

China Sunsine Chemical Holdings Ltd (CSSC SP/CSSC.SI)

Accumulate at the trough

Chen Guangzhi, CFA / 65 6202 1191 / guangzhi.chen@kgi.com

- We re-initiate with an OUTPERFORM rating. Our target price of S\$1.40 is based on DCF model and an 11.6% required rate of return.
- We visited Sunsine's new insoluble sulphur production line located at Dingtao, Shang dong province, in addition to visiting its headquarters and the main plants at Shanxian, Shangdong. We observed that all the plants were running optimally.

Financials & Key Operating Statistics

YE Dec (RMB m)	FY17	FY18	FY19e	FY20e	FY21e
Revenue	1695.9	3283.3	2925.0	3170.4	3569.1
PATMI	341.3	641.3	495.5	536.2	495.7
Core PATMI	341.3	593.3	495.5	536.2	495.7
Core EPS (RMB cents)	70.8	120.7	101.5	109.8	101.5
Core EPS grth (%)	48.6	70.4	-15.9	8.2	-7.5
Core P/E (x)	8.1	4.7	5.6	5.2	5.6
DPS (SGCents)	3.0	5.5	4.1	4.4	4.1
Div Yield (%)	2.7	4.9	3.6	3.9	3.6
Net Margin (%)	12.5	19.5	16.9	16.9	13.9
Gearing (%)		Net cash	Net cash	Net cash	Net cash
Price / Earnings (x)		8.1	4.7	5.6	5.2
Price / Book (x)		10.2	4.8	5.3	4.6
ROE (%)		19.6	27.6	18.6	17.3
					14.2

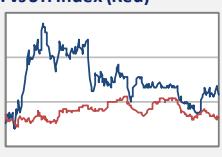
Source: Company Data, KGI Research

Benefiting from the long-term market consolidation. China accounts for 76% of the global rubber chemical production. In 2018, 47 producers supplied 90% of the output to China's market. China's industrial policies continue to promote market consolidation. We thus expect Sunsine, the largest rubber chemical producer in China, to benefit from the ongoing market trend.

High entry barriers reinforce segment integration. Branding recognition in the industry is important in establishing long-term and robust supply and trading relationships with the downstream customers. Furthermore, China's prolonged tightened domestic environmental protection policies have eliminated many companies who fail to meet the required criteria. Meanwhile, banks continue to restrict loans to the chemical industry, especially for capacity expansion.

Raw material prices at the cyclical bottom. The average selling price (ASP) of aniline collapsed after June 2018 and has reached a cyclical low. As a result, this has negatively impacted aniline producers who have high production costs, with many of them reporting thin margins or are even loss-making.

Sunsine has been improving its profitability. Historically, the company has managed to deliver stable profit margins of 20%+ GPM and 10%+ NPM on average. Over the past two years, its GPM and NPM improved to above 30% and 15% respectively. We expect Sunsine to further enhance its

Outperform - Re-initiation	
Price as of 10 Oct 19 (SGD)	1.09
12M TP (\$\$)	1.40
Previous TP (\$\$)	-
Upside (%)	28.4
Performance (Absolute)	
1 Month (%)	3.8
3 Month (%)	0.0
12 Month (%)	13.2
Trading data	
Mkt Cap (\$mn)	532
Issued Shares (mn)	488
Vol - 3M Daily avg (mn)	0.2
Val - 3M Daily avg (\$mn)	0.3
Free Float (%)	38.0%
Perf. vs STI Index (Red)	
	
Major Shareholders	
Success More Group	60.1%
Dimensional Fund Advisor	1.4%
Previous Recommendations	

profitability given its dedicated environmental protection commitment and cost optimisation.

Clean balance sheet with a strong net cash position. Sunsine has managed to operate without debt since 4Q16. Moreover, its cash on hand reached RMB1.0bn in 2016, and most recently RMB1.17bn as of June 2019, equivalent to RMB2.39/share or S\$0.46/share. Sunsine's strong net cash position is an additional competitive advantage, enabling the company to further gain market share by expanding its capacity at its own discretion, and mitigating any pressure from a potential liquidity crunch in the event of a market downturn.

