

Sector outlook

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16 June 2021

China

Small caps

Xinyi Glass (XYG) 868 HK
Rec **BUY**
Market cap US\$16.1bn
3M ADV US\$29.8m
Price HK\$29.70
Target HK\$33.10→HK\$40.70
Total return +41.8%

Xinyi Solar (XYS) 968 HK
Rec **BUY**
Market cap US\$15.8bn
3M ADV US\$108.6m
Price HK\$13.88
Target HK\$14.60→HK\$16.40
Total return +20.3%

Flat Glass (FGG) 6865 HK
Rec **BUY**
Market cap US\$10.2bn
3M ADV US\$22.9m
Price HK\$24.65
Target HK\$24.50→HK\$31.20
Total return +27.8%

Diverging growth profiles

XYG/XYS profit alerts with forked 2H performance; FGG new CB plan

Xinyi Glass (XYG) and Xinyi Solar (XYS) both published 1H21 profit alerts with significant YoY growth. Meanwhile, XYG is likely a strong beat amid soaring float glass price, and we expect healthy demand/supply to continue in 2H to allow price/margin to stay high. On the other hand, YYS is likely a miss given weakening demand since 2Q, and the meaningful price cut will also drag 2H's YoY comparison, pending a pick-up in demand to support prices. Flat Glass (FGG) also announced a new fundraising plan. We adjust our forecasts and continue to favour float glass more in the near-term with our BUY call on XYG reiterated. We still have long-term positive views on solar glass duopoly YYS and FGG (reiterate BUY for both), but short-term volatility remains.

XYG: Decent performance to be sustained

- XYG expects 1H21 net profit to grow 260-290% YoY (HK\$4,977-5,391m), implying c.42.7-54.6% beats to our core profit estimate thanks to soaring float glass prices.
- We continue to expect balanced demand/supply dynamics for float glass in the rest of 2021, with demand still supported by an uptrend in property completion, and 2H peak season demand to absorb additional supply from recently resumed cold-repair production lines. These would allow prices and GPM to stay high, in our view.
- We also treasure XYG's capability to expand capacity amid industry consolidation, like via further M&As (eg, XYG becomes the restructuring investor of the bankrupted AVIC Glass, which owns 3x600t/d float glass lines, versus Xinyi's current capacity of 25,330t/d).

XYS: 2Q reverses positive 1Q, pending demand pick-up

- XYS expects 1H21 net profit to grow 100-120% YoY (HK\$2,813-3,094m), implying c.14.2-22.0% misses to our core profit likely on lower-than-expected sales volume.
- The meaningful cut in solar glass prices since April was due to weakened shipments amid low utilisation of module makers under high cost pressure, as well as leaders' wish to de-incentivise small players' expansions, and thus will drag its 2H performance on a YoY basis. We await any further improvement in demand in 2H when downstream projects need to meet installation deadlines. New-build centralised solar/Commercial & Industrial distributed solar in 2021 to enjoy cold-fired tariff, and no need go through bidding would help avoid a squeeze in project returns.
- At the spot price level, we estimate GPM for leaders like YYS and FGG to be around 30%, and lower-tier peers could be at 10-20%, or already around breakeven at the net profit level, thus providing some support to solar glass prices.

FGG: Convertible bond issue to fund Capex

- FGG proposed to issue not more than Rmb4bn of an A-share convertible bond, converting into 133.8m shares or c.6.2% of outstanding shares assuming exercise price equals today's close.
- Proceeds would be used to fund Capex on new solar glass lines and upgrade as well as self-used distributed PV system.

Adjusting forecasts and target prices

- XYG:** We lift 21/22/23CL core profits by 32.4%/32.3%/30.9% with higher float glass ASP offset by slightly lower profit contributions from YYS. We lift our target price from HK\$33.10 to HK\$40.70, based on blended average 22-23CL (from 22CL) PE/PB of 16.5x/2.8x (from 18x/2.8x). Reiterate BUY.
- XYS:** We cut 21/22/23CL core profits by 6.1%/0.5%/0.6% mainly on lower sales volume in 21CL. We also roll forward our valuation basis and lift our SOTP-based target price from HK\$14.60 to HK\$16.40, implying 23.3x average 22-23CL PE. Reiterate BUY.
- FGG:** We adjust 21/22/23CL core profits by -1.2%/+1.5%/0% on effective capacity due to cold repair, but we have not factored in the proposed convertible bond for now. We roll forward the valuation basis, and our target price is increased from HK\$24.50 to HK\$31.20, at the same 20x on average 22-23CL PE (from 22CL), or a 14% discount to YYS's target valuation. Reiterate BUY.

XYG: A Significant beat**The profit alerts**

XYG expects its 1H21 net profit to grow 260-290% YoY – ie, HK\$4,977m-HK\$5,391m. Compared with our 1H21CL core profit estimate of HK\$3,488m, this implies c.248-277% YoY growth in 1H21 core profit, a c.42.7-54.6% beat to us. The significant profit growth is attributable to:

- 1) A low base in 1H20 due to the impact from Covid-19 on glass demand and prices;
- 2) A significant increase in market float glass prices since mid-2020, with current spot market float glass c.87% higher YoY. YTD average price is c.49%/34% higher than 1H20 / 2020 average levels;
- 3) An increase in sales volume given robust demand driven by rising property completion, as well as its capacity expansion – including the full-period contributions from its new float glass lines added in 2020 in Beihai (three lines at 2,100t/d), Zhangjiagang (two lines at 1,480t/d) and Pengjiang (acquired, 950t/d in 2020 and 900+400t/d added in 2021), plus expansions for auto glass and architecture glass).

All these help offset rising product costs like raw materials and fuel.

Figure 1

Xinyi Glass: actual vs forecast

	1H20 reported profit	Estimated YoY growth	1H21 estimated profit	1H21 CL core profit	% beat/miss to CL	1H20 CL core profit	Implied core profit YoY growth
Lower end	1,382	260%	4,977	3,488	42.7%	1,430	247.9%
Upper end	1,382	290%	5,391	3,488	54.6%	1,430	276.9%
Mid-range	1,382	275%	5,184	3,488	48.6%	1,430	262.4%

Source: CLSA, Company

XYX: Strong growth but a miss

On the other hand, XYX expects its 1H21 net profit to grow 100-120% YoY – ie, HK\$2,813-3,094m. Compared with our 1H21CL core profit estimate of HK\$3,606m, this implies c.100-120% YoY growth in 1H21 core profit, a c.14.2-22.0% miss to us. The significant profit growth is due to:

- 1) A low base in 1H20 due to the impact from Covid-19 on glass demand and prices;
- 2) Soaring solar glass prices since 2H20 as a result of tight supply in the market, with 3.2/2.0mm glass mainstream prices surging from Rmb24/20/m² in mid-2020 to as high as Rmb42/34/m² in 4Q20, before a meaningful pull-back since April 2021;
- 3) Capacity expansion, including the full-period contributions from its Beihai lines added in 2020 (2x1,000t/d), as well as the new lines in Wuhu (2x1,000t/d) commenced in 1H21.
- 4) Efficiency gain to help offset rising product costs like raw materials and fuel. Meanwhile, we believe it is mainly the lower-than-expected sales volume in 1H21 – given lower demand from module makers whose utilisations were dragged by high upstream cost pressure – to result in the miss.

Figure 2

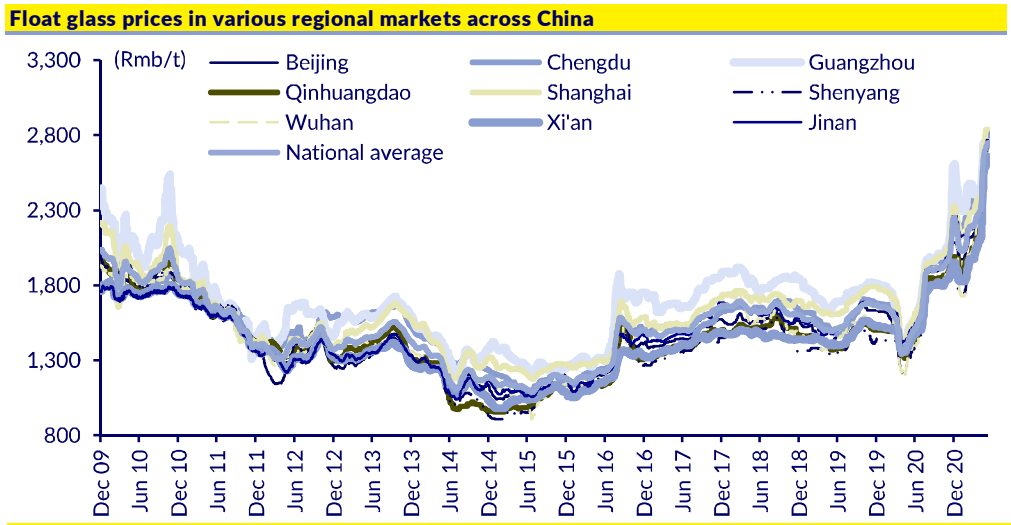
Xinyi Solar: actual vs forecast

	1H20 reported profit	Estimated YoY growth	1H21 estimated profit	1H21 CL core profit	% beat/miss to CL	1H20 CL core profit	Implied core profit YoY growth
Lower end	1,406	100%	2,813	3,606	(22.0%)	1,408	99.8%
Upper end	1,406	120%	3,094	3,606	(14.2%)	1,408	119.8%
Mid-range	1,406	110%	2,954	3,606	(18.1%)	1,408	109.8%

