Equity Research
March 9, 2018

CICC SH-HK Stock Connect

Xinyi Glass Holdings

Rising float glass ASPs and overseas expansion to boost earnings

Resuming Coverage

Investment positives

We resume coverage of Xinyi Glass Holdings (XYG) with a BUY rating and target price of HK$16.00, equivalent to 12.7x 2018e P/E.

Why a BUY rating?

- **Improving business climate, rising ASPs to boost EPS.** We anticipate strong glass demand from the property industry, while massive glass-furnace maintenance and new environmental rules could result in supply shortages. We expect industry float glass ASPs to grow 10% in 2018 and XYG's float and further-processed glass ASPs to rise a respective 8% and 5%, lifting its EPS 26% this year.
- **Auto glass leader boasts high margins in overseas aftermarket.** XYG sells 75% of its products in overseas aftermarkets where it has strong bargaining power. Its auto glass gross margins are approaching 50% as its scale grows.
- **Overseas expansion to support long-term growth.** XYG plans to increase float glass capacity by 50% by 2020 via overseas expansion. We expect expansion to boost its annual gross profits by nearly HK$1.9 bn, or about 20% of our 2020 forecast.

How do we differ from the market? As the nation's largest supplier of quality float glass, XYG is likely to enjoy an increasing product price premium in the longer term amid rapidly growing demand for float glass driven by rising penetration of further-processed glass products.

Potential catalysts: Glass prices may rise more than expected; overseas production lines might come online earlier than expected.

Financials and valuation

We expect XYG to post EPS of HK$1.26 in 2018, HK$1.48 in 2019 and HK$1.71 in 2020, a CAGR of 16.5%. We believe the firm's profitability will prove more sustainable than it was over 2010–2011 (when ROE was similarly high), and **XYG's P/E (10.1x) now** is below its 2011 average of 12.3x. **We resume coverage of the stock with a target price of HK$16, equivalent to 12.7x 2018e P/E.**

Risks

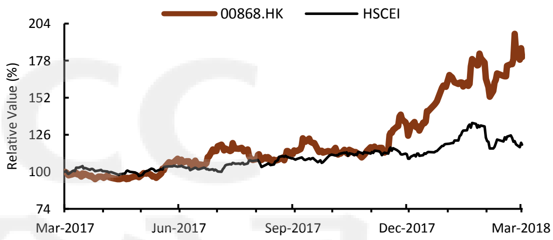
New overseas production lines markets may come online later than expected; fuel prices may rise more than expected.

Coral Keyue LI, CFA
Analyst
coral.li@cicc.com.cn
SAC Reg. No.: S0080517070004
SFC CE Ref: BKW500

Yan CHEN, CFA
Analyst
yan3.chen@cicc.com.cn
SAC Reg. No.: S0080515060002
SFC CE Ref: ALZ159

Resume at BUY

Ticker	00868.HK
CICC investment rating	* BUY
Last close	HK$12.28
CICC target	HK$16.00
52wk price range	HK$13.44~6.37
Market cap (bn)	HK$49
Daily value (mn)	HK$194.60
Shares outstanding (mn)	4,018
Free float (%)	100
Daily volume (mn sh)	16.67
Business sector	Construction Materials



(HK$ mn)	2016A	2017A	2018E	2019E
Revenue	12,848	14,728	16,758	18,739
(+/-)	12.1%	14.6%	13.8%	11.8%
Net profit	3,213	4,014	5,046	5,927
(+/-)	52.1%	24.9%	25.7%	17.5%
EPS	0.80	1.00	1.26	1.48
BPS	3.30	4.56	5.33	6.21
DPS	0.42	0.48	0.60	0.71
CPS	0.89	1.16	1.64	1.81
P/E	15.4	12.3	9.8	8.3
P/B	3.7	2.7	2.3	2.0
EV/EBITDA	11.9	9.5	7.5	6.3
Dividend yield	3.3%	3.9%	4.9%	5.8%
ROAA	14.1%	14.8%	15.5%	15.9%
ROAE	24.7%	25.4%	25.4%	25.6%

Source: Wind, Bloomberg, Corporate filings, CICC Research

Financial summary

Financial statement (HKD mn)	2016A	2017A	2018E	2019E
Income statement				
Revenue	12,848	14,728	16,758	18,739
COGS	-8,189	-9,283	-10,081	-11,025
Selling expenses	-620	-675	-788	-881
Administrative expenses	-1,202	-1,370	-1,559	-1,743
Other ops income (expense)	0	0	0	0
Operating profit	3,900	4,793	6,025	7,032
Finance costs	-77	-97	-121	-97
Other income (expense)	0	0	0	0
Profit before income tax	3,823	4,696	5,904	6,935
Income tax	-607	-682	-858	-1,008
Minority interest	3	0	0	0
Net profit	3,213	4,014	5,046	5,927
EBITDA	4,547	5,797	7,151	8,395
Recurrent net income	3,213	4,014	5,046	5,927
Balance sheet				
Cash and bank balances	2,763	3,049	5,418	7,425
Trade and bill receivables	2,377	3,072	3,100	3,467
Inventories	1,321	1,698	1,639	1,792
Other current assets	76	107	104	109
Total current assets	6,537	7,926	10,261	12,793
Fixed assets and CIP	11,831	12,929	14,357	15,596
Intangible assets and others	5,655	9,450	10,351	11,405
Total non-current assets	17,486	22,379	24,707	27,000
Total assets	24,022	30,305	34,968	39,793
Short-term borrowings	3,165	2,068	1,568	1,568
Trade and bill payables	2,297	2,554	2,634	2,881
Other current liabilities	538	535	609	681
Total current liabilities	6,000	5,157	4,810	5,129
Long-term borrowings	4,509	6,399	8,288	9,288
Total non-current liabilities	4,775	6,842	8,732	9,732
Total liabilities	10,775	11,999	13,542	14,860
Share capital	389	402	402	402
Retained profit	12,792	17,835	20,955	24,461
Equity	13,247	18,306	21,426	24,932
Total liabilities & equity	24,022	30,305	34,968	39,793
Cash flow statement				
Pretax profit	3,823	4,696	5,904	6,935
Depreciation & amortization	827	1,506	1,369	1,557
Change in working capital	271	-837	188	-207
Others	-1,356	-694	-858	-1,008
Cash flow from operations	3,565	4,670	6,603	7,277
Capital expenditure	-1,419	-2,500	-3,000	-3,000
Others	-860	-3,766	-697	-850
Cash flow from investing	-2,280	-6,266	-3,697	-3,850
Equity financing	142	0	0	0
Bank borrowings	1,611	792	1,390	1,000
Others	-1,529	-1,562	-1,926	-2,421
Cash flow from financing	225	-770	-536	-1,421
Foreign exchange gain (loss)	-45	0	0	0
Net changes in cash	1,465	-2,366	2,370	2,006

Financial ratios	2016A	2017A	2018E	2019E
Growth ability				
Revenue	12.1%	14.6%	13.8%	11.8%
Operating profit	60.5%	22.9%	25.7%	16.7%
EBITDA	46.8%	27.5%	23.4%	17.4%
Net profit	52.1%	24.9%	25.7%	17.5%
Profitability				
Gross margin	36.3%	37.0%	39.8%	41.2%
Operating margin	30.4%	32.5%	36.0%	37.5%
EBITDA margin	35.4%	39.4%	42.7%	44.8%
Net margin	25.0%	27.3%	30.1%	31.6%
Liquidity				
Current ratio	1.09	1.54	2.13	2.49
Quick ratio	0.87	1.21	1.79	2.14
Cash ratio	0.46	0.59	1.13	1.45
Liabilities / assets	44.9%	39.6%	38.7%	37.3%
Net debt / equity	36.9%	29.5%	20.6%	13.7%
Return				
RoA	14.1%	14.8%	15.5%	15.9%
RoE	24.7%	25.4%	25.4%	25.6%
Per-share data				
EPS (HKD)	0.80	1.00	1.26	1.48
BPS (HKD)	3.30	4.56	5.33	6.21
DPS (HKD)	0.42	0.48	0.60	0.71
Cash flow per share (HKD)	0.89	1.16	1.64	1.81
Valuation				
P/E	15.4	12.3	9.8	8.3
P/B	3.7	2.7	2.3	2.0
EV/EBITDA	11.9	9.5	7.5	6.3
Dividend yield	3.3%	3.9%	4.9%	5.8%

Source: Corporate filings, CICC Research

Company description

Founded in 1988, Xinyi Glass (XYG) is the world's top supplier of float glass, automobile glass and energy-saving architectural glass, and generates 70% of its revenue from mainland China and Hong Kong. Since listing on the main board of the Hong Kong Stock Exchange in 2005, XYG has expanded production capacity rapidly across China. It has seven mainland industrial bases located in China's most active economic zones (the eastern Yangtze River delta, southern Pearl River delta, northern Beijing-Tianjin region and western Chengdu-Chongqing region). Meanwhile, XYG is adding capacity overseas where natural gas costs are lower. Its base in Malaysia has started operation.

Contents

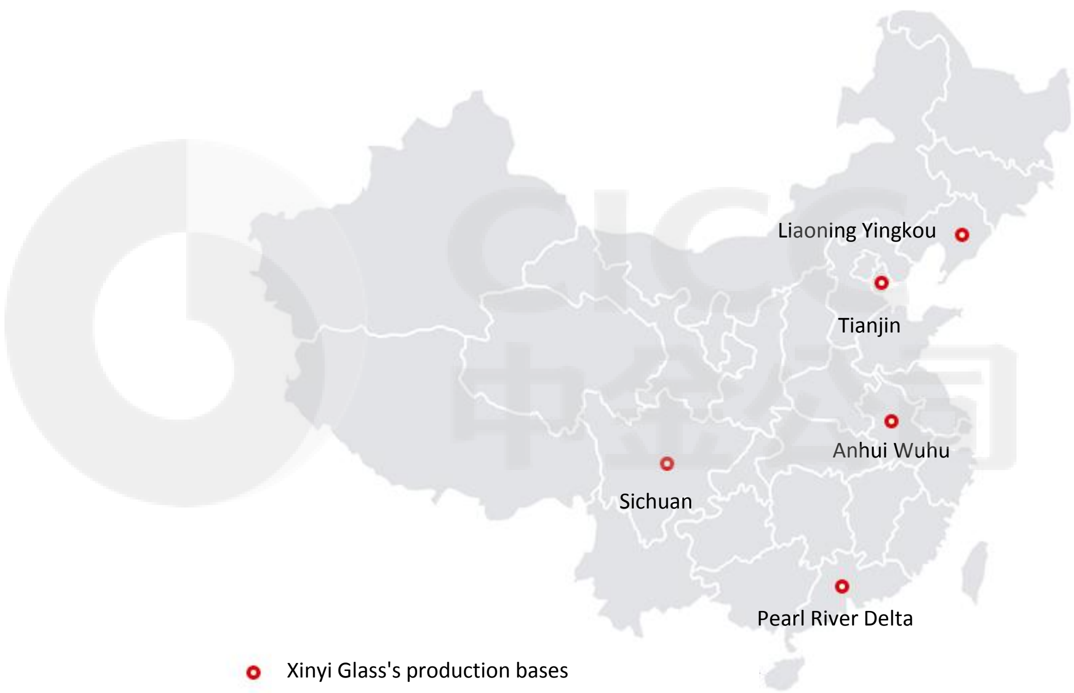
Figures

Executive summary

Xinyi Glass: a leading glass manufacturer with an international presence

Xinyi Glass (XYG) is a comprehensive glass producer with an international presence, producing quality float, automobile and energy-saving architectural glass. It generates 70% of its revenue in mainland China and Hong Kong. Since listing on the Hong Kong Stock Exchange in 2005, the firm has expanded rapidly and constructed production lines across China. XYG now has production bases in Shenzhen, Dongguan, Jiangmen, Wuhu, Tianjin, Yingkou and Deyang. It became the world's leader maker of float glass in terms of production capacity in 2016 and is now adding capacity overseas. Its base in Malaysia has started operating, and we expect XYG to continue introducing new capacity there and in Canada, where energy costs are lower than in China.