Preparing for capacity expansion in the near term. The government has approved Sunsine's plans to add to another 20k tonnes of TBBS (Phase II) production, which is expected to be installed by the end of 2020. In addition, the company plans to acquire 680 mu of land, equivalent to 453.3k m², in the Shanxian Chemical Zone for future expansion. About 300 mu of this new land purchase, or an equivalent 200k m², is scheduled for another 60k tonnes of insoluble sulphur production lines.

Valuation & Action: Sunsine is currently trading at 5.6x 2019E PE, which we believe undervalues the group's dominant position and growth prospects. We expect Sunsine's performance to bottom out in 2020 as it continually increases its capacity and as ASPs recover. We re-initiate with an OUTPERFORM rating. Our target price of S\$1.40 is based on DCF model with a required rate of return of 11.6%.

Risks: Main risks come from: 1) prolonged environment of low ASPs for both raw materials and end products, 2) unexpected surge of industry capacity in the short-term, and 3) an environmental protection inspection at the company that could result in a temporary reduction of utilisation rates.

Table of Contents

Company overview	3
Investment thesis.....	3
Investment merits.....	6
Assumptions and Valuations	8
Key Risks	8
Financial Summary.....	9
Appendix: Plant visit in September 2019.....	10

Company overview

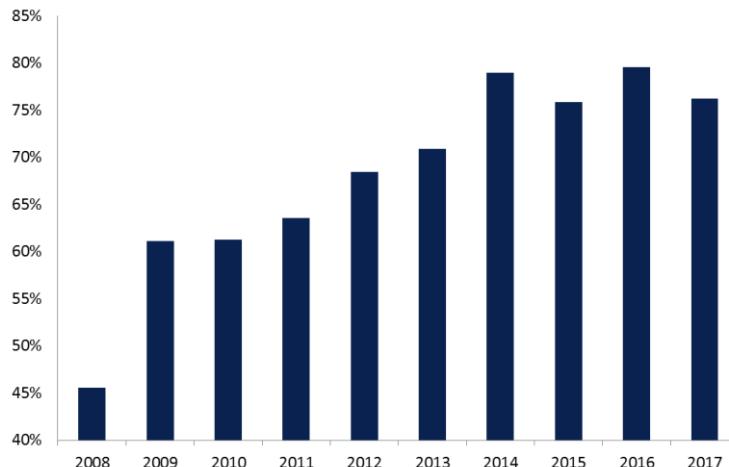
China Sunsine Chemical Holdings Ltd. (Sunsine) is a leading specialty chemical producer. It is the largest producer of rubber accelerators in the world and the largest producer of insoluble sulphur in the People's Republic of China.

- The production plants are located at Shangxian, Weifang, and Dingtao in Shandong Province.
- As of December 2018, the overall capacity was at 172k tonnes, comprising 97k tonnes of rubber accelerators, 30k tonnes of insoluble sulphur, and 45k tonnes of anti-oxidant.
- It has more than 1,000 clients, majority of whom are tyre manufacturers. Currently, Sunsine is supplying two thirds of the global top 75 tyre makers such as Bridgestone, Michelin, Goodyear and Pirelli.

Investment thesis

A market leader benefiting from the long-term industry consolidation. China has been dominating the rubber chemical market in terms of production since 2009. In 2017, they were responsible for 76% of the 16mn tonnes of total global production, the other 24% coming from several major international players namely Flexsys, Lanxess, Agrofert Holding, Nocil, and Kumho Petrochemical. The near-reliance on China's supply has been due mainly to the improvement of clean production technology and synthesis technique, enhancement of product varieties, and proper establishment and standardisation of enterprise and production management.

Figure 1: China's market share of the global rubber chemical industry



Source: China rubber industry yearbook 2017-2018, KGI Research

According to the Rubber Industry Association Rubber Chemical Commission of the PRC, 47 members accounted for more than 90% of the production in the industry as of 2018. In terms of sales, 66.8% came from the top 10 producers, and 84.5% came from the top 20. In terms of production volume, 61.9% and 80.4% was from the top 10 and top 20 respectively. Therefore, the rubber chemical industry has significantly consolidated due mainly to the establishment of the new Environmental Protection Act in 2015. Small and medium producers with obsolete production techniques, singular product mix, and without standardised waste processing facilities have been phased out, benefiting market leaders.

