



BUY 16%↑side
Target Price: HK\$8.88

868 HK
Price: HK\$7.66
TP Basis: SOTP

Xinyi Glass Holdings

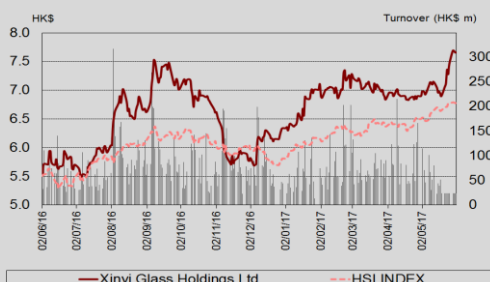
Leading all-round glass maker with margin story in 2017

As one of the largest diversified glass manufacturers in the world, we believe Xinyi Glass's (XYG) capacity expansion and endeavour to seize market shares in specialised glass segments will continue to fuel sales volume growth. With a float glass production capacity of 17ktpd at end-1Q17, we expect it to further expand to 19ktpd by mid-2018. The strong float glass ASP since 3Q16 is likely to persist throughout 2017 thanks to solid demand from the property market and limited new supply. These factors, together with the raw material price pull-backs since the beginning of 2Q17, will help to widen XYG's gross margin. We initiate coverage with a **BUY** rating and TP of HK\$8.88, implying 9.8x 2017E P/E, which we consider undemanding given the stock's 5.6% dividend yield and 25% ROE.

Key Highlights of this Report

- New production lines in Malaysia, partly launched in January 2017 with the rest to come online by mid-2018E, should fuel float glass volume growth.
- Well-controlled supply and decent demand driven by property development can support float glass ASP.
- Soda ash price retreat eases margin concern.
- Higher-than-peer ROE and dividend yield increase its attractiveness.

Trading Summary



(%)	YTD	1M	3M	12M
Absolute	20.8	11.0	5.2	37.3
Relative to HSI	3.5	6.2	(3.3)	30.0

Shares outstanding (m)	3,998
Free float (%)	52
Market cap. (HK\$ m)	30,626
3M avg. daily turnover (HK\$ m)	73
Net debt/equity (%) (2017E)	31
Major shareholder (%)	
Lee Yin Yee, Chairman	22

Source: Company data, Bloomberg, BOCI Research
Closing prices are as of 1 June 2017

BOCI Research Limited
Industrials: Basic Materials

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Key Factors for Rating

- **Capacity expansion drives growth.** In China, XYG ranks No.1 with 11% market share for float glass and No.2 with 20% market share for low-E glass. It ranks No.1 worldwide with 25% market share for auto replacement glass (ARG). A new production line in Malaysia commenced operation in January 2017 and has now fully ramped up. Two more lines will be put into operation by mid-2018. XYG's float glass production capacity should rise to 19ktpd in 2018E from 17ktpd now, which underpins our forecast of a 6.6% float glass sales volume CAGR for 2016-18. We expect a 4% sales volume CAGR for ARG and low-E glass, respectively.
- **Improving margin amid strong ASP and easing cost pressure.** Given steady glass demand thanks to a booming property market, we expect float glass ASP to remain at the current high level, even after a small portion of suspended lines resumed operation after the ASP hike in 2H16. YTD national average float glass ASP of RMB1,450/tonne is 13% higher than the average of 2016 and 1% higher than that of 4Q16, which backs our forecast for 10% YoY ASP increase in 2017. We expect production cost to rise mildly due to the surge in soda ash price and seasonal gas price hike in 1Q17. However, both have normalised since the beginning of 2Q17, which largely relieves our concern. We estimate XYG's gross margin will improve 0.8ppt YoY to 37.7% in 2017.

Key Risks to Rating

- Lower-than-expected ASP.
- Higher-than-expected production cost.

Valuation

- We initiate coverage on XYG with a **BUY** rating and a SOTP-based TP of HK\$8.88, derived from (i) 10x target P/E multiple for its non-solar business, and (ii) market valuation for its solar business. Our TP translates into a blended 9.8x 2017E P/E, on par with the company's historical average level and marking discounts of 13%/43%/45% to the average trading P/E of its H-share/ A-share/ global peers. We believe XYG's decent ROE of 25% and dividend yield of 5.6% in 2017E form a cushion against share price downside.

Investment Summary

Year ended 31 Dec	2015	2016	2017E	2018E	2019E
Revenue (HK\$ m)	11,460	12,848	14,105	14,905	15,611
Change (%)	6	12	10	6	5
Net profit (HK\$ m)	2,113	3,213	3,614	3,910	4,055
Fully diluted EPS (HK\$)	0.430	0.765	0.899	0.973	1.009
Change (%)	51.7	77.8	17.6	8.2	3.7
Consensus EPS (HK\$)	-	-	0.930	1.014	1.038
Core EPS (HK\$)	0.430	0.765	0.899	0.973	1.009
Change (%)	51.7	77.8	17.6	8.2	3.7
Fully diluted P/E (x)	17.8	10.0	8.5	7.9	7.6
Core P/E (x)	17.8	10.0	8.5	7.9	7.6
CFPS (HK\$)	0.67	0.92	0.95	1.00	1.05
P/CF (x)	11.4	8.3	8.1	7.7	7.3
EV/EBITDA (x)	13.9	8.6	7.5	6.7	6.2
DPS (HK\$)	0.265	0.400	0.431	0.460	0.477
Yield (%)	3.5	5.2	5.6	6.0	6.2

Source: Company data, BOCI Research estimates

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COMPANY BACKGROUND

A Leading Glass Manufacturer...

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.

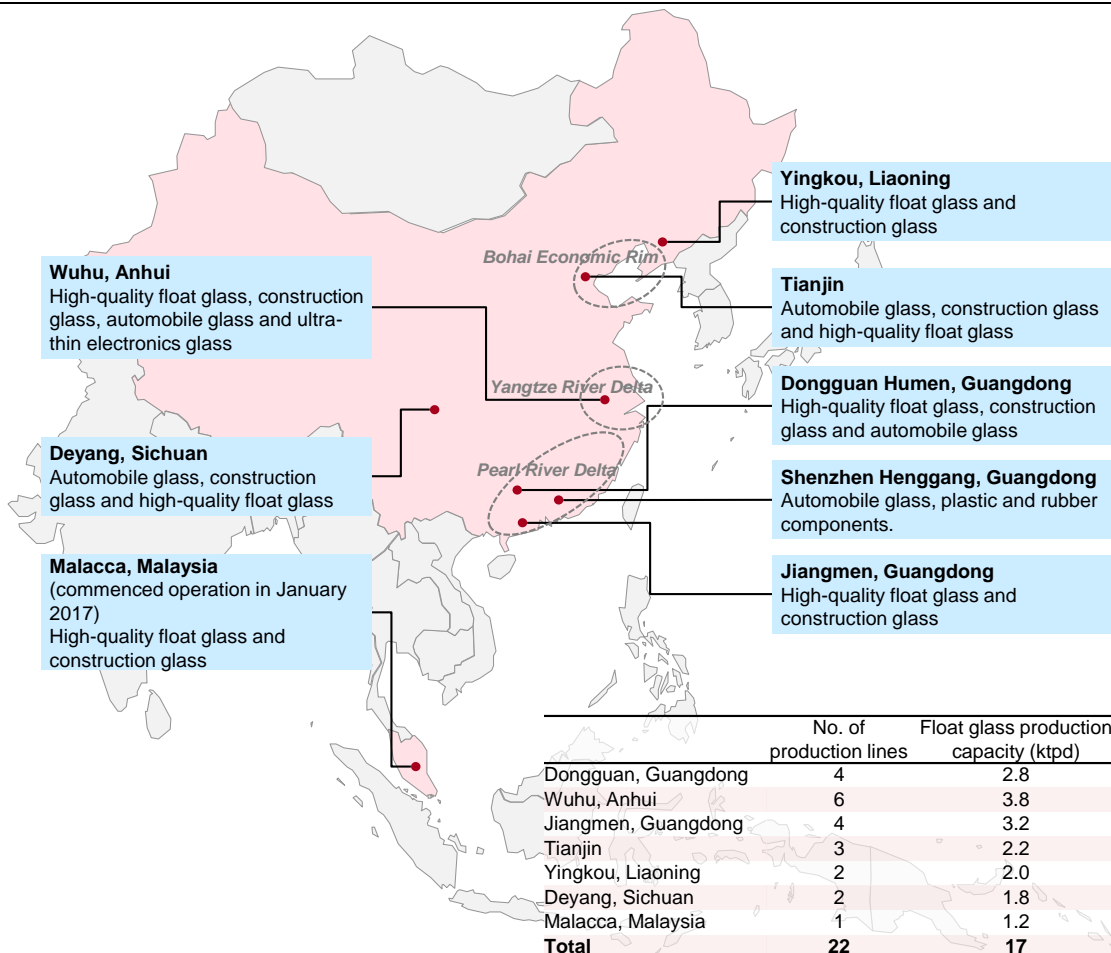
Figure 1. XYG as Leading Glass Manufacturer

Sub-market	Ranking	Market share
Float glass	No.1 in China	11%
ARG	No.1 worldwide	Global: 25%; North America: 30%
Low-E glass	No.2 in China	20%
Solar glass*	No.1 worldwide	40%

