

Lifting PT to HK\$13 - Strong demand and muted float glass expansion

Xinyi Glass (XYG) is one of China's largest and most diversified glass producers. The company reported results on Feb 26, which showed strong sales growth of 14.6% y/y for FY17 (16% y/y for 2H17), due mainly to strong float glass demand and a surge in float glass prices in 2H17. We remain OW and increase our Dec18PT to HK\$13.

- New expansion outside of China.** One of the most positive news is that XYG is planning to add capacity only outside of China. The plan is to add 2 more lines in Malaysia and XYG has signed an agreement in principle with the government of Ontario province in Canada for potentially two more. The positive impact is that XYG is still finding it difficult to find suitable licenses to expand in China (and we believe other operators as well), which we believe should limit industry supply in the foreseeable future. Expansion to Malaysia is mainly to take advantage of the low natural gas costs as well as service the growing SE Asian and Middle East markets. The expansion in North America opens up a new market that was previously too far to be serviced by XYG due to transportation costs.
- Lowering margins but increasing PT to HK\$13.** We lower our FY18 and FY18 earnings estimates to reflect the performance in 2017 (mainly slightly lower GPM as well as higher marketing costs). However, many of the positive developments (such as new float lines being added outside of China) should contribute to earnings only after 2019E. Overall, our long term (to 2025) DCF valuation is increased to HK\$13 (prev. HK\$12) due to the new lines being added outside of China.
- Price, valuation, risks.** Our revised PT implies 10.6x CY19 PE. Key risks are falling demand for construction glass that could result from a cooling property market in China and further weakness in PV glass demand from Europe.

Price: HK\$11.94

Previous: HK\$12.00

(852) 2800-8590

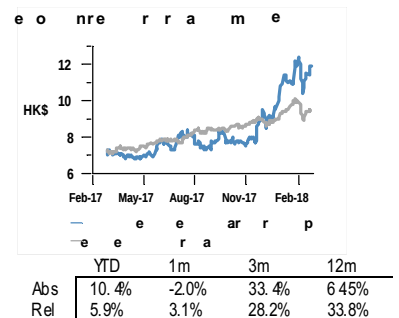
leon.hk.chik@jpmorgan.com

J.P.M. CHIK <GO>

(852) 2800-8528

christine.wang@jpmorgan.com

J.P. Morgan Securities (Asia Pacific) Limited



HK\$ in mn, year-end Dec	FY16A	FY17A	FY18E	FY19E	FY20E
Revenue (HK mn)	12,848	14,281	16,813	19,038	21,641
Operating Profit (HK mn)	3,216	4,014	4,462	4,956	5,453
Operating Profit Margin (%)	0.80	1.00	1.11	1.23	1.36
Revenue Growth (%)	0.40	0.45	0.56	0.62	0.68
Operating Profit Growth (%)	12.1%	14.6%	14.2%	13.2%	13.0%
Operating Profit Margin Growth (%)	4.3%	24.8%	11.2%	11.1%	10.0%
Operating Profit Margin (%)	13.5%	13.6%	12.0%	12.9%	13.5%
Operating Profit Margin (%)	24.8%	25.6%	21.8%	20.0%	20.5%
Operating Profit Margin (%)	1.49	12.0	10.8	9.0	8.8
Operating Profit Margin (%)	3.6	2.6	2.1	1.9	1.0
Operating Profit Margin (%)	12.2	10.5	9.1	8.2	7.3
Operating Profit Margin (%)	3.4%	3.8%	4.0%	5.2%	5.0%

Company Data	
es (mn)	3.68
e (HK mn)	44020
e (mn)	5.62
e (HK)	11.94
D e e	26-e-18
ee l (%)	45.8%
3 - Av l v l (mn)	15.90
3 - Av l v l (HK mn)	165.13
3 - Av l v l (mn)	21.1
H	3126.1
n e R e	.82
e T e n D e	31-Dec-18
e T e (HK)	13.00

See page 11 for analyst certification and important disclosures, including non-US analyst disclosures.

... n es n see s business m nes vee n s ese e s. As esul nves ss ul be e
e mm ve nl nees ul e e be v s e . nves ss ul ns e se s nl sn le
nm n e nvesmen e s n.

