6 March 2020 Greater China

EQUITIES

Greater China Consumer - Food services
Look forward to 2021

Key points

- Restaurant remains fragmented but hot pot remains popular.
- Leading condiment players keep consolidating with pricing power.
- Initiate on Haidilao and Angel Yeast. Haidilao, Fuling Zhacai and Angel Yeast are our top picks.

The China restaurant and condiment industries are in the sweet spot with likely high-single-digit growth over the next three years. With rising health consciousness and brand awareness, we expect the branded names will consolidate the market share. We are initiating coverage of Haidilao and Angel Yeast. Along with Fuling Zhacai, they are our top picks in this sector. We believe Haidilao's high valuation is justified by fast store expansion and high-quality mgmt. Fuling's channel inventory destock is coming to the end, and we expect it will resume growth from new channels and new products. For Angel Yeast, we expect overseas expansion and Yeast Extract will drive sales growth and margins will expand on price hikes, better product mix and higher operating efficiency.

Restaurant remains fragmented but hot pot remains popular

China's restaurant sector will see a material NP impact in 1H20 as many restaurants have faced temporary store closures amid COVID-19. That said, we expect the impact to be transitory and the industry will continue to deliver high-single-digit growth p.a. in the long run. While it's hard to predict when it will normalize, we now estimate 1H20 NP for covered restaurants will decline 30-45% YoY. Given the industry is highly fragmented, chain operators have ample room to consolidate the market given scale advantage and mature operations. Cuisine-wise, we are positive on hot pot as it's in the sweet spot to gain share from other cuisines given changing demographics, a flexible menu offering and interactive dining experience. We prefer market leaders with strong NP growth potential and Haidilao is our top pick in the space.

Restaurants' GPM to normalize in 2H20

We expect restaurants' GPM may trend down in 1H20 before normalizing in 2H20 as restaurants gradually resume operations. We believe the animal protein cost pressure will gradually ease in 2020, given we expect the hog price reflection point will occur in 2H20. The broiler price is likely to rebound in 2Q20 due to supply chain disruptions in 1Q20 amid COVID-19. Based on our analysis, a 10% meat protein price change could result in a 6%/15%/17% OP change for YUMC, XiabuXiabu and Haidilao.

Leading condiment players keep consolidating with pricing power

The China condiment industry could enjoy high-single-digit industry growth over the next three years. Channel-wise, the 2B channel benefits from both a strong restaurant industry and delivery growth though there are near-term hiccups. On the other hand, we expect the 2C channel will benefit from the steady consumption upgrade trend and multi-category expansion. We believe both Fuling Zhacai and Angel Yeast will consolidate the market on the back of the consumption upgrade trend. We expect the leading players will demonstrate pricing power to pass through the raw materials pressure to consumers.

Top picks

Restaurants: Haidilao is our top pick. Maintain OP on XiabuXiabu given new strategies to rejuvenate growth. Maintain N on YUMC due to the moderating SSSg trend.

Condiments: Fuling Zhacai and Angel Yeast are our top picks. Maintain OP on Haitian due to market consolidation and fast oyster sauce growth. Maintain N on Yihai due to raw materials cost pressure and high valuation.

Inside

Restaurants

Condiments

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HK/China consumer valuation table

