INITIATION

Chemicals ▪ Singapore

KGI CHINA DEVELOPMENT FINANCIAL

Jiutian Chemical Group

(JIUC SP/JUTN.SI)

The great chemical industry boom

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- Jiutian Chemical (Jiutian) manufactures chemicals that are used as feedstock for a wide range of applications. The group uses methanol to make dimethylformamide (DMF), a key ingredient used in consumer goods, pharmaceutical, agrochemical products and in the electronics sectors.
- We initiate with an **OUTPERFORM** recommendation and TP of S$0.145, based on 7x FY2022F P/E. We expect record earnings in 2021 driven by favourable industry supply/demand dynamics.

Financials & Key Operating Statistics

YE Dec Rmb	2019	2020	2021F	2022F	2023F
Revenue	1054	1146	1470	1395	1350
PATMI	-248	174	290	191	185
Core PATMI	45	174	290	191	185
Core EPS	2.5	9.6	15.7	10.3	10.0
Core EPS growth (%)	104.5	286.2	63.3	-34.0	-3.2
Core P/E (x)	18.3	4.7	2.9	4.4	4.6
DPS (SGCents)	0.0	0.0	0.8	0.6	0.6
Div Yield (%)	0.0	0.0	9.2	6.9	6.9
Net Margin (%)	-23.6	15.2	19.7	13.7	13.7
Gearing (%)	14.4	Net Cash	Net Cash	Net Cash	Net Cash
Price / Book (x)	2.7	1.6	1.1	1.0	0.8
ROE (%)	-82.5	33.2	39.4	22.0	18.6

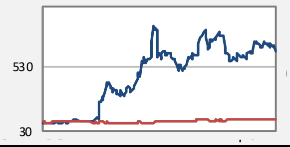
Source: Company Data, KGI Research

Outperform - Initiation

Price as of 14 May 21 (SGD)	0.091
12M TP ($)	0.145
Previous TP ($)	-
Upside, incl div (%)	58.9
Trading data	
Mkt Cap ($mn)	181
Issued Shares (mn)	1,988
Vol - 3M Daily avg (mn)	96.1
Val - 3M Daily avg ($mn)	9.3
Free Float (%)	71.9%
Major Shareholders	
Anyang Longyu	25.3%

Performance (Absolute)	
1 Month (%)	-8.1
3 Month (%)	-13.3
12 Month (%)	600.0

Perf. vs STI Index (Red)



Previous Recommendations	
19-Nov-20	Not Rated
21-Aug-20	Not Rated

Company review. Jiutian is a China-based chemical company located in Henan province. The group is favourably located in China's coal belt, allowing it to enjoy cost advantages over other China-based DMF producers due to easier access to coal-based raw materials. The group produces DMF as its main product, a universal solvent used in petrochemicals, acrylic fibre/natural leather, pharmaceutical, electronics and in agrochemicals. It has a total production capacity of 150,000 tonnes of DMF.

2020 financial review: A turnaround story. Jiutian is now the second largest DMF producer in China after one of its largest competitors ceased operations last year. As a result of lower supply, DMF prices surged in 2020 despite the pandemic, with prices rising by as much as 34% YoY to RMB 5,983. The group posted a 9% YoY increase in 2020 sales to RMB 1.15bn and net profit of RMB 173mn, a significant turnaround from losses of RMB 279mn in 2019.

1Q2021 financial update. The group has started the year on a strong footing. 1Q2021 revenue rose 120% YoY to RMB 439mn while net profit surged 3,150% YoY to RMB 90mn. Its gross profit margin of 31% for the quarter is the highest since 2006, a significant improvement from the 7% gross profit margin in 1Q2020.

DMF prices still strong as China's economy soars. DMF prices currently trade at around RMB11,000 per tonne, driven by China's strong and sustained recovery. In 1Q2021, Jiutian achieved an average selling price (ASP) for DMF and Methylamine of RMB 9,344 per tonne and RMB 9,272 per tonne respectively, which were 98% YoY and 38% YoY higher.

Capacity expansion will be the key driver. Jiutian is in the midst of finalising an expansion plan that comprises a new 100,000 tonnes methylamine plant next to its existing 120,000-tonne methylamine/DMF facility. The expansion is to help meet rising demand, as well as maximise utilisation of existing DMF capacity. The expansion plan is expected to take two years to complete and become fully operational, while capex is in the range of RMB250-300mn. Jiutian has sufficient internal resources to fund the required capex. Confirmation of this project is likely in the next few months, and as a conservative measure, we have not factored this into our three-year financial forecast.

New demand drivers. While Jiutian's products are predominantly used for industrial purposes, there is also another key market that is providing a boost to its business. The group produces a product called Monomethylamine (MMA), a versatile building block used in various applications such as for lithium batteries. Lithium batteries are witnessing strong demand due to the accelerating adoption of electric vehicles (EV) around the world (Tesla being EV's poster child).

Valuation & Action: We initiate Jiutian with an Outperform recommendation and a S$0.145 Target Price. Our TP is based on 7.0x P/E to its FY2022F EPS of RMB 10.3 cents (based on 5.0 SGD/RMB).

First dividend since 2008. Last Friday, Jiutian announced a S$0.0035 interim dividend for 1Q2021, the first time it gave out a dividend since 2008. As a result, we have assumed full-year dividend of S$0.0084 for FY2021F and S$0.0063 for FY2022-23F, based on a 30% payout ratio. This translates to an implied yield of 9% for this year and 7% for FY2022-23F.