Figure 1: Production bases across China

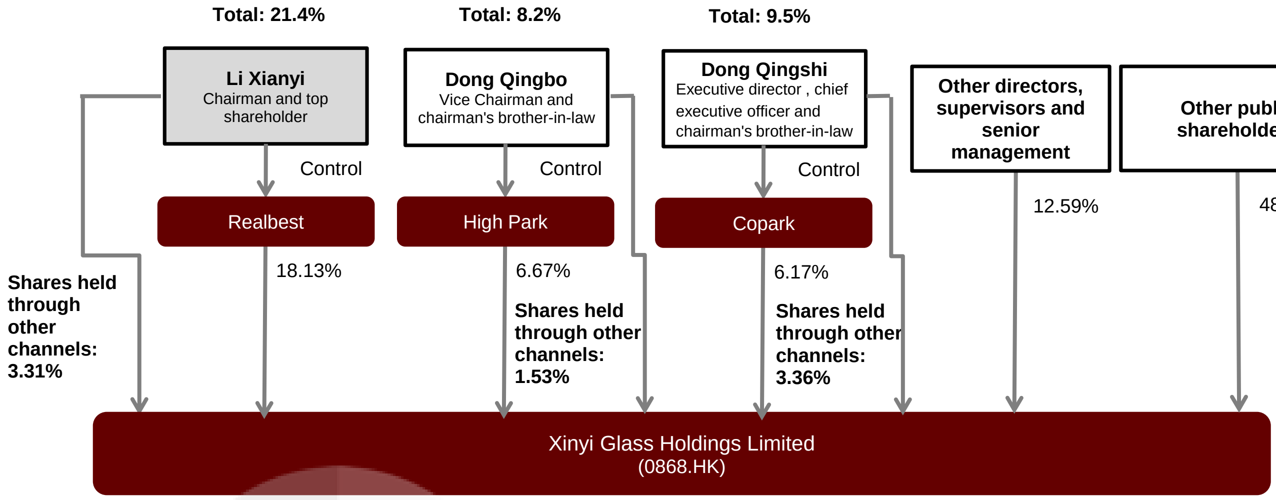


Source: XYG's annual results and website, CICC Research

Management and shareholder structure

As of mid-2017, XYG's actual controllers were its founder and Chairman LI Xianyi (21.4%) and family members DONG Qingbo (8.2%) and DONG Qingshi (9.5%). Other directors, supervisors and senior management collectively own 12.6% of XYG. Major executives have a combined stake of more than 50%.

Figure 2: Shareholder structure (based on 1H17 results)



Source: XYG's annual results, CICC Research

Investment highlights

Rising float glass prices to boost gross margin in 2018

A strong property market—which accounts for 75% glass demand—should benefit XYG. CICC's real estate team expect gross floor area (GFA) starts to grow more than 10% in 2018 after rising 7% in 2017. We expect apparent consumption of flat glass to increase 4.1% in 2018.

On the supply front, China's aggregate capacity of producing glass plants is likely to decline due to new environmental rules and massive cold repair of glass furnaces. We expect a tight supply in 2018 to continue boosting float glass prices. Meanwhile, shrinking glass supply is likely to weigh on sodium carbonate prices, further boosting XYG's gross margin.

XYG's float-glass production capacity stood at 5.25mnt at end-2017. The company sells 80% of its product directly to customers at market prices, and thus it should fully benefit from rising float glass prices and its heavy exposure to float glass sales. We expect an 8% increase in XYG's float-glass product prices and 5% rise in processed glass prices to boost XYG's 2018 EPS 26%.

Rising penetration of further-processed glass to boost demand for quality float glass

Only a small portion of China's glass production is dedicated to quality float glass, which requires high-quality fuel such as natural gas (rather than petroleum coke, for example). Still, we see ample growth potential in demand for quality float glass, driven by rising penetration of further-processed glass. In this context, short-term supply shortages of quality float glass are likely to benefit large producers like XYG, all of whose glass production lines focus on quality float glass. In short, we expect rising penetration of further-processed glass to boost its price premium in the long term.

Diversification of further-processed glass business to support robust growth

- XYG is an automobile glass leader, leading the global automotive aftermarket with a share of 23%. XYG sells 75% of its automobile glass products to overseas aftermarkets, where it has strong bargaining power because the concentration of its client industries is relatively low. This allows high gross margins (47% in 2017), which are trending up as the company gains economies of scale. XYG plans to expand automotive glass production capacity, which should result in higher earnings.
- XYG's architectural glass business mainly sells low-emissivity glass, controls 20% of the national market and is a technological leader. The triple-glazed insulated portion of the low-E glass market has grown rapidly in recent years, replacing double-glazed products and increasing the amount of low-E glass needed to make the same amount of final product. We expect the trend to continue, further boosting demand for low-E glass and benefiting XYG.
- Photovoltaic glass demand is growing rapidly on rising levels of installed PV capacity and penetration of double-glazed modules, and we expect strong earnings growth at Hong Kong-listed Xinyi Solar Holdings (of which XYG owns 29.5%) to support XYG's bottom-line growth.

Overseas expansion to support long-term revenue growth

We estimate that if XYG increases float glass production capacity by 50% via overseas expansion by 2020, as management has said it would, the company's annual revenue and gross profit will increase by a respective HK$5bn and HK$1.9bn in 2020, the latter accounting for more than 20% of the firm's profit that year. In addition, as natural gas prices are much lower overseas than in China, XYG's overseas production bases should enjoy higher gross margins than those in China over the long term. We expect the company's gross margin to improve as overseas lines account for an increasing part of XYG's float-glass production capacity.

Figure 3: Valuations of comparable companies

Company	Currency	Price	P/E			P/B			PEG		
		2018/3/8	2017E	2018E	2019E	2017E	2018E	2019E	2017E	2018E	2019E
Xinyi Glass*	HKD	12.3	12.3	9.8	8.3	2.7	2.3	2.0	0.5	0.4	0.5
Kibing Group*	RMB	6.6	15.5	9.0	7.5	2.7	2.2	1.9	0.4	0.1	0.4
Fuyao Group-A	RMB	26.3	19.8	16.6	14.4	3.4	3.0	2.7	3.3	0.9	0.9
Fuyao Group-H	HKD	32.3	24.5	18.2	n.a.	4.2	3.7	n.a.	4.7	0.5	n.a.
CSG	RMB	8.0	21.3	18.0	14.5	2.4	2.3	2.2	1.2	1.0	0.6
Avic Sanxin	RMB	7.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Jinjing Science & Technology	RMB	4.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Yaohua Pilkington Glass Group	RMB	4.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ancai Hi-Tech	RMB	8.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Shandong Pharmaceutical Glass	RMB	19.7	21.7	17.5	14.2	1.8	1.7	1.6	0.5	0.7	0.6
Sanxia New Building Materials	RMB	7.4	21.5	17.3	14.4	n.a.	n.a.	n.a.	0.2	0.7	0.7
Triumph Science & Technology	RMB	7.1	37.1	25.6	16.9	1.8	1.7	1.6	0.4	0.6	0.3
Northglass Technology	RMB	3.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Xiuqiang Glasswork	RMB	6.1	21.3	17.6	14.1	2.7	2.4	2.1	0.5	0.8	0.6
Changzhou Almaden	RMB	18.8	143.4	45.0	30.1	1.4	1.3	1.3	6.2	0.2	0.6
Jiuding New Materia	RMB	9.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Golden Glass Technologies	RMB	8.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Luoyang Glass	RMB	18.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Feilihua Quartz Glass	RMB	14.5	32.7	25.7	20.2	4.6	4.0	3.4	1.5	0.9	0.7
Average			**33.7**	**20.0**	**15.5**	**2.8**	**2.5**	**2.1**	**1.8**	**0.6**	**0.6**
Median			**21.5**	**17.6**	**14.4**	**2.7**	**2.3**	**2.0**	**0.5**	**0.7**	**0.6**

(Note: Companies with asterisk use CICC estimates, others are based on market consensus.)

Source: Wind Info, Bloomberg, CICC Research

Figure 4: Production capacity of top-10 domestic glass manufacturers

	Production capacity		Total capacity		
	Daily melting (t/d)	Annual capacity (weight box)	Daily melting (t/d)	Annual capacity (weight box)	Productivity utilization rate
Xinyi Glass	17,100	10,260	17,100	10,260	100%
Kibing Group	16,600	9,960	16,600	9,960	100%
CSG Holding	7,650	4,590	9,400	5,640	81%
Hebei Yingxin Group	8,450	5,070	8,750	5,250	97%
China Glass	6,100	3,660	8,250	4,950	74%
Taiwan Glass	7,200	4,320	8,250	4,950	87%
Zhejiang Glass	5,000	3,000	7,500	4,500	67%
Farun Group	1,950	1,170	7,610	4,566	26%
Greatwall Glass	6,350	3,810	6,350	3,810	100%
Anquan Industrial	5,450	3,270	5,950	3,570	92%
Jinjing Group	3,450	2,070	5,600	3,360	62%
Top 10 glass producers' output	**85,300**	**51,180**	**101,360**	**60,816**	**84%**
Total output in China	**148,710**	**89,226**	**215,220**	**129,132**	69%
CR10 (portion of total capacity)	**57%**		**47%**		