Source: Company data, BOCI Research estimates

*Through its 29.5%-owned subsidiary Xinyi Solar (XYS, 968 HK), which was spun off from XYG in 2013

Figure 2. XYG's Production Bases Located in Key Economic Development Zones with Freight Transport Access



Source: Company data, BOCI Research

Three business lines to fuel growth – float glass, ARG and construction glass

...with Diversified Products

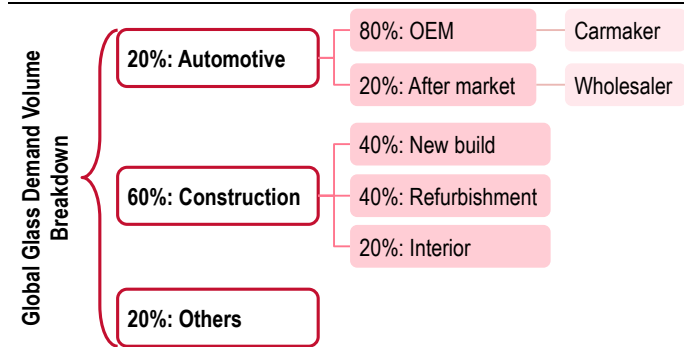
The wholesale of float glass constituted half of XYG's revenue in 2016, with almost all other sizeable glass manufacturers being its customers, such as **Asahi Glass** (5201 JP), **CSG Holding** (000012 CH) and **Fuyao Glass** (3606 HK).

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.

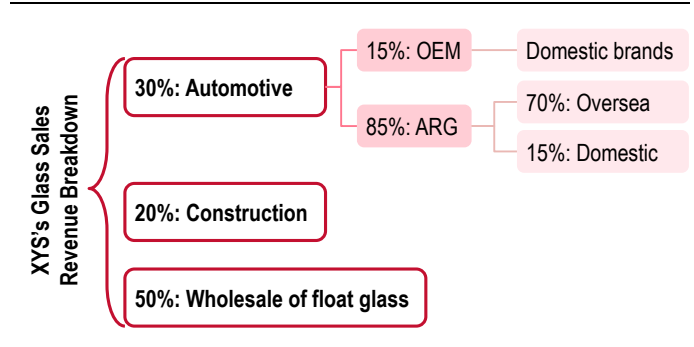
XYG is capable of producing all kinds of high-end specialised glass, and its production yield is one of the highest in the industry, riding on extensive experience and industry know-how. Thus, it has strong pricing power and enjoys higher-than-peer ASP.

Figure 3. Global Glass Demand Volume Breakdown



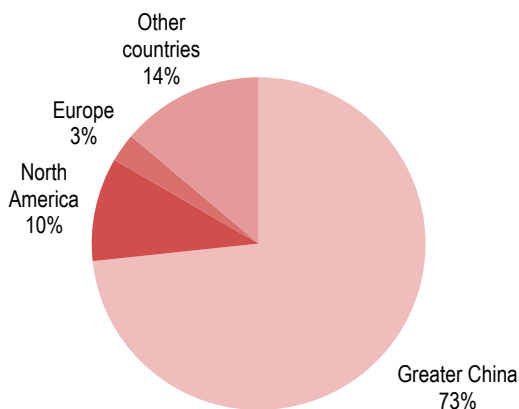
Source: Nippon Sheet Glass Group

Figure 4. XYG's Revenue Breakdown (2016)



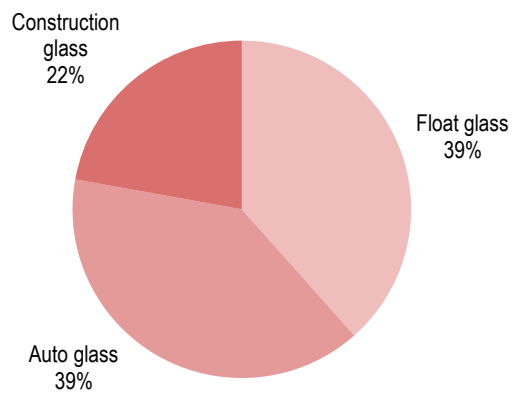
Source: Company data, BOCI Research

Figure 5. XYG's Revenue Breakdown by Region (2016)



Source: Nippon Sheet Glass Group

Figure 6. XYG's Gross Profit Breakdown by Segment (2016)



Source: Company data, BOCI Research

EXPANDING CAPACITY DRIVES GROWTH

Float Glass as Main Focus

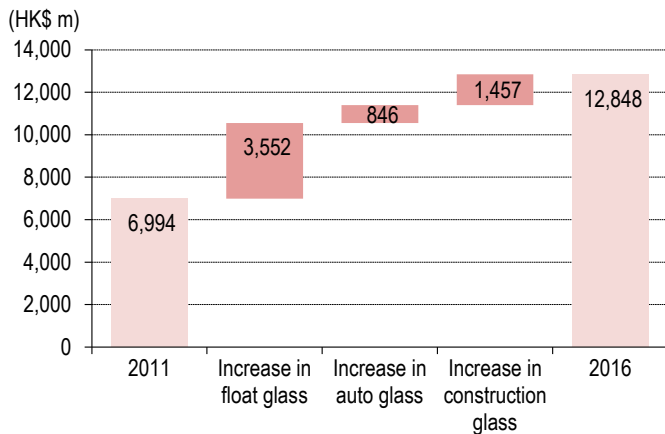
XYG's sales revenue registered 84% growth over the past five years driven primarily by sales volume growth following capacity expansion, with that for float glass, auto glass and construction glass enlarged by 83%, 35% and 194%, respectively. Float glass accounted for 61% of XYG's revenue growth in 2011-16, 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.

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.

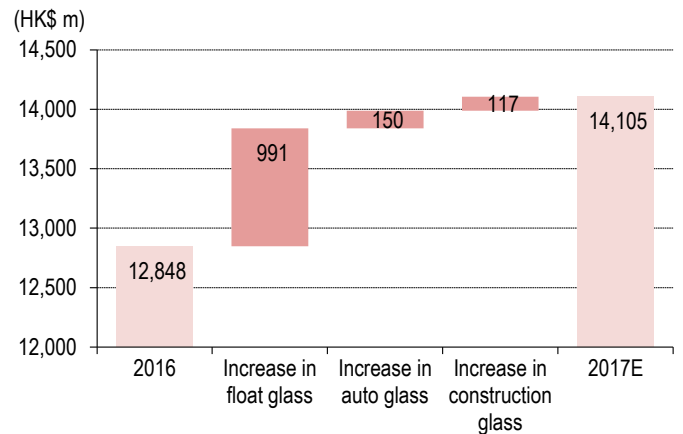
Float glass production capacity to increase 7%/6% YoY in 2017/18E backed by new production lines in Malaysia

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



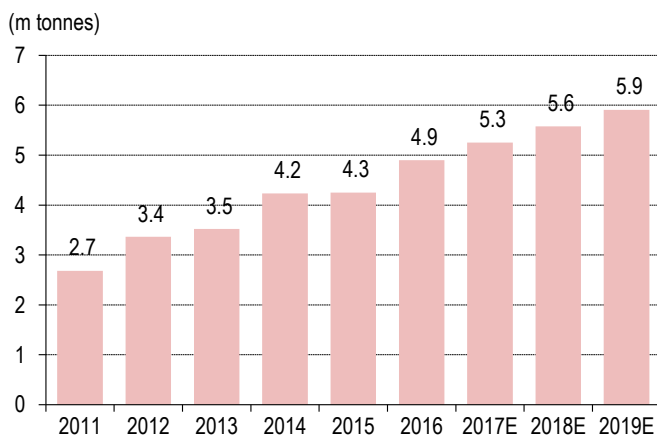
Source: Company data, BOCI Research

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



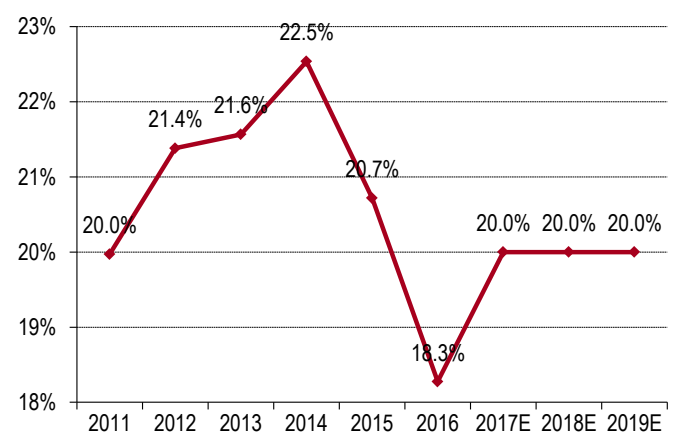
Source: Company data, BOCI Research

Figure 9. Annual Float Glass Production Capacity



Source: Company data, BOCI Research estimates

Figure 10. Float Glass Internal Sales Percentage



Source: Company data, BOCI Research estimates

Sound product quality, well-controlled production cost and long-term relationships with global customers ensure XYG's competitiveness in the ARG market

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.