Risks: Decline in ASP of its two main products, DMF and methylamine, is a key risk to earnings. Rising raw material costs, driven by a surge in coal prices, will impact profit margins.

Contents

Jiutian has grown over the last 18 years and over two major economic cycles.

Long-term growth is driven by China's industrial demand.

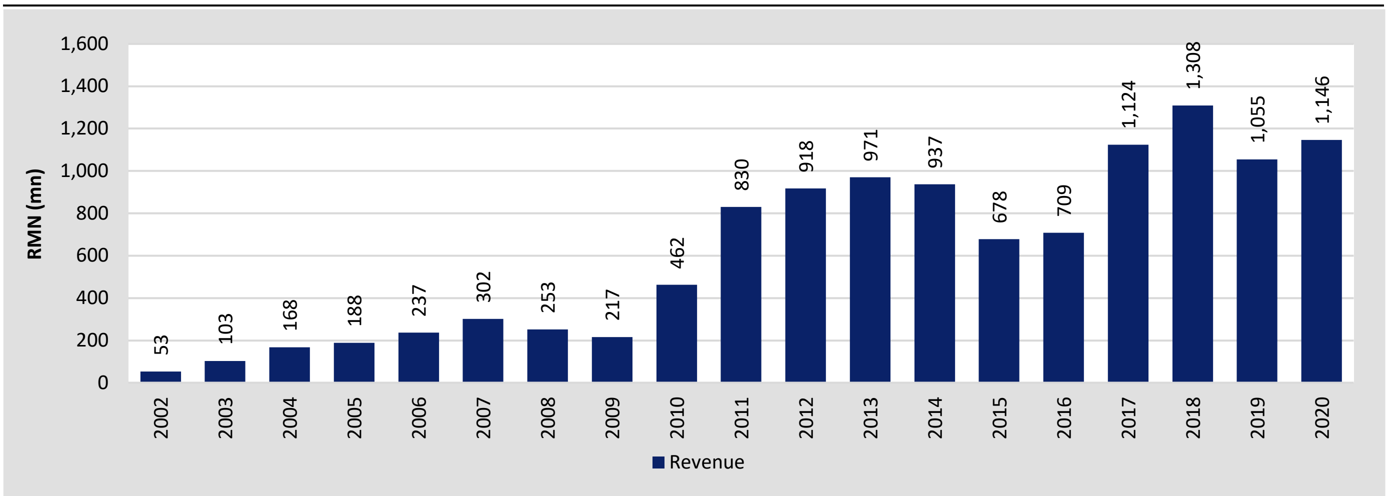
Financial review

Jiutian derives most of its revenue from the manufacture and sale of DMF (57% of 2020 sales) and Methylamine (39% of 2020 sales). Total revenue has grown 22x from RMB 53mn in 2002, to RMB 1,146mn in 2020. Over the past 20 years, there were two downcycles, the first during the global financial crisis in 2008-2009, the second in 2015-2016 when there was a slowdown in the wider Chinese economy.

Since the onset of Covid-19, China's economy has performed above expectations given its early control of the pandemic, and as such, demand for chemicals have remained robust. Jiutian's net profit of RMB 159mn in 2020 is a company record, and we forecast 2021 to even be better.

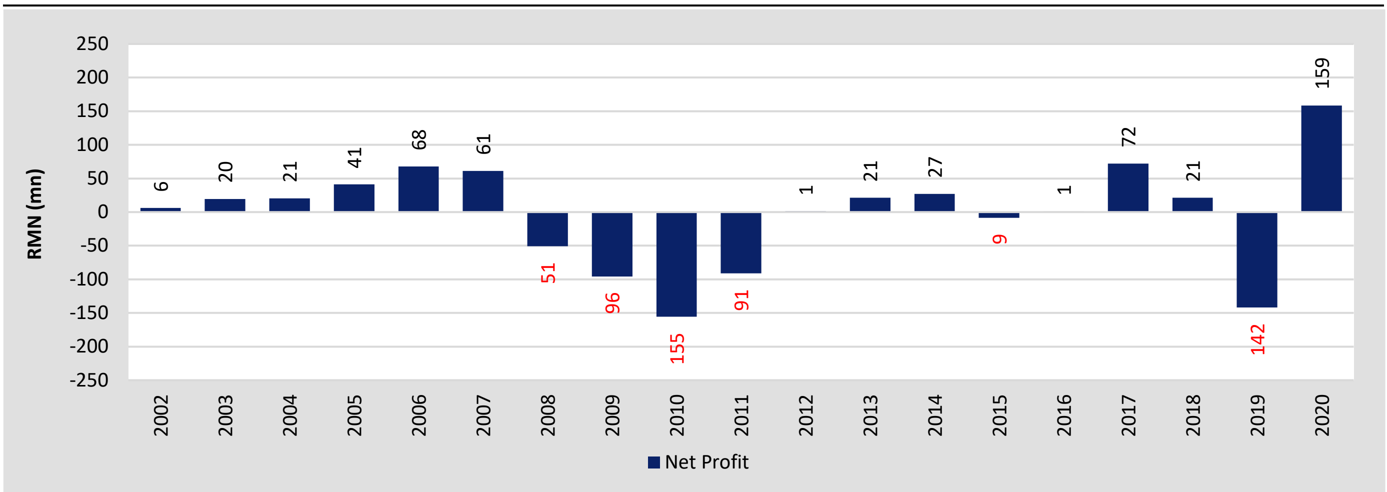
Jiutian currently has 150,000 tonnes of DMF/Methylamine capacity and is in the midst of finalising an expansion plan to add 100,000 tonnes of capacity. The approval process may take 2-3 months from now, and another 2 years for the facilities to be completed and fully operational. We have not factored in the additional 100,000 tonne capacity in our forecasts.