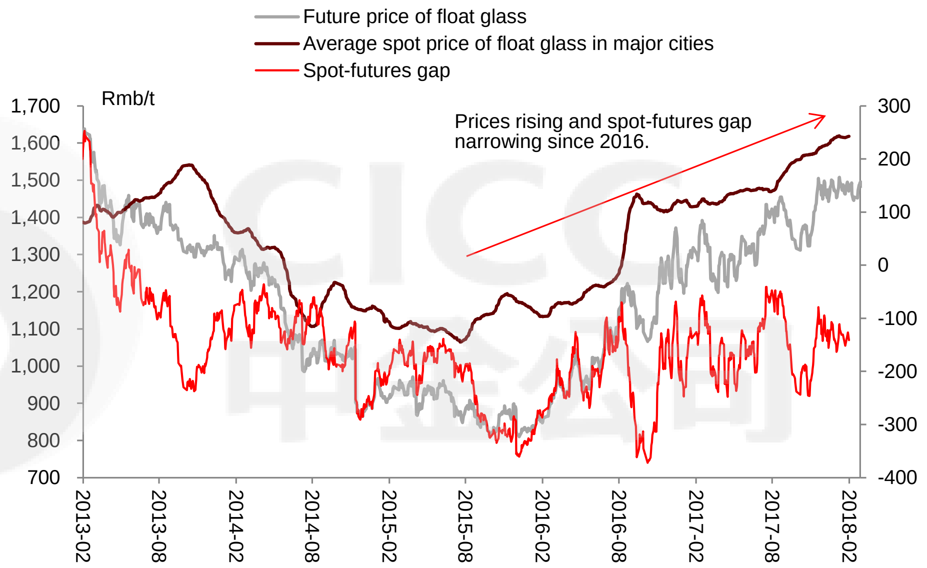
Note: Capacity of XYG and Kibing Group and total output for China as of end-2017; other data as of March 17, 2017
Source: Company website, China Building Materials Federation, CICC Research

Leading producer of quality float glass to prosper as ASPs rise and further-processed glass boosts demand

Leading producer of float glass benefitting from cyclical industry recovery

Float glass supply-demand balance to be tight, average prices to rise in 2018. We expect strong demand from the property industry to drive decent growth in overall float glass demand in 2018. Supply will likely tighten due to massive maintenance of glass furnaces, and new environmental rules will likely exacerbate the situation. Some glass production lines are likely to suspend production when China issues wastewater discharge permits, and companies that cannot meet new environmental requirements will have to purchase and install environmentally-friendly facilities before they can resume production. Thus, lines that are suspended, overhauled or relocated are unlikely to restart production on a large scale in the near term. We expect the tight supply to lift float glass prices further, with average prices for 2018 rising 10%.

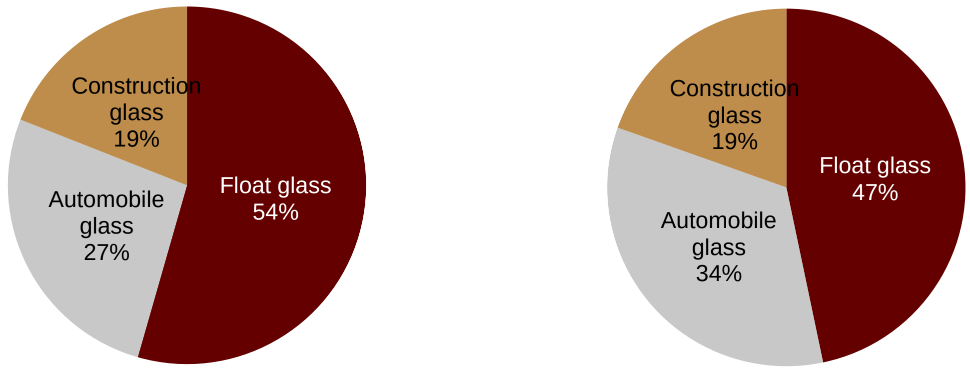
Figure 5: Glass prices recovering since early 2016



Source: Wind Info, CICC Research

Heavy exposure to quality float glass to boost earnings. XYG is now China's largest float glass producer in terms of production capacity (5.25mnt as of end-2017). It supplies 20% of its float glass products to its own plants and the remaining 80% directly to downstream customers at market prices. XYG's 2017 results show that float glass contributed 54% of its revenue and 47% of its gross profit. This suggests that its earnings will fully benefit from the upturn in float glass prices. We estimate a 5% increase in float glass prices will boost the company's profit by 14%, assuming prices of automotive and architectural glass remain unchanged.

Figure 6: Float glass contribution to XYG's revenue (left) and gross profit (right) remained high in 2017



Source: Xinyi's annual results, CICC Research

Cost advantages growing as environmental rules push up cost curve of smaller suppliers. XYG's float glass production lines all use natural gas as fuel and meet environmental requirements, so the company should not have to spend to cope with new environmental rules. This is not the case for smaller suppliers, however, and XYG's cost advantages are likely to be more significant as environmental regulations increase industry costs.

In addition, XYG's further-processed glass plants source float glass in-house, making the firm immune to the risk of a rise in float glass costs and giving it a significant cost advantage over processors that have to buy float glass.

Figure 7: XYG's float glass production lines across China

	Production Line	Daily melting capacity (tonnes)	Annual capacity (mn weight boxes)	Production start at
1	Humen Line1 (white float glass)	700	4.20	2006.03
2	Humen Line2 (A grade white float glass)	500	3.00	2006.07
3	Humeni Line3 (A grade white float glass)	600	3.60	2007.06
4	Humen Line4 (white float glass)	900	5.40	2007.10
5	Wuhu Line1 (A grade white float glass)	500	3.00	2009.09
6	Wuhu line2 (A grade white float glass)	500	3.00	2009.10
7	Wuhu PV line1 (Ultra white raw glass)	500	3.00	2009.8
8	Wuhu line3 (A grade white float glass)	700	4.20	2010.04
9	Jiangmen line1 (A grade white float)	600	3.60	2011.01
10	Jiangmen xinyi line2 (A grade Crystal white float glass)	900	5.40	2011.03
11	Wuhu PV line2 (Ultra white raw glass)	500	3.00	2011.03
12	Wuhu PV line3 (Ultra white raw glass)	500	3.00	2011.03
13	Jiangmen line3 (A grade white float glass)	900	5.40	2011.05
14	Tianjin Line1 (premium float glass)	1,000	6.00	2011.06
15	Tianjin Line2 (premium float glass)	600	3.60	2012.04
16	Tianjin Line3 (premium float glass)	600	3.60	2012.07
17	Liaoning yingkou Line 1(white float glass)	1,000	6.00	2014.01
18	Liaoning yingkou Line 2(white float glass)	1,000	6.00	2014.02
19	Sichuan deyang Line 1(premium ultra white glass)	800	4.80	2014.11
20	Sichuan deyang Line2(premium white float glass)	1,000	6.00	2015.02
21	Jiangmen line4 (white float glass)	1,000	6.00	2015.06
22	Malacca Line 1(float glass)	1,200	7.20	2017.01

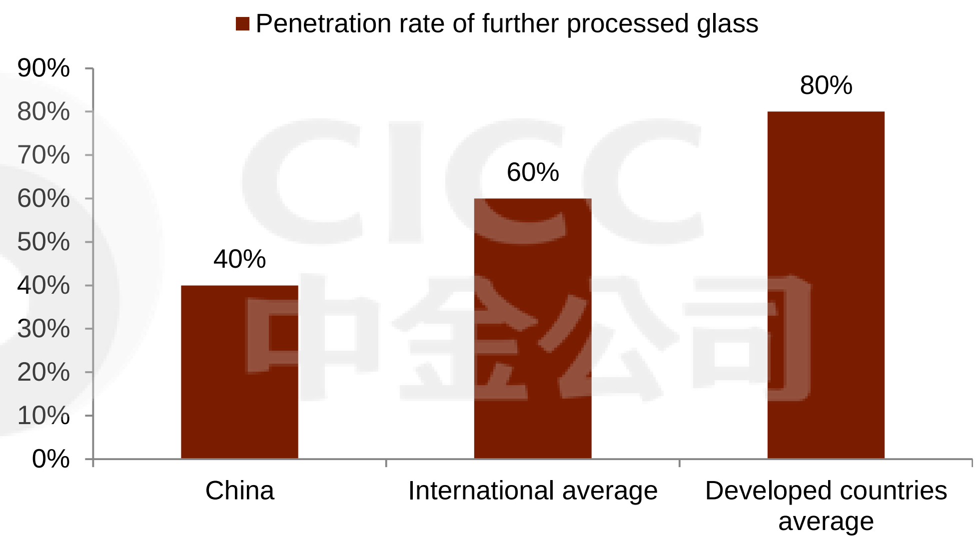
Note: Data from news media used for lines of which XYG has not disclosed capacity
Source: Company data, CICC Research.

Dedication to quality float glass to benefit XYG as further-processed glass penetration rises

Rising further-processed glass penetration, product upgrading to boost demand for quality float glass. Quality float glass is generally used as a raw material for further-processed glass, penetration of which in China is much lower than the global and developed country averages of 60% and 80%, respectively. We believe penetration in China will trend up in the long term, creating enormous demand for quality float glass. In addition, as further-processed products are upgraded, their need for quality float glass will likely become increasingly demanding. For instance, most automotive glass is now 4mm thin, but this will likely decrease to 2mm as carmakers work to lighten cars. This will pose further challenges to automotive glass production.

Quality float glass accounts for only small part of China's total production capacity, and temporary supply shortages are likely. Production of quality float glass needs high-quality fuel such as heavy oil and natural gas (other fuels degrade glass quality). Only a small percentage of China's float glass capacity produces quality glass (16% of lines use heavy oil; less than 30% use natural gas). The percentages are even lower if we exclude lines using both high- and low-quality fuel. As penetration of further processed glass processing continues to rise, supply of quality float glass is likely to become tight—benefiting large producers of high quality float glass.

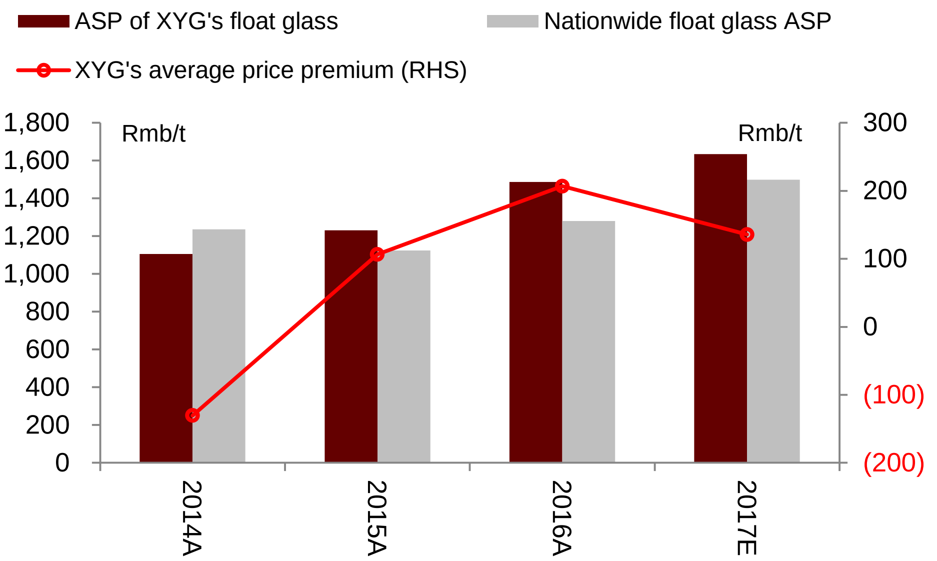
Figure 8: Further-processed glass penetration in China has large upside vs. global averages



Source: www.chyxx.com, CICC Research

China's top seller of quality float glass. All of XYG's float glass facilities use natural gas as fuel. The firm sells more than 4mn tonnes of quality float glass per annum, most among all producers in China, and its products come in a wide range of specifications and colors to meet the standards of different downstream industries. XYG can produce super-thin or super-thick glass, which is technologically challenging, and its products sell for Rmb100–200 more than ordinary glass, which ensures a higher gross margin. We believe its emphasis on producing quality float glass will become increasingly valuable as further-processed glass penetration increases.