Key catalysts for the stock price:	Upside risks to our view:	Downside risks to our view:
1. Strong sales growth in the core business 2. Expansion into new markets 3. Improved operating leverage 4. Strong financial performance	1. Strong sales growth in the core business 2. Expansion into new markets 3. Improved operating leverage 4. Strong financial performance	1. Strong sales growth in the core business 2. Expansion into new markets 3. Improved operating leverage 4. Strong financial performance

Key financial metrics	FY17	FY18E	FY19E	FY20E
Revenues (\$mn)	14,280	16,813	19,038	21,640
Revenue growth (%)	14.6%	14.2%	13.2%	13.0%
TDA (\$mn)	4,699	5,443	6,113	6,864
TDA margin (%)	31.9%	32.4%	32.1%	31.0%
Operating income (\$mn)	4,014	4,462	4,956	5,453
Operating margin (%)	28.1%	26.5%	26.0%	25.2%
EBITDA (\$mn)	6,401	7,359	8,139	8,956
EBITDA margin (%)	44.9%	43.8%	42.8%	41.4%
Net income (\$mn)	1,851	2,139	2,444	2,750
Net income margin (%)	12.9%	12.7%	12.8%	12.7%
EBITDA (\$mn)	6,401	7,359	8,139	8,956
EBITDA margin (%)	44.9%	43.8%	42.8%	41.4%
Debt to equity ratio	0.54	0.51	0.51	0.54
Debt to capitalization ratio	0.29	0.25	0.24	0.23
Return on equity (%)	26%	22%	21%	21%

Key model assumptions	FY17E	FY18E	FY19E	FY20E
Average sales growth (%)	11.8	11.1	10.0	9.0
Operating margin (%)	28.1	26.5	26.0	25.2
EBITDA margin (%)	44.9	43.8	42.8	41.4
Debt to equity ratio	0.54	0.51	0.51	0.54
Debt to capitalization ratio	0.29	0.25	0.24	0.23
Return on equity (%)	26	22	21	21

Source: J.P. Morgan & Co. analysis

Peer valuation comparison

Company Name	Code	Price (TP)	MCAP US\$MM	Vol US\$mn	3M Chg	P/E 17e (x)	PE 18e (x)	ROE (%)	P/B (x)	Yld (%)
H A TAT	3311 HK	10.9	030.0	13.1	5.0	8.0	6.8	22.0	1.4	3.0
D A R	2689 HK	12.8	61.0	36.5	(1.4)	8.9	6.4	21.3	1.8	0.8
A R	2314 HK	8.9	513.0	11.5	(0.6)	-	6.4	13.4	2.4	2.3
XINYI GLASS HOLD	868 HK	11.9	6,150.6	22.8	35.7	12.0	10.8	24.8	2.1	3.4
H A T A	1882 HK	23.4	488.0	5.6	(1.0)	15.2	12.1	18.1	2.5	2.0
K A R D H	148 HK	40.5	553.0	10.1	(10.0)	-	6.4	13.5	0.9	3.2
H A	2128 HK	5.3	209.1	3.4	3.9	6.3	6.0	18.3	1.0	3.5
K A	1888 HK	13.8	543.2	9.0	10.6	9.6	9.2	31.5	2.0	8.1
Average						9.1	7.8	18.9	1.7	4.1

Source: J.P. Morgan & Co. analysis, as of February 26, 2018.

e o a n a a ewnga a m kr t e e

Good opportunities for global expansion. XYG mentioned that the Chinese government is still restricting the capacity of energy consumption industries such as float glass production. The company sees strong demand in North America, which imported over 2.1m tonnes of float glass, wh

Figure 1: Price of float glass in China



u e l mbe .

o e ng g n re wgr m e e t ete t

We lower our FY18 and FY18 earnings estimates to reflect the performance in 2017 (mainly slightly lower GPM as well as higher marketing costs) However, much of the positive developments (such as new float lines being added outside of China) should contribute to earnings only after 2019E. Overall, our long term (to 2025) DCF valuation is lifted to HK\$13 (prev. HK\$12) due to the new lines being added outside of China.