Fig 1 Valuation comp table – Consumer Discretionary

Company Name	Code	Price (lcy/sh)	Rating	TP (lcy/sh)	Upside (%)	Mkt Cap US$m	P/E (x) 2019E	P/E (x) 2020E	P/B (x) 2019E	P/B (x) 2020E	ROE (%) 2019E	ROE (%) 2020E
Department stores												
Golden Eagle	3308 HK	7.93	OP	12.70	60%	1,722	9.7	8.4	1.7	1.6	18.8	19.7
Lifestyle	1212 HK	7.50	OP	14.30	91%	1,397	6.9	6.8	2.9	2.5	48.0	39.3
Luxury												
Samsonite International	1910 HK	13.00	OP	21.20	63%	2,390	13.7	10.7	1.2	1.1	11.7	12.6
Prada	1913 HK	25.60	OP	30.50	19%	8,577	30.6	43.8	2.5	2.6	8.4	5.8
Chow Tai Fook	1929 HK	6.65	OP	9.50	43%	8,596	14.5	15.3	2.2	2.1	14.3	13.9
Luk Fook	590 HK	19.40	OP	25.80	33%	1,431	7.6	9.8	1.1	1.0	14.5	10.8
Chow Sang Sang	116 HK	9.22	OP	17.00	84%	791	6.5	6.5	0.6	0.5	8.9	8.5
Sportswear												
Anta Sports	2020 HK	64.10	OP	80.00	25%	22,634	28.8	20.5	7.7	6.0	30.0	33.0
Li Ning	2331 HK	20.60	OP	25.80	25%	6,727	36.8	26.0	6.5	5.5	19.4	22.8
Topsports	6110 HK	9.10	OP	11.20	23%	7,094	NA	18.8	NA	4.7	nmf	24.9
Cosmetics												
Sa Sa	178 HK	1.47	Neutral	1.90	29%	587	123.4	37.0	2.0	1.9	1.6	5.3
L' Occitane	973 HK	14.44	OP	23.00	59%	2,729	17.3	15.4	2.2	2.0	13.2	13.5
Shanghai Jahwa	600315 CH	26.58	UP	20.00	-25%	2,587	47.5	49.2	2.8	2.7	6.2	5.7
Home appliance												
GOME	493 HK	0.84	UP	0.40	-52%	2,358	NA	NA	1.2	1.3	-7.9	-9.4
Suning	002024 CH	9.54	Neutral	13.90	46%	13,028	276.6	234.3	1.0	0.9	0.4	0.4
Haier Electronics	1169 HK	22.75	OP	25.60	13%	8,532	13.8	12.1	2.1	1.9	16.4	16.5
Haier Smart Home	600690 CH	17.64	OP	20.50	16%	16,457	14.6	12.5	2.3	2.0	17.1	17.1
Midea Group	000333 CH	54.50	OP	64.00	17%	54,416	15.3	13.1	4.0	3.3	27.1	27.5
Gree	000651 CH	59.99	Neutral	59.00	-2%	51,648	13.3	12.2	3.4	2.9	27.3	25.7
Hangzhou Robam	002508 CH	31.90	Neutral	27.70	-13%	4,408	19.6	16.9	4.4	3.8	23.8	24.1
Home improvement												
Man Wah	1999 HK	5.46	Neutral	5.30	-3%	2,643	17.2	15.8	3.4	2.9	20.1	19.7
OEM												
Shenzhou	2313 HK	99.80	OP	117.00	17%	19,866	25.9	20.7	5.4	4.8	22.1	24.5
Stella Intnl	1836 HK	9.93	OP	15.90	67%	1,037	8.9	8.4	1.1	1.0	11.9	12.4
Pacific Textile	1382 HK	5.10	OP	6.40	37%	935	8.3	9.0	2.2	2.2	26.8	24.8
Li & Fung	494 HK	0.66	OP	1.50	135%	714	9.4	5.4	0.4	0.3	4.0	6.7
Yue Yuen	551 HK	18.78	Neutral	24.00	28%	3,776	13.4	11.0	0.9	0.9	7.0	8.5
Tourism												
China Int'l Travel Service	601888 CH	79.17	OP	132.00	67%	22,154	35.9	26.7	7.6	6.4	23.6	26.1
China CYTS Tours	600138 CH	10.56	OP	14.10	34%	1,106	13.3	12.8	1.1	1.0	9.0	8.6
Restaurant and supply chain												
YUM China	YUMC US	44.77	Neutral	39.60	-12%	16,824	24.4	29.4	5.5	5.0	24.0	17.9
Café de Coral	341 HK	17.10	OP	22.90	34%	1,284	22.0	19.4	2.9	2.9	13.3	15.1
Xiabu Xiabu	520 HK	7.92	OP	9.40	19%	1,126	21.2	21.8	3.1	2.9	15.4	13.8
Haidilao	6862 HK	32.30	OP	40.00	24%	22,131	66.8	58.1	14.5	12.0	23.9	22.7
Gourmet Master	2723 TT	96.20	Neutral	97.00	1%	569	17.0	17.6	1.7	1.6	16.4	9.7
Yihai	1579 HK	55.20	Neutral	46.50	-16%	7,504	64.4	48.8	18.4	14.2	32.3	32.8
Haitian	603288 CH	103.75	OP	83.30	-20%	40,345	55.2	45.2	16.9	14.2	33.4	34.1
Fuling Zhacai	002507 CH	28.82	OP	34.50	20%	3,377	35.4	31.0	7.8	6.5	23.8	22.9
Angel Yeast	600298 CH	30.12	OP	41.60	40%	3,775	27.5	24.7	5.0	4.3	18.6	17.9
TCI	8436 TT	235.50	Neutral	255.00	8%	911	15.1	15.5	4.1	3.6	32.0	24.4
Education												
EDU	EDU US	134.20	OP	163.00	22%	21,261	46.6	35.8	8.1	6.6	18.0	20.4
TAL	TAL US	58.31	OP	62.70	8%	34,504	70.6	219.0	12.7	12.4	21.7	5.7
Hong Kong China Consumer Discretionary ex Suning							**27.5**	**26.6**	**4.6**	**4.0**		