Figure 1: Revenue trend (RMB mn), 2002-2020



Source: Bloomberg, KGI Research

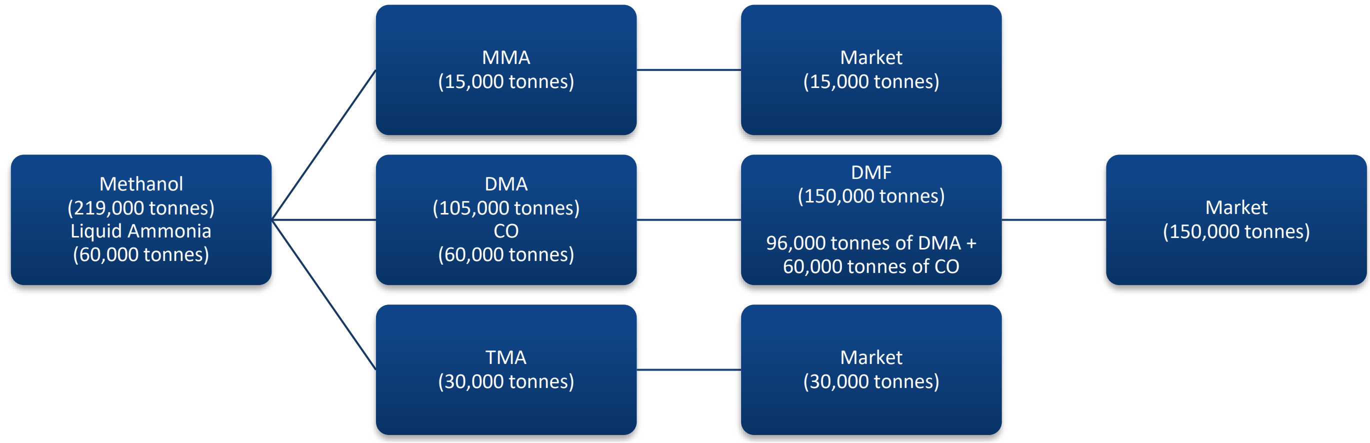
Figure 2: Net profit trend (RMB mn), 2002-2020



Source: Bloomberg, KGI Research

Upside from other chemical production (See production flow chart below). Jiutian has an annual capacity of 15,000 tons to produce Monomethylamine (MMA), which in turn is used for Pyrrolidone. Pyrrolidine is used as a raw material for lithium batteries. The company also produces 30,000 tonnes of Trimethylamine (TMA), which is used in Choline Chloride (for animal feed use). Other minor uses of TMA are as an electronic chemical (cleaning agent for panel) and for surface treatment materials.

Figure 3: Jiutian's production flow



Source: Company, KGI Research

Forecasts and valuation

While we expect DMF prices to remain above historical averages, we forecast raw material prices to rise due to higher commodity prices in general.

DMF and Gross Profit Margin forecasts

We forecast DMF prices of RMB 9,800, RMB 9,300 and RMB 9,000 in FY2021F, 2022F and 2023F, respectively. The lower DMF price factors in upcoming DMF capacity entering the market from 2022 onwards. (read our industry review section below).

Gross profit margins are forecasted to improve this year due to robust ASP, and we have assumed Jiutian to achieve 28% gross margins in FY2021F before settling at around 22-24% gross margins in FY2022-23F. These levels of gross margins will be in line with peers.

S$0.145 Target Price. We assign a 7.0x P/E multiple to its FY2022F EPS of RMB 10.3 cents to derive a target price of RMB 0.723 or S$0.145 based on a 5.0 SGD/RMB exchange rate.

Peer comparison

Figure 4: Peer comparison table

Bloomberg Code	Stock	Market Cap (local currency bn)	1M Return	3M Return	1Y Return	Price to Sales (Forward)	Price to Earnings (Forward)	Gross Margin (%)	Operating Margin (%)	Net Margin (%)	ROE (%)	ROA (%)
JIUC SP	JIUTIAN CHEMICAL GROUP LTD	0.2	-4.0%	-12.0%	630.8%	0.6	3.1	24.0	21.3	15.2	56.8	21.8
Singapore												
CSSC SP	CHINA SUNSINE CHEMICAL HLDGS	0.5	-9.7%	5.2%	37.8%	0.7	7.1	25.7	13.7	9.4	8.3	7.2
China												
600426 CH	SHANDONG HUALU HENGSHENG-A	60.9	4.0%	-23.1%	118.9%	3.3	14.7	21.4	16.7	13.7	18.6	14.2
000830 CH	LUXI CHEMICAL GROUP CO LT-A	30.0	5.0%	9.9%	109.4%	1.3	10.6	15.8	9.1	4.7	13.7	5.8
002109 CH	SHAANXI XINGHUA CHEMICAL -A	5.2	3.1%	49.1%	68.8%	NA	NA	19.0	12.9	11.0	8.4	7.6