Table 2: Earnings Revisions

Year to Dec (HKDm)	New		Old		Change	
	FY18E	FY19E	FY18E	FY19E	FY18E	FY19E
Tu n ve	16 813	19 038	1 21	20 021	-5.1%	- 49%
ss	6 16	6 962	6 560	433	-6.0%	-6.3%
T	4319	4883	45 3	5 185	-5.6%	-5.8%
e	4 462	4956	4881	5 439	-8.6%	-8.9%
(HKD	1.11	1.23	1.21	1.35	-8.6%	-8.9%
Assumptions						
ss m n	36. %	36.6%	3 .0%	3 .1%	-0.3%	-0.6%

u e . . n es m es

Enterprise price analysis

Enterprise value

valuation that assumes a market risk premium of 6% (based on 10-year government notes in China). We use a Beta of 1.3. Accordingly, WACC is 10.6%. The terminal growth is based on the annual growth rate of the estimate period) subject to a 6% depending on the nature of the industry and

sensitivity to WACC, and the terminal multiple.

	2021E	2022E	2023E	2024E	Terminal
Cash flow estimates					
Operating income	16,813	19,038	21,644	24,346	30,019
Depreciation	4,319	4,883	5,521	6,223	8,449
Amortization	453	426	492	569	86
Debt expense	(2,202)	(2,850)	(3,141)	(3,303)	(3,823)
Change in working capital	1,124	1,230	1,342	1,462	1,840
Free operating CF (FoCF)	2,539	2,236	2,659	3,467	7,639
DCF Parameters					
Discount rate	10%				2.0%
WACC	11.4%				42%
					6.0%
					1.30
Enterprise NPV (10-16E)	55,840				

Table 5: XYG – Revenue mix

HK\$ MM, year-end 31Dec	2015	2016	2017	2018E	2019E	2020E
Au m b l e l s s	3 86	3 48	3 910	4 139	4 358	4 663
Y Y	5.4%	-1.0%	43%	5.9%	5.3%	.0%
%	33.0%	29.2%	26.5%	24.6%	22.9%	21.5%
n s u n l s s	2 652	2 590	2 801	3 116	3 363	3 5 0
Y Y	3.8%	-2.3%	8.1%	11.2%	.9%	6.2%
%	23.1%	20.2%	19.0%	18.5%	1 . %	16.5%
l l s s	4 30	6 1 4	558	8 8 4	10 29 4	12 013
Y Y	10.8%	29.9%	23.0%	1 .1%	16.3%	16. %
%	41.3%	4 .9%	51.3%	52.6%	5 41%	55.5%
l s s	0	0	0	0	0	0
Y Y	41.3%	4 .9%	51.3%	52.6%	5 41%	55.5%
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
l e n l s s	293	339	459	09	1023	1 401
Y Y	-340%	16.0%	35.4%	543%	443%	3 .0%
%	2.6%	2.6%	3.1%	42%	5.4%	6.5%
Total revenue	11,460	12,824	14,728	16,813	19,038	21,647

u e m n . . nes mes

Table 6: XYG – P&L statement

Year-end 31Dec (HK\$MM)	2015	2016	2017	2018E	2019E	2020E
Total Revenues	11,460	12,848	14,728	16,813	19,038	21,647
Y Y n e (%)	5.5%	12.1%	146%	142%	13.2%	13. %
s s l	(8 328)	(8 189)	(9 283)	(10 6 4)	(12 0 6)	(13 4
Y Y n e (%)	2.5%	-1. %	13.4%	14 %	13.4%	13.8%
ss	3 132	4 659	5 444	6 16	6 962	900
Y Y n e (%)	146%	48. %	16.9%	13.3%	12.9%	13.5%
ss n	2 .3%	36.3%	3 .0%	36. %	36.6%	36.5%
A	(1 615)	(1 822)	(2 0 4)	(2 296)	(2 558)	(2 86 4
Y Y n e (%)	-1.4%	12.9%	12.2%	12.3%	11.4%	12.0%
e n me (enses	215	342	3	448	480	486
e n	1 33	3 1 8	3 6	4319	4883	5 521
EBITDA	2,313	3,991	4,699	5,443	6,113	6,864
TDA m n	20.2%	31.1%	31.9%	32.4%	32.1%	31. %
De e n Am n	(580)	(812)	(922)	(1 12 4)	(1 230)	(1 3 42
Y Y n e (%)	-5.2%	40.0%	13.6%	21.8%	9.4%	9.2%
EBIT	1,733	3,178	3,776	4,319	4,883	5,521
T m n	15.1%	24 %	25.6%	25. %	25.6%	25.5%
e n e e s ense	(50)	(	(9	(2	(83	(90
e n l em	3 9	159	31	250	200	1 40
Ass es	31	563	00	26	802	813
ns l sses	0	0	0	0	0	0
e n me e e T es	2 3 9	3 823	4 696	5 22 4	5 803	6 383
Y Y n e (%)	49.3%	60. %	22.8%	11.2%	11.1%	10.0%
T	(266)	(60)	(682)	(62	(8 4	(931
e ve T e	13.3%	16.6%	15.6%	146%	146%	146%
n n e e s s	0	0	0	0	0	0
Net Income	2,113	3,216	4,014	4,462	4,956	5,453
Y Y n e (%)	548%	52.2%	248%	11.2%	11.1%	10.0%
e m n	18.4%	25.0%	2 .3%	26.5%	26.0%	25.2%