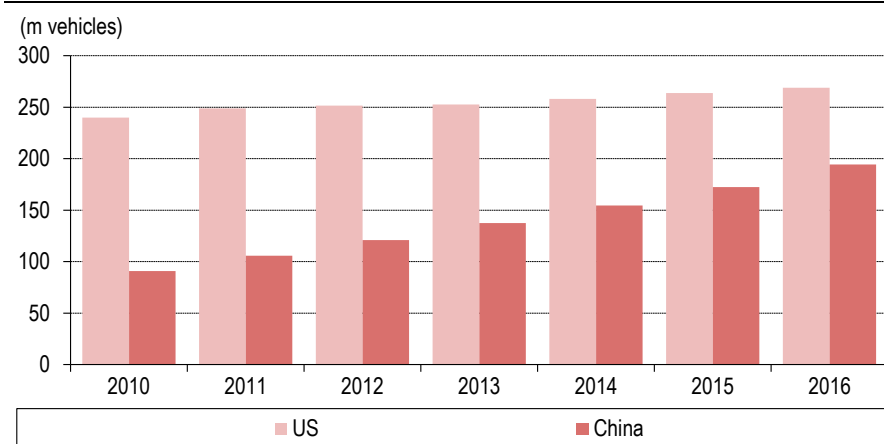
We believe XYG will be able to achieve these as it has the following key competitive edges:

- (i) **Production yield.** 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) **Economies of scale.** XYG is the largest exporter of auto windshields in China and the world's largest ARG supplier. Its integrated manufacturing enables it to optimise operation and cost control.
- (iii) **Long-established relationship with customers.** XYG has had more than 10 years of business relationships with its major ARG buyers PGW and Belron.

Although the ARG market is just 1/4 the size of OEM auto glass market, it is more resilient given that it is more related to the existing number of cars, which has been growing at a mid-single digit and is expected to maintain such pace in the coming few years, according to Global Market Insights Inc. It also forecasts a 5% CAGR for the global ARG market in 2015-24.

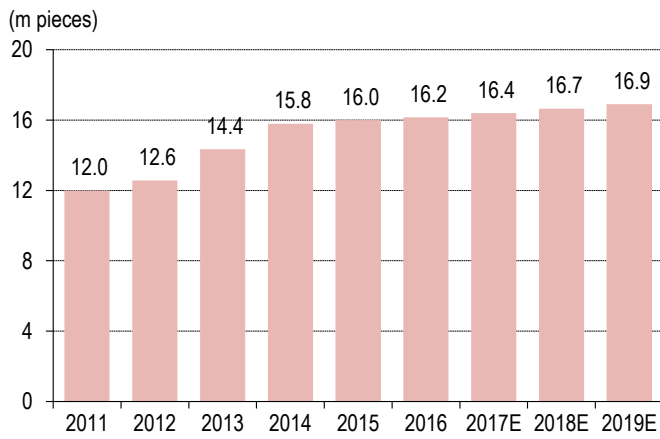
Apart from ARG, XYG also generates approximately 15% of its auto glass sales via OEM, mainly serving the domestic brands such as **Geely** (175 HK), **BYD** (1211 HK) and **Yutong** (600066 CH); it has a global market share of approximately 1.5% according to the management. By riding on the fast developments of domestic brands and aiming to penetrate into the supply chains of other foreign brands, XYG also targets to raise its global market share in the auto glass OEM market to more than 5% from around 1.5% now in the coming five years, according to management.

Figure 11. Number of Vehicles in US and China



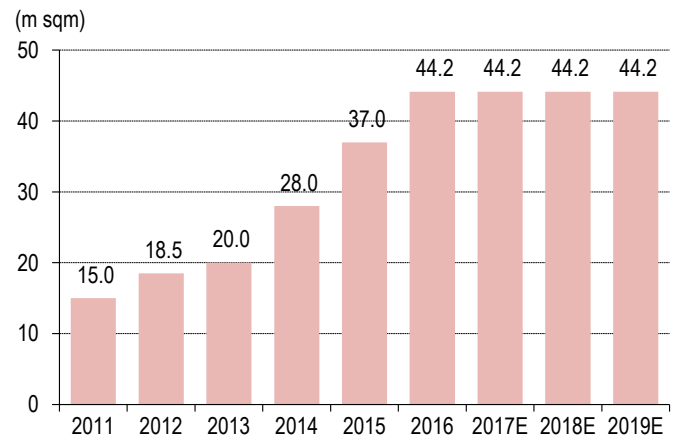
Source: WIND Database, China National Bureau of Statistics (NBS), US Bureau of Economic Analysis (BEA)

Figure 12. Annual Auto Glass Production Capacity



Source: Company data, BOCI Research estimates

Figure 13. Annual Construction Glass Production Capacity



Source: Company data, BOCI Research estimates

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.

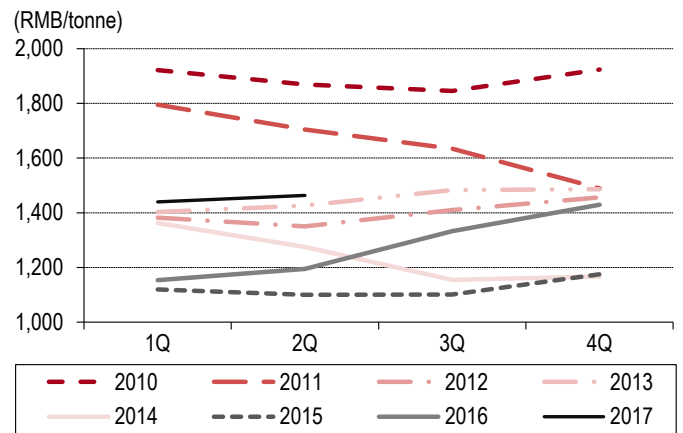
If the temporarily-suspended capacity comes back online and industry average capacity utilisation rate increases as ASP goes up, the oversupply may translate into ASP pressure in 2018E. We have yet to see such a trend.

Figure 14. Domestic Float Glass ASP



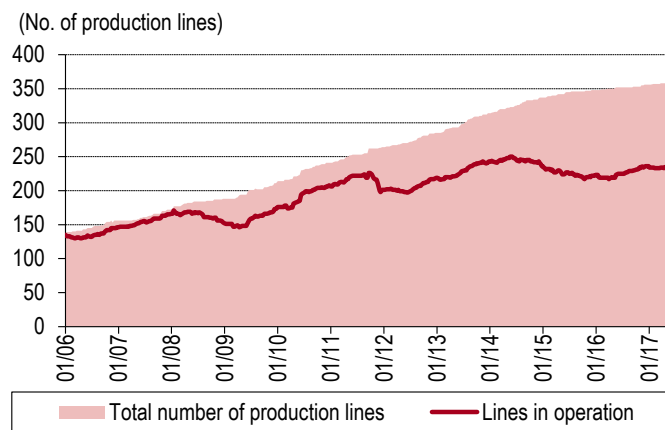
Source: WIND Database

Figure 15. Domestic Float Glass ASP by Quarter



Source: WIND Database

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



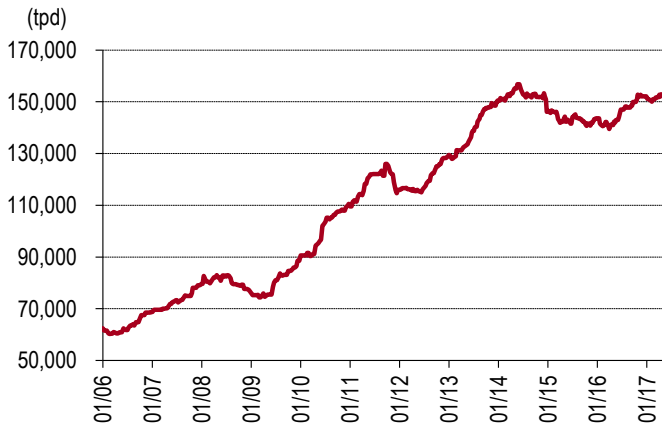
Source: WIND Database

Figure 17. Industry Average Capacity Utilisation Rate



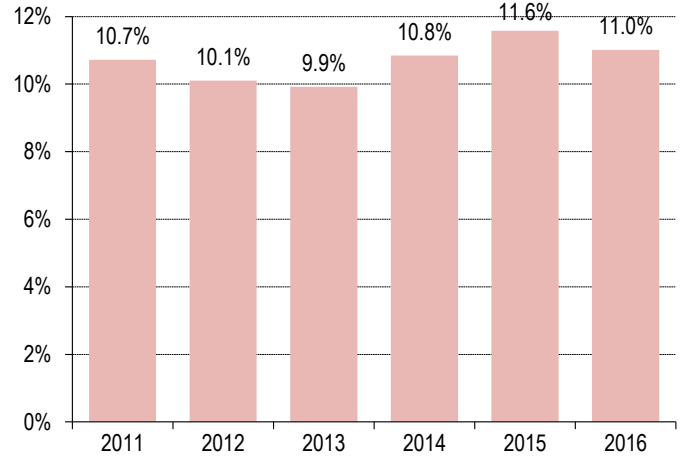
Source: WIND Database

Figure 18. Float Glass Production Capacity in Operation



Source: WIND Database

Figure 19. XYG's Market Share (2011-16)