Source: Bloomberg, KGI Research

Industry review - chemical industry upcycle is underway

China's rising chemical prices

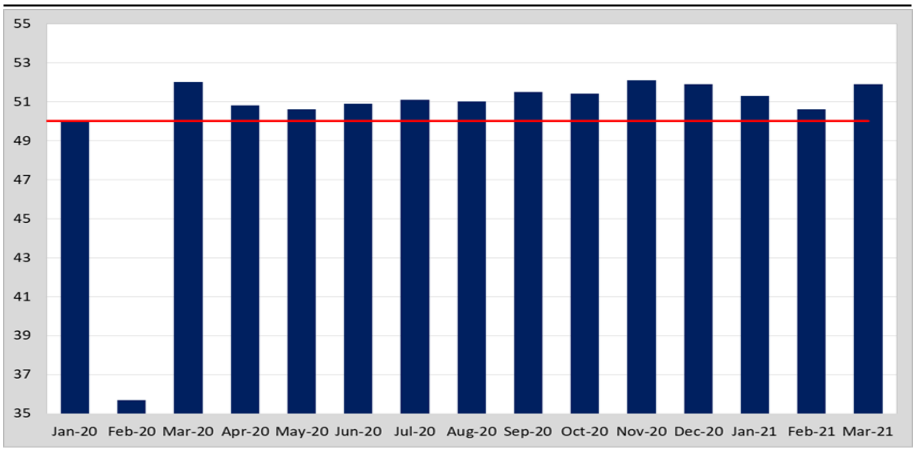
Chemical product prices bottomed out in May 2020, and the acceleration of the industry upswing started in 4Q20. The major driver behind the chemical industry upcycle is the resumption of work or normalisation of economic growth after the containment of COVID-19 in March and April. As shown in Figure 4, China's manufacturing PMI displayed a V-shape rebound in March 2020 and has stayed above 50 since then. However, the demand-pull dynamic due to economic expansion only partially explains the strong ongoing price appreciation.

Another more important reason which explains the upcycle of chemical prices: expansionary monetary stimulus. Following in the footsteps of other countries that have implemented accommodative monetary policies during the COVID-19 pandemic, China did the same. In fact, China started to loosen credit much earlier in the second of 2018 when trade tensions with the US surfaced. As shown in Figure 5 and 6, credit impulse is a leading indicator of the cyclicality of the chemical PPI. On average, the upcycle of chemical prices lags 12 to 18 months behind the upcycle of the credit impulse.

We expect the current upcycle in commodities to last at least for two more quarters, based on China's credit impulse.

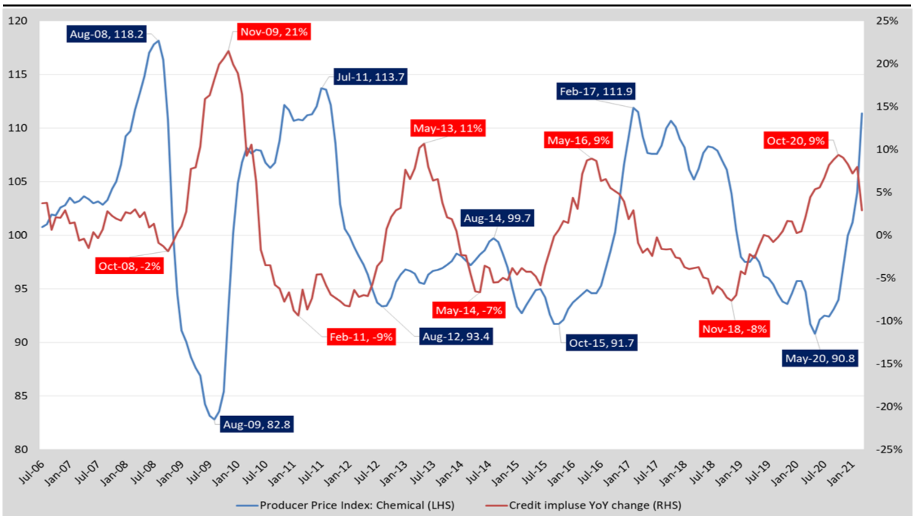
The recent cycle of credit impulse seems to top out in October 2020. This implies that chemical PPI is expected to top out in late 2021 or early 2022. **Therefore, we can expect that the strong price appreciation will last for two more quarters.**

Figure 5: China manufacturing PMI during COVID period



Source: Bloomberg, KGI Research

Figure 6: Correlation between Chemical Producer Price Index and China's Credit impulse



Previous year = 100

Source: National Bureau of Statistics, Bloomberg, KGI Research

Figure 7: Cyclical time lag

Credit impulse			Chemical producer price index			Time lag	
Bottom	Peak	Duration (months)	Bottom	Peak	Duration (months)	Credit impulse bottom-to-PPI bottom (months)	Credit impluse peak-to-PPI peak (months)
Oct-08	Nov-09	13	Aug-09	Jul-11	24	10	20
Feb-11	May-13	28	Aug-12	Aug-14	25	19	16
May-14	May-16	25	Oct-15	Feb-17	17	17	10
Nov-18	Oct-20	24	May-20	Current	12	19	6