u e m n . . nes mes

Table 7: Interim estimates

Year to Dec (HK\$ MM)	1H18E	2H18E	1H19E	2H19E	1H20E	2H20E
T I Revenues	622	919	863	1040	981	1183
ss	252	346	310	385	352	435
T	1836	2483	205	2808	234	315
e n me e e T es	2220	3004	246	3336	213	360
e n me	1896	2566	210	2850	231	313
D l u e (HK	0.4	0.64	0.52	0.1	0.58	0.8
Ratios						
Revenue s l	45.3%	54%	45.3%	54%	45.3%	54%
	36.1%	3.2%	36.0%	3.0%	35.9%	3.0%
T m n	241%	2.0%	240%	2.0%	23.9%	26.8%
	249%	2.9%	244%	2.4%	23.6%	26.5%
YoY						
Revenue	142%	142%	13.2%	13.2%	13.0%	13.0%
	13.3%	13.3%	12.9%	12.9%	13.5%	13.5%
T	144%	144%				

Table 9: XYG – Cash flow statement

Year-end 31Dec (HK\$ MM)	2015	2016	2017	2018E	2019E	2020E
T	1 33	3 1 8	3 6	4319	4883	5 521
De e n n Am n	95	812	922	1 12 4	1 230	1 3 42
n l n es	539	1	2 310	(402	(412	(4 2
T	(228	(266	(60	(682	(62	(8 46
s l m e ns	2 838	3 42	6 401	4359	4939	5 5 46
le en ues	(1 91 4	(1 853	(3 216	(2 20	(2 850	(3 1 41
nves men s n es	2 43	(1 116	(1 2 3	(83	(5	(
e ne es	(50	(	(9	(2	(83	(90
s l m nves n	(1 21	(3 0 46	(4585	(2 8 5	(3 008	(3 239
Free Cash Flow	1,117	696	1,816	1,484	1,932	2,307
D v en s	(608	(1 322	(1 08	(2 020	(2 355	(2 602
mm n ssue	1	0	0	0	0	0
e n n n	(18	2 092	1	63	6	9
n bu n m ne	(25	0	0	0	0	0
s l m n n n	(650	69	(1 530	(1 95	(2 288	(2 52 4
n en s	46	1 465	286	(4 3	(356	(216
s be n n n	831	1 298	2 63	3 0 49	2 5 6	2 220
e ne ne n es	0	0	0	0	0	0
Cash at end	1,298	2,763	3,049	2,576	2,220	2,003

u e m n . . nes mes

Investment Thesis, Valuation and Risks

n (Overweight; Price Target HK\$13.00)

Investment Thesis

We believe Xinyi is China's most diversified glass conglomerate. The defensive auto glass aftermarket business and the advanced low-emission construction glass business continued to do well, with stable growth and steady margins. The key driver for growth in the rest of this year is the recovery in margins for the float glass business. In the past, we have seen peak margins for float glass hit 40% when the market is in short supply. We could see margins recover when demand improves, as new supply has slowed to a trickle since the beginning of 2014.