Figure 9: XYG's float glass sells for Rmb100–200 more than ordinary float glass



Note: XYG's float glass ASP converted into renminbi using CICC-determined annual exchange rate
Source: Wind Info, CICC Research

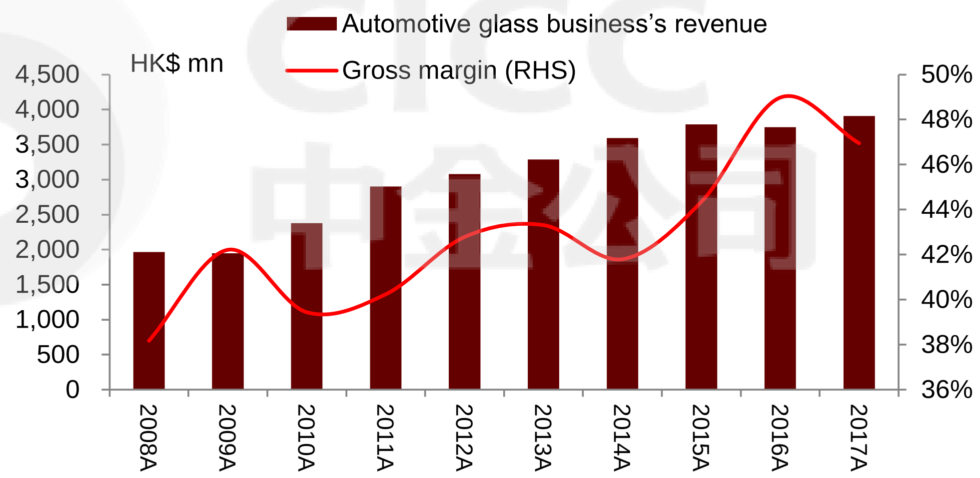
Further-processed glass business diversified & growing steadily

Automotive glass: focus on automobile aftermarkets; new production lines to support growth

Automotive glass leader focused on aftermarkets and enjoying rising gross margin. XYG's automotive glass business focuses on aftermarkets, selling 75% of its product to overseas aftermarket firms, 12% to domestic aftermarket companies and 13% to OEMs. It controls around 25% of the global aftermarket for automotive glass and enjoys strong bargaining power, as most downstream aftermarket companies are small. It also enjoys significant cost advantages in supplying the business's raw material on its own. As the business has expanded, its gross margin has improved significantly, reaching 47% in 2017, well above the 40% level of 2010.

New capacity to support revenue growth. Revenue growth in XYG's automotive glass business slowed substantially in the past three years as new production capacity growth slowed. However, XYG is planning to build three lines to produce special and automotive glass, and it is constructing two quality float-glass lines in Canada to gain presence in the large North American automotive glass market. Eventually, it may build automotive glass production lines in Canada and rely on its local quality float glass production to supply them. As new lines come online, growth momentum at XYG's automotive glass business should gain steam.

Figure 10: Automotive glass business has gained scale and significantly improved gross margin



Source: Xinyi's annual results, CICC Research

Architectural glass: XYG a leader in Chinese market that generates enormous demand

A leading, technologically strong player. Low-emissivity glass accounts for most of XYG's building-glass products. The firm ranks second only to CSG Holdings in China's architectural glass market and is technologically stronger than most of its peers, as evidenced by its low-E glass production line (introduced from Germany's VAAT), which adopts state-of-art vacuum magnetron sputtering coating technology.

Strong demand for energy-saving low-E glass. Low-E glass improves insulation in building. Penetration is now just 10% in China, far below the more than 80% seen in many developed economies, and we see substantial upside as policymakers are focusing more on the energy conservation of buildings. Energy-saving buildings mostly use double-glazed insulated low-E glass, but triple-glazed products save more energy and have been rapidly gaining ground in low-E glass sales in recent years, further boosting demand for low-E glass. We expect XYG's architectural glass business to keep growing quickly on rising demand for energy-saving glass.

Figure 11: Energy consumption of different types of glass windows

	Ordinary single-pane glass	Ordinary insulated glass	Low-E insulated glass
Energy consumption in hot summer and warm winter zones	100%	74%	33%

Source: Company website, CICC Research

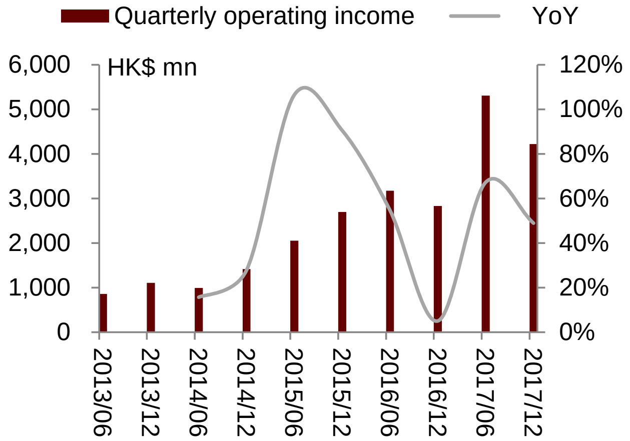
Photovoltaic glass: Gains from Xinyi Solar to keep growing

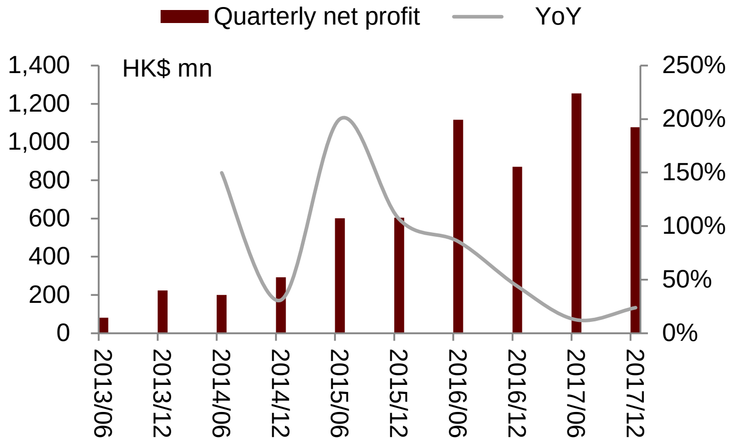
Focused on PV glass and power stations, Xinyi Solar is an important earnings source for XYG. The Hong Kong-listed Xinyi Solar was formed in the 2013 split-off of XYG's PV glass business from the company. XYG owns 29.5% of Xinyi Solar, which focuses on PV glass, PV power stations and EPC services (60%, 16% and 24% of its revenue in 2017, respectively). The company has continued to enjoy high revenue and earnings growth since the split-off, and it contributes significantly to XYG's pre-tax profits (i.e., 10–20%).

Xinyi Solar has leading cost advantages and strong overseas expansion capabilities. Xinyi Solar is the world's largest PV glass manufacturer, with a 32% market share. Its gross margins of 35–40% are well above second-tier players' 15–25%, thanks to its scale, synergies created by centralized purchasing of sodium carbonate and natural gas, and lower energy costs in Malaysia. We expect it to be the first Chinese firm to benefit from strong PV glass demand growth, as its experience in Malaysia suggests it will be the fastest Chinese PV glass supplier to expand overseas (new capacity expansions are blocked in China). We believe its revenue and earnings will keep growing rapidly, supporting XYG's bottom-line growth.

We expect Xinyi Solar's revenue and net profit to increase at respective 2016–2019 CAGRs of 26% and 19% to HK$10.1bn and HK$2.8bn in 2018 and HK$12.1bn and HK$3.3bn in 2019.

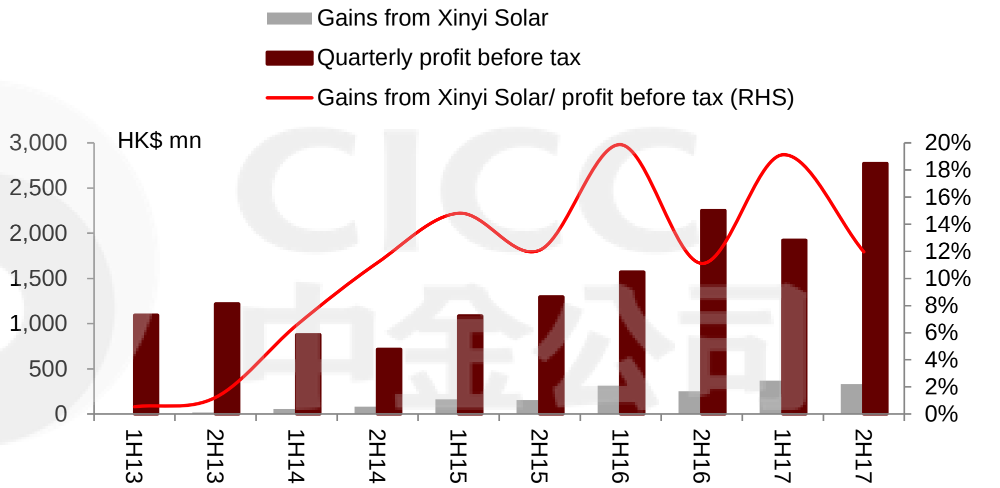
Figure 12: Xinyi Solar's revenue and earnings growth has remained high since split-off





Source: Xinyi Solar's annual results, CICC Research

Figure 13: Xinyi Solar accounted for almost 20% of XYG's pre-tax profit in 2017



Source: Xinyi's annual results, CICC Research

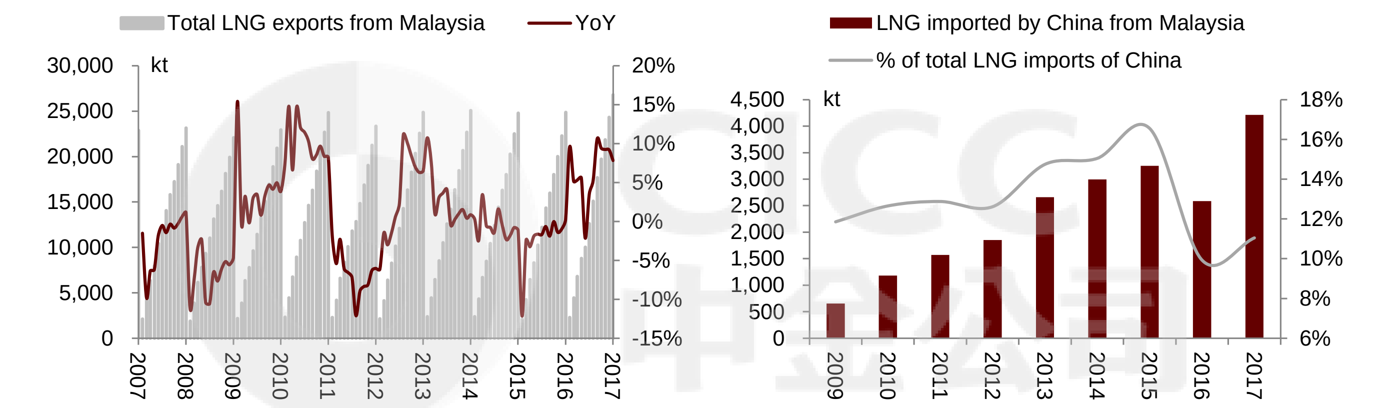
Expansion in low-cost overseas markets to create new growth

Malaysia: Low costs, preferential trade and tax treatment make for an ideal base

Production lines in Malaysia to come online gradually. XYG began investing in Malaysia in 2014. Its phase-I project, which started production in early 2017, includes a 1200t/d line for quality float glass and another line making coated low-E glass. Phase-II (two lines with melting capacity likely around 2,000t/d) is scheduled to come on stream in 2018. We expect it to become a new profit growth driver for XYG. Phase-III construction is expected to start in 2Q18.