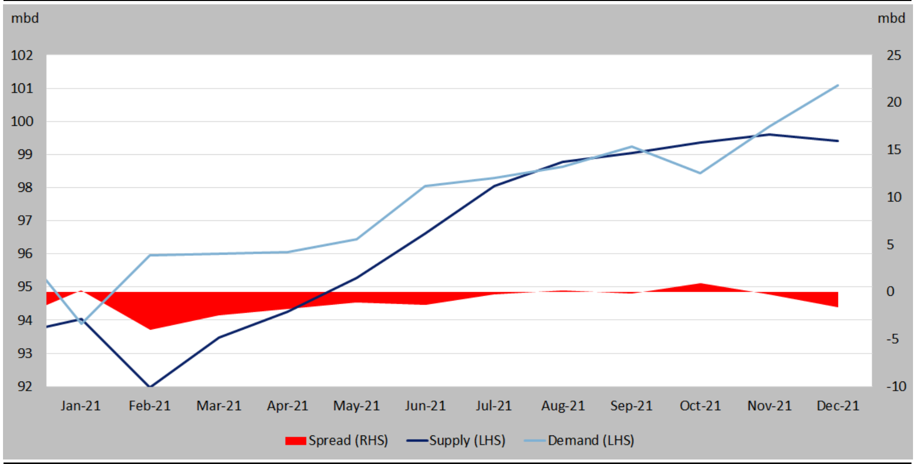
Source: National Bureau of Statistics, Bloomberg, KGI Research

Oil and coal are two major sources of production costs. These commodities have been rising and are above pre-pandemic levels.

Raw material costs such as crude oil and coal adding fuel into the fire

Crude oil is the primary source of production for most chemical products as crude oil is the raw material used to refine and produce other derivative petrochemical products while petroleum is one of the sources to maintain production. With the gradual reopening of economies and the resumption of production and business activities, crude oil demand has steadily recovered. Although OPEC+ has decided to ease output cuts starting in May, oil demand growth is expected to outpace the speed of unwinding of production cuts, implying buoyant oil prices that will likely last at least for another two more quarters. Eventually, high oil prices will be partially embedded in the inflated selling prices.

Figure 8: World liquid fuel supply and demand dynamics

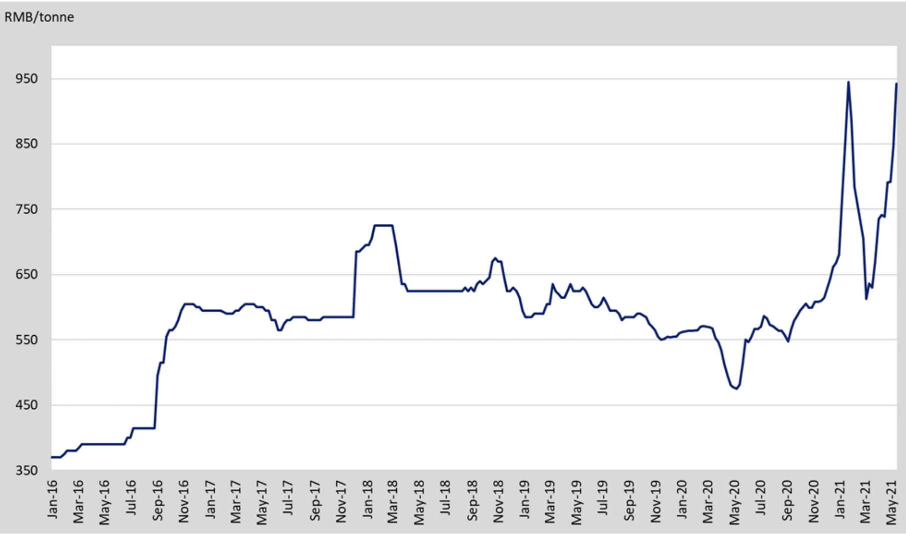


Source: Bloomberg, KGI Research

Coal is another main source of energy which is pushing production costs higher. After entering the winter season, China's demand for coal surged in 4Q20. However, due to geopolitical factors, China has sharply cut down imported coal from Australia during the peak demand period. The blockage of the Suez Canal last month also caused a ripple effect that led to tightening of the global shipping sector, resulting in soaring freight rates. Both factors of demand-pull due to more supply for power generation and cost-push due to skyrocketing freight rates are propelling coal prices higher.

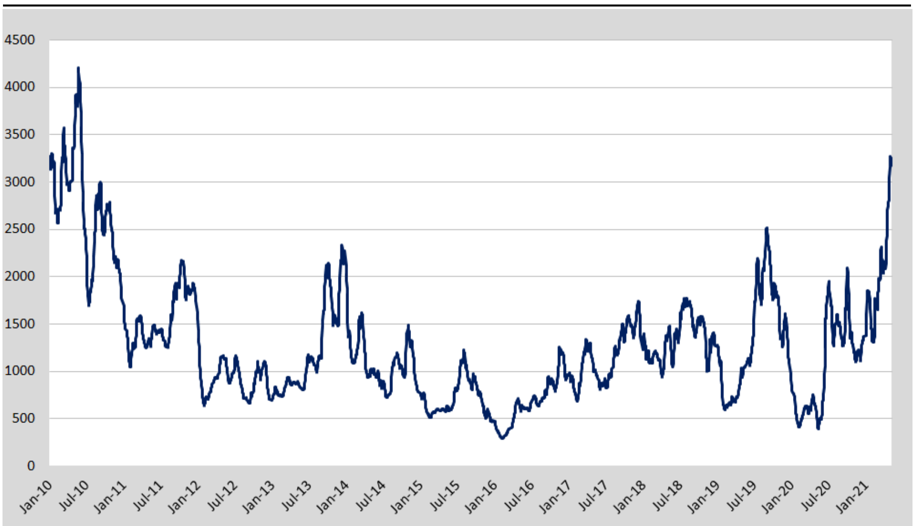
Coal is not only used for power generation, but also for heating. In the process of producing significant amounts of chemical products, heat is required. China still heavily relies on coal rather than natural gas to generate heat. Prices of thermal coal, the main type of coal to generate power and heat, hit a multi-year high recently. Therefore, it will also factor into higher ASPs for chemical products.

