

# Xinyi Solar (968 HK)

## Thrilling demand driving up solar glass price

We upgrade XYZ from Hold to BUY rating, based on 1) substantially higher-than-expected solar price outlook; 2) we see limited solar glass supply growth in 1H20, while demand will likely be thrilling; 3) potential policy control on solar glass capacity expansion will likely benefit XYZ for its leading capacity scale and overseas development experience. It seems a non-consensus call at a timing that XYZ's major shareholders placing 350mn old shares at discount, but we believe market impact of the share offloading will create a good entry point.

- **Share placement impact seems limited.** Nine major shareholders of XYZ planned to sell 350mn shares through placement at HK\$5.125 with 8.5% discount to previous close price. The share placement may remind the market of those nine shareholders and XYG (868 HK)'s share offloading in May and Jun 2019, and then create pressure on XYZ for potential concerns and uncertainties. Given continuous solar glass price hike since Sep 2019, we think XYZ's fundamental would be strong enough to absorb the impacts, and we believe it will create a good entry point if share price has significant decline.
- **Strong pricing driven by thrilling demand.** XYZ's share price has soared from Dec, since the Company announced price hike from RMB27.9/sqm to RMB28.9/sqm on 29 Nov. Strong pricing was driven by tightened solar glass supply, as domestic PV installation order started to flow in, and overseas demand maintained decent growth on the back of continuous declining solar module price. In 2020, we expect global PV installation to increase 30.4% YoY, while we estimate effective PV glass output growth will be less than 19.7%, implying tightened supply situation will likely last for the whole year. We expect XYZ to benefit from tightened supply while releasing capacity growth in 2Q/3Q20.
- **Outstanding profitability with GPM reaching 39.5%.** At RMB29/sqm, we estimate the Company is making 42% GPM from PV glass sales. Based on declining price outlook as XYZ releasing new capacity throughout the year, we expect ASP to remain strong at RMB28.0/sqm in 2020, leaving outstanding GPM of 39.5% for the PV glass segment. In 2021, we also raise our ASP outlook by 5.8% from RMB26/sqm to RMB27.5/sqm.
- **Upgrade to BUY with TP lifted to HK\$6.62.** Based on revised ASP and costs outlook, we raise our EPS forecast by 12.8%/34.9%/28.4% from HK\$0.28/0.31/0.42 to HK\$0.31/0.42/0.57. Our DCF TP is lifted by 62.2% from HK\$4.08 to HK\$6.62. **Upgrade XYZ from Hold to BUY.**

### Earnings Summary

(YE 31 Dec)	FY17A	FY18A	FY19E	FY20E	FY21E
Revenue (HK\$ mn)	9,527	7,672	9,492	12,054	16,024
YoY growth(%)	58.6	(19.5)	23.7	27.0	32.9
Net income (HK\$ mn)	2,332	1,863	2,500	3,417	4,569
EPS (HK\$)	0.33	0.25	0.31	0.42	0.57
YoY growth (%)	11	(24)	26	35	34
P/E (x)	16.9	22.1	17.5	13.0	9.7
P/B (x)	4.0	4.0	3.4	2.9	2.5
Yield (%)	2.7	2.2	2.7	3.7	4.9
ROE (%)	23.9	18.3	19.2	22.5	25.6
Net gearing (%)	64.7	76.5	35.1	48.9	33.2

Source: Company data, CMBIS estimates

**BUY (Up)**

Target Price **HK\$6.62**  
 (Previous TP **HK\$4.08**)  
 Up/Downside **+20.4%**  
 Current Price **HK\$5.50**

### China Solar Sector

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### Stock Data

Mkt Cap (HK\$ mn)	44,450
Avg 3 mths t/o (HK\$ mn)	94.4
52w High/Low (HK\$)	6.00/2.72
Total Issued Shares (mn)	8,082