Source: Bloomberg, Macquarie Research, November 2019. Prices as of 3rd March 2020

Fig 2 Valuation comp table – Consumer staples

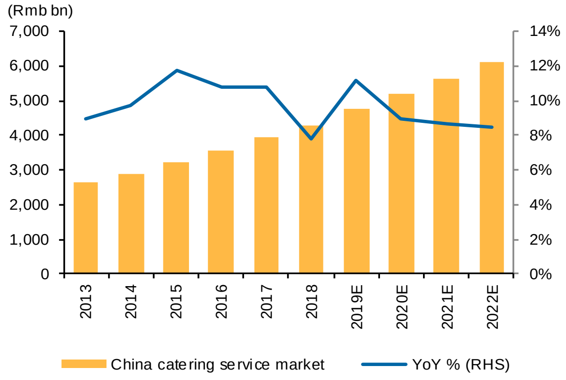
Company Name	Code	Price (lcy/sh)	Rating	TP (lcy/sh)	Upside (%)	Mkt Cap US$m	P/E (x) 2019E	P/E (x) 2020E	P/B (x) 2019E	P/B (x) 2020E	ROE (%) 2019E	ROE (%) 2020
Grocery retailers												
Sun Art	6808 HK	9.92	OP	11.20	14%	12,447	29.8	31.3	3.5	3.3	12.3	11.
Yonghui	601933 CH	9.08	UP	7.00	-22%	13,681	43.3	32.3	4.3	4.0	10.2	12.
President Chain Store	2912 TT	295.00	Neutral	295.00	0%	10,290	29.1	27.7	8.3	7.8	29.1	29.
Taiwan Familymart	5903 TT	218.00	OP	266.00	22%	1,619	27.9	24.2	8.4	7.7	31.0	33.
Consumer staples												
Want Want China	151 HK	6.10	Neutral	7.00	15%	9,889	19.6	17.4	4.4	4.2	23.3	24.
Dali Foods	3799 HK	5.13	UP	4.20	-18%	9,375	16.0	15.3	3.6	3.8	23.9	24.
Tingyi	322 HK	14.06	Neutral	15.70	12%	10,522	24.0	23.2	3.5	3.5	14.8	15.
WH Group	288 HK	8.05	OP	10.80	34%	15,388	11.7	11.2	1.7	1.6	15.8	14.
Shuanghui	000895 CH	34.11	Neutral	27.30	-20%	17,198	20.3	18.8	8.1	7.6	41.2	41.
Uni-President China	220 HK	8.02	OP	11.00	37%	4,674	21.4	19.5	2.3	2.3	10.8	11.
Uni President Enterprises	1216 TT	72.00	OP	81.30	13%	13,895	21.5	20.0	3.7	3.5	17.5	18.
Hengan	1044 HK	59.30	OP	85.00	43%	9,185	16.2	14.5	3.5	3.2	22.5	23.
Moutai	600519 CH	1113.00	OP	1253.00	14%	203,534	32.0	26.4	10.1	8.3	34.8	34.
Yanghe	002304 CH	97.33	Neutral	112.00	18%	21,235	20.1	19.1	4.0	3.6	20.7	19.
Tsingtao H	168 HK	40.30	Neutral	44.50	12%	7,892	33.8	34.4	2.8	2.7	8.7	8.
Wuliangye	000858 CH	124.37	Neutral	141.00	15%	69,787	27.8	22.1	6.5	5.5	25.2	27.
CRB	291 HK	36.25	UP	30.80	-14%	15,717	35.9	39.7	5.8	5.2	16.8	13.
Budweiser APAC	1876 HK	23.30	OP	29.60	28%	40,559	35.7	41.9	4.0	3.9	10.0	9.
Dairy & Infant formula and supply chain												
China Modern Dairy	1117 HK	0.96	OP	1.90	98%	808	4.8	4.3	0.8	0.7	16.4	17.
China Mengniu - Restricted	2319 HK	28.45				14,484	15.1	25.7	3.2	2.9	23.4	11.
Bright dairy & Food Co., Ltd	600597 CH	10.96	UP	8.00	-27%	1,981	26.3	24.8	2.4	2.3	9.4	9.
Inner Mongolia Yili Industries	600887 CH	29.85	Neutral	27.70	-7%	26,564	27.1	27.8	6.0	5.5	23.0	20.
Health & Happiness	1112 HK	33.70	OP	36.00	7%	2,853	16.1	14.1	3.3	2.8	22.9	22.
Yashili	1230 HK	0.60	Neutral	0.92	53%	354	23.6	24.3	0.5	0.4	1.9	1.
Greatview	468 HK	2.98	OP	5.20	74%	514	9.4	8.8	1.4	1.4	15.4	16.
HK China Consumer Staple - Average ex Yashili							**23.8**	**22.9**	**4.6**	**4.2**		