Figure 9: China thermal coal price almost doubled since September 2020



Source: Bloomberg, KGI Research

Figure 10: Baltic Dry Index hit a 11-year high as of May 2021



Source: Bloomberg, KGI Research

Major chemical companies have announced 300,000 tonnes of new capacity by the end of 2021. However, not all will be fully utilised.

China's DMF supply and demand overview

China's overall domestic DMF capacity was 960,000 tonnes with an average utilisation rate of 72% in 2020. The total actual production reached 690,000 tonnes in 2020. The expected total effective capacity of DMF in 2021 is 880,000 tonnes as some plants are under maintenance. However, there will be another 300,000 tonnes of new capacity coming into the market by the end of 2021 and more in the following years.

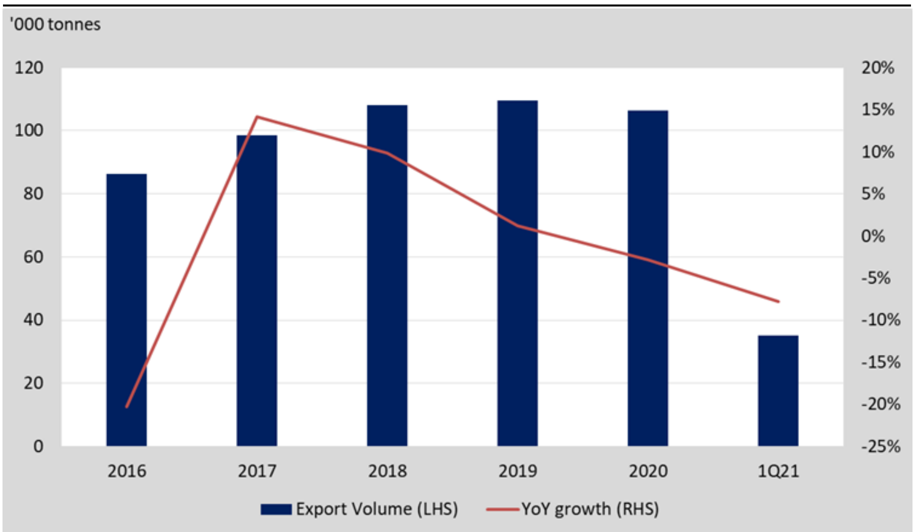
Figure 11: Major DMF producers and related capacity

Company	Current DMF capacity (tonnes)	Planned DMF capacity ramp-up (tonnes)
Hualu Hengsheng (600426 CH)	330,000	150,000
Jiutian Chemical	150,000	
Luxi Chemmical (000830 CH)	150,000	200,000 (commence operation by the end of 2021)
Shaanxin Xinhua Chemistry (002109 CH)	100,000	
Shandong Jinmei Riyue Chemical Industry	100,000	
Yangzi BASF	40,000	
Eastman Chemical (Nanjing)	40,000	
Henan Junhua Development	30,000	
China XLX Fertiliser (Jiujiang)		300,000 (New, 100,000 is expected to commece operation by the end of 2021)
HEILONGJIANG ZN CONTROL ENGINEERING		180,000 (New)
Inner Mongolia Xinyuan Jiangshan Chemical		100,000 (Resumption)
Total	**940,000**	**930,000 (Estimated 300,000 by the end of 2021)**

Source: KGI Research

The total domestic demand for DMF in China has been stabilizing at around 600,000 tonnes per annum. Export volume averages at around 100,000 tonnes. Hence, the overall demand is about 700,000 tonnes per annum.