Source: Bloomberg

### Shareholding Structure

Xinyi Group Glass Co Ltd	24.4%
Yin Yee Lee	32.1%
Free float	43.5%

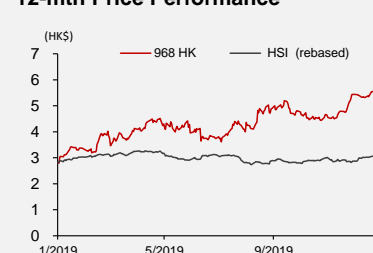
Source: HKEx

### Share Performance

	Absolute	Relative
1-mth	1.1%	-5.4%
3-mth	14.3%	4.2%
6-mth	47.1%	49.4%
12-mth	96.4%	79.2%

Source: Bloomberg

### 12-mth Price Performance



Source: Bloomberg

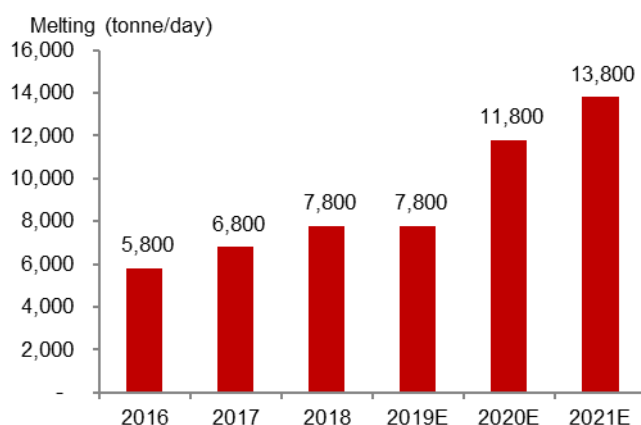
### Auditor: PwC

### Related Reports

1. "Xinyi Solar (968 HK) - NDR takeaway: bullish demand outlook" – 15 Aug 2019
2. "Xinyi Solar (968 HK) -1H results slightly missed; heading to strong 2H" – 9 Aug 2019
3. "Xinyi Solar (968 HK) - Capacity expansion accelerating" – 27 May 2019

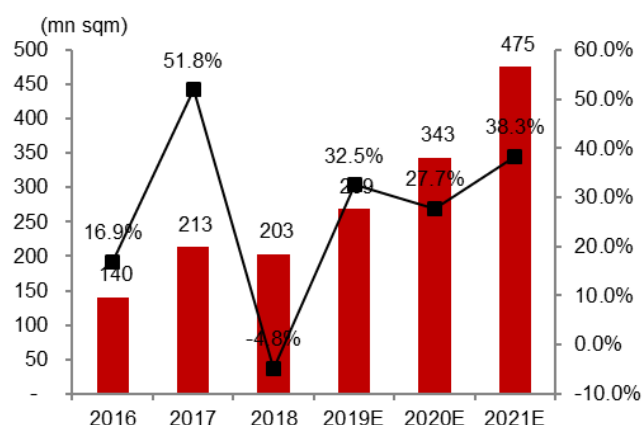
- Further room to improve profitability.** We've noticed that XYS offers solar glass price quotation for thinner model at 2.0mm specification in the recent weeks, and according to SCI99, XYS is currently the only manufacturer offering price quotation for 2.0mm product. Mgmt. disclosed that 2.0mm product has significantly higher technical requirement during manufacturing processes, which may cause lower output yield. 2.0mm solar glass is catered for larger size wafer, as the product will help reduce overall module weight for rooftop installation as well as saving supporting frame costs. Mgmt. sees the product will have promising outlook to become mainstream hotshot in the near future. In regard to profit contribution, we think 2.5mm/2.0mm solar glass is having juicy profit at current stage, since each tonne of solar glass output will expand to 160/200sqm, comparing to 3.2mm product of 125sqm, further diluting material and energy costs while having relatively low pricing discount. We estimate the higher 2.5/2.0mm product penetration rate will lead to higher overall GPM of XYS, and the Company is enjoying pricing premium as first mover.
- Potential capacity expansion control will favor market leader.** Ministry of Industry and Information Technology of China (MIIT) recently released an interpretation of capacity replacement guidance for cement and glass industry. Market has noticed that MIIT had included solar glass industry in its interpretation, which led to some concerns on Chinese government may tighten solar glass capacity expansion. Given consensus understanding that global PV demand will increase 15-20% per annum in the coming few years, we see low possibility of tightening solar glass capacity. But if the concerns were true, we think capacity control will favor XYS, since the Company has the largest capacity in the industry, and having 4x1,000 tonnes/day approved new melting capacity pending to commence operation in 2020.

