glass ASP holds up well.

Figure 41. SOTP Valuation

	2017E	2018E	Average	Notes
Non-solar business:				
Solar business:				
SOTP valuation:				

Figure 42 -year Forward P/E vs. National Average Float Glass ASP

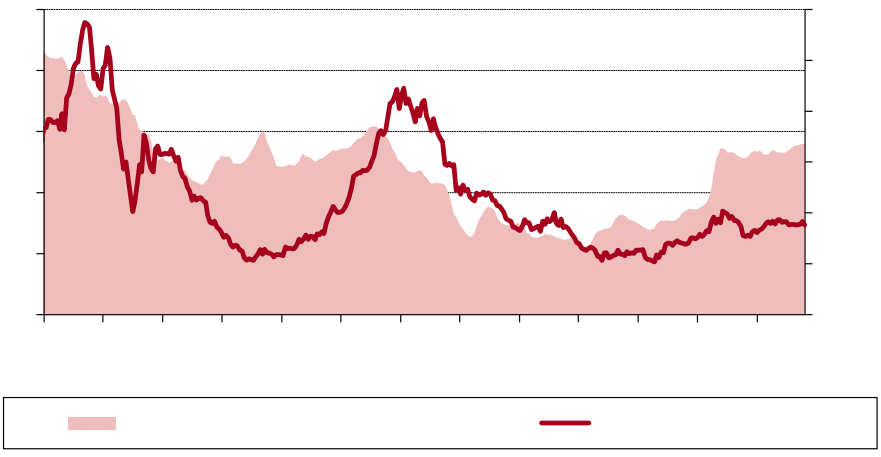


Figure 43. 1-year Forward P/E Range

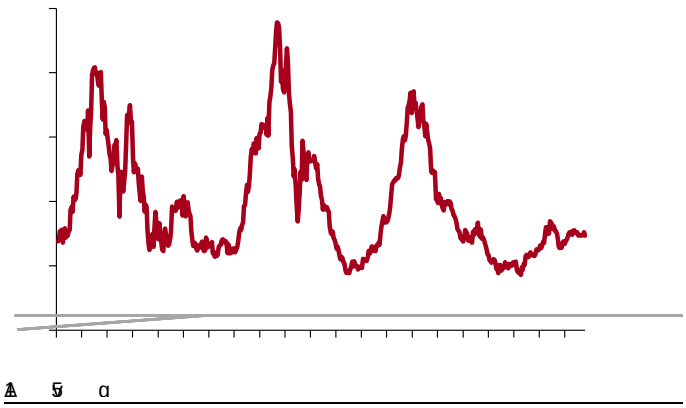


Figure 44. 1-year Forward P/E Band

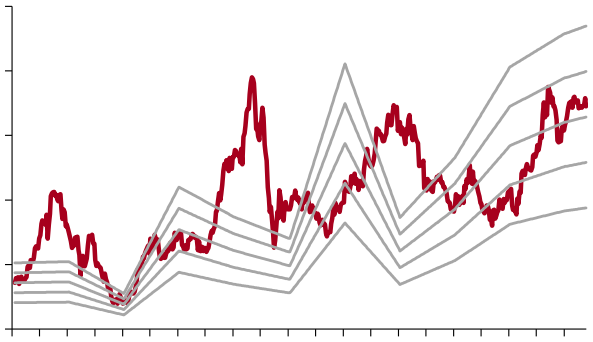


Figure 45. Valuation Comparison

Code	Company	Price	Mkt cap	Turnover	P/E		P/B		ROE		ROA	
					2017E	2018E	2017E	2018E	2017E	2018E	2017E	2018E
H shares												
	Average											
A shares												
	Average											
Overseas												
	Average											
	Overall average											

5. Valuation Comparison

Code	Company	Price	Mkt cap	Turnover	EV/EBITDA		Net debt-to-equity		Div. yield	
					2017E	2018E	2017E	2018E	2017E	2018E
H shares										
	Average									
A shares										
	Average									
Overseas										
	Average									
	Overall average									

RISKS

Lower-than-expected ASP due to Oversupply or Weak Demand

We expect float glass ASP to remain largely flat throughout 2017 with 10% YoY hike, which is well justified as 5M17 national average ASP is 13% higher than 2016 annual average, though similar to that in 4Q16.

According to our sensitivity analysis, a 1% change in float glass ASP assumption would have a 1.3% impact on 2017E net profit, and a 1% change in ASP for all of XYG's glass products would make a 2.8% net profit impact.