The rubber chemical segment integration fits the national strategic purpose; hence, the central government will continue to maintain the current market status moving forward. In October 2014, the Rubber Industry Power Strategy forecasted total production and sales of 15mn tonnes (7% CAGR) and more than RMB25bn (6% CAGR) by the end of the 13th-Five-Year Plan (2015-2020); the figures are expected to grow to 20mn tonnes and more than RMB30bn by the end of the 14th-Five-Year Plan (2021-2025). Meanwhile, the segment

integration (percentage of sales from the top 10 producers) will reach at least 70% and more than 3 enterprises with RMB2bn of sales will become the top 5 global producers by the end of the 13th-Five-Year Plan; the figures are targeted to increase to 80% and 4 respectively by the end of the 14th-Five-Plan.

Therefore, Sunine takes a dominating role in the industry that controls the major supply globally, with the largest production scale and a relatively complete product mix.

Figure 2: Top 10 rubber chemical producers in China (as of Dec-18)

Name	Sales (RMB bn)	Production ('000 tonnes)
China Sunine Chemical	3.5	154.0
Sennics	2.9	138.0
Yanggu Huatai Chemical	2.1	95.0
Kemai Chemical	2.1	80.0
Red Avenue New Materials	2.0	96.0
Hongsheng Chemical	1.3	12.5
Willing New Materials Technology	1.1	43.0
Stair Chemical & Technology	0.8	36.0
Sinopec Nanjing Chemical Industries	0.7	49.0
Chinasun Specialty Products	0.7	22.0

Source: rubberchem.com.cn, KGI Research

Figure 3: Ranking by product breakdown (as of Dec-18)

Rank	Rubber Accelerator	Anti-oxidant	Insoluble Sulphur
1	China Sunine Chemical	Sennics	China Sunine Chemical
2	Kemai Chemical	China Sunine Chemical	Yanggu Huatai Chemical
3	Willing New Materials Technology	Kemai Chemical	Kailun Chemical

Source: rubberchem.com.cn, KGI Research

High entry barriers further leads to segment integration. There are three main barriers to entry for the industry.

First, branding recognition is important in establishing long-term and robust supply and trading relationships with the downstream customers, mainly the tyre and other rubber product manufacturers. Before tyre companies recognise the supplier, they will discreetly conduct due diligence on the suppliers regarding multiple aspects such as the product quality, production safety, and environment protection (EP). Global tyre companies will follow international standards such as the European Commission's Registration, Evaluation, Authorisation and Restriction of Chemicals. The recognition period will last for one to two years.

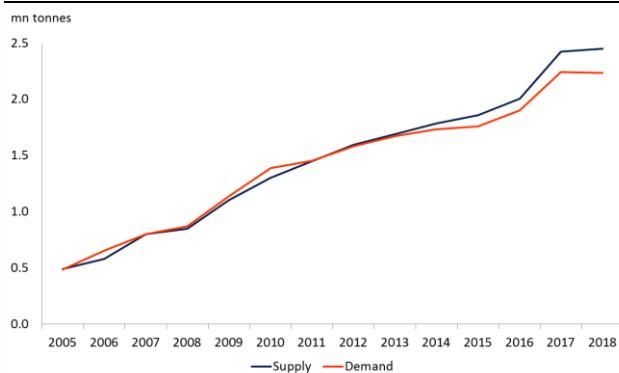
Second, prolonged tightened domestic environmental protection policies phase out companies who fail to meet the required criteria. The new Environmental Protection Act reinforces the regulation on air, water and solid waste treatment (3Ws). The production and processing of rubber chemicals inevitably generate the 3Ws, thus demanding companies to put more effort and capital on EP consistently. Accordingly, companies who fail to comply or cannot afford the costs have been forced to exit the market.

Lastly, every phase of the rubber chemical manufacturing requires enormous amounts of capital input, from product research and development to plant and facility built-up, even to marketing and technological innovations. Meanwhile, banks are also restricting loans to the chemical industry, especially for capacity expansion. Hence, insufficient funding support blocks new entrants.

Raw material price is at the cyclical bottom. Aniline, whose market topped in mid-2018 since the average selling price (ASP) of aniline peaked at over RMB12k/tonne in 1Q18, is one of the primary raw materials in the production of rubber chemicals. The strong demand in 1H18 also resulted in the 19.8k tonnes of aniline import in June 2018 since 2011.