**Figure 1: XYS will have significant growth in melting capacity in the coming two years**

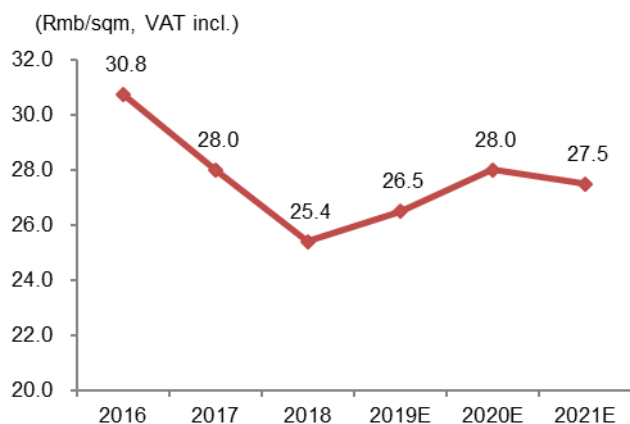


Source: Company data, CMBIS estimates

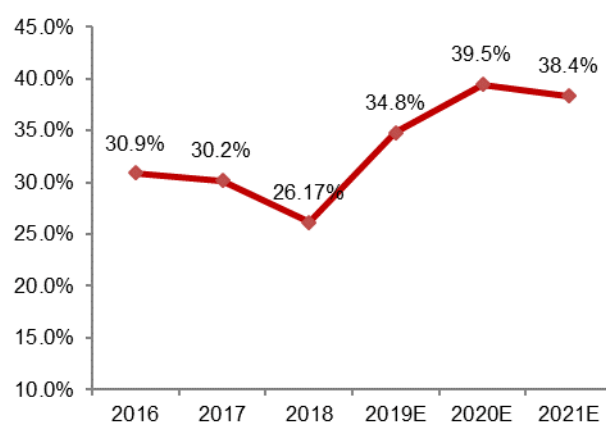
**Figure 2: We expect XYS will have rapid solar glass sales growth in term of sqm in 2020-21E**



Source: Company data, CMBIS estimates

**Figure 3: Our solar glass ASP estimates and assumptions**


Source: Company data, CMBIS estimates

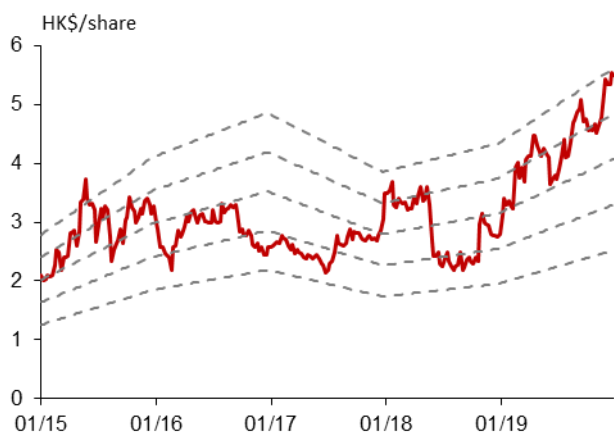
**Figure 4: We estimate XYS solar glass segment to reach GPM of 39.5% in 2020E**