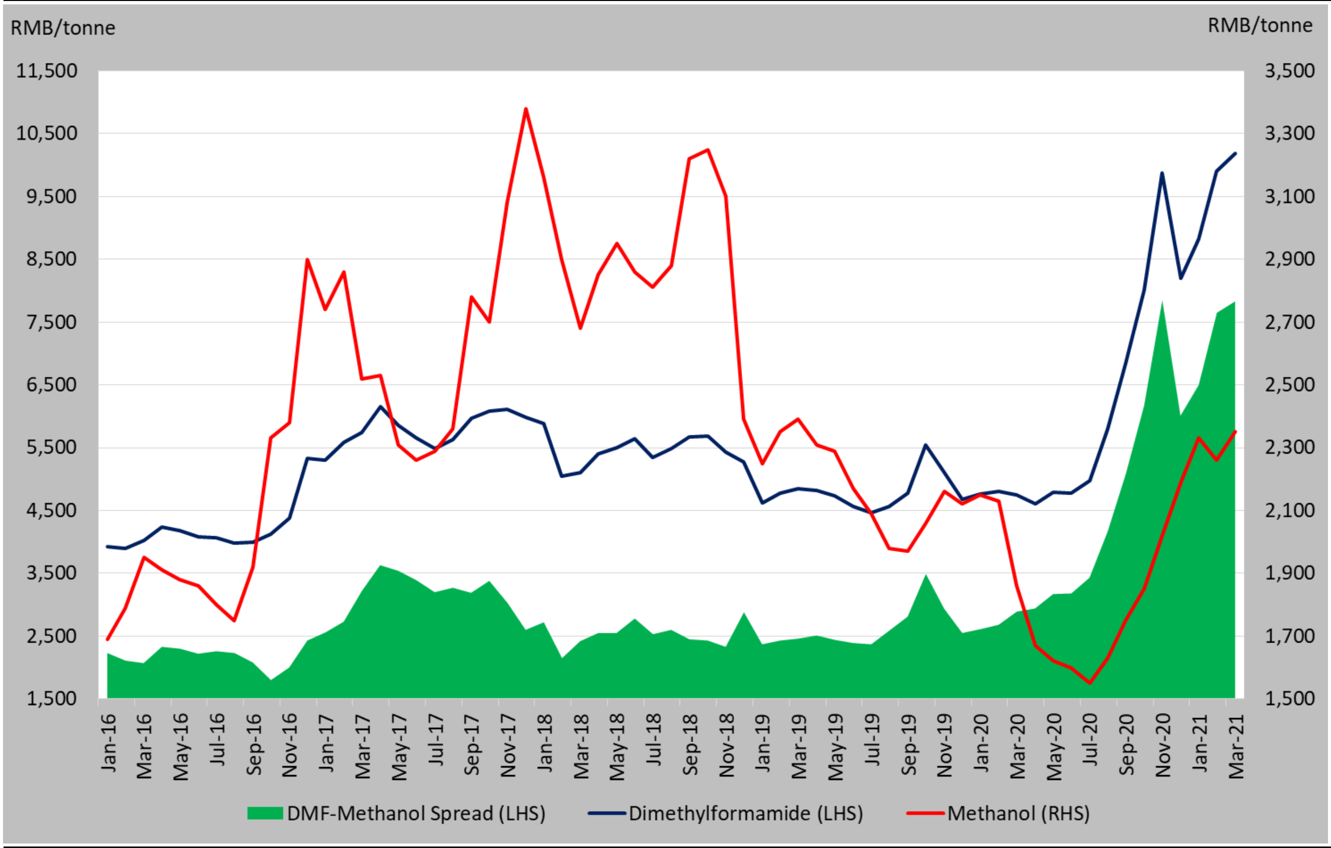
Figure 12: China's DMF export volume and YoY growth



Source: KGI Research

DMF prices growth outpacing the raw material prices growth. DMF prices have been breaking record highs while methanol prices have yet reached the previous highs. The widening spread benefits DMF producers as profit margins are higher.

Figure 13: DMF and Methanol prices have surged together but the spread have widened



Source: CEIC, KGI Research

Company background

Jiutian has been listed on the SGX since 2006. Its major shareholder is a key Chinese state-owned enterprise in Henan Province.

Long operating history

Jiutian Chemical Group has been listed on the SGX since May 2006. It opened its second DMF/methylamine facility capable of producing 120,000 tonnes in 2H17, making it the second largest producer of such products in China. However, performance of the group was negatively impacted by the downturn in demand caused by the global financial crisis in 2008. In 2011, a subsidiary of Henan Energy and Chemical Industry Group (HNEC), Anyang Chemical Group (Anhua), became the major shareholder by taking a 27.6% stake in the group. Jiutian's market capitalisation reached a peak of US$650mn in 2007 prior to the onset of the global financial crisis.

Major business units

The group has four subsidiaries and associated companies that operate in Henan province, China.

- **Anyang Jiutian Fine Chemical Co (100% owned)** produces DMF and methylamine. This subsidiary is capable of producing 150,000 tonnes of DMF or 150,000 tonnes of methylamine.

- **Henan Herunsheng Isotope Technology (45% interest)** develops isotope technology, and produces and trades Oxygen 18 and deuterium depleted water. Capable of producing 140kg of Oxygen 18 and 1,700 tons of deuterium depleted water. The financial results of Henan Herunsheng are consolidated into Jiutian's financial statements given that Jiutian has control of 80% of the voting rights of this entity.

- **Anyang Jiulong Chemical (49% interest)** manufactures industrial steam and electricity. The remaining 51% of Anyang Jiulong Chemical is owned by Henan Energy and Chemical Industry Group Co (HNEC), one of China's most significant coal mining companies. To date, Anyang Jiulong has completed the construction of two 130 tonnes per hour steam boilers, two 10,000 tonnes methanol storage tanks, a 400 tonnes per hour distilled water station, two 25,000 kilo watts per hour power station and a 20,000 tonnes DMAC plant.

- **Anyang Jiujiu Chemical Technology Co (74% interest)** manufactures sodium hydrosulfite. Although Jiutian has a 74% interest, management has concluded that the group has no control but only significant influence. Hence, Anyang Jiujiu is classified as an associated company and earnings from this business is reflected as contribution from associates in the P&L. This plant is capable of producing 140,000 tonnes of sodium hydrosulfite. It also produces key feedstock for the production of sodium hydrosulfite including sulfur dioxide, sodium matabisulfite and sodium formate.