Source: CLSA, Company

Current spot market float glass is c.87% higher YoY with a low-base in 2020. YTD average price is c.49%/34% higher than 1H20 / 2020 average levels

Figure 3



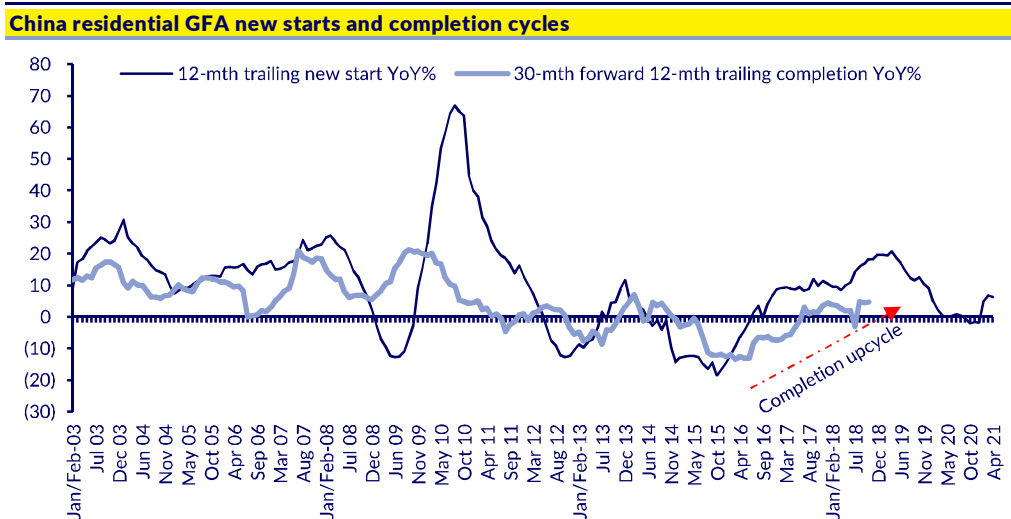
Source: WIND, CLSA

Figure 4



Source: SCI99.com, CLSA

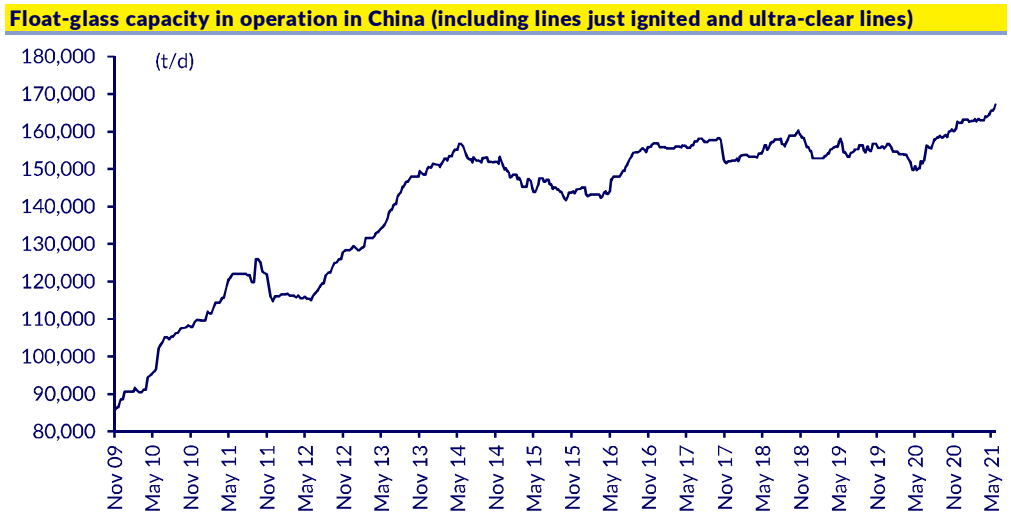
Figure 5



Source: CRR, CLSA

Some rise in market operating capacity in 2020 mainly from XYG, and it has remained fairly steady since then