Valuation

Our Dec-18 PT is based on a DCF valuation that assumes a market risk premium of 6.0% and a risk-free rate of 4.2% (the yield on 10-year government notes in China). We assume a beta of 1.3 (Bloomberg beta is 1.3). Accordingly, WACC is assumed at 11.4%. We estimate free cash flow for XYG until 2025 and assume a terminal growth rate of 2.0%. The terminal growth is based on the annual growth rate expected in 2025 (the final year of the estimate period), subject to a minimum of 2% and a maximum of 6%, depending on the nature of the industry and the level of maturity in China.

Risks to Rating and Price Target

Key downside risks include falling demand for construction glass, which may result from a cooling property market in China, and further weakness in PV glass demand from Europe.

Xinyi Glass: Summary of Financials

Income Statement						Cash Flow Statement					
	FY16A	FY17A	FY18E	FY19E	FY20E		FY16A	FY17A	FY18E	FY19E	FY20E
Revenue	12,848	14,728	16,813	19,038	21,647	Cash flow from operating activities	3,742	6,401	4,359	4,939	5,546
	(8189)	(9283)	(10646)	(12066)	(134)	De e n m n	812	922	1124	1230	1342
Gross profit	4,659	5,444	6,167	6,962	7,900	n es n l	1	2310	(402)	(412)	(442)
A	(1822)	(2045)	(2296)	(2558)	(2864)						
Adj. EBITDA	3,991	4,699	5,443	6,113	6,864	Cash flow from investing activities	(2,969)	(4,489)	(2,803)	(2,925)	(3,148)
D A	(812)	(922)	(1124)	(1230)	(1342)	le en ue	(3138)	(4699)	(3021)	(3166)	(3443)
Adj. EBIT	3,178	3,776	4,319	4,883	5,521	as % of sales	24.4%	31.9%	18.0%	16.6%	16.0%
e nes	(	(9	(2	(83	(90						
Adj. PBT	3,823	4,696	5,224	5,803	6,383	Cash flow from financing activities	769	(1,530)	(1,957)	(2,288)	(2,524)
T	(60	(682	(62	(846	(931	D v en s	(1322)	(108	(2020)	(2355)	(2602)
n nes	0	0	0	0	0	es ssue (e u se	0	0	0	0	0
Adj. Net Income	3,216	4,014	4,462	4,956	5,453	e eb ssue (e	2092	1	63	6	9
Re e	0.80	1.00	1.11	1.23	1.36	Net change in cash	1,542	382	(401)	(274)	(126)
Adj. EPS	0.80	1.00	1.11	1.23	1.36						
DPS	0.40	0.45	0.56	0.62	0.68	Adj. Free cash flow to firm	668	1,785	1,399	1,844	2,150
u	50.0%	45.0%	50.0%	50.0%	50.0%	y/y Growth	(31.0%)	167.1%	(21.6%)	31.8%	16.6%
es us n n	4018	4018	4018	4018	4018						
Balance Sheet						Ratio Analysis					
	FY16A	FY17A	FY18E	FY19E	FY20E		FY16A	FY17A	FY18E	FY19E	FY20E
s n s e u v l e n s	263	3049	256	2220	2003	ss m n	36.3%	30.0%	36.0%	36.6%	36.5%
A n s e e v b l e	23	302	350	391	4515	TDA m n	31.1%	31.9%	32.4%	32.1%	31.0%
n ven es	1321	1698	1938	2194	2485	T m n	24.0%	25.6%	25.0%	25.6%	25.5%
e u en sses	6	113	316	4064	4898	e m n	25.0%	20.3%	26.5%	26.0%	25.2%
Current assets	6,537	7,932	11,188	12,449	13,911						
	12952	16356	1952	1952	2131	R	248%	25.6%	21.8%	20.0%	20.5%
T nves men s	4534	601	6318	6634	6966	R A	142%	148%	13.6%	13.4%	13.5%
e n n u e n sses	4534	601	6318	6634	6966	R	13.5%	13.6%	12.0%	12.9%	13.5%
Total assets	24,022	30,305	35,458	38,655	42,248	A les	142%	13.9%	13.0%	13.4%	13.2%
						e eb u	30.1%	29.6%	25.8%	24.0%	23.1%
e mb n s	3165	2068	2068	2068	2068	e eb TDA	123.1%	115.3%	108.2%	102.2%	942%
bles	89	923	1053	1193	1356						
e s e m l b l e s	2046	2166	2614	3126	351	les Asse s (	0.6	0.5	0.5	0.5	0.5
Current liabilities	6,000	5,157	5,735	6,387	7,175	Asse s u (	1.8	1.0	1.6	1.5	1.5
n - e m eb	4509	6399	6399	6399	6399	n ees ve (	51.9	48.6	5.9	41	5.9
e l n e m l b l e s	45	6842	6905	692	050	e n leve e	688.0%	128.6%	101.4%	98.0%	95.4%
Total liabilities	10,775	11,999	12,640	13,358	14,225	T e	15.9%	145%	146%	146%	146%
e le se u	13181	1823	2249	25228	2954	Revenue	12.1%	146%	142%	13.2%	13.0%
n nes	66	69	69	69	69	TDA	50.9%	10.8%	15.8%	12.3%	12.3%
Total liabilities & equity	24,022	30,305	35,458	38,655	42,248		48.3%	248%	11.2%	11.1%	10.0%
BVPS						Valuation					
	FY16A	FY17A	FY18E	FY19E	FY20E		FY16A	FY17A	FY18E	FY19E	FY20E
y/y Growth	1.0%	38.4%	24.7%	10.9%	10.8%	(	149	12.0	10.8	9.0	8.8
						(	3.6	2.6	2.1	1.9	1.0
e eb (s	4911	5418	5891	624	6463	TDA (	12.2	10.5	9.1	8.2	7.3
						D v en Yel	3.4%	3.8%	4.0%	5.2%	5.0%