Source: Company data, CMBIS estimates

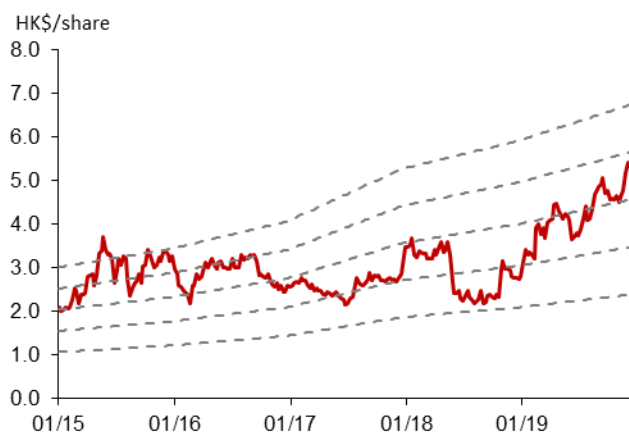
**Figure 5: Earnings revision**

	Old			New			Change		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
PV processed glass ASP (RMB/sqm)	26.5	26.3	26.0	26.5	28.0	27.5	0.0%	6.5%	5.8%
PV glass sales volume (mn sqm)	248	352	470	269	343	475	8.5%	-2.4%	1.1%
Revenue (HK\$, mn)	8,952	11,791	14,960	9,492	12,054	16,024	6.0%	2.2%	7.1%
Net income (HK\$, mn)	2,216	2,533	3,558	2,500	3,417	4,569	12.8%	34.9%	28.4%
EPS (HK\$)	0.28	0.31	0.44	0.31	0.42	0.57	12.8%	34.9%	28.4%
Consensus earnings (HK\$, mn)				2,358	3,034	3,660			
Our est. vs. consensus (%)				6.0%	12.6%	24.8%			

Source: Company data, CMBIS estimates

**Figure 6: 12M forward P/E band**


Source: Bloomberg, CMBIS

**Figure 7: 12M forward P/B band**


Source: Bloomberg, CMBIS

**Figure 8: Our DCF valuation for YYS**

DCF Valuation	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Turnover (HK\$ mn)	16,024	19,403	22,301	24,422	26,478	27,824	27,652	27,512	27,405	27,332
Solar glass	12,816	15,789	18,869	20,746	22,541	23,607	23,134	22,672	22,218	21,774
Solar Farm	2,920	3,241	3,021	3,224	3,440	3,670	3,916	4,179	4,459	4,757
EPC	287	374	411	452	497	547	602	662	728	801
Turnover growth	32.9%	21.1%	14.9%	9.5%	8.4%	5.1%	-0.6%	-0.5%	-0.4%	-0.3%
EBIT (HK\$ mn)	5,267	6,455	7,425	8,110	8,779	9,237	9,245	9,265	9,300	9,349
EBIT margin(%)	32.9%	33.3%	33.3%	33.2%	33.2%	33.2%	33.4%	33.7%	33.9%	34.2%
Tax rate (%)	14.9%	15.4%	15.6%	15.8%	15.8%	15.8%	15.9%	15.9%	16.0%	16.1%
Depreciation -Rmb mn	1,258	1,235	1,249	1,359	1,472	1,523	1,579	1,638	1,701	1,768
Change in working capital	(1,985)	(1,690)	(1,014)	(742)	(411)	(215)	27	22	17	12
CAPEX (HKD mn)	(4,192)	(2,101)	(2,202)	(2,312)	(2,463)	(2,629)	(2,812)	(3,014)	(3,235)	(3,478)
<b>Free cash flow</b>	<b>(435)</b>	<b>2,905</b>	<b>4,300</b>	<b>5,136</b>	<b>5,988</b>	<b>6,454</b>	<b>6,570</b>	<b>6,434</b>	<b>6,294</b>	<b>6,147</b>
Years	1	2	3	4	5	6	7	8	9	10
Discount factor	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45
<b>Discount free cash flow</b>	<b>(402)</b>	<b>2,477</b>	<b>3,385</b>	<b>3,733</b>	<b>4,019</b>	<b>4,000</b>	<b>3,760</b>	<b>3,400</b>	<b>3,071</b>	<b>2,770</b>
Terminal value	99,541									
Terminal EV/EBITDA	8.95									
Discounted terminal value	44,851									
Terminal perpetual growth	2%									

WACC Calculations	
Cost of debt	4.0%
Tax rate	15.0%
After tax cost of debt	3.4%
Cost of equity	12.3%
Adjusted beta	1.10
Market risk premium	9.6%
Risk free rate	1.8%
% of debt financing	45.0%
WACC	8.3%