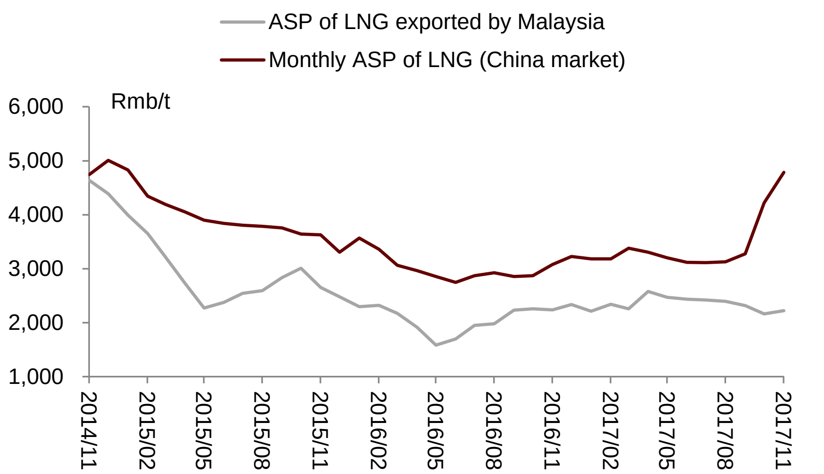
Glass plant margins higher in Malaysia than China thanks to lower raw material and fuel costs. Malaysia, Australia and Qatar are China's three largest LNG suppliers (Malaysia accounts for more than 10% of China's LNG imports). Natural gas and sodium carbonate in Malaysia are cheaper than in China, giving XYG's plants in the country significant advantages in raw material and fuel costs, even taking into account higher silica sand costs in Malaysia. XYG enjoys 2–3ppt higher gross margins on glass produced in Malaysia than in China.

Figure 14: Malaysia is one of China's major LNG suppliers



Source: Wind Info, CICC Research

Figure 15: LNG much cheaper in Malaysia than China



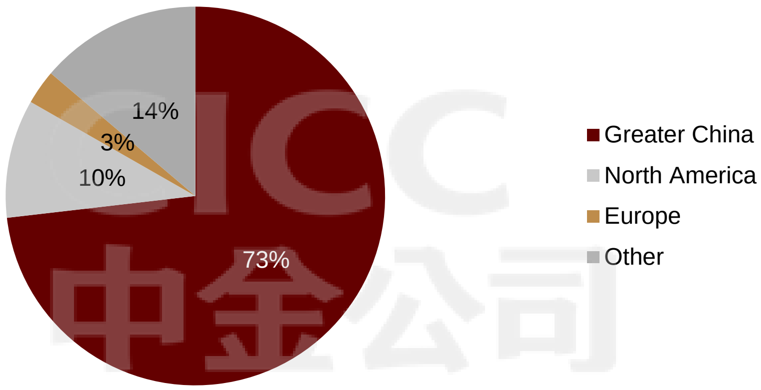
Note: LNG prices in Malaysia calculated based on average monthly exchange rate of Malaysian ringgit against renminbi
Source: Wind Info, CICC Research

Malaysia plants export to neighboring countries, enjoy preferential trade and tax treatment. Glass demand In Malaysia is low, and XYG sells most of its glass to China and other neighboring countries. Malaysia provides local exporters preferential trade and taxation treatment, and XYG is exempted from import duties when selling to Indonesia and Vietnam. The Malaysia plants also allow the company to avoid anti-dumping campaigns in South Korea and India targeting China, and the Malaysian government gives foreign investors preferential taxation treatment (e.g., taxes are levied on net profit after deducting investment value). This further strengthens XYG's cost advantage.

Canada: Building production capacity in North America to take advantage of cheaper energy

North America a major overseas market. North America is one of XYG's most important foreign markets. The company mainly sells automotive glass there and focuses on the automotive aftermarket, where car ownership exceeding 250mn units[1] creates strong aftersales and replacement demand and, in turn, robust local demand for quality float glass. Over 2014–2017, North America accounted for over 10% of XYG's revenue and 35% of its automotive glass revenue.

Figure 16: Revenue breakdown by region (2017)



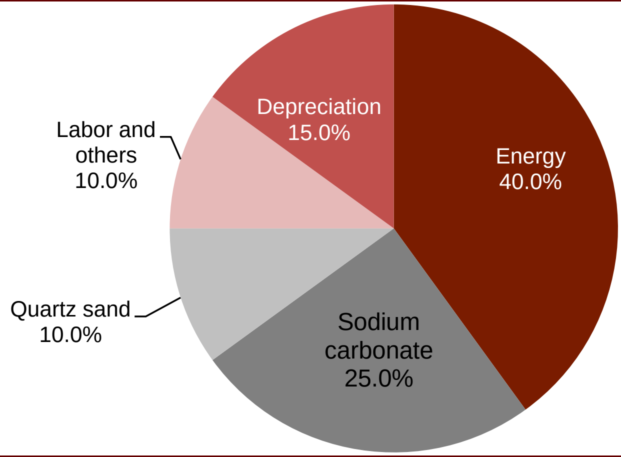
Source: Company data, CICC Research

Soon to become only local producer of quality float glass in Canada. After investing in Malaysia, XYG plans to build two to three large production lines for quality float glass (with daily melting capacity of 1,800—2,000 tonnes) in Ontario, Canada. Producing locally in North America would significantly reduce transport costs and give the company more flexibility in adjusting production. Once the plants come online, XYG should become the only large producer of quality float glass in Canada. In other words, local competition should be moderate.

Cheap natural gas in North America boosts gross margin. Natural gas prices in Canada are one-third the level in China. Assuming energy accounts for 30–40% of float glass costs, we estimate the company's current energy cost would be Rmb300–450 per tonne of float glass. Thus, energy costs should be about Rmb200/tonne lower at a Canada production base than in China. In other words, the cost advantages are significant. Labor accounts for a low percentage of the costs on XYG's lines, which are usually large and highly automated, meaning China's higher labor costs are unlikely to offset the energy-cost advantages. We believe gross margins at XYG's plans will be much higher in Canada than in China.

[1] Per-capita automobile ownership in the US stood at 0.766 units in 2016, according to the latest survey by the University of Michigan's Transportation Research Institute. We calculate the country's total auto ownership at close to 250mn units based on its population of 324mn in 2016. Wind Info data show that Canada sold more than 20mn automobiles over 2005–2016.

Figure 17: XYG's float glass cost breakdown



Source: Information from company visits, CICC Research

Overseas bases to contribute over 20% of earnings and become new profit growth engine. We estimate that production in Malaysia and Canada will contribute about 15% of XYG's revenue and gross profit after the phase-II project in Malaysia and the quality float-glass plant in Canada come on stream. Management has said XYG will expand float glass production capacity by 50% by 2020, and we expect the bulk of this to be built in Malaysia and Canada to take advantage of cheap local natural gas. In sum, we expect overseas bases to become a new profit growth driver.

Figure 18: Revenue and gross profit forecasts for production lines in Malaysia and Canada

	2016A	2017E	2018E	2019E	2020E
Production capacity (kt)					
Float glass (Malaysia)	360	360	900	960	960
Float glass (Canada)				450	600
ASP (HK$/t)					
Float glass (HK$/t)	1,661	1,909	2,061	2,165	2,186
Revenue (HK$ mn)					
Float glass (Malaysia)	598	687	1,855	2,078	2,099
Float glass (Canada)				974	1,312
Total	**598**	**687**	**1,855**	**3,052**	**3,410**
Gross margin					
Float glass (Malaysia)	28%	32%	35%	38%	39%
Float glass (Canada)				31%	34%
Gross profit (HK$ mn)					
Float glass (Malaysia)	164	218	655	790	821
Float glass (Canada)				302	441
Total	**164**	**218**	**655**	**1,092**	**1,262**
Overseas production contributions					
Revenue of XYG (HK$ mn)	**12,848**	**14,728**	**16,758**	**18,739**	**20,778**
Gross profit of XYG (HK$ mn)	**4,659**	**5,444**	**6,677**	**7,714**	**8,668**
Overseas production revenue contribution	5%	5%	11%	16%	16%
Overseas production profit contribution	4%	4%	10%	14%	15%

Note: Data does not include low E-glass production capacity in Malaysia (not disclosed by company)
Source: Company data, CICC Research

Figure 19: Revenue and gross profit forecasts for overseas production bases

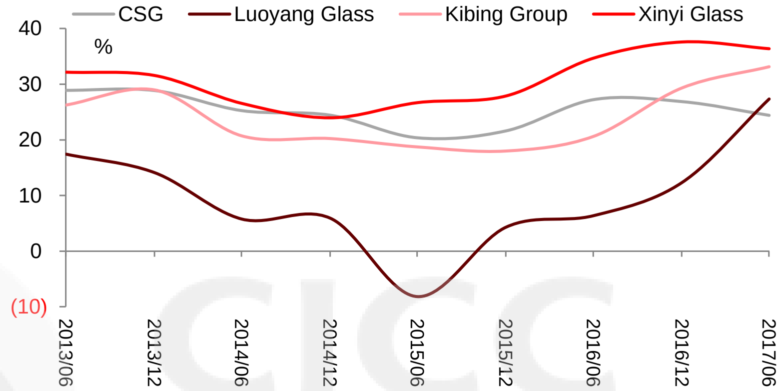
	2016A	2017E	2018E	2019E	2020E	2021E
Production capacity overseas (kt)	360	360	900	1,500	2,300	3,000
ASP (HK$/t)	1,661	1,909	2,061	2,165	2,186	2,208
Revenue (HK$ mn)	**598**	**687**	**1,855**	**3,247**	**5,028**	**6,624**
Gross margin	28%	32%	35%	36%	37%	38%
Gross profit (HK$ mn)	**164**	**220**	**655**	**1,169**	**1,860**	**2,517**
Overseas production contributions						
Revenue of XYG (HK$ mn)	**12,848**	**14,728**	**16,758**	**18,739**	**20,778**	**21,942**
Gross profit of XYG (HK$ mn)	**4,659**	**5,444**	**6,677**	**7,714**	**8,668**	**9,263**
Overseas production revenue contribution	5%	5%	11%	17%	24%	30%
Overseas production profit contribution	4%	4%	10%	15%	21%	27%

Source: Company data, CICC Research

Financial analysis: robust profitability, high dividend yield incentivizes management to hold shares

Gross margin higher than industry average thanks to heavy exposure to high-end products. XYG manufactures only quality float or further-processed glass, both of which are more expensive than ordinary flat glass. It also self-supplies 100% of the float glass needed to make its further-processed glass, saving purchase costs. In addition, XYG has established long-term relationships with its suppliers and a stable supply of natural gas, and long-term contracts allow it to purchase gas below market prices. These factors produce gross margins much higher than the industry average.