Source: Company data, WIND Database

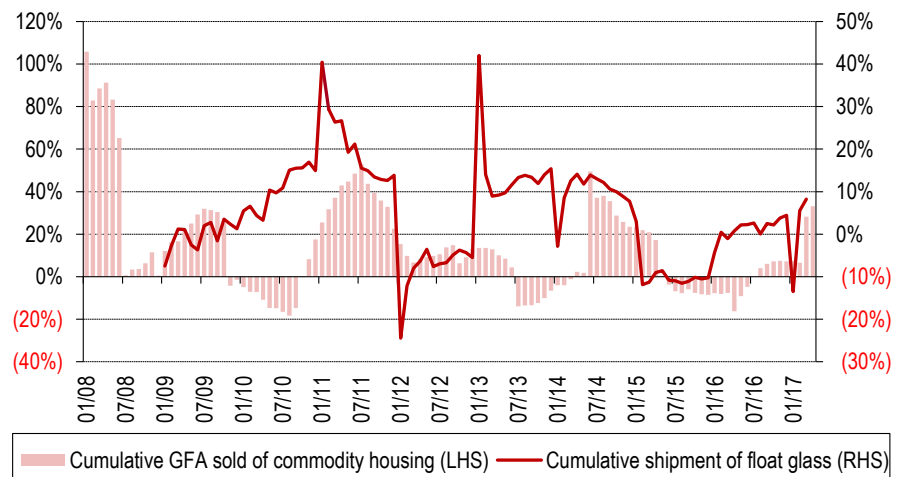
Strong property development can help to strengthen glass demand and ASP in 2H17-2018

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).

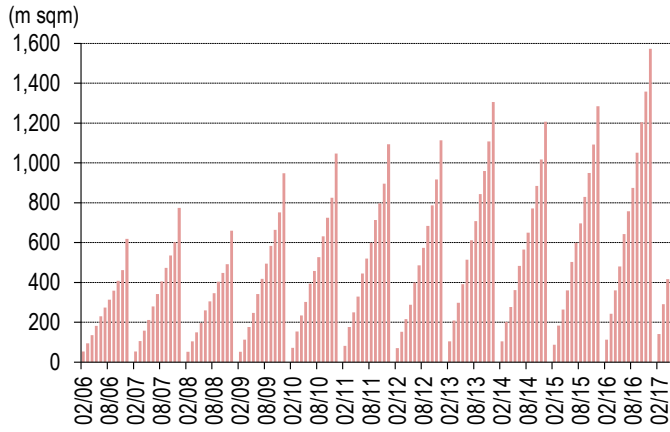
According to the National Bureau of Statistics (NBS), the YoY change in cumulative GFA sold of commodity housing turned positive in June 2015 and hit high double digits in February 2016; the YoY change in cumulative GFA starts returned to positive territory as well in February 2016. Both readings have 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



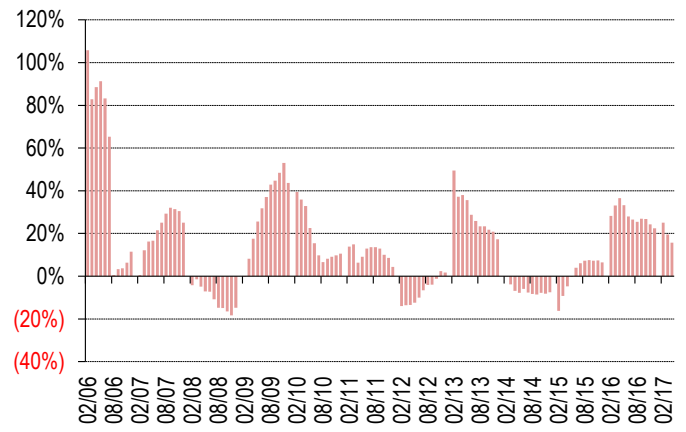
Source: National Bureau of Statistics, China Architectural and Industrial Glass Association

Figure 21. Cumulative Monthly GFA Sold of Commodity Housing



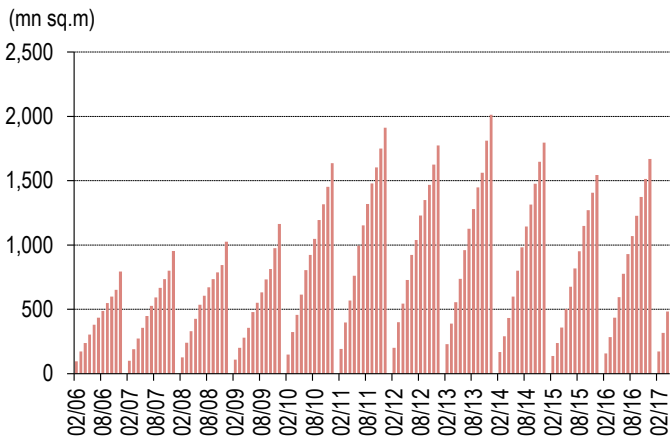
Source: National Bureau of Statistics

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



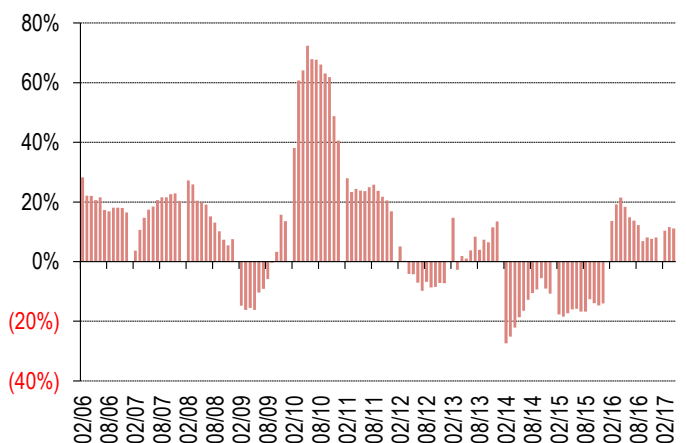
Source: National Bureau of Statistics

Figure 23. Cumulative Monthly GFA Starts



Source: National Bureau of Statistics

Figure 24. Cumulative Monthly GFA Starts – YoY Growth



Source: National Bureau of Statistics

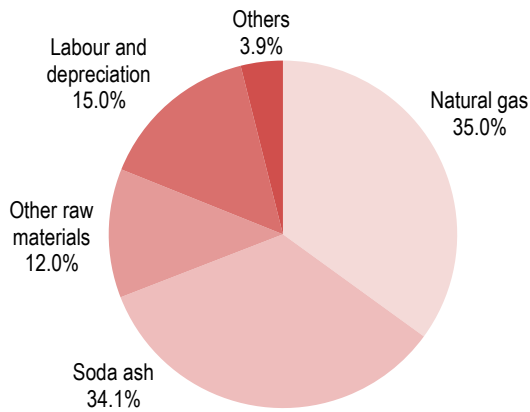
EASING COST PRESSURE SUPPORTS MARGIN

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. XYG's Float Glass Production Cost Breakdown (2016)



Source: Company data, BOCI Research estimates

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



Source: WIND Database, China Chlor-Alkali Industry Association, BOCI Research estimates
 Note: Calculated by using an average consumption of 10.65kg soda ash and 11cu m natural gas per weight case of float glass

Stable Natural Gas Price

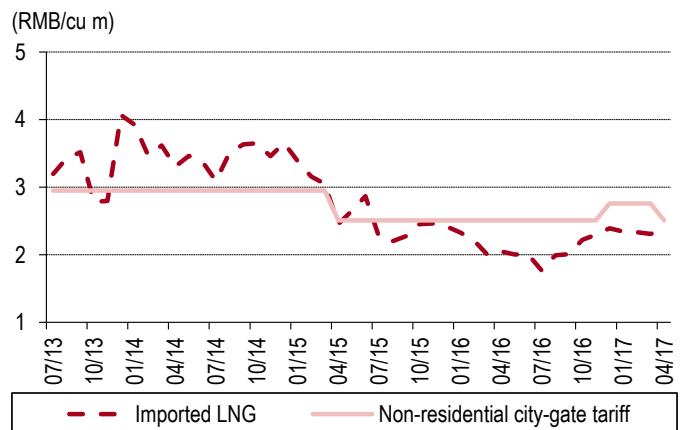
XYG uses natural gas as its major fuel source in making glass, and some LNG at its production plant in Guangdong Province. It has been able to purchase natural gas directly from upstream suppliers, and thus, generally at a discount to retail prices. With international oil prices still lingering at low 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



Source: Bloomberg

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



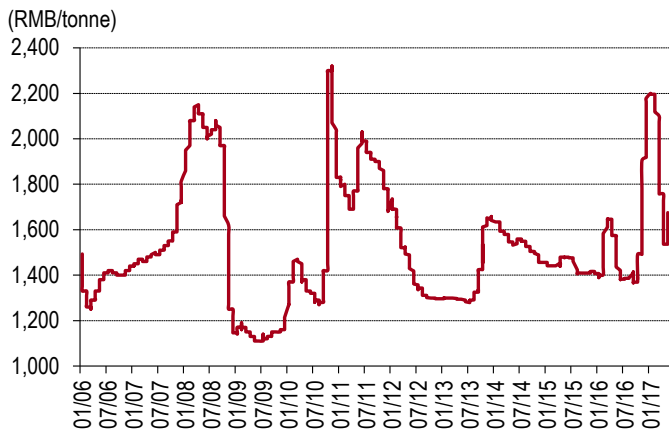
Source: China Customs, NDRC

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.