Valuations ( HK\$ mn )	
Discounted Terminal Value	44,851
Terminal perpetual growth(%)	2.0%
Terminal EV/EBITDA	8.95
Total discount FCF	20,974
Enterprise Value	65,825
Discount FCF(% of total)	31.9%
Terminal value (% of total)	68.1%
Add: Cash & cash equivalent	4,342
Less: Total debt	(11,775)
Non-controlling interest	(5,152)
Equity Value (HKD mn)	53,240
<b>Fair value per share(HK\$)</b>	<b>6.62</b>

Source: CMBIS estimates

## Financial Summary

### Income statement

YE 31 Dec (HK\$ mn)	FY17A	FY18A	FY19E	FY20E	FY21E
<b>Revenue</b>	<b>9,527</b>	<b>7,672</b>	<b>9,492</b>	<b>12,054</b>	<b>16,024</b>
Solar glass sales	5,746	5,562	7,079	9,437	12,816
Solar power generation	1,474	1,920	2,243	2,396	2,920
EPC services	2,307	189	170	221	287
<b>Cost of sales</b>	<b>(6,122)</b>	<b>(4,711)</b>	<b>(5,313)</b>	<b>(6,509)</b>	<b>(8,854)</b>
<b>Gross profit</b>	<b>3,405</b>	<b>2,960</b>	<b>4,180</b>	<b>5,545</b>	<b>7,170</b>
Other Income	181	176	155	155	155
Other gain/(losses),net	0	(8)	(5)	(5)	(5)
Selling & marketing exps	(239)	(271)	(326)	(408)	(553)
Admin and other exps	(433)	(413)	(474)	(559)	(714)
<b>EBIT</b>	<b>2,914</b>	<b>2,443</b>	<b>3,530</b>	<b>4,728</b>	<b>6,053</b>
Financial income	14	10	25	40	48
Financial cost	(179)	(256)	(276)	(320)	(366)
Exceptional	-	-	-	-	-
Pre-tax profit	<b>2,789</b>	<b>2,246</b>	<b>3,323</b>	<b>4,492</b>	<b>5,778</b>
Income tax	(265)	(205)	(349)	(472)	(607)
Minority interests	(192)	(179)	(474)	(603)	(603)
<b>Net profit</b>	<b>2,332</b>	<b>1,863</b>	<b>2,500</b>	<b>3,417</b>	<b>4,569</b>

### Cash flow summary

YE 31 Dec (HK\$ mn)	FY17A	FY18A	FY19E	FY20E	FY21E
<b>EBIT</b>	<b>2,914</b>	<b>2,443</b>	<b>3,530</b>	<b>4,728</b>	<b>6,053</b>
Depreciation and amortization	551	707	836	1,012	1,258
Change in working capital	(1,765)	(255)	(754)	(744)	1,182
Taxation	(242)	(237)	(328)	(472)	(607)
Others	(160)	(348)	(584)	(840)	(878)
<b>Net cash from operating</b>	<b>1,298</b>	<b>2,310</b>	<b>2,700</b>	<b>3,685</b>	<b>7,009</b>
Capex	(3,729)	(2,248)	(1,997)	(5,063)	(3,589)
Joint ventures investments	(63)	17	(457)	(603)	(603)
Others	1,302	-	-	-	-
<b>Net cash from investment</b>	<b>(2,490)</b>	<b>(2,230)</b>	<b>(2,454)</b>	<b>(5,666)</b>	<b>(4,192)</b>
Equity raised	2,572	(456)	1,200	-	-
Change of Debts	1,267	837	989	2,017	1,071
Dividend paid	(999)	(1,095)	(922)	(1,420)	(1,917)
Others	(1,137)	(65)	2,924	603	603
<b>Net cash from financing</b>	<b>1,703</b>	<b>(778)</b>	<b>4,191</b>	<b>1,200</b>	<b>(243)</b>
<b>Net change in cash</b>	<b>511</b>	<b>(698)</b>	<b>4,437</b>	<b>(781)</b>	<b>2,574</b>
Cash at the beginning	843	1,381	682	5,119	4,338
Exchange difference	26	-	-	-	-
<b>Cash at the end of the year</b>	<b>1,381</b>	<b>682</b>	<b>5,119</b>	<b>4,338</b>	<b>6,912</b>