Source: Bloomberg, Macquarie Research, November 2019. Prices as of 3rd March 2020

Restaurants

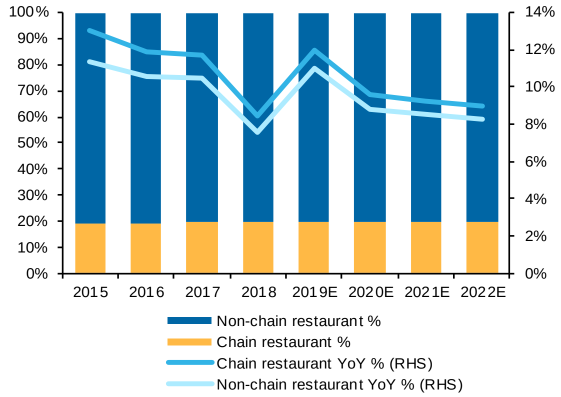
According to Frost & Sullivan, China's catering service industry grew 8% YoY in 2018 and is expected to maintain high-single-digit per annum growth in the coming five years. The industry remains highly fragmented where non-chain operations account for 80% of the market. This echoes the mid-single-digit revenue contribution from the top 100 restaurants. That said, concentration is quite high among the top 100 brands where the top 30 accounted for 75% of sales in 2018. Fast food and full service have the biggest share, while hot pot is the smallest among the top 30 brands. Against a highly fragmented market backdrop, we expect to see more market consolidation from chain operators on the back of their scale advantage and mature management system.

Fig 3 China catering industry growing at high-single digits per annum



Source: Frost & Sullivan, Macquarie Research, March 2020

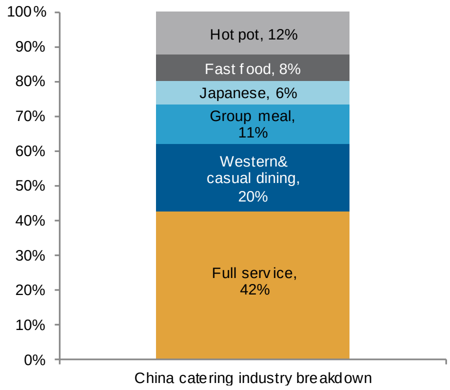
Fig 4 Chain restaurants only account for c.20% of the market



Source: Frost & Sullivan, Macquarie Research, March 2020

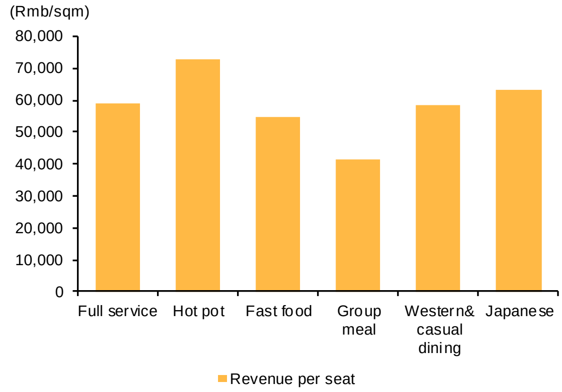
Similar to the top 30 restaurant breakdown, full service is also the biggest category with 42% share for the overall market. In terms of revenue per seat per year, hot pot comes out on top at Rmb72,800 followed by Japanese's Rmb62,300 then full service's Rmb59,000. Hot pot and fast food enjoyed the fastest YoY revenue per seat growth in 2018, while full service saw a single-digit YoY decline. We believe categories that can satisfy the fickle consumer preference and category restaurant leaders will outperform in the competitive catering restaurant industry.