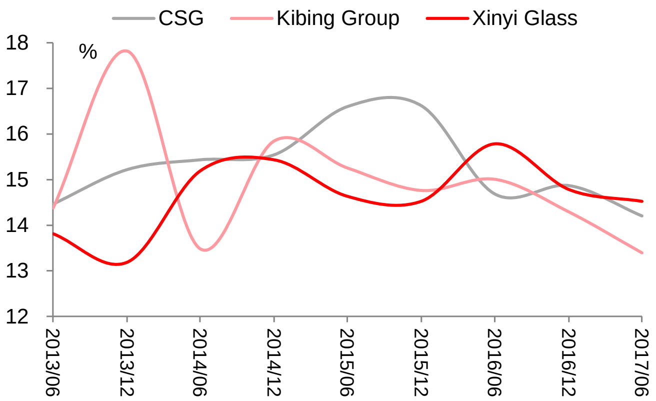
Figure 20: XYG has higher gross margin than most of its peers in China

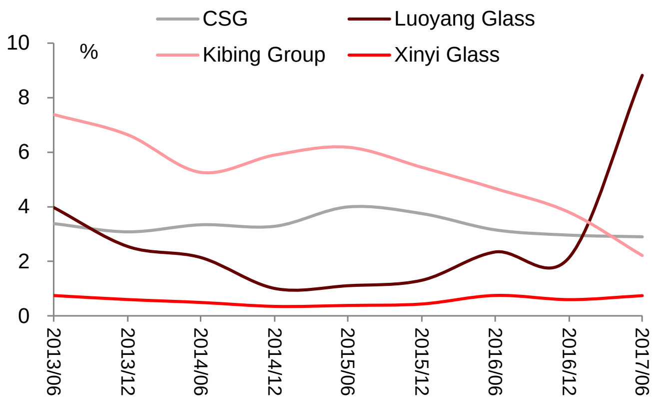


Source: Company data, CICC Research

Boasts relatively low overall expense ratio and much lower financial expense ratio than peers. XYG's overall expenses are lower than the industry average and similar to those of other tier-1 players like CSG Holdings and Kibing. XYG is now China's largest glass producer in terms of production capacity, and its boasts greater capacity per line than its rivals, further improving production efficiency. Economies of scale translate into lower sales and administrative expenses per unit. Meanwhile, XYG raises most of its money through low-cost Hong-Kong dollar-denominated loans and sports a financial expense-to-sales of less than 1%, far lower than its competitors' levels. Its debt/asset ratio is fair at around 40%. High gross margins and low expense ratios translate into decent net margin and ROE levels.

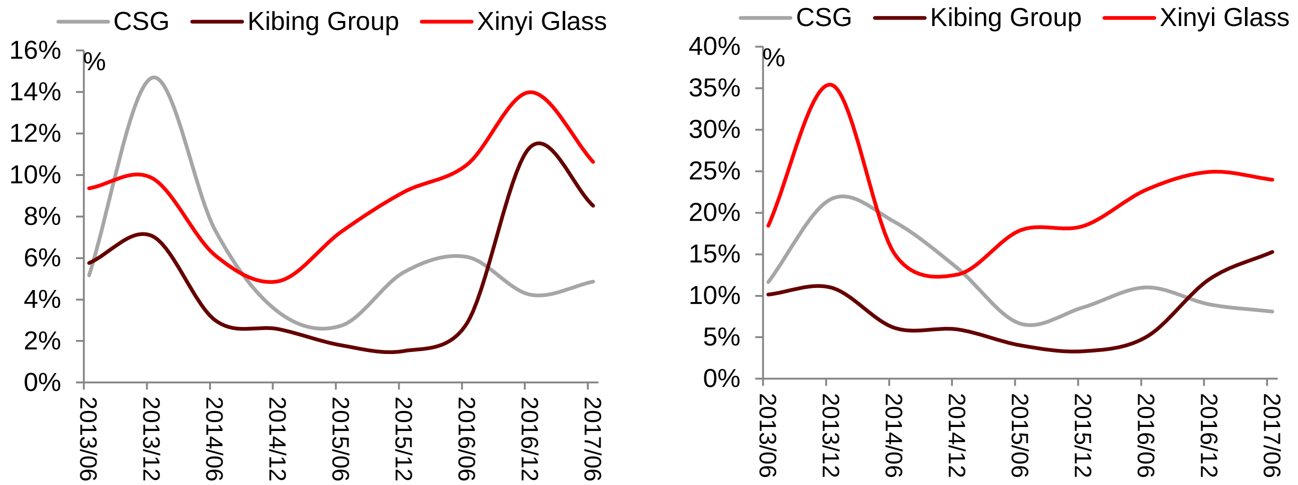
Figure 21: XYG has similar overall expense ratio as major competitors (left) but much lower financial expense ratio (right)





Source: Xinyi and peers' annual results, CICC Research

Figure 22: XYG boasts significantly higher ROE (left) and net margin (right) than rivals



Notes: ROE calculated by dividing net profit for each half year by net assets at half-end
Source: Xinyi and peers' annual results, CICC Research

Dividend yield of 5% incentivizes management to hold shares. XYG's capex is stable, its cash balance is ample, and the company maintains a stable dividend payout ratio of more than 47%. We estimate the 2018 dividend yield on shares at their current price at about 5%, assuming a payout ratio of 50%. A high dividend yield makes XYG's management team more willing to hold shares. XYG's directors and key senior executives own more than 50% of the company.

Better business climate to lift profits; valuation expansion likely

Earnings forecast: improving industry business climate to drive profit growth

Gross margin to improve more than 6ppt as float glass prices rise, sodium carbonate prices fall

We expect a tight supply to boost float glass prices industry-wide by 10% and XYG's float glass ASP by 8% in 2018. Combined with a 5% increase in further-processed product prices, this should allow XYG to grow earnings 26%. In the meantime, we expect average prices of sodium carbonate to decline 5% in 2018 as glass industry supply shrinks. Sodium carbonate accounts for a quarter of XYG's float glass costs. Assuming float glass ASPs rise 8% and sodium carbonate prices fall 5%, we expect the company's gross margin to improve 6.6ppt this year.

New capacity in Malaysia, Xinyi Solar's earnings growth to contribute additional profits

XYG's two production lines in its phase-II project in Malaysia (with total melting capacity of 2,000t/d) are scheduled to come online in 2018. Assuming 100% utilization for three months this year, a gross margin of 38%, and float glass unit price of HK$2,061/t, we estimate the two lines will contribute additional revenue of HK$310mn and gross profit of HK$120mn in 2018. In addition, we expect revenue and net profit at Xinyi Solar to improve to a respective HK$10.1bn and HK$2.8bn in 2018 and to HK$12.1bn and HK$3.3bn in 2019, boosting XYG's pre-tax profit by HK$905mn this year and HK$1,058mn in 2019.

Figure 23: Key assumptions

Key assumptions	2013A	2014A	2015A	2016A	2017A	2018E	2019E
Sales volume							
Float glass (kt, to external customers)	2,818	3,387	3,401	3,920	4,200	4,711	5,239
Automotive glass ('000 pieces)	12,198	13,430	13,600	13,736	13,940	13,940	13,940
Architectural glass ('000 sqm)	15,000	21,000	27,750	33,113	33,113	33,113	33,113
ASP							
Float glass (HK$/t)	1,595	1,391	1,477	1,661	1,909	2,061	2,165
YoY		*-13%*	*6%*	*12%*	*15%*	*8%*	*5%*
Automotive glass (HK$/piece)	269	268	278	273	280	295	309
YoY		-1%	4%	-2%	3%	5%	5%
Architectural glass (HK$/sqm)	144	122	96	78	85	89	93
YoY		-15%	-21%	-18%	8%	5%	5%
Costs							
Float glass (HK$/t)	1,292	1,294	1,313	1,204	1,303	1,272	1,277
YoY		0%	1%	-8%	8%	-2%	0%
Among which: cost of sodium carbonate (HK$/t)	*323*	*323*	*328*	*301*	*326*	*310*	*310*
Automotive glass (HK$/piece)	153	156	155	139	149	159	170
YoY		2%	0%	-10%	7%	7%	7%
Architectural glass (HK$/sqm)	86	79	63	47	52	57	59
YoY		-9%	-20%	-26%	11%	8%	5%
Gross profit per unit							
Float glass (HK$/t)	303	97	163	457	605	790	888
YoY		-68%	68%	180%	33%	30%	12%
Automotive glass (HK$/piece)	117	112	123	134	132	135	139
YoY		-4%	10%	8%	-1%	3%	3%
Architectural glass (HK$/sqm)	57	43	32	31	32	32	34
YoY		-25%	-25%	-4%	3%	0%	5%
Gross margin							
Float glass	19%	7%	11%	28%	32%	38%	41%
Automotive glass	43%	42%	44%	49%	47%	46%	45%
Architectural glass	40%	35%	34%	40%	38%	36%	36%
Average gross margin	**32%**	**25%**	**27%**	**36%**	**37%**	**40%**	**41%**

Source: Xinyi's annual results, CICC Research

Figure 24: Sensitivity of 2018e EPS growth to YoY changes in glass ASPs

EPS YoY		Automotive and architectural glass ASP YoY				
		-5%	0%	**5%**	10%	15%
Float glass ASP YoY	0%	-1%	5%	**12%**	18%	25%
	4%	6%	12%	**19%**	25%	32%
	8%	**13%**	**19%**	**26%**	**32%**	**39%**
	12%	20%	26%	**33%**	39%	46%
	16%	27%	33%	**40%**	46%	53%

Source: Xinyi's annual results, CICC Research

Strong earnings growth to continue in 2018 and 2019

We expect XYG to deliver decent revenue and earnings growth in 2018 on rising prices of float glass and overseas production capacity expansion. We estimate its profit will rise by 25.7% in 2018 to HK$5.05bn or HK$1.26/share and by 17.5% in 2019 to HK$5.94bn or HK$1.48/share.

Resume coverage with BUY rating and target price of HK$16

XYG's ROE came in at 22.0% in 2017 and should hit 23.6% in 2018, close to its 2010 record of 26.2%, and significantly higher than its 2011 ROE. The stock is trading at 10.1x 2018e P/E, well below its 2011 P/E average of 12.3x. We expect XYG's earnings to keep growing rapidly in 2018, its ROE to remain high and its profitability to prove more sustainable than in 2010–2011, all of which should lead to a valuation re-rating.