Higher-than-expected Production Cost due to Raw Material Price Hike

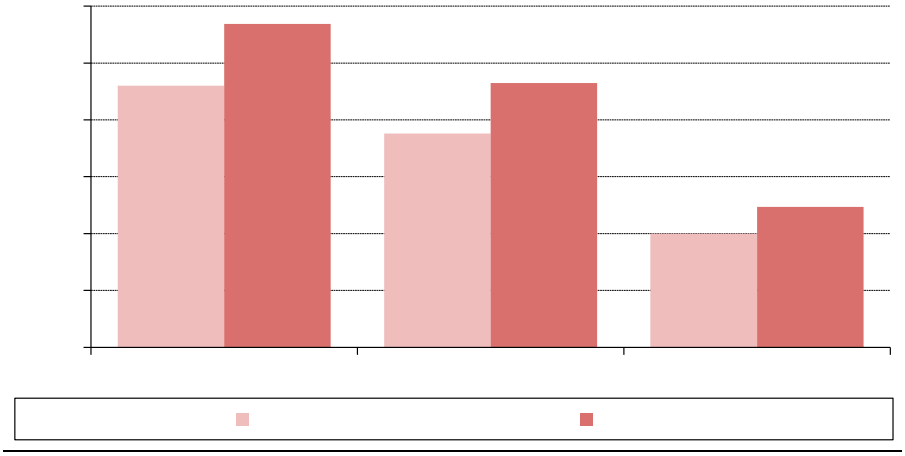
We expect float glass production cost to edge up 0.8% YoY in 2017 due to (i) 5% YoY increase in soda ash price, which went up dramatically from November 2016 but has been dropping since February 2017, and (ii) 3% YoY increase in natural gas price due to seasonal price hike during winter and a slightly-higher LNG price this year.

According to our sensitivity analysis, a 1% change in float glass ASP assumption would have a 1.2% impact on 2017E net profit, and a 1% change in ASP for all of XYG's glass products would make a 2.3% net profit impact.

Lower-than-expected Sales Volume

We expect XYG to see 7%/4%/4.5% YoY sales volume growth rates for float glass, aftermarket auto glass and construction glass, respectively. A 1% change in sales volume for them would have 0.6%/0.4%/0.2% impact on XYG's 2017E net profit.

Figure 46. 2017E Gross and Net Profit Sensitivity to Changes in Assumptions



Equity Dilution Risk

We have already fully factored in the impact of the conversion of CB in 5M17, with new shares issued during the period totalling 97m shares (at conversion price of HK$5.61/share), or 2.5% of XYG's share capital before enlargement. On 10 May 2017, XYG announced the redemption of its outstanding CB in full, thus precluding further share dilution ahead.

XYG conducted several equity financing during 2007-13 when it was expanding rapidly and yet to have enough operating cash flow to support its capex. With FCF yield at 4.0%/4.9% in 2017/18E, we think XYG is fully capable of meeting its capex demand with bank borrowings and internal resources, and thus see limited likelihood for it to seek share placement.

Income Statement *(HK$ m)*

Year ended 31 Dec	2015	2016	2017E	2018E	2019E
Revenue	11,460	12,848	14,105	14,905	15,611

LISTED COMPANIES IN THIS REPORT

Asahi Glass (5201 JP/JPY914, NR)

AVIC Sanxin (002163 CH/RMB6.92, NR)

BYD Co (1211 HK/HK$46.20, NR)

Central Glass (4044 JP/JPY454, NR)

Changzhou Almaden (002623 CH/RMB23.94, NR)

China Glass (3300 HK/HK$0.73, NR)

Corning Inc (GLW US/US$29.10, NR)

CSG Holding (000012 CH/RMB8.66, NR)

Fuyao Glass (3606 HK/HK$29.50, HOLD; 00660 CH/RMB24.43, BUY)

Geely Auto (175 HK/HK$13.26, BUY)

Hankuk Glass (002000 KS/KRW28800, NR)

Henan Ancai (600207 CH/RMB7.81, NR)

Kibing Glass (601636 CH/RMB4.22, BUY)

Luoyang Glass (1108 HK/HK$4.06, NR)

Nippon Sheet Glass (5202 JP/JPY850, NR)

Och-Ziff Capital Management (OZM US/US$2.24, NR)

PPG Industries (PPG US/US$106.36, NR)

Saint Gobain (SGO FP/EUR50.65, NR)

Shandong Jinjing (600586 CH/RMB4.13, NR)

Taiwan Glass (1802 TT/NT$13.85, NR)

Xinyi Glass (868 HK/HK$7.66, BUY)

Xinyi HK (8328 HK/HK$1.54, NR)

Xinyi Solar (968 HK/HK$2.39, NR)

Yaohua Pilkington (600819 CH/RMB6.16, NR)

Yutong Bus (600066 CH/RMB20.66, BUY)

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