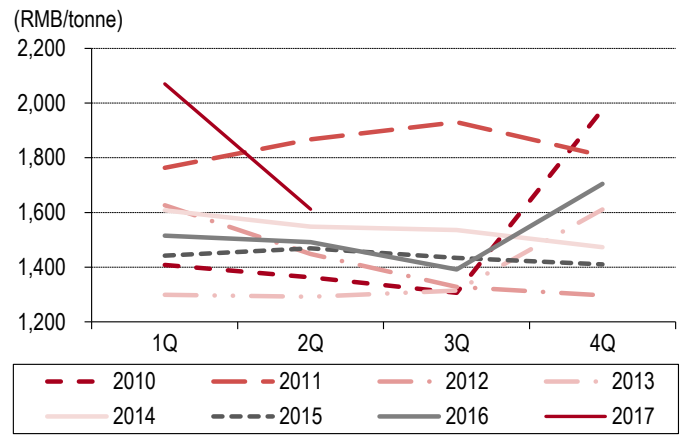
That said, due to soda ash's nature of being a commodity, we cannot rule out the possibility for price hike to resume in the next winter. Based on our calculation, a price increase of RMB100/tonne for soda ash (c.6.25%) will lead to around RMB20/tonne increase in float glass production cost (c.2%). For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



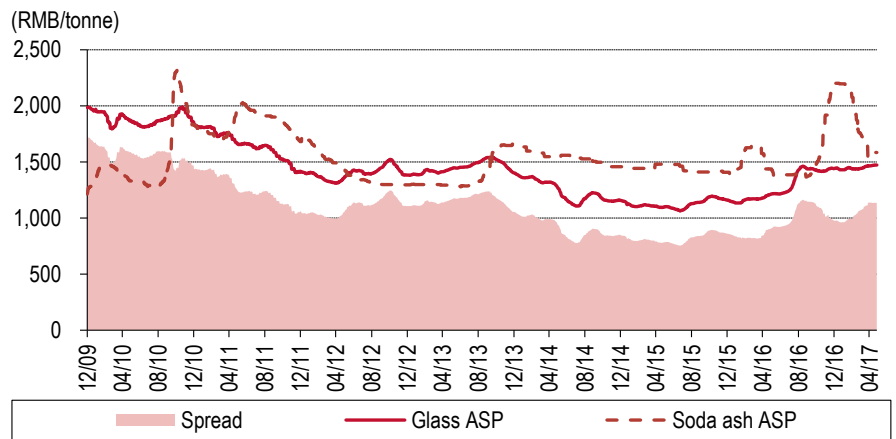
Source: WIND Database, China Chlor-Alkali Industry Association

Figure 30. National Price of Dense Soda Ash by Quarter



Source: WIND Database, China Chlor-Alkali Industry Association

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



Source: WIND Database, China Chlor-Alkali Industry Association, BOCI Research estimates
 Note: Calculated by using an average of 10.65kg soda ash consumption per wright case of float glass.

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.

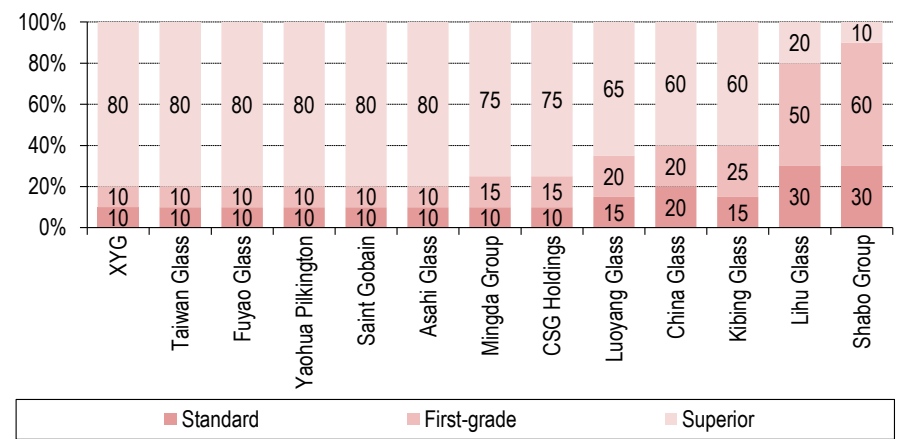
According to management, while XYG's domestic float glass market share is around 11%, it is predominant in the high-end segment with up to 40-50% share.

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).

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

Figure 32. Quality of Float Glass Produced



Source: Bohai Commodity Exchange

Figure 33. Key Ratios Comparison

Code	Company	ROE (%)			ROA (%)			Gross margin (%)			Net margin (%)			Net debt to equity (%) 2016
		2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016	
H shares														
868 HK	Xinyi Glass	11.1	16.9	24.8	7.6	11.1	15.9	25.2	27.3	36.3	12.6	18.4	25.0	37
968 HK	Xinyi Solar	17.6	26.6	33.2	11.7	13.0	13.5	31.6	36.0	45.8	20.5	25.4	33.1	78
3606 HK	Fuyao Glass - H	26.6	20.6	18.2	14.1	12.5	11.5	41.5	41.5	42.0	17.2	19.2	18.9	0
1108 HK	Luoyang Glass	5.6	(37.1)	2.9	1.4	(12.0)	0.9	7.6	3.7	11.2	3.2	(28.1)	3.0	106
3300 HK	China Glass	0.1	(20.0)	NA	0.0	(7.2)	NA	15.0	4.0	NA	0.1	(21.7)	1.0	NA
	Average	12.2	1.4	19.8	6.8	3.3	10.0	24.2	22.5	33.8	10.7	2.7	16.2	55
A shares														
000012 CH	CSG Holding	10.7	6.7	10.3	5.8	3.5	4.9	24.1	21.2	26.0	12.5	7.2	9.0	73
600660 CH	Fuyao Glass - A	26.6	20.6	18.2	14.1	12.5	11.5	41.5	41.5	42.0	17.2	19.2	18.9	0
601636 CH	Kibing Glass	7.5	3.3	15.0	3.1	1.4	6.7	18.8	17.6	28.4	6.3	3.3	12.2	56
600586 CH	Shandong Jinjing	(5.0)	0.7	0.9	(2.3)	0.3	0.4	12.9	16.3	24.8	(5.6)	0.8	1.2	57
002623 CH	Almaden	1.8	2.6	0.8	1.5	2.1	0.5	13.4	15.7	14.1	4.4	5.0	1.2	39
002163 CH	AVIC Sanxin	2.0	(27.3)	1.3	0.3	(3.2)	0.1	7.2	4.8	13.0	0.4	(5.2)	0.2	287
600207 CH	Henan Ancai	(29.7)	2.4	0.7	(9.2)	0.7	0.4	10.5	8.0	12.4	(14.2)	1.1	0.5	(5)
600819 CH	Yaohua Pilkington	1.7	(12.0)	7.7	0.7	(4.5)	2.9	20.5	17.0	19.5	1.9	(13.3)	7.7	48
	Average	2.0	(0.4)	6.9	1.7	1.6	3.4	18.6	17.8	22.5	2.9	2.3	6.4	69
Overseas														
1802 TT	Taiwan Glass	0.3	(10.2)	(3.7)	0.1	(4.6)	(1.8)	6.7	5.4	13.9	0.4	(11.4)	(3.8)	44
5201 JP	Asahi Glass	1.4	3.9	4.3	0.8	2.1	2.4	24.6	25.2	27.2	1.2	3.2	3.7	25
5202 JP	Nippon Sheet Glass	(11.4)	1.0	(35.7)	(1.9)	0.2	(5.8)	24.1	24.5	24.9	(2.9)	0.3	(7.9)	333
4044 JP	Central Glass	3.9	7.2	6.5	2.1	4.0	3.6	23.3	23.8	21.0	2.6	5.2	4.3	23
SGO FP	Saint Gobain	5.4	7.0	7.0	2.1	2.9	3.0	24.9	25.1	25.5	2.5	3.3	3.4	29
PPG US	PPG Industries	41.6	27.7	17.9	12.6	8.1	5.3	42.8	44.4	45.3	13.7	9.5	5.9	52
GLW US	Corning	11.8	6.9	22.4	8.4	4.6	13.1	41.7	40.1	39.9	25.4	14.7	39.4	(8)
002000 KS	Hankuk Glass	5.6	7.2	4.4	4.5	6.0	3.7	19.2	17.9	18.4	8.8	13.3	7.7	(21)
	Average	7.3	6.3	2.9	3.6	2.9	2.9	25.9	25.8	27.0	6.5	4.8	6.6	60
	Overall average	7.2	2.5	9.8	4.0	2.6	5.4	22.9	22.0	27.8	6.7	3.2	9.7	61

Source: Bloomberg, Company data

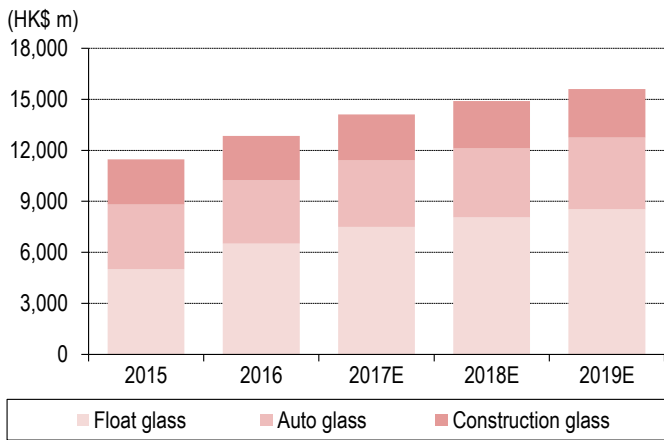
FINANCIAL ANALYSIS

We forecast a 7.7% revenue CAGR for 2016-18, with 11.2%/4.0%/3.5% for float glass, auto glass and construction glass, respectively, driven mainly by sales volume growth after capacity expansion, in conjunction with contributions from float glass ASP hike.