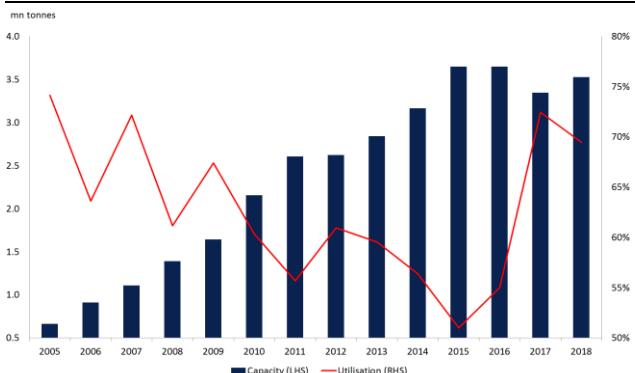
Additionally, although the market has had excess capacity, the sharp jump in utilisation over the past two years amid moderate capacity growth indicates that more rubber chemical producers have resumed their idled production lines. However, since the ASP of aniline nosedived after June 2018 reaching its cyclical low, aniline producers with high production costs are back to thin operational margins or even loss-making. The longer aniline price stays low, the more producers will halt production or even exit the market. Therefore, the low raw material prices are not sustainable. Aniline price saw a slight rebound in late August this year.

Figure 4: Aniline supply and demand dynamics



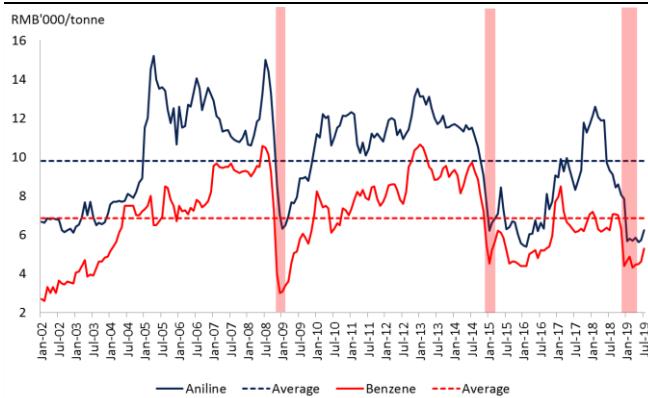
Source: chyxx.com, KGI Research

Figure 5: Utilisation rate surged in 2017 and 2018



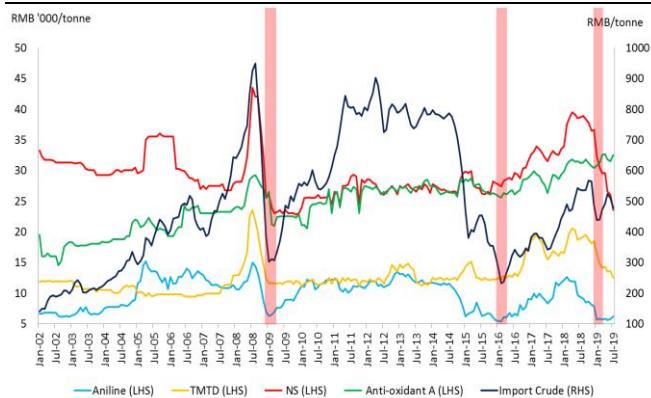
Source: chyxx.com, KGI Research

Figure 6: Aniline and benzene price movements



Source: CEIC, KGI Research

Figure 7: ASP is bottoming



Source: CEIC, KGI Research

Investment merits

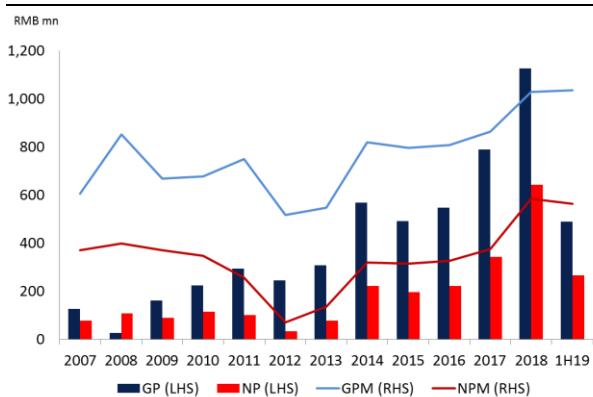
Improving robust profitability. Not only has Sunsine been leading the industry by taking up the largest market share, but it also maintains superior profitability. Historically, the company has managed to deliver stable profit margins with 20%+ GPM and 10%+ NPM on average.