We are confident in the sustainability of XYG's earnings growth and resulting re-rating. In the near term, rising float glass prices should boost earnings. Industry costs are likely to rise as new environmental rules are implemented, making XYG's cost advantages more significant. In the medium and long term, rising penetration of further processed glass processing is likely to increase demand for quality float glass, benefitting XYG. Finally, steady overseas expansion should boost XYG's earnings growth and gross margins. **We resume coverage of XYG with a BUY rating and target price of HK$16, equivalent to 12.7x 2018e P/E.**

Figure 25: Income statement (2017A)

HKD mn	2013A	2014A	2015A	2016A	2017A	2018E	2019E
Revenue	**9,936**	**10,861**	**11,460**	**12,848**	**14,728**	**16,758**	**18,739**
YoY %	*17.8%*	*9.3%*	*5.5%*	*12.1%*	*14.6%*	*13.8%*	*11.8%*
COGS	**-6,799**	**-8,128**	**-8,328**	**-8,189**	**-9,283**	**-10,081**	**-11,025**
Gross profit	**3,137**	**2,733**	**3,133**	**4,659**	**5,444**	**6,677**	**7,714**
Gross Margin	*31.6%*	*25.2%*	*27.3%*	*36.3%*	*37.0%*	*39.8%*	*41.2%*
Other income	326	178	215	342	377	430	480
Disposal income	138	220	379	159	317	361	403
Profits from spin-off and independent listing of subsidiaries	1,315	0	0	0	0	0	0
Selling & distribution exp.	-478	-608	-680	-620	-675	-788	-881
G&A exp.	-772	-1,030	-935	-1,202	-1,370	-1,559	-1,743
Financial exp.	-60	-38	-50	-77	-97	-121	-97
Share of results of JV	0	0	0	0	0	0	0
Share of results of associates	21	138	317	563	700	905	1,058
Goodwill impairment loss	0	0	0	0	0	0	0
Profit before taxation	**2,311**	**1,593**	**2,380**	**3,823**	**4,696**	**5,904**	**6,935**
Taxation	-381	-228	-266	-607	-682	-858	-1,008
Profit for the period attributable to minority interest	0	1	0	3	0	0	0
Profit for the period attributable to owners of the company	**2,207**	**1,364**	**2,113**	**3,213**	**4,014**	**5,046**	**5,927**
YoY %	*85.7%*	*-38.2%*	*55.0%*	*52.1%*	*24.9%*	*25.7%*	*17.5%*

Source: Xinyi's annual results, CICC Research

Figure 26: Balance sheet (2017A)

HKD mn	2013A	2014A	2015A	2016A	2017A	2018E	2019E
Fixed assets	10,459	11,293	11,971	11,831	12,929	14,357	15,596
Equity investment	2,123	2,362	2,535	3,258	4,416	5,320	6,378
Deferred tax assets	1,390	1,287	1,206	1,121	3,427	3,427	3,427
	1,142	1,286	714	1,276	1,607	1,603	1,599
Total non-current assets	**15,114**	**16,229**	**16,426**	**17,486**	**22,379**	**24,707**	**27,000**
Current assets							
Inventories	1,232	1,478	1,223	1,321	1,698	1,639	1,792
Trade receivables	2,255	2,487	2,381	2,377	3,072	3,100	3,467
Cash and bank balances	1,042	831	1,298	2,763	3,049	5,418	7,425
	7	9	93	76	107	104	109
Total current assets	**4,537**	**4,805**	**4,995**	**6,537**	**7,926**	**10,261**	**12,793**
Total assets	**19,651**	**21,034**	**21,422**	**24,022**	**30,305**	**34,968**	**39,793**
Current liabilities							
Trade payables	1,744	1,978	2,112	2,297	2,554	2,634	2,881
Bank loans due within one year	2,116	2,529	2,514	3,165	2,068	1,568	1,568
	219	294	333	538	535	609	681
Total current liabilities	**4,079**	**4,801**	**4,959**	**6,000**	**5,157**	**4,810**	**5,129**
Non-current liabilities							
Bank loans due after one year	3,024	3,483	3,514	4,509	6,399	8,288	9,288
Deferred tax liabilities	160	159	159	218	335	335	335
	180	255	63	48	108	108	108
Total non-current liabilities	**3,364**	**3,898**	**3,737**	**4,775**	**6,842**	**8,732**	**9,732**
Total liabilities	**7,442**	**8,699**	**8,696**	**10,775**	**11,999**	**13,542**	**14,860**
Capital and reserves							
Share capital	392	392	392	389	402	402	402
Reserves	11,816	11,941	12,326	12,792	17,835	20,955	24,461
Non-controlling interest	1	2	7	66	69	69	70
Total shareholders' equity	**12,209**	**12,335**	**12,726**	**13,247**	**18,306**	**21,426**	**24,932**

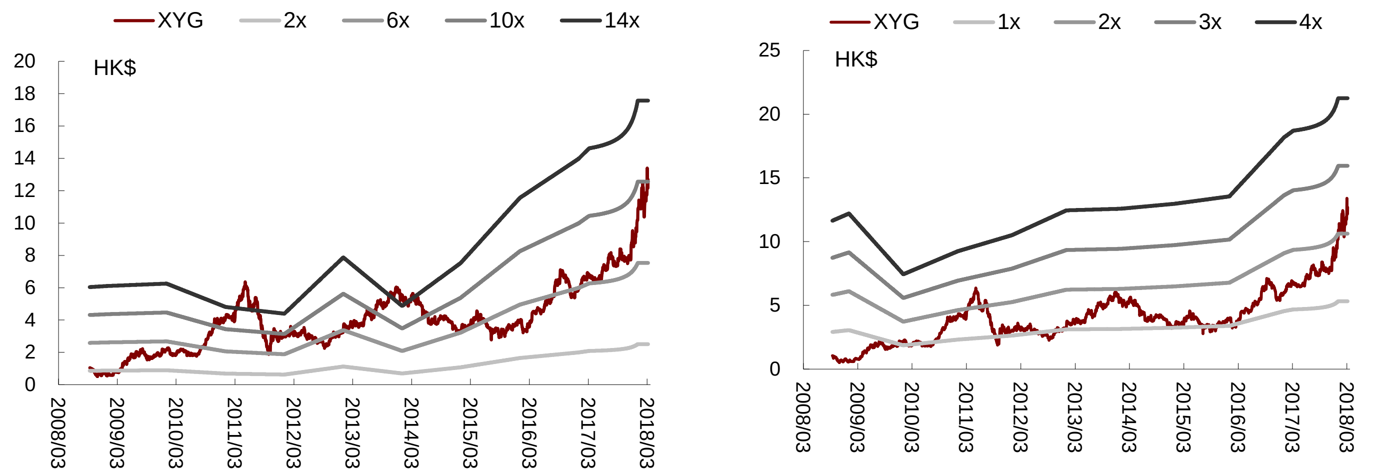
Source: Xinyi's annual results, CICC Research

Figure 27: Cash flow statement (2017E)

HKD mn	2013A	2014A	2015A	2016A	2017E	2018E	2019E
Net cash flows generated from operating activities	**2,712**	**1,455**	**2,637**	**3,565**	**4,670**	**6,603**	**7,277**
Net cash flows generated from investing activities	**-3,121**	**-1,578**	**-1,520**	**-2,280**	**-6,266**	**-3,697**	**-3,850**
Net cash flows generated from financing activities	**770**	**-72**	**-625**	**225**	**-770**	**-536**	**-1,421**
Net change in cash and cash equivalents for the period	**361**	**-195**	**492**	**1,510**	**-2,366**	**2,370**	**2,006**
Effect of FX changes on cash and bank balances	1	-17	-25	-45	0	0	0
Opening	**680**	**1,042**	**831**	**1,298**	**2,763**	**3,049**	**5,418**
Ending	**1,042**	**831**	**1,298**	**2,763**	**3,049**	**5,418**	**7,425**

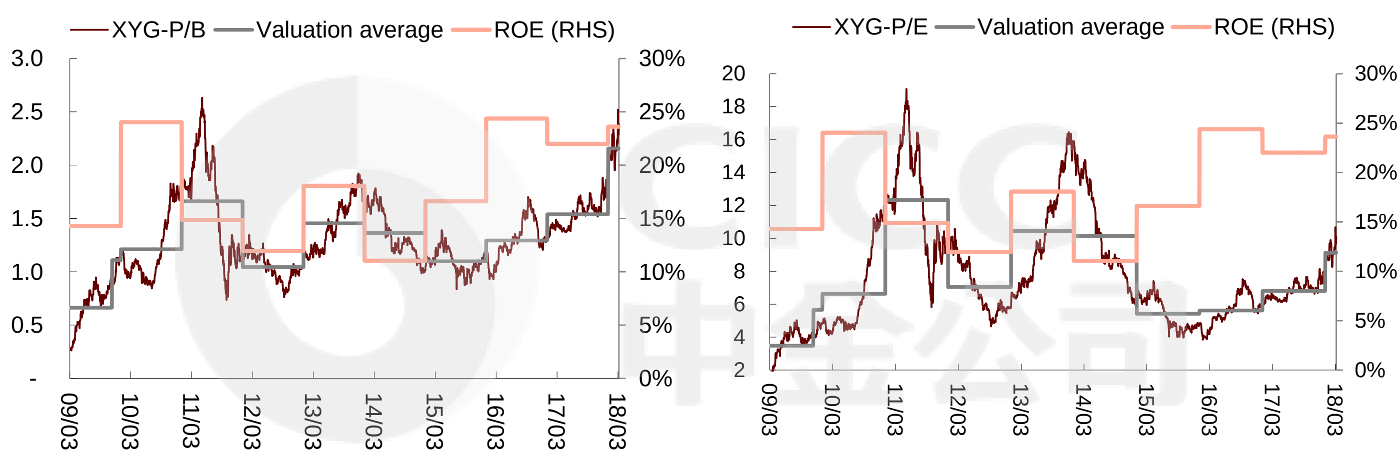
Source: Xinyi's annual results, CICC Research

Figure 28: Historical P/E band (left) and P/B band (right)



Source: Wind Info, Xinyi's annual results, CICC Research

Figure 29: Historical P/E and P/B valuation averages vs. historical ROE



Source: Wind Info, Xinyi's annual results, CICC Research

Risks

We see four risks to our thesis: 1) property-industry demand for float glass might miss expectations; 2) the execution of new environmental rules may be less strict than expected, potentially leading to massive oversupply if some production lines resume production; 3) new overseas production lines may come online later than expected, or overseas projects may be less profitable than expected; and 4) fuel and sodium carbonate prices may rise substantially, increasing XYG's production costs.