Financials

YE 31 Dec

INCOME STATEMENT Rmb	2019	2020	2021F	2022F	2023F
Revenue	**1,054.5**	**1,146.3**	**1,470.0**	**1,395.0**	**1,350.0**
Cost of sales	(979.6)	(871.5)	(1,029.0)	(1,088.1)	(1,053.0)
Gross Profit	**74.9**	**274.8**	**441.0**	**306.9**	**297.0**
Other operating income/(expenses)	150.3	20.9	0.0	0.0	0.0
Selling and distribution	(22.7)	(14.0)	(26.5)	(25.1)	(24.3)
Admin	(23.6)	(21.6)	(22.1)	(20.9)	(20.3)
Profit from Operations	**178.9**	**260.1**	**392.5**	**260.9**	**252.5**
Finance income/(expenses)	(7.9)	(7.4)	(6.6)	(6.3)	(6.1)
Share of JV results	(146.8)	(9.5)	0.0	0.0	0.0
Exceptionals/Investment income	(293.6)	(0.7)	0.0	0.0	0.0
Profit before Tax	**(269.4)**	**242.4**	**385.9**	**254.6**	**246.4**
Income tax	(9.5)	(69.3)	(96.5)	(63.6)	(61.6)
Non-controlling interests	30.5	0.6	0.1	0.1	0.1
PATMI	**(248.4)**	**173.7**	**289.5**	**191.0**	**184.9**
PATMI Normalized	45.1	174.4	289.5	191.0	184.9

BALANCE SHEET Rmb	2019	2020	2021F	2022F	2023F
Cash and cash equivalents	400.8	454.1	703.1	843.5	949.9
Trade and other receivables	475.5	665.1	853.0	809.5	783.4
Inventory	24.0	38.9	46.0	48.6	47.0
Other current assets	0.0	0.0	0.0	0.0	0.0
Current Assets	**900.3**	**1,158.1**	**1,602.1**	**1,701.6**	**1,780.4**
Property, plant and equipment	208.4	209.5	219.5	229.5	239.5
Other non-current assets	84.7	67.2	69.1	71.0	73.0
Non-current Assets	**293.1**	**276.7**	**288.6**	**300.5**	**312.5**
Total assets	**1,193.4**	**1,434.8**	**1,890.7**	**2,002.1**	**2,092.8**
Trade and other payables	423.8	502.6	593.5	627.6	607.3
Borrowings (current)	444.1	344.3	441.5	419.0	405.5
Other current liabilities	22.5	59.9	115.9	83.1	81.1
Current Liabilities	**890.4**	**906.8**	**1,151.0**	**1,129.7**	**1,093.9**
Borrowings (non-current)	0.0	0.0	0.0	0.0	0.0
Other non-current liabilities	2.1	5.1	5.1	5.1	5.1
Non-current liabilities	**2.1**	**5.1**	**5.1**	**5.1**	**5.1**
Shareholders equity	302.2	524.7	736.6	869.4	996.0
Non-controlling interests	-1.3	-1.9	-2.0	-2.1	-2.2
Total Equity	**300.9**	**522.9**	**734.6**	**867.3**	**993.8**
Total Liabilities and Equity	**1,193.4**	**1,434.8**	**1,890.7**	**2,002.1**	**2,092.8**

CASH FLOW STATEMENT Rmb	2019	2020	2021F	2022F	2023F
Net income before tax	(269.4)	242.4	385.9	254.6	246.4
Depreciation & non cash adjustments	336.7	23.1	5.5	5.1	4.9
Change in Working Capital	8.9	(125.8)	(104.0)	75.0	7.4
Income Tax Paid	(7.2)	(3.2)	(40.4)	(96.5)	(63.6)
Interest Paid	(7.9)	(7.4)	(6.6)	(6.3)	(6.1)
CF from operating activities	**61.2**	**129.0**	**240.3**	**231.9**	**189.0**
Purchase/Disposal of PPE	(20.6)	(6.3)	(10.0)	(10.0)	(10.0)
Other CFI	0.0	0.0	0.0	0.0	0.0
CF from investing activities	**(20.5)**	**(10.9)**	**(10.0)**	**(10.0)**	**(10.0)**
Dividends Paid	0.0	0.0	(77.7)	(58.2)	(58.2)
Other Cash from Financing	0.0	0.0	0.0	0.0	0.0
CF from financing activities	**32.8**	**5.7**	**19.6**	**(80.8)**	**(71.8)**
Net increase in cash & cash equiv.	73.5	123.0	249.1	140.4	106.4
FX effects	0.0	(0.8)	(0.8)	(0.8)	(0.8)
Beginning Cash	63.3	136.7	259.7	508.8	649.2
Ending Cash	**400.9**	**454.1**	**703.1**	**843.5**	**949.9**

KEY RATIOS	2019	2020	2021F	2022F	2023F
Profitability					
Core EPS	2.5	9.6	15.7	10.3	10.0
Core EPS Growth (%)	104.5	286.2	63.3	(34.0)	(3.2)
DPS (SGD Cents)	–	–	0.8	0.6	0.6
Dividend Yield (%)	–	–	9.2	6.9	6.9
Profitability					
Gross margin	7.1%	24.0%	30.0%	22.0%	22.0%
EBITDA margin	17.0%	22.7%	26.7%	18.7%	18.7%
Net margin	-23.6%	15.2%	19.7%	13.7%	13.7%
ROE	-82.5%	33.2%	39.4%	22.0%	18.6%
ROA	-20.8%	12.1%	15.3%	9.5%	8.8%
Financial Structure (x)					
Interest coverage	22.6	34.9	59.3	41.5	41.5
Total Debt/Equity	1.5	0.7	0.6	0.5	0.4
Net Gearing	0.1	-0.2	-0.4	-0.5	-0.5

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.

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