The industry had a big turn in 2016 after the supply side reform – China deleveraged the industrial sector and curtailed overcapacities drastically. More importantly, China has also been implementing stricter environmental protection (EP) regulations. Consequently, a large number of plants, factories, and related companies were forced to shut down during that time.

Sunsine, however, survived and thrived owing to its dedicated EP commitment and its stringent pollution control long before. Furthermore, the company expanded its capacity (10k tonnes of each IS and TBBS) during 2016 and 2017, filling the supply gap. Thereafter, Sunsine reinforced its pricing bargain power. Over the past two years, its GPM and NPM were further lifted to above 30% and 15% respectively.

Compared to its peers' performance, Sunsine is taking the lead as well, its performance mainly attributable to its cost optimisation - the respective 20% and 80% of self-supplied electricity and steam for the main plant in ShanXian, Shangdong Province. Its quality scale and product mix also strengthens its competitiveness.

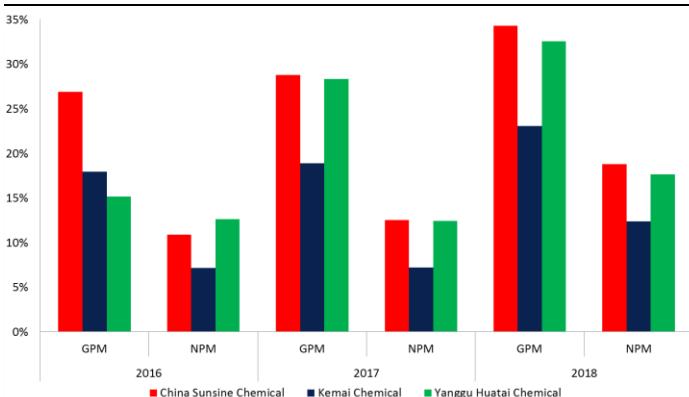
Figure 8: Sunsine's well-performed profitability



*Adjusted NPM was 18.1% after excluding one-time tax credit of RMB48mn in 2018

Source: Company, KGI Research

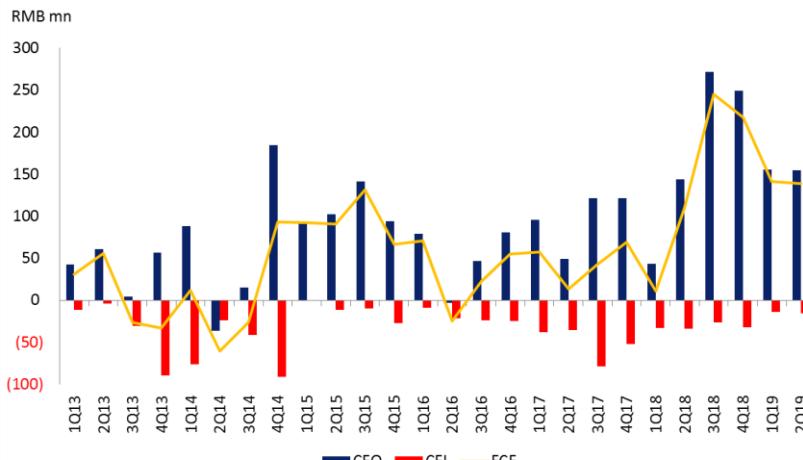
Figure 9: Sunsine outperformed peers profitably



Source: Company, KGI Research

Clean balance sheet with a strong net cash position. Sunsine has managed to operate without debt since 4Q16. Moreover, its cash on hand reached RMB1.0bn in 2016, and most recently RMB1.17bn as of June 2019, equivalent to RMB2.39/share or S\$0.46/share. The amassed war chest has been a result of positive free cash flow (FCF) generation. On average, the maintenance capex (bulk of the cash flow from investment, CFI) is RMB100mn to 150mn p.a. which is fully covered by cash flow from operation (CFO).