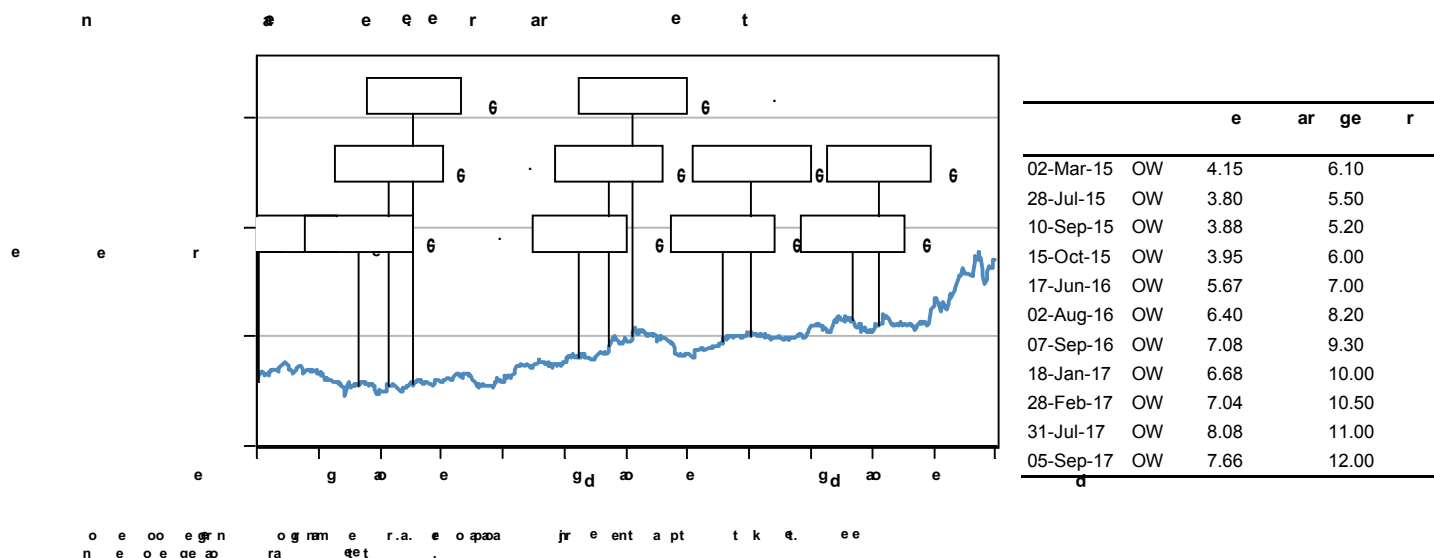
u e m n e s n . . n e s m e s.
e HK n m l l n s (e e e s e . s l e e n s De . - u

Analyst Certification: The research analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. For all Korea-based research analysts listed on the front cover, they also certify, as per KOFIA requirements, that their analysis was made in good faith and that the views reflect their own opinion, without undue influence or intervention.