We expect gross margin to inch up in the coming three years, thanks to both float glass ASP hike in 2017E and a slight 0.5% drop in production cost in 2018E after 0.8% increment in 2017E. The spread between the ASP and cost for float glass should keep widening during the period.

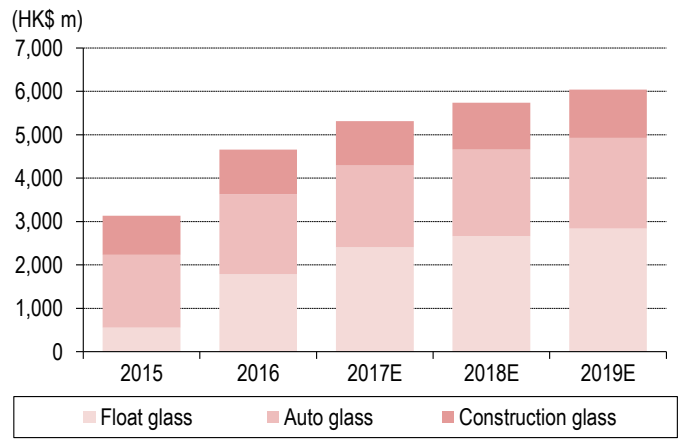
Along with our forecast for flattish SG&A cost as a share of revenue compared to 2016 (14.2%), we forecast net margin of 26% and a 10.1% net profit CAGR in 2016-18E.

Figure 34. Revenue by Segment (2015-19E)



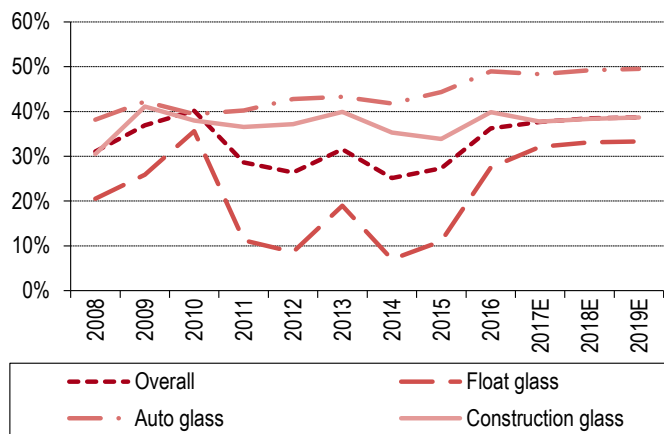
Source: Company data, BOCI Research estimates

Figure 35. Gross Profit by Segment (2015-19E)



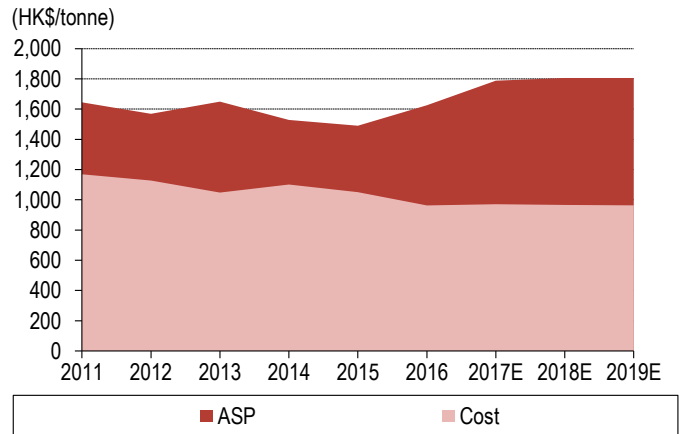
Source: Company data, BOCI Research estimates

Figure 36. Gross Margin by Segment (2008-19E)



Source: Company data, BOCI Research estimates

Figure 37. Float Glass ASP and Cost (2011-19E)

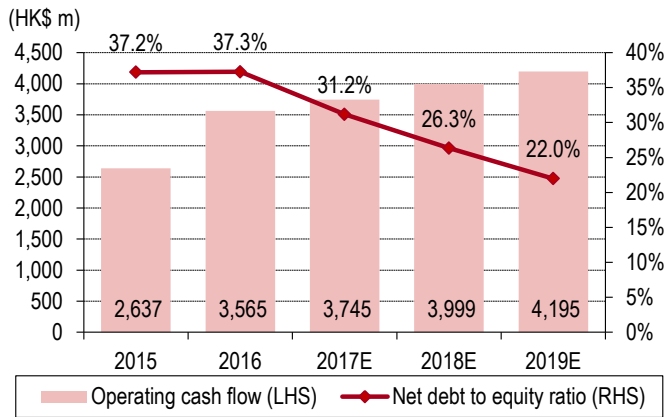


Source: Company data, BOCI Research estimates

With strong operating cash flow, we expect XYG to record FCF of HK\$1.2bn/ HK\$1.5.bn in 2017/18E with FCF yield at 4.0%/4.9% in the respective years. The drop in FCF in 2017E is due to higher capex planned at HK\$2.5bn in the year (vs. HK\$1.85bn in 2016), including HK\$1.5bn-2.0bn for the construction of production lines in Malaysia and HK\$200m to be invested in producing OEM auto glass.

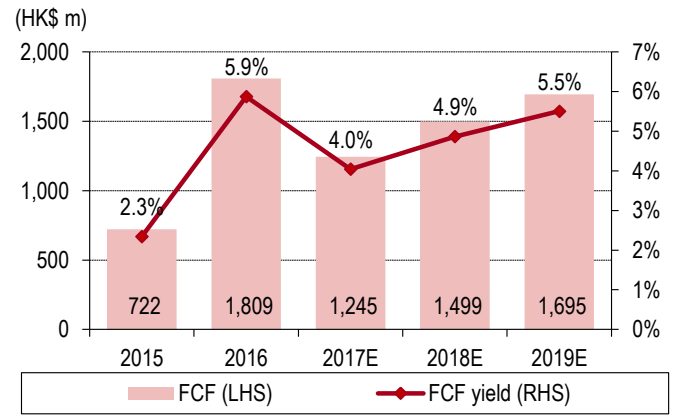
The high FCF yield not only supports our forecast for a downtrending net gearing ratio, but also underpins XYG's attractive dividend yield at 5.6%/6.0% in 2017/18E, assuming the same 47% payout ratio. On a longer-term horizon, XYG may consider to increase its dividend payout if there is no significant capex demand.

Figure 38. Operating Cash Flow and Net Gearing Ratio



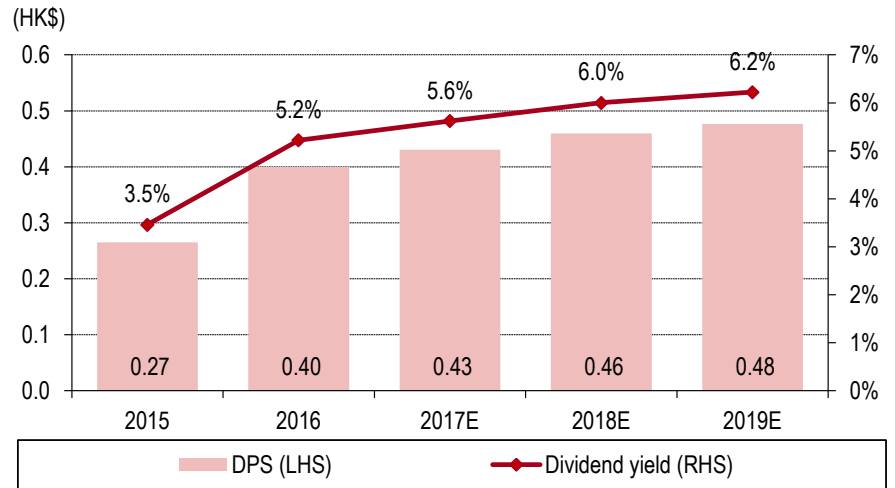
Source: Company data, BOCI Research estimates

Figure 39. FCF and FCF Yield



Source: Company data, BOCI Research estimates

Figure 40. DPS and Dividend Yield



Source: Company data, BOCI Research estimates

VALUATION

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

We initiate coverage on XYG with a **BUY** 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.