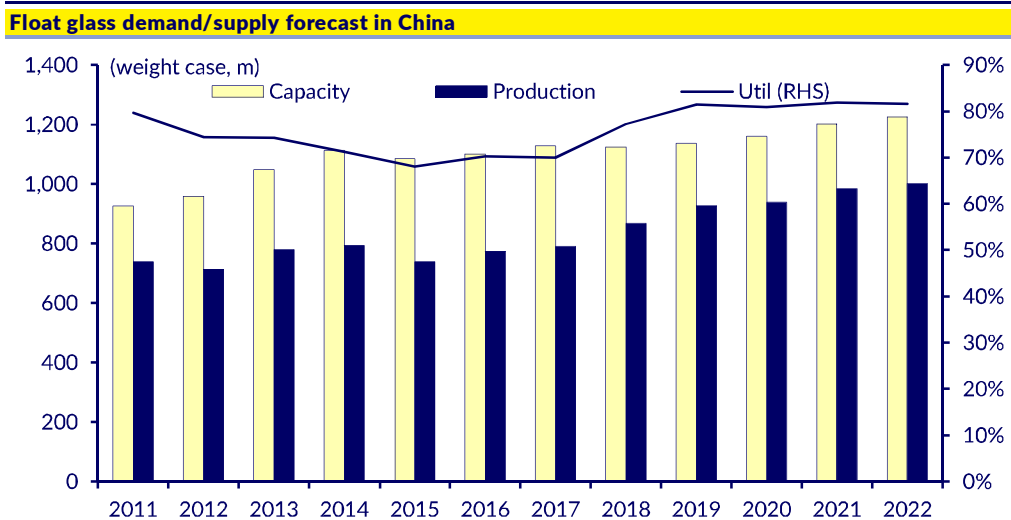
Figure 6



Source: WIND, CLSA

We expect decent demand/supply for float glass to sustain

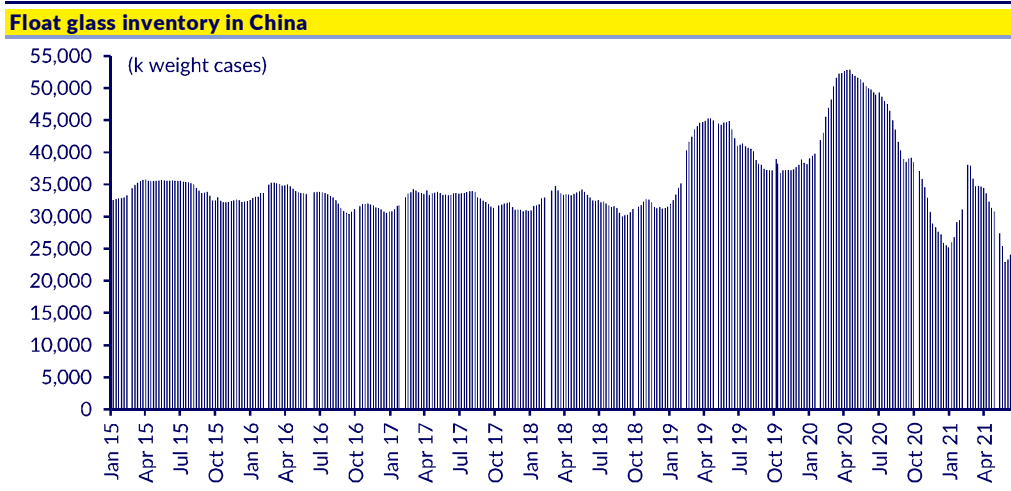
Figure 7



Source: CLSA

Float glass inventory has fallen from its peak

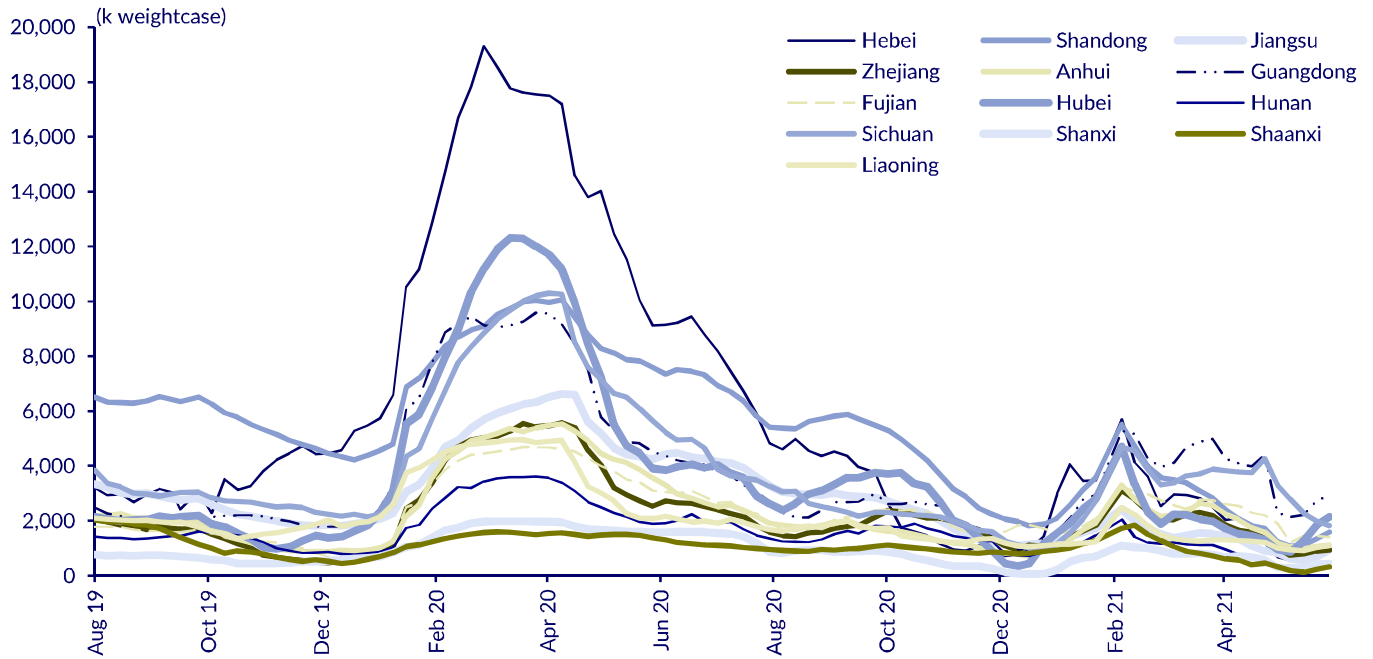
Figure 8



Source: CLSA

Figure 9

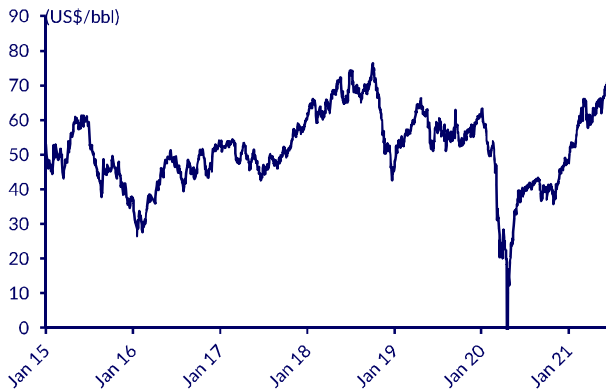
Float glass inventory by region



Source: sci99.com, CLSA

Figure 10

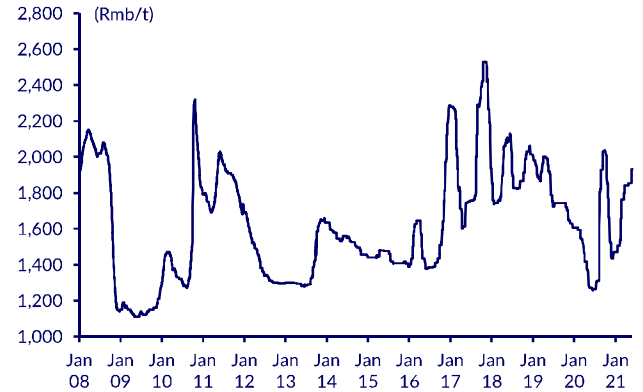
WTI crude



Source: WIND, CLSA

Figure 11

Domestic soda-ash prices

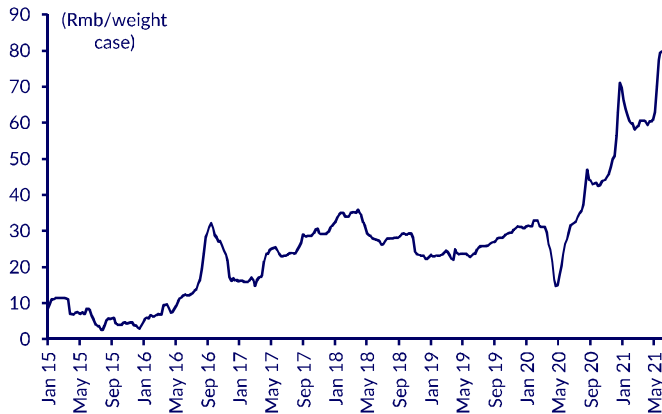


Source: WIND, CLSA



Figure 12

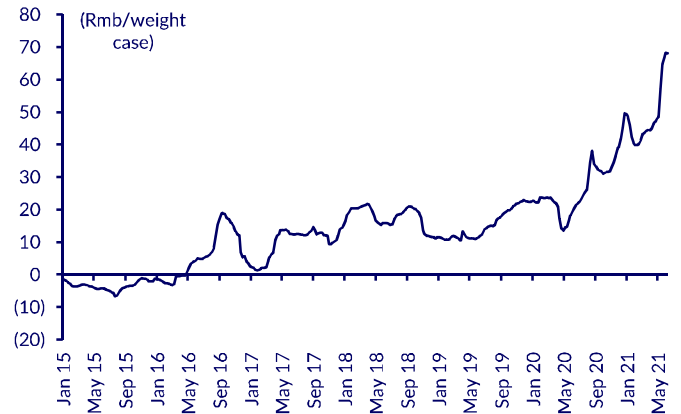
Approximate spread between the float-glass price and major costs (natural gas and soda ash) for XYG



Source: CLSA

Figure 13

Approximate spread between the float-glass price and major costs (natural gas and soda ash) for the industry

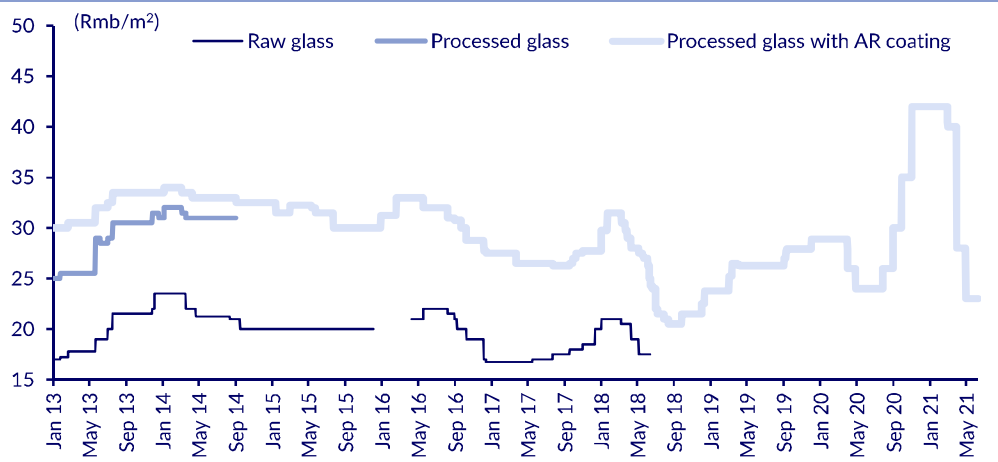


Source: CLSA

Meaningful cut in solar glass prices since April and further in May

Figure 14

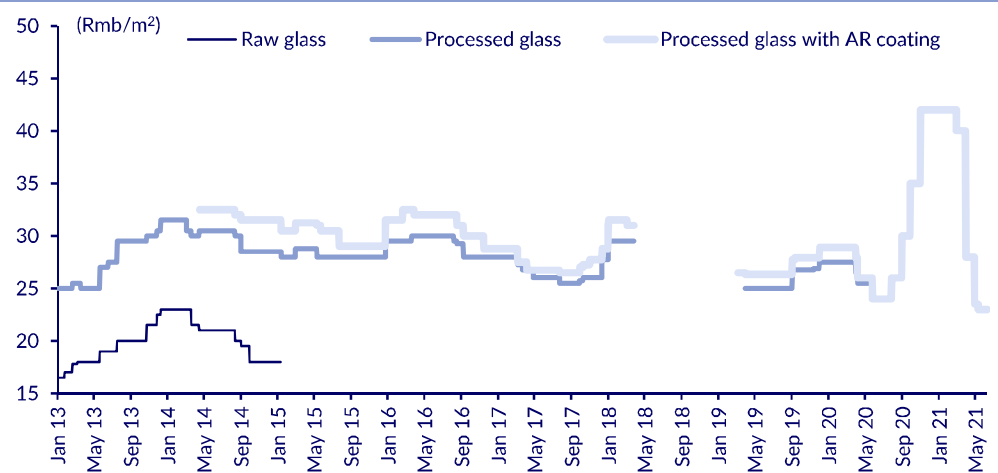
Selling prices of XYG's solar glass - Wuhu plant, 3.2mm glass