### Balance sheet

YE 31 Dec (HK\$ mn)	FY17A	FY18A	FY19E	FY20E	FY21E
<b>Non-current assets</b>	<b>15,301</b>	<b>17,089</b>	<b>18,518</b>	<b>23,402</b>	<b>26,226</b>
Fixed assets	14,240	15,804	16,953	20,991	23,310
Land use rights	344	320	333	346	358
Inv. in JV and Associate	453	433	894	1,497	2,100
Others	264	532	339	568	458
<b>Current assets</b>	<b>7,467</b>	<b>6,803</b>	<b>12,049</b>	<b>12,746</b>	<b>15,626</b>
Cash	1,381	784	5,119	4,338	6,912
Account receivable	4,167	4,154	4,685	5,632	5,459
Inventory	374	430	531	708	961
Amount due from	-	4	-	-	-
Others	1,545	1,432	1,715	2,068	2,294
<b>Current liabilities</b>	<b>6,241</b>	<b>6,737</b>	<b>5,905</b>	<b>7,474</b>	<b>9,173</b>
Trade and other payable	2,941	2,780	2,900	3,863	5,241
Amount due	67	102	18	18	18
Current income tax liabilities	88	48	60	60	60
Borrowings	3,145	3,773	2,927	3,533	3,854
Others	-	34	-	-	-
<b>Non-current liabilities</b>	<b>4,846</b>	<b>5,096</b>	<b>6,902</b>	<b>8,314</b>	<b>9,063</b>
Borrowings	4,787	4,997	6,831	8,243	8,992
Other payables	59	89	54	54	54
Deferred tax liabilities	-	11	17	17	17
<b>Total net assets</b>	<b>11,680</b>	<b>12,059</b>	<b>17,761</b>	<b>20,361</b>	<b>23,616</b>
<b>Minority Interest</b>	<b>1,559</b>	<b>1,625</b>	<b>4,549</b>	<b>5,152</b>	<b>5,755</b>
<b>Shareholders' equity</b>	<b>10,121</b>	<b>10,434</b>	<b>13,212</b>	<b>15,209</b>	<b>17,861</b>

### Key ratios

YE 31 Dec	FY17A	FY18A	FY19E	FY20E	FY21E
<b>Sales mix (%)</b>					
Solar glass sales	60.3	72.5	74.6	78.3	80.0
Solar power generation	15.5	25.0	23.6	19.9	18.2
EPC services	24.2	2.5	1.8	1.8	1.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Profit &amp; loss ratios (%)</b>					
Gross margin	35.7	38.6	44.0	46.0	44.7
Pre-tax margin	29.3	29.3	35.0	37.3	36.1
Net margin	24.5	24.3	26.3	28.3	28.5
Effective tax rate	9.5	9.1	10.5	10.5	10.5
<b>Balance sheet ratios</b>					
Current ratio (x)	1.2	1.0	2.0	1.7	1.7
Quick ratio (x)	1.1	0.9	2.0	1.6	1.6
Cash ratio (x)	0.2	0.1	0.9	0.6	0.8
Debtors turnover days	118.5	197.9	169.9	156.2	126.3
Inventory turnover days	19.7	31.1	33.0	34.7	34.4
Creditors turnover days	163.3	221.6	195.1	189.6	187.7
Total debt / equity ratio (%)	67.9	72.7	54.9	57.8	54.4
Net debt / equity ratio (%)	64.7	76.5	35.1	48.9	33.2
<b>Returns (%)</b>					
ROE	23.0	17.9	18.9	22.5	25.6
ROA	10.2	7.8	8.2	9.5	10.9
<b>Per share</b>					
EPS (HK\$)	0.33	0.25	0.31	0.42	0.57
DPS (HK\$)	0.15	0.12	0.15	0.20	0.27
BVPS (HK\$)	1.36	1.36	1.63	1.88	2.21

Source: Company data, CMBIS estimates

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<b>HOLD</b>	: Stock with potential return of +15% to -10% over next 12 months
<b>SELL</b>	: Stock with potential loss of over 10% over next 12 months
<b>NOT RATED</b>	: Stock is not rated by CMBIS

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