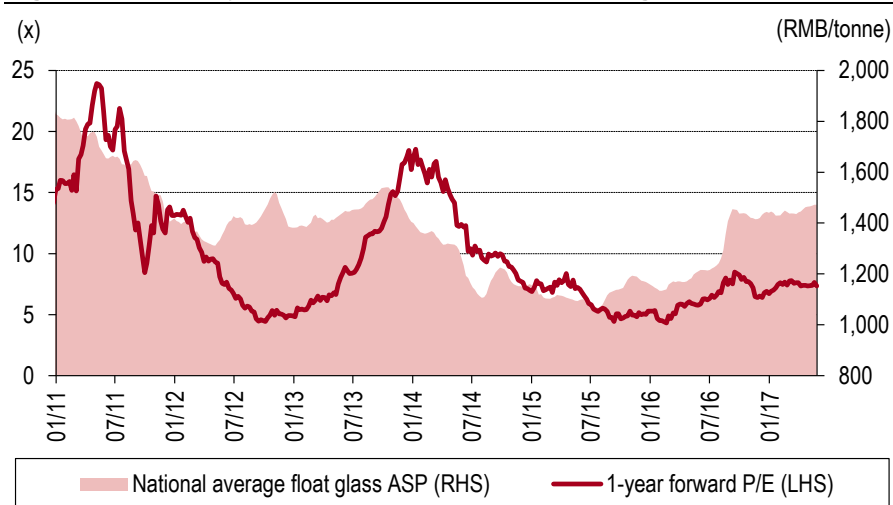
Figure 41. SOTP Valuation

		2017E	2018E	Average	Notes
Non-solar business:					
Net profit of XYG	(HK\$ m)	3,614	3,910	3,762	a
Less: share of profit from XYS	(HK\$ m)	(707)	(760)	(734)	b
Net profit of XYG's non-solar business	(HK\$ m)	2,907	3,150	3,029	c = a + b
Target P/E for XYG's non-solar business	(x)			10.0x	d
Target market cap of XYG's non-solar business	(HK\$ m)			30,286	e = c x d
Solar business:					
Current market cap of XYS (*)	(HK\$ m)			17,743	f
XYG's shareholding of XYS	(%)			29.5%	g
Attributable market cap of XYS to XYG	(HK\$ m)			5,234	h = f x g
SOTP valuation:					
Target market cap of XYG	(HK\$ m)			35,520	TP = e + h
Target price	(HK\$)			8.88	

Source: Bloomberg, BOCI Research estimates

*Price as of 1 June 2017

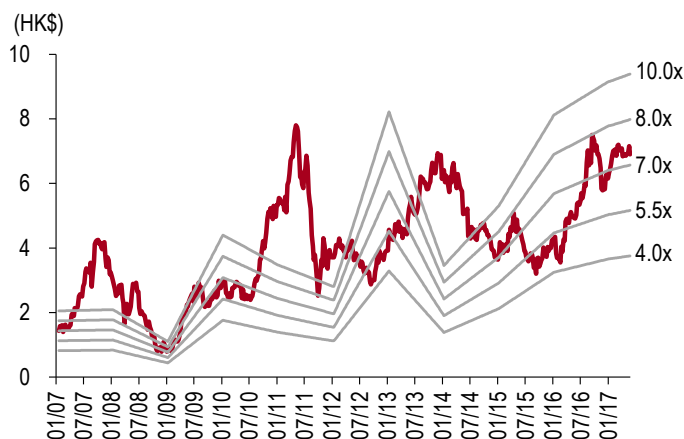
Figure 42. XYG's 1-year Forward P/E vs. National Average Float Glass ASP



Source: Bloomberg, WIND Database, BOCI Research estimates

Figure 43. 1-year Forward P/E Range


Source: Bloomberg, BOCI Research estimates

Figure 44. 1-year Forward P/E Band


Source: Bloomberg, BOCI Research estimates

Figure 45. Valuation Comparison

Code	Company	Price (local ccy)	Mkt cap (US\$ m)	Turnover (US\$ m)	P/E (x)		P/B (x)		ROE (%)		ROA (%)	
					2017E	2018E	2017E	2018E	2017E	2018E	2017E	2018E
H shares												
868 HK	Xinyi Glass	7.66	3,930	10.2	8.5	7.9	2.0	1.7	25.4	23.9	16.9	17.0
968 HK	Xinyi Solar	2.39	2,277	5.3	7.1	6.2	2.0	1.7	31.1	29.8	12.4	12.0
3606 HK	Fuyao Glass - H	29.50	9,105	6.4	18.1	16.1	3.3	3.0	18.4	18.5	11.7	12.2
1108 HK	Luoyang Glass	4.06	700	1.4	NA	NA	NA	NA	NA	NA	NA	NA
3300 HK	China Glass	0.73	170	0.1	NA	NA	NA	NA	NA	NA	NA	NA
	Average				11.2	10.0	2.4	2.2	24.9	24.1	13.6	13.7
A shares												
000012 CH	CSG Holding	8.66	2,177	21.5	16.5	13.1	NA	NA	NA	NA	NA	NA
600660 CH	Fuyao Glass - A	24.43	9,104	46.5	17.5	15.2	3.1	2.8	18.5	18.6	11.9	12.5
601636 CH	Kibing Glass	4.22	1,665	16.0	11.3	9.6	1.5	1.3	14.3	14.3	NA	NA
600586 CH	Shandong Jinjing	4.13	885	11.9	8.4	NA	NA	NA	NA	NA	NA	NA
002623 CH	Almaden	23.94	563	9.6	32.8	23.0	NA	NA	NA	NA	NA	NA
002163 CH	AVIC Sanxin	6.92	817	20.5	32.8	NA	NA	NA	NA	NA	NA	NA
600207 CH	Henan Ancai	7.81	990	5.9	NA	NA	NA	NA	NA	NA	NA	NA
600819 CH	Yaohua Pilkington	6.16	797	7.3	NA	NA	NA	NA	NA	NA	NA	NA
	Average				17.3	15.2	2.3	2.1	16.4	16.5	11.9	12.5
Overseas												
1802 TT	Taiwan Glass	13.85	1,338	9.9	38.5	NA	0.9	NA	3.1	NA	1.1	NA
5201 JP	Asahi Glass	914.00	9,673	563.2	15.3	14.6	0.9	0.9	6.3	6.3	4.3	4.3
5202 JP	Nippon Sheet Glass	850	691	182.7	9.9	6.5	0.7	0.6	8.2	10.6	NA	NA
4044 JP	Central Glass	454	878	56.6	10.7	9.8	0.5	0.5	5.1	5.2	NA	NA
SGO FP	Saint Gobain	50.65	31,607	10.5	17.2	15.0	1.4	1.4	8.3	9.0	3.6	4.0
PPG US	PPG Industries	106.36	27,298	21.5	17.0	15.3	5.0	4.8	31.8	31.4	10.1	10.6
GLW US	Corning	29.10	26,779	21.9	16.9	15.7	1.7	1.6	9.6	9.9	5.0	5.6
002000 KS	Hankuk Glass	28800	259	3.8	NA	NA	NA	NA	NA	NA	NA	NA
	Average				17.9	12.8	1.6	1.6	10.3	12.1	4.8	6.1
	Overall average				15.5	12.7	2.1	2.0	17.2	17.5	10.1	10.8

Source: Bloomberg, BOCI Research estimates

Note: Prices as of 1 June 2017

(Cont'd) Figure 45. Valuation Comparison

Code	Company	Price (local ccy)	Mkt cap (US\$ m)	Turnover (US\$ m)	EV/EBITDA (x)		Net debt-to-equity (%)		Div. yield (%)	
					2017E	2018E	2017E	2018E	2017E	2018E
H shares										
868 HK	Xinyi Glass	7.66	3,930	10.2	7.5	6.7	31	26	5.6	6.0
968 HK	Xinyi Solar	2.39	2,277	5.3	7.2	6.2	94	85	5.9	6.9
3606 HK	Fuyao Glass - H	29.50	9,105	6.4	11.1	9.7	6	7	3.3	3.7
1108 HK	Luoyang Glass	4.06	700	1.4	NA	NA	NA	NA	NA	NA
3300 HK	China Glass	0.73	170	0.1	NA	NA	NA	NA	NA	NA
	Average				8.7	7.6	43	39	4.9	5.5
A shares										
000012 CH	CSG Holding	8.66	2,177	21.5	NA	NA	NA	NA	NA	NA
600660 CH	Fuyao Glass - A	24.43	9,104	46.5	11.1	9.6	4	5	3.4	3.8
601636 CH	Kibing Glass	4.22	1,665	16.0	NA	NA	NA	NA	NA	NA
600586 CH	Shandong Jinjing	4.13	885	11.9	NA	NA	NA	NA	NA	NA
002623 CH	Almaden	23.94	563	9.6	NA	NA	NA	NA	NA	NA
002163 CH	AVIC Sanxin	6.92	817	20.5	NA	NA	NA	NA	NA	NA
600207 CH	Henan Ancai	7.81	990	5.9	NA	NA	NA	NA	NA	NA
600819 CH	Yaohua Pilkington	6.16	797	7.3	NA	NA	NA	NA	NA	NA
	Average				11.1	9.6	4	5	3.4	3.8
Overseas										
1802 TT	Taiwan Glass	13.85	1,338	9.9	NA	NA	NA	NA	NA	NA
5201 JP	Asahi Glass	914.00	9,673	563.2	6.0	5.6	26	22	2.2	2.2
5202 JP	Nippon Sheet Glass	850	691	182.7	5.7	5.2	275	223	0.6	1.2
4044 JP	Central Glass	454	878	56.6	NA	NA	NA	NA	2.2	2.2
SGO FP	Saint Gobain	50.65	31,607	10.5	7.7	7.0	26	22	2.6	2.7
PPG US	PPG Industries	106.36	27,298	21.5	10.9	10.9	46	68	1.5	1.6
GLW US	Corning	29.10	26,779	21.9	9.0	9.2	2	8	2.1	2.4
002000 KS	Hankuk Glass	28800	259	3.8	NA	NA	NA	NA	NA	NA
	Average				7.9	7.6	75	68	1.9	2.0
	Overall average				9.2	8.3	41	37	3.4	3.8