Source: SCI99.com, CLSA

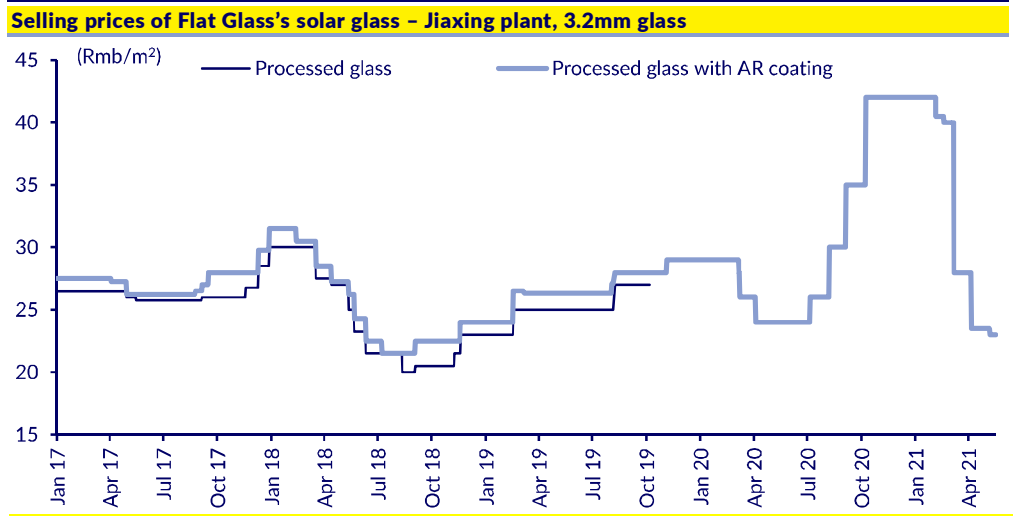
Figure 15

Selling prices of XYG's solar glass - Tianjin plant, 3.2mm glass



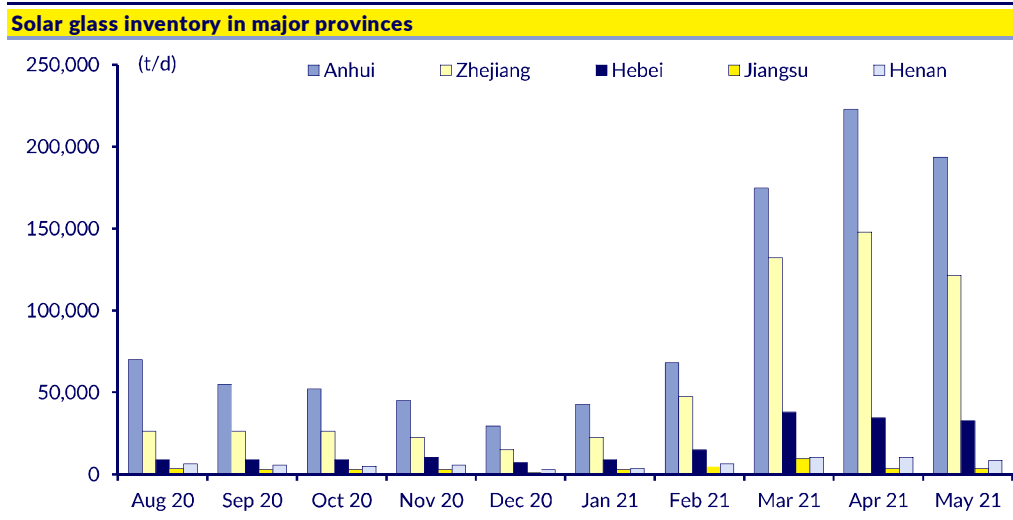
Source: SCI99.com, CLSA

Figure 16



Source: SCI99.com, CLSA

Figure 17



Source: SCI99.com, CLSA

Solar glass inventory climbed quickly from a low level in the past two months

XYG: BUY, lift TP from HK\$33.10 to HK\$40.70

We lift 21/22/23CL core profits by 32.4%/32.3%/30.9% with higher float glass ASP offset by slightly lower profit contributions from XYS. We lift our target price from HK\$33.10 to HK\$40.70, based on blended average 22-23CL (from 22CL) PE/PB of 16.5x/2.8x (from 18x/2.8x), both at 2.5SD above their historical averages given the significant improvement in profitability compared with historical levels. We reiterate our BUY rating, with confidence supported by management's continuous share purchases.

Figure 18

XYG earnings revisions

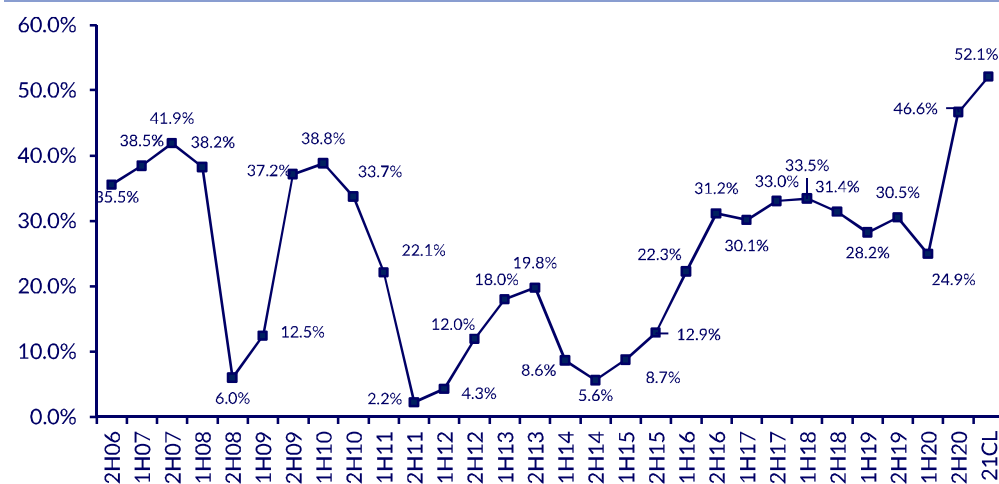
HK\$m	New			Old			Change		
	21CL	22CL	23CL	20CL	21CL	22CL	20CL	21CL	22CL
Revenue									
Automobile glass products	4,951	5,380	5,620	4,951	5,380	5,620	0.0%	0.0%	0.0%
Architecture glass	2,578	2,736	2,999	2,424	2,682	2,940	6.3%	2.0%	2.0%
Float glass (including electronic glass)	19,976	21,143	22,243	16,755	17,987	18,937	19.2%	17.5%	17.5%
Total	27,505	29,258	30,861	24,130	26,049	27,497	14.0%	12.3%	12.2%
Gross margin									
Automobile glass products	46.8%	47.5%	48.0%	46.8%	47.5%	48.0%	0.0 ppt	0.0 ppt	0.0 ppt
Architecture glass	46.4%	47.5%	48.5%	44.1%	45.6%	46.5%	2.3 ppt	1.9 ppt	1.9 ppt
Float glass (including electronic glass)	54.2%	55.4%	55.6%	47.2%	48.2%	48.5%	7.0 ppt	7.2 ppt	7.1 ppt
Total	52.1%	53.2%	53.5%	46.8%	47.8%	48.2%	5.3 ppt	5.4 ppt	5.3 ppt
Core profit	11,153	12,177	13,395	8,422	9,206	10,236	32.4%	32.3%	30.9%

Source: CLSA

XYG's float glass GPM will likely stay high in 21CL

Figure 19

XYG's float glass GPM - half-yearly



Source: XYG, CLSA

Earnings are more sensitive to prices than costs

Figure 20

Earnings sensitivity analysis

	Change in 21CL core profit
1% increase in float glass price	+1.2%
1% increase in auto glass price	+0.3%
1% increase in architecture glass price	+0.3%
1% increase in soda ash price	-0.2%
1% increase in unit fuel cost	-0.3%

Source: CLSA

Figure 21

XYG - Revised 1H21 forecasts summary				
HK\$m	1H20	2H20	1H21CL	YoY growth
Sales	7,134	11,482	12,963	81.7%
COGS (excl depr)	(4,220)	(5,555)	(5,864)	38.9%
Operating expenses (ex D&A)	(1,213)	(1,450)	(1,340)	10.5%
...Opex %	17.0%	12.6%	10.3%	-39.2%
Core EBITDA	1,701	4,477	5,759	238.5%
Depreciation	(472)	(597)	(527)	11.6%
Amortisation	(43)	(57)	(44)	1.8%
Core EBIT	1,186	3,823	5,188	337.6%
...Ebit Margin	16.6%	33.3%	40.0%	
Other revenue (ex interest exp)	245	219	260	6.4%
			0	
Interest Income	26	11	26	-3.5%
Interest Expense	(123)	(70)	(93)	-24.3%
Net Interest Expense	(97)	(58)	(68)	-29.9%
Share of Associate Profit	356	768	766	115.1%
Profit Before Tax	1,690	4,752	6,147	263.8%
Tax Expense	(254)	(646)	(922)	263.7%
Minority Interest	(6)	(3)	(9)	51.8%
Core Net Profit	1,430	4,103	5,216	264.6%
Exceptional gain/(loss)	(48)	937	-	-100.0%
Net Profit After Tax	1,382	5,040	5,216	277.3%
... NPM, pre exceptional	20.1%	35.7%	40.2%	
Key operating statistics				
Sales (HK\$m)				
Automobile glass	2,161	2,448	2,434	12.6%
Architecture glass	938	1,274	1,185	26.4%
Float glass	4,035	7,760	9,343	131.6%
Total	7,134	11,482	12,963	81.7%
Gross margin				
Automobile glass	46.7%	47.7%	46.5%	-0.1 ppt
Architecture glass	45.6%	42.5%	46.2%	0.6 ppt
Float glass	24.9%	46.6%	52.4%	27.5 ppt
Overall	34.2%	46.4%	50.7%	16.5 ppt