Meanwhile, its working capital is fully funded internally by cash. Although this is not an optimal working capital management structure, since the cost of internal funding is higher than the cost of debt, it could buffer the liquidity issues that are prevalent in the industry. Currently, Sunsine's peers are attempting to ramp up capacity in order to obtain more market share. However, funding is the one of the highest hurdles to overcome – domestic banks have been tightening the amount of credit released, especially for traditional manufacturing industries; not only will equity funding through an initial public offering take time, the amount raised is also subject to market sentiments. Therefore, Sunsine's strong net cash position shines through as an additional competitive advantage, enabling the company to further gain market share by expanding its capacity at its own discretion, and mitigating any pressure from a potential liquidity crunch in the event of a market downturn.

Figure 10: Increasing free cash flow

Source: Company, KGI Research

Preparing for capacity expansion in the near term. As of June 2019, the respective annual capacities are: 97k tonnes of rubber accelerator; 30k tonnes of insoluble sulphur; and 45k tonnes of anti-oxidant. Another 20k tonnes of TBBS (Phase II) is pending to be installed by the end of 2020, the approval of which has been granted. Sunine will proceed with the Phase II project if the operation of Phase I (10k tonnes) runs smoothly. Additionally, the company plans to acquire 680 mu of land, equivalent to 453.3k m², located at Shanxian Chemical Zone for future expansion. About 300 mu of this land, or an equivalent 200k m², is scheduled for another 60k tonnes of insoluble sulphur production lines. The preliminary estimation of capex for facilities and construction is about RMB400mn; the capex for land is expected to be RMB45mn to 48mn based on the estimated price of RMB150k to 160k/mu.

We have listed Sunine's peers' scheduled ramp-up of capacity below.

While investors may have concerns regarding the market's ability to absorb total production without putting more pressure on the ASP, we believe that this will not be a market-moving catalyst as it could take more than three to five years to see output from each of the new lines.

Yanggu Huatai has cancelled its plans for 10k tonnes of accelerator NS in April 2019, and the 15k tonnes of accelerator M could only be realised next year onwards.

Kemai's aggressive expansion plans also depend on the success of its IPO, which has already previously failed twice. Hence, there is no specific timeframe that the China Securities Regulatory Commission will approve it. Even if Kemai succeeds in its fund raising efforts, the new plants are still subject to approvals from various authorities, which could take an additional one to two years.

Essentially, competitiveness is dependent on the speed at which a company is able to shorten production times. As a result, we believe that the odds are in favor of Sunine because capital is ready, it has a proven operating track record, and its relationships with the authorities are also well established.

Figure 11: Peers' planned capacity expansion (as of Jun-19)

	('000 tonnes)	Rubber Accelerator	Anti-oxidant	Insoluble Sulphur
China Sunine Chemical	TBBS: 20	N/A	60	
Yanggu Huatai Chemical	M: 15 NS: 10, cancelled	N/A	10	
Kelmai Chemical	TBBS: 30 CBS: 20	6PPD: 30	N/A	

Source: Company, KGI Research

Assumptions and Valuations

We expect ASP to bottom out in 2020 amid the ongoing ramp-up of capacity. We derive a target price of S\$1.40 based on a DCF model with a required rate of return of 11.6%. We re-initiate with an OUTPERFORM rating.

Figure 12: Assumptions and Valuations

	FY19e	FY20e	FY21e
Sales volume (tonnes)			
Accelerators	92,150	101,650	111,150
Insoluble Sulphur	31,800	31,800	31,800
Anti-oxidant	40,500	40,500	40,500
Realised ASP (RMB/tonne)			
Accelerators	21,736	21,931	23,201
Insoluble Sulphur	9,999	10,199	10,811
Anti-oxidant	13,550	13,821	14,512
Sales (RMB m)			
Accelerators	2,003	2,229	2,579
Insoluble Sulphur	318	324	344
Anti-oxidant	549	560	588
RMB mn	FY19e	FY20e	FY21e
Net income	495	536	496
Net capex	110	120	130
Change in net WC	49	78	(37)
Change in borrowing	-	-	-
FCFE	336	338	402
Beta	1.35		
Required rate of return	11.6%		
Growth	0.5%		
FX (SGD/RMB)	5.10		
TP (SGD)	1.40		

Source: KGI Research

Key Risks

Risk	Remark
Market	
Raw materials and end products average selling prices remain weak	Earnings will decline and drag down growth driven by capacity expansion
Overall market capacity increases in the short term	Intensification of industry competition which could lead to a decline in profit margins
Policy	
Environmental protection inspection	Operation halt lowers utilisation and results in a decline in revenues and profits