Important Disclosures

- **Market Maker/ Liquidity Provider (Hong Kong):** J.P. Morgan Securities (Asia Pacific) Limited and/or J.P. Morgan Broking (Hong Kong) Limited and/or an affiliate is a market maker and/or liquidity provider in the securities of Xinyi Glass and/or warrants or options thereon, which are listed or traded on The Stock Exchange of Hong Kong Limited.
- **Client:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients: Xinyi Glass.
- **Other Significant Financial Interests:** J.P. Morgan owns a position of 1 million USD or more in the debt securities of Xinyi Glass.

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan–covered companies by visiting <https://www.jpmm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request. J.P. Morgan’s Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail research.disclosure.inquiries@jpmorgan.com.



The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.

J.P. Morgan ratings or designations: OW = Overweight, N= Neutral, UW = Underweight, NR = Not Rated

Explanation of Equity Research Ratings, Designations and Analyst(s) Coverage Universe:

J.P. Morgan uses the following rating system: Overweight [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Neutral [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Not Rated (NR): J.P. Morgan has removed the rating and, if applicable, the price target, for this stock because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating and, if applicable, the price target, no longer should be relied upon. An NR designation is not a recommendation or a rating. In our Asia (ex-Australia and ex-India) and U.K. small- and mid-cap equity research, each stock's expected

total return is compared to the expected total return of a benchmark country market index, not to those analysts' coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying analyst's coverage universe can be found on J.P. Morgan's research website, www.jpmorganmarkets.com.

Coverage Universe: Chik, Leon: 3SBio (1530.HK), Athenex, Inc. (ATNX), CAR Inc. (0699.HK), CSPC Pharmaceutical Group (1093.HK), China Lesso (2128.HK), China Lodging Group Limited (HTHT), China Maple Leaf Educational Systems Limited (1317.HK), China Medical System (0867.HK), China State Construction (3311.HK), China Travel International Investments HK Ltd (0308.HK), China Yuhua Education Corp (6169.HK), Fu Shou Yuan International (1448.HK), Fufeng Group (0546.HK), Genscript Biotech Corporation (1548.HK), Haitian International Holdings (1882.HK), Johnson Electric Holdings (0179.HK), Kingboard Chemical (0148.HK), Kingboard Laminates (1888.HK), Lee & Man Paper Manufacturing (2314.HK), New Oriental Education (EDU), Nine Dragons Paper Holdings Ltd (2689.HK), PAX Global Technology Ltd (0327.HK), Samsung Biologics (207940.KS), Sino Biopharm (1177.HK), Skyworth Digital Holdings (0751.HK), TAL Education Group (TAL), TCL Multimedia (1070.HK), Techtronic Industries (0669.HK), VTech Holdings (0303.HK), Wasion Group Holdings Ltd (3393.HK), Wuxi Biologics (2269.HK), Xinyi Glass (0868.HK), Xinyi Solar (0968.HK), eHi Car Services Ltd (EHIC)

J.P. Morgan Equity Research Ratings Distribution, as of January 02, 2018

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage	45%	43%	12%
IB clients*	53%	50%	35%
JPMS Equity Research Coverage	44%	46%	10%
IB clients*	70%	66%	54%

*Percentage of investment banking clients in each rating category.

For purposes only of FINRA/NYSE ratings distribution rules, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above.

Equity Valuation and Risks: For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at <http://www.jpmorganmarkets.com>, contact the primary analyst or your J.P. Morgan representative, or email research.disclosure.inquiries@jpmorgan.com. For material information about the proprietary models used, please see the Summary of Financials in company-specific research reports and the Company Tearsheets, which are available to download on the company pages of our client website, <http://www.jpmorganmarkets.com>. This report also sets out within it the material underlying assumptions used.

Equity Analysts' Compensation: The equity research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Registration of non-US Analysts: Unless otherwise noted, the non-US analysts listed on the front of this report are employees of non-US affiliates of JPMS, are not registered/qualified as research analysts under NASD/NYSE rules, may not be associated persons of JPMS, and may not be subject to FINRA Rule 2241 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

Other Disclosures

J.P. Morgan ("JPM") is the global brand name for J.P. Morgan Securities LLC ("JPMS") and its affiliates worldwide. J.P. Morgan Cazenove is a marketing name for the U.K. investment banking businesses and EMEA cash equities and equity research businesses of JPMorgan Chase & Co. and its subsidiaries.