Source: CLSA

Our target price is based on a blended PE and PB approach and is unchanged

Figure 22

Valuation of Xinyi Glass	
PE basis	
22CL (HK\$)	3.14
Target multiple (x)	16.5 (from 18x)
Fair value (HK\$)	51.86
PB basis	
22CL (HK\$)	10.58
Target multiple (x)	2.8
Fair value (HK\$)	29.62
Average/target price (HK\$)	40.70
Implied 21CL PE	14.8x

Source: CLSA

Xinyi Glass's current market cap implies 9.2x/8.3x for its non-solar business earnings in 21/22CL

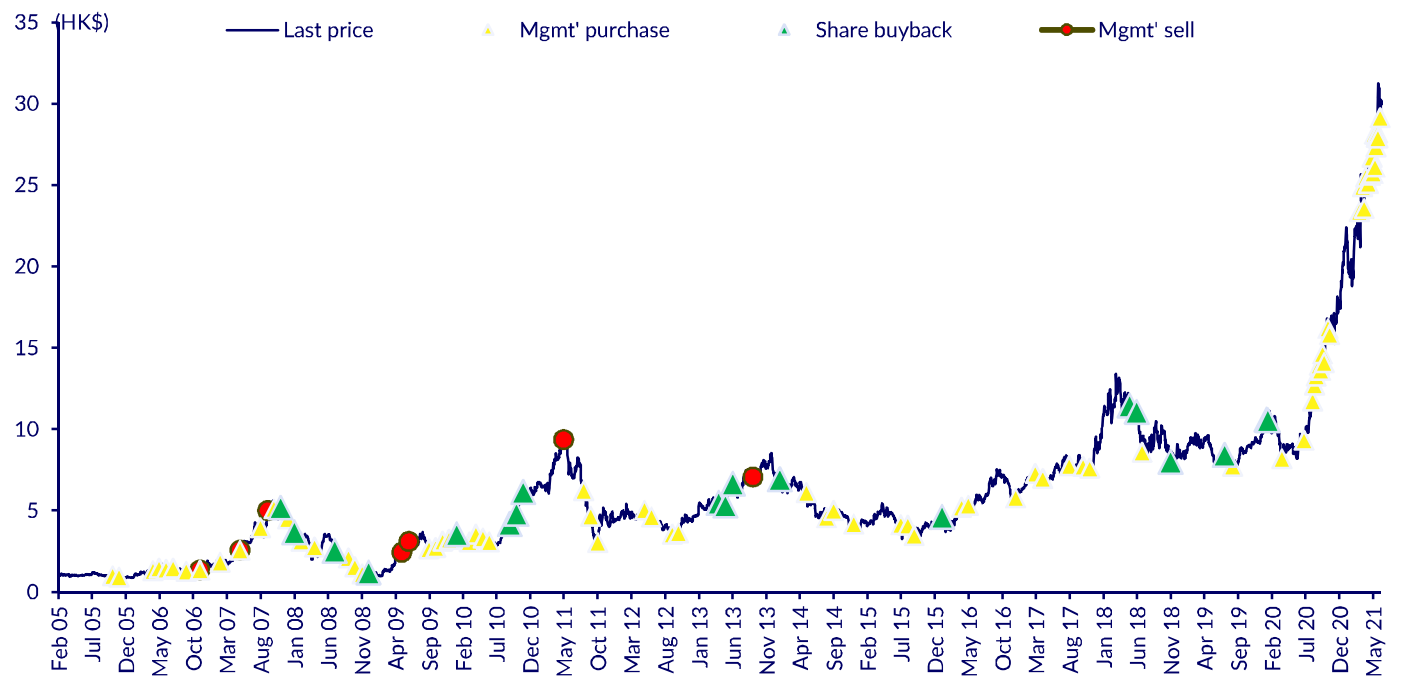
Figure 23

Valuation of Xinyi Glass's non-solar business			
HK\$m	FY21CL	FY22CL	
Net profit of Xinyi Glass	11,153	12,177	
Less: after-tax share of profits of Xinyi Solar	(1,306)	(1,256)	
Less: after-tax share of profits of Xinyi Energy	(76)	(83)	
Non-solar profit	(a) 9,847	10,921	
Current market cap of Xinyi Glass	(b) 120,355	120,355	
Current market cap of Xinyi Solar	(c) 122,272	122,272	
Current market cap of Xinyi Energy	(d) 28,440	28,440	
Market cap of Xinyi Glass's non-solar business	(e) = (b) - 22.86%*(c) - 6.03%*(d)	90,689	90,689
PE of Xinyi Glass's non-solar business	(f) = (e)/(a)	9.2	8.3

Source: CLSA

Figure 24

XYG's previous management buy/sell and company repurchase activity



Source: FactSet, HKEx, CLSA

Figure 25

Xinyi Glass 12-month forward PE



Source: CLSA

Figure 26

Xinyi Glass 12-month forward PB



XYS: BUY, lift TP from HK\$14.60 to HK\$16.40

We cut 21/22/23CL core profits by 6.1%/0.5%/0.6% mainly on lower sales volume in 21CL.

Figure 27

Xinyi Solar earnings estimate revisions

(HK\$m)	New			Old			Change (%)		
	21CL	22CL	23CL	21CL	22CL	23CL	21CL	22CL	23CL
Revenue									
Total solar glass	13,068	15,426	19,690	14,100	15,426	19,690	-7.3%	0.0%	0.0%
Sale of electricity	2,907	3,118	3,275	2,907	3,118	3,275	0.0%	0.0%	0.0%
Solar EPC	76	74	73	76	74	73	0.0%	0.0%	0.0%
Total	16,051	18,619	23,037	17,082	18,619	23,037	-6.0%	0.0%	0.0%
Gross margin (%)									
Total solar glass	46.0%	38.1%	39.1%	46.2%	38.3%	39.3%	-0.2 ppt	-0.2 ppt	-0.2 ppt
Sale of electricity	75.7%	75.2%	74.8%	75.7%	75.2%	74.8%	0.0 ppt	0.0 ppt	0.0 ppt
Solar EPC	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	0.0 ppt	0.0 ppt	0.0 ppt
Total	51.3%	44.3%	44.1%	51.1%	44.4%	44.3%	0.2 ppt	-0.2 ppt	-0.2 ppt
Core profit	5,713	5,496	6,968	6,082	5,522	7,009	-6.1%	-0.5%	-0.6%

Source: CLSA

Figure 28

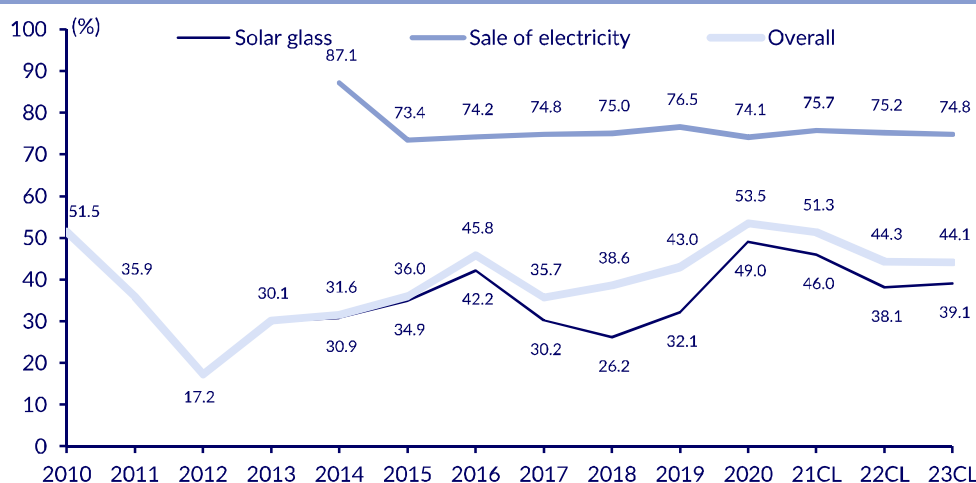
Xinyi Solar earnings sensitivity analysis