Financial Summary

YE 31 Dec

INCOME STATEMENT (RMB m)	FY17	FY18	FY19e	FY20e	FY21e
Revenue	2,738	3,283	2,925	3,170	3,569
Cost of sales	(1,950)	(2,157)	(1,989)	(2,156)	(2,463)
Gross Profit	788	1,126	936	1,015	1,106
EBITDA	567	809	703	757	805
Depreciation & Amortisation	90	98	106	111	116
EBIT	477	712	597	646	688
Profit from Operations	1,922	2,744	2,342	2,529	2,716
Net Finance (Expense)/Inc	—	—	—	—	—
Profit before Tax	477	712	597	646	688
Income tax	(136)	(70)	(101)	(110)	(193)
PAT	341	641	495	536	496
PAT Normalized	341	593	495	536	496

BALANCE SHEET (RMB m)	FY17	FY18	FY19e	FY20e	FY21e
Cash and bank balances	500	1,039	1,327	1,670	2,078
Inventories	212	217	328	317	343
Trade receivables	638	691	624	739	711
Others	75	70	66	70	75
Current Assets	1,425	2,016	2,345	2,796	3,208
PP&E	662	691	688	698	713
Others	41	40	39	38	37
Non-current Assets	703	731	727	736	750
Total assets	2,128	2,747	3,072	3,531	3,957
Trade payables	71	63	62	68	74
Borrowings	—	—	—	—	—
Others	314	359	345	365	394
Current Liabilities	385	422	407	433	468
Bank loans	—	—	—	—	—
Non-current liabilities	—	—	—	—	—
Shareholders equity	1,742	2,326	2,665	3,098	3,489
Total Equity	1,742	2,326	2,665	3,098	3,489
Total Liabilities and Equity	2,128	2,747	3,072	3,531	3,957

CASH FLOW STATEMENT (RMB m)	FY17	FY18	FY19e	FY20e	FY21e
Profit before tax	477	712	597	646	688
Depreciation & non cash adjustments	90	98	106	111	116
Change in Working Capital	(83)	(2)	(49)	(78)	37
Income Tax Paid	(100)	(84)	(101)	(110)	(193)
Interest Paid	—	—	—	—	—
Others	2	(22)	(4)	(5)	(5)
CF from operating activities	387	701	548	565	644
Purchase/Disposal of PPE	(209)	(130)	(110)	(120)	(130)
Others	4	4	4	5	5
CF from investing activities	(205)	(125)	(106)	(115)	(125)
Dividends Paid	(47)	(59)	(136)	(106)	(111)
Debt Raised / (Repaid)	—	—	—	—	—
Equity Raised / (Bought Back)	86	(2)	(15)	—	—
Others	10	8	—	—	—
CF from financing activities	50	(52)	(150)	(106)	(111)
Net increase in cash & cash equiv.	231	523	292	344	408
FX effects	(9)	16	—	—	—
Beginning Cash	274	496	1,035	1,327	1,670
Ending Cash	496	1,035	1,327	1,670	2,078

KEY RATIOS	FY17	FY18	FY19e	FY20e	FY21e
Profitability					
Core EPS	70.8	120.7	101.5	109.8	101.5
Core EPS Growth (%)	48.6	70.4	(15.9)	8.2	(7.5)
DPS (SGD Cents)	3.0	5.5	4.1	4.4	4.1
Dividend Yield (%)	2.7	4.9	3.6	3.9	3.6
Profitability					
Gross margin	28.8%	34.3%	32.0%	32.0%	31.0%
EBITDA margin	20.7%	24.6%	24.0%	23.9%	22.5%
Net margin	12.5%	19.5%	16.9%	16.9%	13.9%
ROE	19.6%	27.6%	18.6%	17.3%	14.2%
ROA	16.0%	23.3%	16.1%	15.2%	12.5%
Financial Structure (x)					
Interest coverage	—	—	—	—	—
Total Debt/Equity	—	—	—	—	—
Net Gearing	Net cash				