Source: Bloomberg, BOCI Research estimates

Note: Prices as of 1 June 2017

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

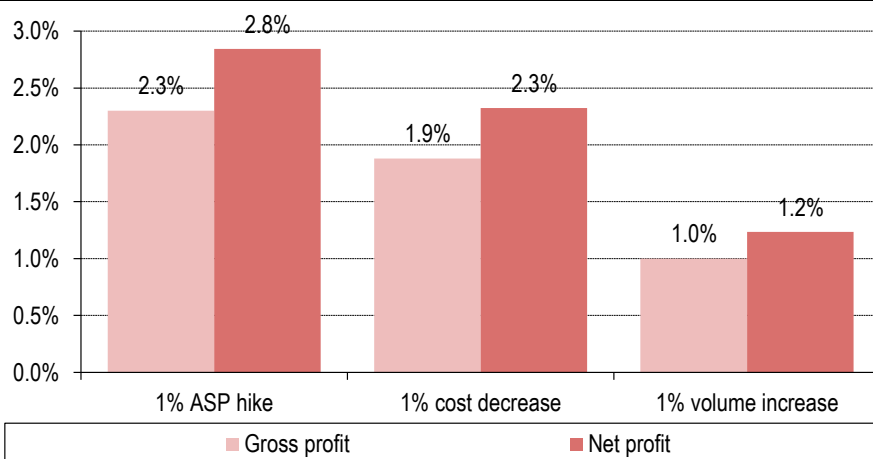
We expect float glass production cost to edge up 0.8% YoY in 2017 due to (i) 5% YoY increase in soda ash price, which went up dramatically from November 2016 but has been dropping since February 2017, and (ii) 3% YoY increase in natural gas price due to seasonal price hike during winter and a slightly-higher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



Source: BOCI Research estimates

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
Cost of sales	(8,328)	(8,189)	(8,791)	(9,169)	(9,572)
Operating expenses (exclude depreciation & amortisation)	(819)	(996)	(1,093)	(1,098)	(1,097)
EBITDA	2,313	3,664	4,222	4,639	4,942
Depreciation & amortisation	(795)	(827)	(908)	(1,016)	(1,117)
Operating profit (EBIT)	1,518	2,837	3,314	3,622	3,825
Net interest income/(expenses)	(50)	(77)	(21)	(30)	(20)
Other gains/(losses)	912	1,063	1,013	1,066	1,145
Pre-tax profit	2,380	3,823	4,306	4,659	4,950
Tax on profit	(266)	(607)	(689)	(745)	(891)
Minority interests	0	(3)	(3)	(3)	(3)
Net profit	2,113	3,213	3,614	3,910	4,055
Core net profit	1,734	3,055	3,614	3,910	4,055
EPS (HK\$)	0.524	0.805	0.899	0.973	1.009
Core EPS (HK\$)	0.430	0.765	0.899	0.973	1.009
DPS (HK\$)	0.265	0.400	0.431	0.460	0.477
Revenue growth (%)	6	12	10	6	5
EBIT growth (%)	39	87	17	9	6
EBITDA growth (%)	33	58	15	10	7
EPS growth (%)	55	53	12	8	4
Core EPS growth (%)	52	78	18	8	4

Source: Company data, BOCI Research estimates

Cash-flow Statement (HK\$ m)

Year ended 31 Dec	2015	2016	2017E	2018E	2019E
Pre-tax profit	2,380	3,823	4,306	4,659	4,950
Depreciation & amortisation	795	827	908	1,016	1,117
Net interest expenses	50	77	21	30	20
Change in working capital	375	(218)	23	(92)	(73)
Tax paid	(223)	(342)	(689)	(745)	(891)
Other operating cash flows	(740)	(603)	(825)	(869)	(927)
Cash flow from operations	2,637	3,565	3,745	3,999	4,195
Net purchase of fixed assets	(1,915)	(1,839)	(2,500)	(2,500)	(2,500)
Decrease/(increase) in invest.	240	(762)	0	0	0
Other investing cash flows	155	321	418	425	450
Cash flow from investing	(1,520)	(2,280)	(2,082)	(2,075)	(2,050)
Net increase in equity	1	(122)	60	0	0
Net increase in debt	(18)	1,611	(644)	(453)	(2,032)
Dividends paid	(608)	(1,321)	(1,575)	(1,754)	(1,865)
Other financing cash flows	0	56	0	0	0
Cash flow from financing	(625)	225	(2,159)	(2,208)	(3,897)
Change in cash	492	1,510	(496)	(284)	(1,752)
Cash at beginning of year	831	1,298	2,763	2,267	1,983
Free cash flow to firm	1,157	1,336	1,759	2,003	2,215
Free cash flow to equity	1,049	2,820	998	1,441	94

Source: Company data, BOCI Research estimates

Balance Sheet (HK\$ m)

As at 31 Dec	2015	2016	2017E	2018E	2019E
Cash & cash equivalents	1,298	2,763	2,267	1,983	231
Receivables	2,381	2,377	2,379	2,514	2,633
Inventories	1,223	1,321	1,365	1,424	1,486
Other current assets	93	76	76	76	76
Total current assets	4,995	6,537	6,087	5,996	4,427
Fixed assets	11,971	11,831	13,449	14,959	16,367
Intangible assets	75	72	72	72	72
Other long term assets	4,380	5,583	5,942	6,331	6,763
Total long-term assets	16,426	17,486	19,464	21,362	23,202
Total assets	21,422	24,022	25,551	27,358	27,628
Creditors	2,112	2,297	2,367	2,468	2,577
Short-term debt	2,514	3,165	3,165	3,165	3,165
Other current liabilities	333	538	538	538	538
Total current liabilities	4,959	6,000	6,070	6,172	6,280
Long-term borrowings	3,514	4,509	3,865	3,412	1,379
Other long-term liabilities	223	266	266	266	266
Share capital	392	389	400	400	400
Reserves	12,326	12,792	14,881	17,036	19,227
Shareholders' equity	12,718	13,181	15,280	17,436	19,627
Minority interests	7	66	69	72	76
Total liabilities & equity	21,422	24,022	25,551	27,358	27,628
Book value per share (HK\$)	3.24	3.39	3.82	4.36	4.91
Tangible assets per share (HK\$)	3.22	3.37	3.80	4.34	4.89
Net debt/(cash)per share (HK\$)	1.21	1.26	1.19	1.15	1.08

Source: Company data, BOCI Research estimates

Key Ratios

Year ended 31 Dec	2015	2016	2017E	2018E	2019E
Profitability (%)					
EBITDA margin	20.2	28.5	29.9	31.1	31.7
EBIT margin	13.2	22.1	23.5	24.3	24.5
Pre-tax margin	20.8	29.8	30.5	31.3	31.7
Net profit margin	18.4	25.0	25.6	26.2	26.0
Liquidity (x)					
Current ratio	1.0	1.1	1.0	1.0	0.7
Interest coverage	16.8	22.2	28.2	33.3	43.0
Net debt to equity (%)	37.2	37.3	31.2	26.3	22.0
Quick ratio	0.8	0.9	0.8	0.7	0.5
Valuation (x)					
P/E	14.6	9.5	8.5	7.9	7.6
Core P/E	17.8	10.0	8.5	7.9	7.6
Core P/E @ target price	20.7	11.6	9.9	9.1	8.8
P/B	2.4	2.3	2.0	1.8	1.6
P/CF	11.4	8.3	8.1	7.7	7.3
EV/EBITDA	13.9	8.6	7.5	6.7	6.2
Activity ratios					
Inventory days	59.2	56.7	55.8	55.5	55.5
Accounts receivables days	77.5	67.6	61.5	59.9	60.2
Accounts payables days	89.6	98.3	96.8	96.2	96.2
Returns (%)					
Dividend payout ratio	48.9	50.5	47.0	47.0	47.0
Return on equity	16.9	24.8	25.4	23.9	21.9
Return on assets	11.1	15.9	16.9	17.0	17.9
Return on capital employed	8.4	14.6	15.8	15.9	16.1

Source: Company data, BOCI Research estimates

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)

*Prices as of 1 June 2017
All figures subject to rounding*

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