	Change in 21CL core profit (%)
1% increase in solar glass price	1.8
1% increase in solar glass sales volume	0.8
1% increase in soda ash price	(0.2)
1% increase in unit fuel cost	(0.3)
100MW more in new solar farm addition	+0.6 (22CL profit)

Source: CLSA

Figure 29

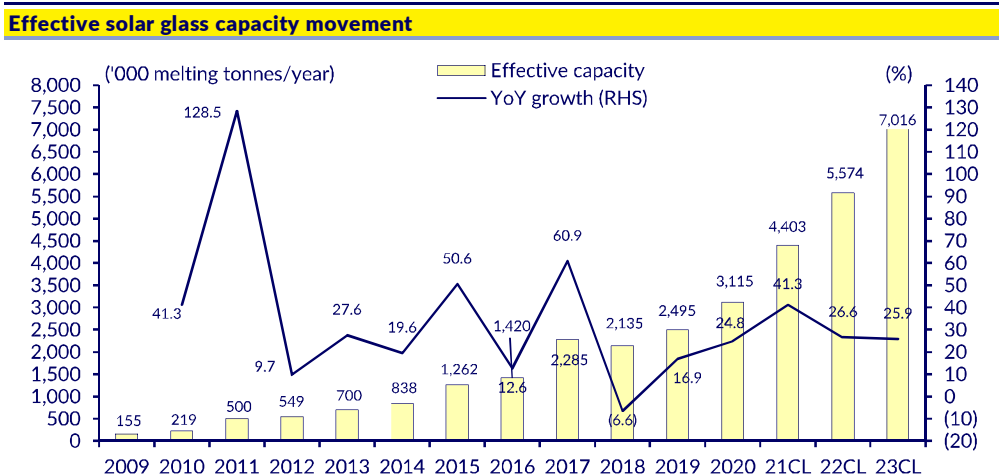
Xinyi Solar GPM profile



Source: XYS, CLSA

We estimate a solar glass effective capacity Cagr of 31.1% in 2020-23

Figure 30



Source: XYS, CLSA

Figure 31

XYS - Revised 1H21 forecasts summary

HK\$m	1H20	2H20	1H21CL	YoY growth
Sales	4,623	7,693	7,828	69.3%
COGS (excl depreciation)	(2,098)	(2,884)	(3,142)	49.8%
Operating expenses (ex D&A)	(275)	(440)	(438)	59.2%
...Opex %	6.0%	5.7%	5.6%	5.6%
Core EBITDA	2,249	4,368	4,248	88.8%
Depreciation (not in COGS)	(384)	(472)	(426)	11.1%
Amortisation	(22)	(27)	(22)	0.0%
Core EBIT	1,844	3,869	3,800	106.0%
...Ebit Margin	39.9%	50.3%	48.5%	
Other revenue (ex interest exp)	71	120	73	3.6%
Interest Income	22	39	43	96.1%
Interest Expense	(116)	(74)	(83)	-29.2%
Net Interest Expense	(95)	(36)	(39)	-58.2%
Share of Associate Profit	0	(0)	(0)	-450.6%
Share of JCE Profit	19	17	20	7.3%
Profit Before Tax	1,839	3,970	3,854	109.5%
Tax Expense	(225)	(510)	(521)	131.1%
Minority Interest	(206)	(256)	(303)	47.0%
Core Net Profit	1,408	3,204	3,030	115.2%
Exceptional gain/(loss)	(1)	(50)	-	-100.0%
Net Profit After Tax	1,406	3,154	3,030	115.4%
... NPM, pre exceptional	30.5%	41.7%	38.7%	

Key operating statistics

Sales (HK\$m)	1H20	2H20	1H21CL	YoY growth
Total solar glass	3,488	6,504	6,406	83.7%
Sale of electricity	1,101	1,130	1,384	25.7%
Solar EPC	34	59	38	12.3%
Total	4,623	7,693	7,828	69.3%
Gross margin				
Total solar glass	38.9%	54.5%	50.9%	12.1 ppt
Sale of electricity	74.5%	73.7%	75.0%	0.5 ppt
Solar EPC	37.0%	30.8%	30.8%	-6.3 ppt
Overall	47.3%	57.1%	55.1%	7.7 ppt

Source: CLSA

We continue to use a SOTP valuation for Xinyi Solar

We value Xinyi Solar using an SOTP methodology, with the solar glass/EPC businesses valued on a PE basis and solar farms/distributed generation projects valued using a discounted cashflow approach. We also roll forward our valuation basis. Further methodology details follow.

- ❑ **Solar glass.** We use a relative valuation methodology, with a target multiple of 23x average 22-23CL PE (from 22CL).
- ❑ **Solar farms.** We use a DCF model with an unchanged WACC of 6.5%, derived from a risk-free rate of 4.0%, a market-risk premium of 7.0%, a beta of 1, an after-tax interest rate of 2.0%, leverage of 50%, and a terminal growth rate of 1.0%.
- ❑ **Distributed generation projects.** We apply a DCF model on the firm's two rooftop projects (25MW in Tianjin and 13.1MW in Wuhu) with the same WACC of 6.5%.
- ❑ **EPC.** We use a PE approach with the same target multiple of 5x on average 22-23CL PE (from 22CL).

Overall, our valuation for Xinyi Solar is HK\$144.9bn. As a result, we raise our target price from HK\$14.60 to HK\$16.40, translating to 23.3x average 22-23CL PE. Given the still-strong long-term industry prospects and the firm's growth potential driven by capacity expansions to help market share gain, we reiterate a BUY rating on this industry leader.

Figure 32

Xinyi Solar SOTP valuation summary	
(HK\$m)	Avg 22-23CL earnings for glass/EPC, 22CL onwards projections for solar farm/DG DCF discounting since 1H22 (roll forward from 2021)
Valuation of solar glass business	118,824
Valuation of solar farms	25,593
Valuation of distributed project	427
Valuation of EPC	85
Total valuation	144,929
Total number of shares (m)	8,811
Value per share	16.40
Net profit for Xinyi Solar in avg 22-23CL	6,232
Implied 22CL PE (x)	23.3

Source: CLSA

Figure 33

Xinyi Solar solar glass/EPC valuation derivation	
(HK\$m)	22CL
Net profit for Xinyi Solar	6,232
Less: Net profit for solar farms	(1,047)
Less: Net profit for distributed project	(2)
Less: Net profit for EPC	(17)
Net profit for solar glass	5,166
Fair PE of solar glass (x)	23
Valuation of solar-glass business	118,824
Fair PE of solar EPC (x)	5
Valuation of solar-EPC business	85

Source: CLSA

We value the company's solar glass segment at HK\$118.8bn

Proposed A-share CB issue to fund solar glass and distributed generation system Capex

FGG: BUY, raise TP from HK\$24.50 to HK\$31.20

FGG announced ([link](#)) a proposal to issue A-share convertible bonds of no more than Rmb4bn with nominal value of Rmb100 each, and a term of six years from the issuance date. Assuming the exercise price to be at today's A-share closing price (Rmb29.90), the bonds could be converted into 133.8m shares, which is equivalent to c.7.9% of its outstanding A-shares / c.6.2% of its total outstanding shares.

Proceeds from the convertible bonds would be used for: 1) construction of 2x1,200t/d solar glass production lines in Jiaying previously announced; 2) construction of distributed PV power generation system for self-use, which will help reduce power costs; 3) technological upgrade of existing 15m² solar glass production line to help efficiency improvement; and 4) working capital.

Figure 38

Planned use of proceeds from the A-share CB issue		
Project	Total amount of investment (Rmb m)	Amount of net proceeds to be used (Rmb m)
Annual production of 750,000 tons of solar equipment ultrathin and ultra-high-transparent panel manufacturing project	2,393.10	1,945.00
Distributed PV power generation construction project	665.2	658
Annual production of 15 million square meters of solar PV ultra-white glass technical transformation project	207	197
Working capital	1,200.00	1,200.00
Total	4,465.30	4,000.00

Source: Company, CLSA

Given the aggressive capacity expansion (planned total solar glass capacity to increase to 25,400t/d in around 24CL, vs 6,400t/d by end-2020), FGG would incur a significant amount of Capex (some Rmb4bn in each of 2021 and 2022). Thus, it is reasonable for the company to look for various financing channels. The company also has its 76m H-share placement plan just recently approved by CSRC ([link](#)).

We adjust 21/22/23CL core profits by -1.2%/+1.5%/0% on effective capacity due to cold repair, but we have not factored in the proposed convertible bond for now. We roll forward the valuation basis, and our target price is increased from HK\$24.50 to HK\$31.20, at the same 20x on average 22-23CL PE (from 22CL), or a 14% discount to XY's target valuation. Reiterate BUY.