Important legal disclosures

General Disclosures

This report has been produced by China International Capital Corporation Hong Kong Securities Limited (CICCHKS). This report is based on information available to the public that we consider reliable, but CICCHKS and its associated company(ies)(collectively, hereinafter "CICC") do not represent that it is accurate or complete. The information and opinions contained herein are for investors' reference only and do not take into account the particular investment objectives, financial situation, or needs of any client, and are not an offer to buy or sell or a solicitation of an offer to buy or sell the securities mentioned. Under no circumstances shall the information contained herein or the opinions expressed herein constitute a personal recommendation to anyone. Investors should make their own independent evaluation of the information contained in this research report, consider their own individual investment objectives, financial situation and particular needs. CICC does not provide tax, accounting, or legal advice to our clients, and all investors are advised to consult with their tax, accounting, or legal advisers regarding any potential investment. Neither CICC nor its related persons shall be liable in any manner whatsoever for any consequences of any reliance thereon or usage thereof.

The performance information (including any expression of opinion or forecast) herein reflect the most up-to-date opinions, speculations and forecasts at the time of the report's production and publication. Such opinions, speculations and forecasts are subject to change and may be amended without any notification. At different periods, CICC may release reports which are inconsistent with the opinions, speculations and forecasts contained herein.

The analysts named in this report may have from time to time discussed with our clients, including CICC salespeople, traders, and other professionals, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analysts' published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks as described herein.

CICC's salespeople, traders, and other professionals may provide oral or written market commentary or trading ideas that may be inconsistent with, and reach different conclusions from, the recommendations and opinions presented in this report. Such ideas or recommendations reflect the different assumptions, views and analytical methods of the persons who prepared them, and CICC is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this report. CICC's asset management area, proprietary trading desks and other investing businesses may make investment decisions that are inconsistent with the recommendations or opinions expressed in this report.

Unless stated otherwise, any performance data quoted represents past performance. Past performance is not a indicator of future performance. No representation or warranty is made that any returns indicated will be achieved. Certain assumptions may have been made in this analysis which have resulted in any returns detailed herein. Changes to the assumptions may have a material impact on any returns detailed.

To the extent this material is provided to any recipient, this material is provided solely on the basis that the recipient has the capability to independently evaluate investment risk and is exercising independent judgment in evaluating investment decisions in that its investment decisions will be based on its own independent assessment of the opportunities and risks presented by a potential investment, market factors and other investment considerations.

This report is distributed in Hong Kong by CICCHKS, which is regulated by the Securities and Futures Commission. Queries concerning CICC Research from readers in Hong Kong should be directed to our Hong Kong sales representatives. The CE numbers of SFC licensed authors of this report are disclosed by the authors' names on the cover page.

This report is distributed in Singapore only to accredited investors and/or institutional investors, as defined in the Securities and Futures Act, by China International Capital Corporation (Singapore) Pte. Limited ("CICCSG"), which is regulated by the Monetary Authority of Singapore. By virtue of distribution by CICCSG to these categories of investors in Singapore, disclosure under Section 36 of the Financial Adviser Act (which relates to disclosure of a financial adviser's interest and/or its representative's interest in securities) is not required. Recipients of this report in Singapore should contact CICCSG in respect of any matter arising from or in connection with this report. This report is not intended for and should not be distributed or passed on, directly or indirectly, to any other person in the jurisdiction of Singapore.

This report is distributed in the United Kingdom by China International Capital Corporation (UK) Limited ("CICCUK"), which is authorised and regulated by the Financial Conduct Authority. The investments and services to which this report relates are only available to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005. This report is not intended for retail clients. In other EEA countries, the report is issued to persons regarded as professional investors (or equivalent) in their home jurisdiction.

This report will be made available in other jurisdictions pursuant to the applicable laws and regulations in those particular jurisdictions.

Continued on next page

Special Disclosures

CICC does and seeks to do business with companies covered in CICC Research. As a result, investors should be aware that CICC and/or its associated persons may have a conflict of interest that could affect the objectivity of this report.

Disclosures in relation to the Companies contained this report could be found at http://research.cicc.com/disclosure_en, or in the published latest company-specific research.

Distribution of ratings is available at http://research.cicc.com/en/disclosure/general.xhtml.

Explanation of stock ratings: "BUY" indicates analyst perceives absolute return of 20% or more over the next 6~12 months; "HOLD" between +20% and -10%; "SELL" -10% and below. Asterisk denotes coverage initiation or resumption.

Explanation of sector ratings: Analyst expects a sector rated "OVERWEIGHT" to outperform the market by 10% or more over the next 6~12 months, "EQUAL-WEIGHT" to end up between 10% below and 10% above the market, and "UNDERWEIGHT" to fall behind the market by 10% or more, over the next 6~12 months.

V160908
Translation: Wei LU
Editing: Robert PARKER, Stephen FOSTER

Beijing

China International Capital Corporation Limited
28th Floor, China World Office 2
1 Jianguomenwai Avenue
Beijing 100004, P.R. China
Tel: (86-10) 6505-1166
Fax: (86-10) 6505-1156

Shanghai

China International Capital Corporation Limited – Shanghai Branch
32nd Floor Azia Center
1233 Lujiazui Ring Road
Shanghai 200120, P.R. China
Tel: (86-21) 5879-6226
Fax: (86-21) 5888-8976

Hong Kong

China International Capital Corporation (Hong Kong) Limited
29th Floor, One International Finance Centre
1 Harbour View Street
Central, Hong Kong
Tel: (852) 2872-2000
Fax: (852) 2872-2100

Shenzhen

China International Capital Corporation Limited – Shenzhen Branch
#2503, 25th Floor, China Merchants Bank Tower
7088 Shennan Boulevard, Futian District
Shenzhen 518040, P.R. China
Tel: (86-755) 8319-5000
Fax: (86-755) 8319-9229

Singapore

China International Capital Corporation (Singapore) Pte. Limited
#39-04, 6 Battery Road
Singapore 049909
Tel: (65) 6572-1999
Fax: (65) 6327-1278

United Kingdom

China International Capital Corporation (UK) Limited
Level 25, 125 Old Broad Street
London EC2N 1AR, United Kingdom
Tel: (44-20) 7367-5718
Fax: (44-20) 7367-5719

Beijing Jianguomenwai Avenue Branch
1st Floor, Capital Tower
6A Jianguomenwai Avenue
Beijing 100022, P.R. China
Tel: (86-10) 8567-9238
Fax: (86-10) 8567-9235

Beijing Kexueyuan South Road Branch
Room 1311, Block B, Raycom Infotech Park
2 Kexueyuan South Road, Haidian District
Beijing 100022, P.R. China
Tel: (86-10) 8286-1086
Fax: (86-10) 8286 1106

Shanghai Pudong New District Century Avenue Branch
Unit 4609-14, 46th Floor, Phase II Shanghai IFC, No.8 Century Avenue, China (Shanghai) Pilot Free Trade Zone, Shanghai, 200120, P.R. China
Tel: (86-21) 5359-9800
Fax: (86-21) 2057-9488

Shanghai Huangpu District Hubin Road Branch
18th Floor, 3 Corporate Avenue,No.168
Hubin Road, Huangpu District,
Shanghai 200021, P.R. China
Tel: (86-21) 6386-1195
Fax: (86-21) 6386-1180

Shenzhen Fuhuayilu Branch
Room 201, Annex Building
Shenzhen Duty Free Commercial Tower
6 Fuhua 1st Road, Futian District
Shenzhen 518048, P.R. China
Tel: (86-755) 8832-2388
Fax: (86-755) 8254-8243

Hangzhou Jiaogong Road Branch
1st Floor, Euro American Center
18 Jiaogong Road
Hangzhou 310012, P.R. China
Tel: (86-571) 8849-8000
Fax: (86-571) 8735-7743

Nanjing Hanzhong Road Branch
Section C, 30th Floor, Asia Pacific Tower
2 Hanzhong Road, Gulou District
Nanjing 210005, P.R. China
Tel: (86-25) 8316-8988
Fax: (86-25) 8316-8397

Guangzhou Tianhe Road Branch
40th Floor, Teemtower
208 Tianhe Road
Guangzhou 510620, P.R. China
Tel: (86-20) 8396-3968
Fax: (86-20) 8516-8198

Chengdu Binjiang Road (East) Branch
1st & 16th Floors, Shangri-La Center
Block 9B, Binjiang Road (East)
Chengdu 610021, P.R. China
Tel: (86-28) 8612-8188
Fax: (86-28) 8444-7010

Xiamen Lianyue Road Branch
4th Floor, Office Building, Paragon Center
1 Lianyue Road, Siming District
Xiamen 361012, P.R. China
Tel: (86-592) 515-7000
Fax: (86-592) 511-5527

Wuhan Zhongnan Road Branch
4301-B, Poly Plaza
99 Zhongnan Road, Wuchang District
Wuhan 430070, P.R. China
Tel: (86-27) 8334-3099
Fax: (86-27) 8359-0535

Qingdao Middle Hongkong Road Branch
11th Floor, Shangri-La Center
Block 9, Hongkong Road (M), South District
Qingdao 266071, P.R. China
Tel: (86-532) 6670-6789
Fax: (86-532) 6887-7018

Chongqing Honghu Road (West) Branch
1st & 10th Floors, Ourui Lanjue Center
Block 9, Honghu Road (W), New North District
Chongqing 401120, P.R. China
Tel: (86-23) 6307-7088
Fax: (86-23) 6739-6636

Tianjin Nanjing Road Branch
10th Floor, Tianjin Global Trading Center
219 Nanjing Road, Heping District
Tianjin 300051, P.R. China
Tel: (86-22) 2317-6188
Fax: (86-22) 2321-5079

Dalian Gangxing Road Branch
16th Floor, Wanda Center
6 Gangxing Road, Zhongshan District
Dalian 116001, P.R. China
Tel: (86-411) 8237-2388
Fax: (86-411) 8814-2933

Foshan Jihua 5th Road Branch
12th Floor, Trend International Business Building
2 Jihua 5th Road, Chancheng District
Foshan 528000, P.R. China
Tel: (86-757) 8290-3588
Fax: (86-757) 8303-6299

Yunfu Xinxing Dongdi North Road Branch
2nd Floor, Service Building C1, Wens Science & Technology Garden, Dongdi North Road
Xincheng Town, Xinxing County
Yunfu 527499, P.R. China
Tel: (86-766) 2985-088
Fax: (86-766) 2985-018

Changsha Chezhan Road (North) Branch
3rd Floor, Annex Building, Securities Tower
459 Chezhan Road (North), Furong District
Changsha 410001, P.R. China
Tel: (86-731) 8878-7088
Fax: (86-731) 8446-2455

Ningbo Yangfan Road Branch
11th Floor, Building Five, 999 Yangfan Road
Hi-tech Industrial Development Zone
Ningbo 315103, P.R. China
Tel: (86-574) 8907-7288
Fax: (86-574) 8907-7328

Fuzhou Wusi Road Branch
38th Floor, Henglicheng Office Building
No.128 Wusi Road, Gulou District
Fuzhou 350001, P.R. China
Tel: (86-591) 8625 3088
Fax: (86-591) 8625 3050

Xi'an Yanta Branch
21th Floor, Capitaland West Tower,
No.64 Second Ring South Road West Section
Yanta District, Xi'an 710065, P.R. China
Tel: (+86-29) 8648-6888
Fax: (+86-29) 8648-6868

CICC
中金公司