All research reports made available to clients are simultaneously available on our client website, J.P. Morgan Markets. Not all research content is redistributed, e-mailed or made available to third-party aggregators. For all research reports available on a particular stock, please contact your sales representative.

Options related research: If the information contained herein regards options related research, such information is available only to persons who have received the proper option risk disclosure documents. For a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options, please contact your J.P. Morgan Representative or visit the OCC's website at <https://www.theocc.com/components/docs/riskstoc.pdf>

Legal Entities Disclosures

U.S.: JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC. **U.K.:** JPMorgan Chase N.A., London Branch, is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and to limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from J.P. Morgan on request. J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited is a member of the Johannesburg Securities Exchange and is regulated by the Financial Services Board. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong and/or J.P. Morgan Broking (Hong Kong) Limited (CE

number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. **Korea:** This material is issued and distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch, which is a member of the Korea Exchange (KRX) and is regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). **Australia:** J.P. Morgan Australia Limited (JPMAL) (ABN 52 002 888 011/AFS Licence No: 238188) is regulated by ASIC and J.P. Morgan Securities Australia Limited (JPMSAL) (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by ASIC and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai - 400098, is registered with Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231), the Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3990, Facsimile: 91-22-6157 3990 and Website: www.jpmpil.com. For non local research reports, this material is not distributed in India by J.P. Morgan India Private Limited. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **Indonesia:** PT J.P. Morgan Securities Indonesia is a member of the Indonesia Stock Exchange and is regulated by the OJK a.k.a. BAPEPAM LK. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissão de Valores Mobiliários (CVM) and by the Central Bank of Brazil. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 202/03/2017 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) [MCI (P) 059/09/2017], both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of "accredited investors," "expert investors" or "institutional investors," as defined under Section 4A of the SFA. Recipients of this document are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the document. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Saudi Arabia:** J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. **Dubai:** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE.

Country and Region Specific Disclosures

U.K. and European Economic Area (EEA): Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. Further information about J.P. Morgan's conflict of interest policy and a description of the effective internal organisations and administrative arrangements set up for the prevention and avoidance of conflicts of interest is set out at the following link <https://www.jpmorgan.com/jpmpdf/1320742677360.pdf>. This report has been issued in the U.K. only 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 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in their home jurisdiction. **Australia:** This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. **Germany:** This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch which is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. **Hong Kong:** The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: <http://www.hkex.com.hk>. **Korea:** This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Singapore:** As at the date of this report, JPMSS is a designated market maker for certain structured warrants listed on the Singapore Exchange where the underlying securities may be the securities discussed in this report. Arising from its role as designated market maker for such structured warrants, JPMSS may conduct hedging activities in respect of such underlying securities and hold or have an interest in such underlying securities as a result. The updated list of structured warrants for which JPMSS acts as designated market maker may be found on the website of the Singapore Exchange Limited: <http://www.sgx.com>. In addition, JPMSS and/or its affiliates may also have an interest or holding in any of the securities discussed in this report – please see the Important Disclosures section above. For securities where the holding is 1% or greater, the holding may be found in the Important Disclosures section above. For all other securities mentioned in this report, JPMSS and/or its affiliates may have a holding of less than 1% in such securities and may trade them in ways different from those discussed in this report. Employees of JPMSS and/or its affiliates not involved in the preparation of this report may have investments in the securities (or derivatives of such securities) mentioned in this report and may trade them in ways different from those discussed in this report. **Taiwan:** This material is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material

which may give rise to conflicts of interests, unless otherwise disclosed in the "Important Disclosures" in this material. **India:** For private circulation only, not for sale. **Pakistan:** For private circulation only, not for sale. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. **Canada:** The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence. **Dubai:** This report has been issued to persons regarded as professional clients as defined under the DFSA rules. **Brazil:** Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com.

General: Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

"Other Disclosures" last revised January 01, 2018.

Copyright 2018 JPMorgan Chase & Co. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.