Figure 39

FGG PE valuation		
Core EPS (avg 22-23CL, adjusted for dilution impact from H-share placement)	(Rmb¢)	130.1
Target PE	(x)	20.0x
Intrinsic value	(Rmb)	26.01
Target price	(HK\$)	31.20
Target price implied 21CL PE	(x)	25.8
21-23CL EPS growth	(%)	24.7%
Target price implied PE/G	(x)	1.05

Source: CLSA

Figure 40

Xinyi Solar - CLSA's target price		
SOTP-based target price	(HK\$)	16.40
Core EPS (avg 22-23CL)	(HK¢)	70.64
Target price implied avg 22-23CL PE	(x)	23.2
Discount of our FGG target multiple to Xinyi Solar's target multiple	(%)	-13.9%

Source: CLSA

Our HK\$31.20 target price is based on a PE valuation

Our FGG target multiple is at a c.14% discount to Xinyi Solar's target valuation due to FGG's relatively smaller scale

Figure 41

FGG earnings estimate revisions									
(Rmb m)	New estimate			Old estimate			Change		
	21CL	22CL	23CL	21CL	22CL	23CL	21CL	22CL	23CL
Revenue	8,747	11,820	16,861	8,842	11,657	16,861	-1.1%	1.4%	0.0%
Photovoltaic glass	7,436	10,477	15,484	7,531	10,315	15,484	-1.3%	1.6%	0.0%
Household glass	376	376	376	376	376	376	0.0%	0.0%	0.0%
Architectural glass	637	669	702	637	669	702	0.0%	0.0%	0.0%
Float glass	182	182	182	182	182	182	0.0%	0.0%	0.0%
Mining products	73	73	73	73	73	73	0.0%	0.0%	0.0%
Others	44	44	44	44	44	44	0.0%	0.0%	0.0%
Gross profit margin	43.1%	35.1%	35.9%	43.1%	35.1%	35.9%	0 ppt	0 ppt	0 ppt
Photovoltaic glass	45.1%	35.6%	36.3%	45.1%	35.6%	36.3%	0 ppt	0 ppt	0 ppt
Household glass	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	0 ppt	0 ppt	0 ppt
Architectural glass	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	0 ppt	0 ppt	0 ppt
Float glass	29.9%	30.0%	29.8%	29.9%	30.0%	29.8%	0 ppt	0 ppt	0 ppt
Mining products	56.2%	56.2%	56.2%	56.2%	56.2%	56.2%	0 ppt	0 ppt	0 ppt
Others	92.6%	92.6%	92.6%	92.6%	92.6%	92.6%	0 ppt	0 ppt	0 ppt
Core profit	2,219	2,303	3,480	2,246	2,270	3,480	-1.2%	1.5%	0.0%

Source: CLSA

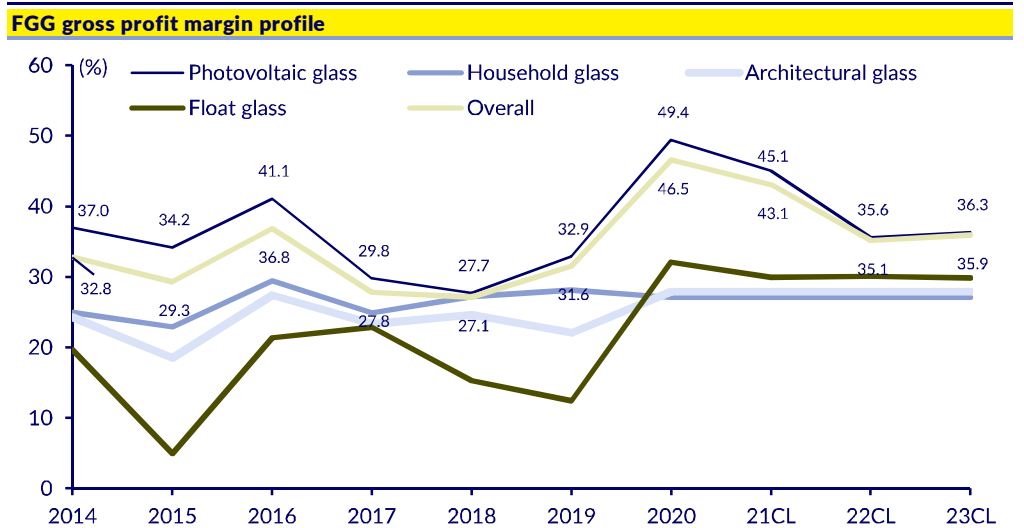
Earnings are more sensitive to solar glass average selling prices

Figure 42

FGG earnings sensitivity analysis	
Change in factor	Percent change to estimated 2021 core profit
1% increase in solar glass average selling price	2.5
1% increase in solar glass sales volume	1.0
1% increase in unit fuel cost	(0.7)
1% increase in unit soda ash cost	(0.4)
1ppt increase in effective interest rate	(1.1)

Source: CLSA

Figure 43



Source: FGG, CLSA

Figure 46

FGG - Revised 1H21 forecasts summary				
Rmb m	1H20	2H20	1H21CL	YoY growth
Sales	2,496	3,764	3,916	56.9%
COGS (excl depreciation)	(1,364)	(1,611)	(1,675)	22.7%
Operating expenses (ex D&A)	(275)	(450)	(426)	54.7%
...Opex %	11.0%	11.9%	10.9%	10.9%
Core EBITDA	856	1,704	1,815	112.0%
Depreciation (not in COGS)	(180)	(191)	(258)	43.6%
Amortisation	(17)	(17)	(17)	0.1%
Core EBIT	660	1,495	1,540	133.5%
...Ebit Margin	26.4%	39.7%	39.3%	
Other revenue (loss)	(52)	(90)	(24)	-54.1%
	2		7	
Interest Income	7	10	10	38.8%
Interest Expense	(49)	(109)	(74)	49.7%
Net Interest Expense	(42)	(99)	(64)	51.5%
Share of Associate Profit	-	3	3	N/A
Share of JCE Profit	-	-	-	N/A
Profit Before Tax	565	1,309	1,455	157.3%
Tax Expense	(105)	(141)	(224)	114.4%
Minority Interest	-	-	-	N/A
Core Net Profit	461	1,168	1,231	167.1%
Exceptional gain/(loss)	-	-	-	N/A
Net Profit After Tax	461	1,168	1,231	167.1%
... NPM, pre exceptional	18.5%	31.0%	31.4%	
Key operating statistics				
Sales (Rmb m)				
Photovoltaic glass	2,128	3,097	3,413	60.3%
Household glass	125	202	144	15.0%
Architectural glass	184	347	221	20.0%
Float glass	5	71	76	1,592.0%
Mining products	38	26	44	15.0%
Other business	16	22	19	15.0%
Total	2,496	3,764	3,916	56.9%
Gross margin				
Photovoltaic glass	40.0%	55.8%	53.3%	13.2 ppt
Household glass	22.4%	30.0%	27.1%	4.7 ppt
Architectural glass	19.1%	32.5%	27.9%	8.8 ppt
Float glass	7.4%	33.6%	29.3%	21.9 ppt
Mining products	57.8%	53.8%	56.2%	-1.6 ppt
Other business	0.0%	160.8%	92.6%	92.6 ppt
Overall	37.6%	52.5%	50.6%	13.1 ppt

Source: CLSA

Figure 47

Flat Glass 12-month forward PE

Figure 48

Flat Glass 12-month forward PB

Source: CLSA

Valuation details - Flat Glass Group Co Ltd 6865 HK

Our target price is based on 20x 22CL PE, close to a 14% discount to the implied 22CL PE for our Xinyi Solar Holdings target price due to FGG's relatively smaller scale.

Investment risks - Flat Glass Group Co Ltd 6865 HK

Key risks include: 1) A change in government support for the solar sector, as the industry is highly reliant on incentive programmes implemented by various countries' governments. 2) A macroeconomic slowdown, particularly from prolonged Covid-19 impact domestically and internationally. 3) Oversupply risk, as solar-glass producers' production capacity may not keep up with demand, which could pressure pricing. 4) Solar technical advances that would require players to develop and improve technologies quickly. 5) Slower-than-expected expansion of the company's new production lines, as these are expected to be the company's key earnings growth drivers in the next two to three years. 6) Unsuccessful execution of the new plant in Vietnam, given that it is the company's first international production base.

Valuation details - Xinyi Glass Holdings Ltd 868 HK

We value Xinyi Glass using a blended PE and PB approach. We apply a target multiple of 17x to 22CL EPS and a target multiple of 2.5x to 22CL BVPS, both at around 2 standard deviation above the historical average, considering its decent margin amid an upcycle in the float glass market.

Investment risks - Xinyi Glass Holdings Ltd 868 HK

Key risks include: 1) Weakening of the property market or even the auto market. Demand for float glass and construction glass is highly dependent on the property market. In addition, despite being a stable business, the auto glass segment is correlated to the global number of vehicles in use, and any significant slowdown in the global auto industry may also hinder the segment's performance. 2) Further tightening of credit. Tightening of credit also affects developers' cashflows and progress in construction of property projects. 3) Incremental production costs. A significant surge in natural gas, international crude oil prices, and other raw material costs may affect gross margins if the company cannot pass on incremental costs by raising average selling prices. 4) More capacity additions in the market. 5) Prolonged

impact from Covid-19 could hinder downstream demand in China as well as internationally, given that float glass production lines cannot be stopped easily; thus slower shipments may result in excess inventory. International lockdown measures could also hinder auto glass sales (which are mainly exports) and float glass at the Malaysia plant.