Appendix: Plant visit in September 2019

Figure 13: New IS production line with 10k-tonne capacity



Source: KGI Research

Figure 14: A corner of the 680 mu land in the fence



Source: KGI Research

Figure 15: One wrapped pack with 25 bags weighs one tonne



Source: KGI Research

Figure 16: Automatic wrapping line with a capacity of 33 to 40 tonne/day



Source: KGI Research

Figure 17: Hydrogen sulphide recycling facility



Source: KGI Research

Figure 18: Exhaust emission and treatment facility



Source: KGI Research

KGI's Ratings

Rating	Definition
Outperform (OP)	We take a positive view on the stock. The stock is expected to outperform the expected total return of the KGI coverage universe in the related market over a 12-month investment horizon.
Neutral (N)	We take a neutral view on the stock. The stock is expected to perform in line with the expected total return of the KGI coverage universe in the related market over a 12-month investment horizon.
Underperform (U)	We take a negative view on the stock. The stock is expected to underperform the expected total return of the KGI coverage universe in the related market over a 12-month investment horizon
Not Rated (NR)	The stock is not rated by KGI Securities.
Restricted (R)	KGI policy and/or applicable law regulations preclude certain types of communications, including an investment recommendation, during the course of KGI's engagement in an investment banking transaction and in certain other circumstances.

Disclaimer

This report is provided for information only and is not an offer or a solicitation to deal in securities or to enter into any legal relations, nor an advice or a recommendation with respect to such securities. This report is prepared for general circulation. It does not have regard to the specific investment objectives, financial situation and the particular needs of any recipient hereof. You should independently evaluate particular investments and consult an independent financial adviser before dealing in any securities mentioned in this report.

This report is confidential. This report may not be published, circulated, reproduced or distributed and/or redistributed in whole or in part by any recipient of this report to any other person without the prior written consent of KGI Securities. This report is not intended for distribution and/or redistribution, publication to or use by any person in any jurisdiction outside Singapore or any other jurisdiction as KGI Securities may determine in its absolute discretion, where the distribution, publication or use of this report would be contrary to applicable law or would subject KGI Securities and its connected persons (as defined in the Financial Advisers Act, Chapter 110 of Singapore) to any registration, licensing or other requirements within such jurisdiction.

The information or views in the report ("Information") has been obtained or derived from sources believed by KGI Securities to be reliable. However, KGI Securities makes no representation as to the accuracy or completeness of such sources or the Information and KGI Securities accepts no liability whatsoever for any loss or damage arising from the use of or reliance on the Information. KGI Securities and its connected persons may have issued other reports expressing views different from the Information and all views expressed in all reports of KGI Securities and its connected persons are subject to change without notice. KGI Securities reserves the right to act upon or use the Information at any time, including before its publication herein.

Except as otherwise indicated below, (1) KGI Securities, its connected persons and its officers, employees and representatives may, to the extent permitted by law, transact with, perform or provide broking, underwriting, corporate finance-related or other services for or solicit business from, the subject corporation(s) referred to in this report; (2) KGI Securities, its connected persons and its officers, employees and representatives may also, to the extent permitted by law, transact with, perform or provide broking or other services for or solicit business from, other persons in respect of dealings in the securities referred to in this report or other investments related thereto; and (3) the officers, employees and representatives of KGI Securities may also serve on the board of directors or in trustee positions with the subject corporation(s) referred to in this report. (All of the foregoing is hereafter referred to as the "Subject Business".)

However, as of the date of this report, neither KGI Securities nor its representative(s) who produced this report (each a "research analyst"), has any proprietary position or material interest in, and KGI Securities does not make any market in, the securities which are recommended in this report.

Each research analyst of KGI Securities who produced this report hereby certifies that (1) the views expressed in this report accurately reflect his/her personal views about all of the subject corporation(s) and securities in this report; (2) the report was produced independently by him/her; (3) he/she does not carry out, whether for himself/herself or on behalf of KGI Securities or any other person, any of the Subject Business involving any of the subject corporation(s) or securities referred to in this report; and (4) he/she has not received and will not receive any compensation that is directly or indirectly related or linked to the recommendations or views expressed in this report or to any sales, trading, dealing or corporate finance advisory services or transaction in respect of the securities in this report. However, the compensation received by each such research analyst is based upon various factors, including KGI Securities' total revenues, a portion of which are generated from KGI Securities' business of dealing in securities.

Copyright 2019. KGI Securities (Singapore) Pte. Ltd. All rights reserved.