Valuation details - Xinyi Solar Holdings Ltd 968 HK

We value Xinyi Solar on an SOTP basis, using a PE approach for the solar glass/engineering, procurement and construction businesses and DCF valuation for solar farm/distributed generation projects.

Investment risks - Xinyi Solar Holdings Ltd 968 HK

Key risks include: 1) A change in government support of the solar sector, as the solar industry is still highly reliant on incentive programmes by various countries' governments. 2) Oversupply risk, as vendors' expanded solar glass production capacity may not keep up with product demand, which could pressure pricing. 3) Technological advancement, as the solar industry is developing rapidly and associated technologies are also advancing quickly. It is important for Xinyi Solar to respond to market changes by improving existing products and developing new ones. 4) Payment of government subsidies on solar projects as well as risk of curtailment, which could hinder downstream-project returns. 5) A macroeconomic slowdown, especially from prolonged Covid-19 impact in China and internationally.



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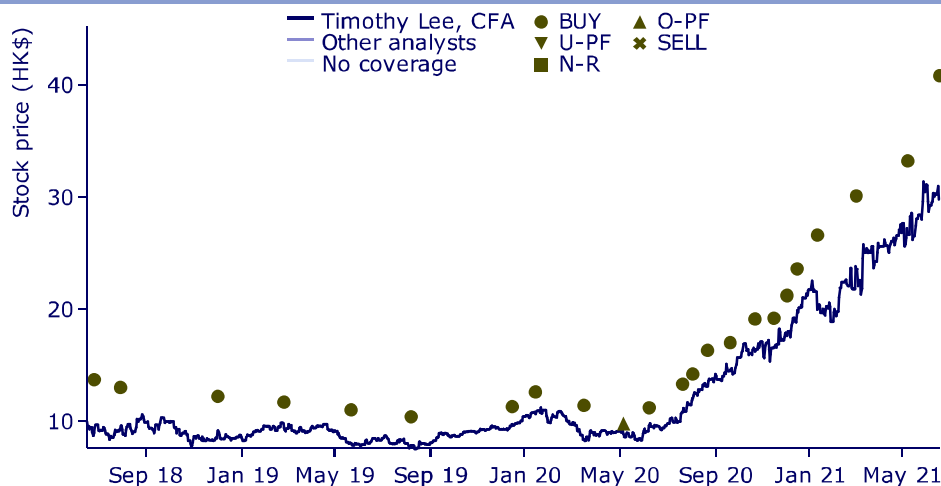
- AVIC Glass (N-R)
- Flat Glass (6865 HK - HK\$24.65 - BUY)
- Xinyi Glass (868 HK - HK\$29.70 - BUY)
- Xinyi Solar (968 HK - HK\$13.88 - BUY)

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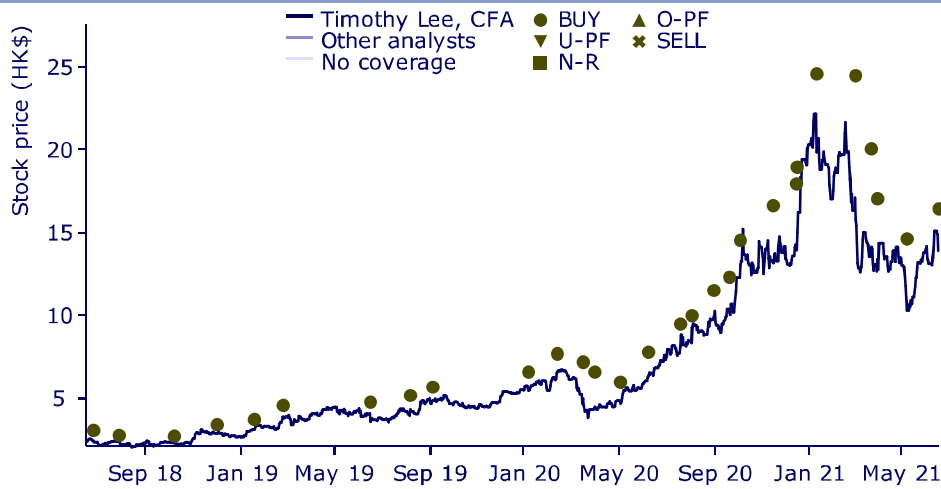
Recommendation history of Xinyi Glass Holdings Ltd 868 HK



Date	Rec	Target	Date	Rec	Target
LATEST	BUY	40.70	09 Jun 2020	BUY	11.10
07 May 2021	BUY	33.10	07 May 2020	O-PF	9.70
02 Mar 2021	BUY	30.00	17 Mar 2020	BUY	11.30
11 Jan 2021	BUY	26.50	15 Jan 2020	BUY	12.50
16 Dec 2020	BUY	23.50	16 Dec 2019	BUY	11.20
03 Dec 2020	BUY	21.10	08 Aug 2019	BUY	10.30
16 Nov 2020	BUY	19.10	23 May 2019	BUY	10.90
23 Oct 2020	BUY	19.00	26 Feb 2019	BUY	11.60
21 Sep 2020	BUY	16.90	03 Dec 2018	BUY	12.10
23 Aug 2020	BUY	16.20	31 Jul 2018	BUY	12.90
04 Aug 2020	BUY	14.10	27 Jun 2018	BUY	13.60
22 Jul 2020	BUY	13.20			

Source: CLSA

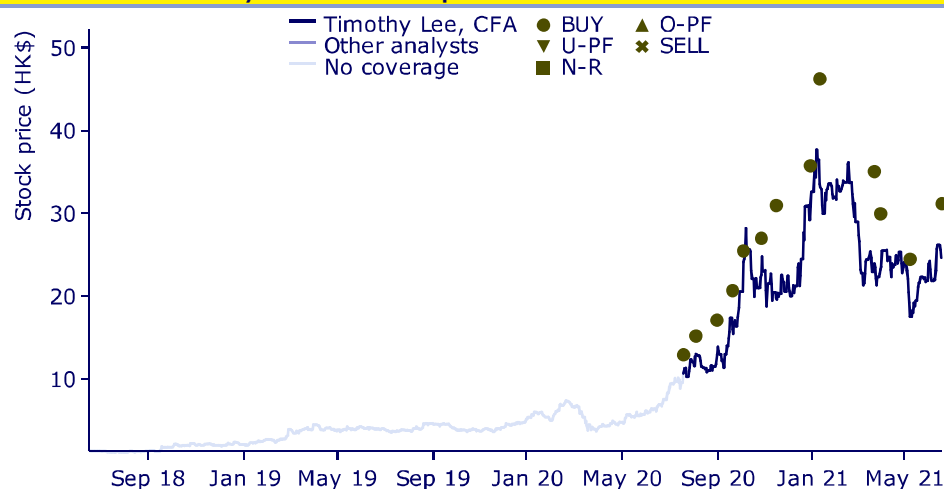
Recommendation history of Xinyi Solar Holdings Ltd 968 HK



Date	Rec	Target	Date	Rec	Target
LATEST	BUY	16.40	04 May 2020	BUY	6.00
07 May 2021	BUY	14.60	01 Apr 2020	BUY	6.60
30 Mar 2021	BUY	17.00	17 Mar 2020	BUY	7.20
22 Mar 2021	BUY	20.00	13 Feb 2020	BUY	7.70
02 Mar 2021	BUY	24.40	07 Jan 2020	BUY	6.60
11 Jan 2021	BUY	24.50	06 Sep 2019	BUY	5.70
17 Dec 2020	BUY	18.90	08 Aug 2019	BUY	5.20
16 Dec 2020	BUY	17.90	18 Jun 2019	BUY	4.80
16 Nov 2020	BUY	16.60	26 Feb 2019	BUY	4.60
05 Oct 2020	BUY	14.50	20 Jan 2019	BUY	3.75
21 Sep 2020	BUY	12.30	03 Dec 2018	BUY	3.45
01 Sep 2020	BUY	11.50	09 Oct 2018	BUY	2.75
04 Aug 2020	BUY	10.00	30 Jul 2018	BUY	2.80
20 Jul 2020	BUY	9.50	27 Jun 2018	BUY	3.10
09 Jun 2020	BUY	7.80			

Source: CLSA

Recommendation history of Flat Glass Group Co Ltd 6865 HK



Date	Rec	Target	Date	Rec	Target
LATEST	BUY	31.20	28 Oct 2020	BUY	27.00
07 May 2021	BUY	24.50	05 Oct 2020	BUY	25.50
30 Mar 2021	BUY	30.00	21 Sep 2020	BUY	20.70
22 Mar 2021	BUY	35.10	01 Sep 2020	BUY	17.10
11 Jan 2021	BUY	46.30	05 Aug 2020	BUY	15.20
30 Dec 2020	BUY	35.80	20 Jul 2020	BUY	12.90
16 Nov 2020	BUY	31.00			

Source: CLSA

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