Fig 5 China catering industry breakdown by cuisine type



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

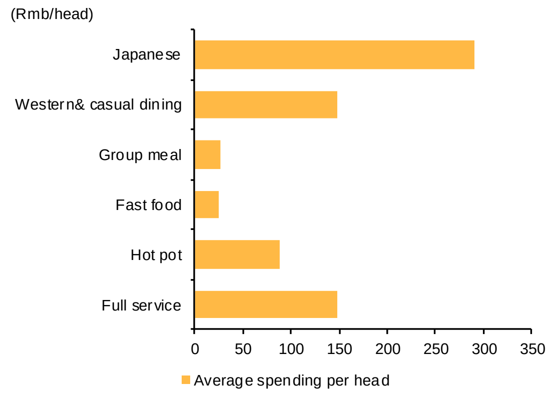
Fig 6 Hot pot generates the highest revenue per seat



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

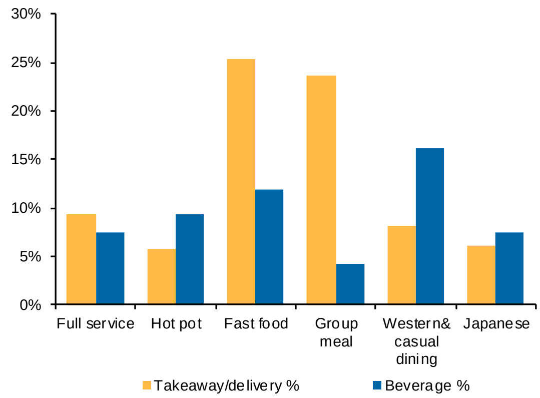
Cuisine types that require table side service have the highest average spending per head; at the same time, they also have the lowest table turns. On the contrary, group meal and fast food rely on fast table turn to drive sales and tend to have a lower average spending per head. These fast table turn cuisine types also rely on takeaway/delivery along with the dine-in business. Evidently, Japanese cuisine has the highest average spending per head at Rmb291, while fast food is the lowest at Rmb25 in 2018, per China Hospitality Association.

Fig 7 Japanese cuisine has the highest average spending



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

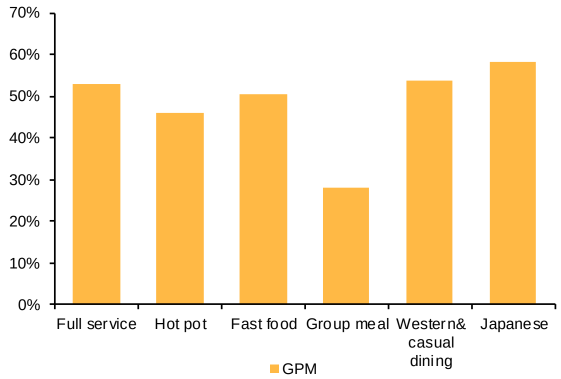
Fig 8 Takeaway/delivery and beverage revenue contribution by cuisine type



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

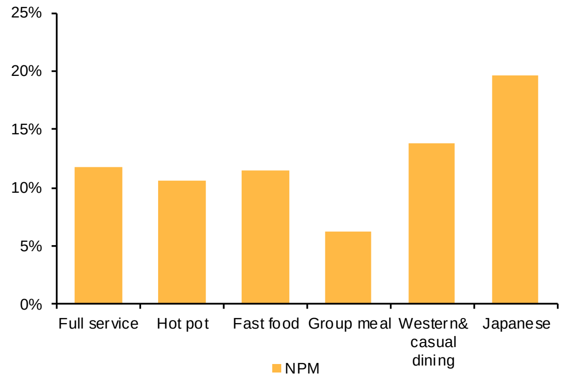
Both western casual dining and fast food generate >10% revenue from beverages, which carry higher margins. As such, this paves the way for better margins as well. Thanks to higher GPM and lower opex % such as labour expense, Japanese cuisine has the highest NPM among different cuisine types. Unsurprisingly, group meal has the lowest NPM given the volume-driven business nature.

Fig 9 Japanese cuisine has the highest GPM



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

Fig 10 It also has the highest NPM among diff cuisine types

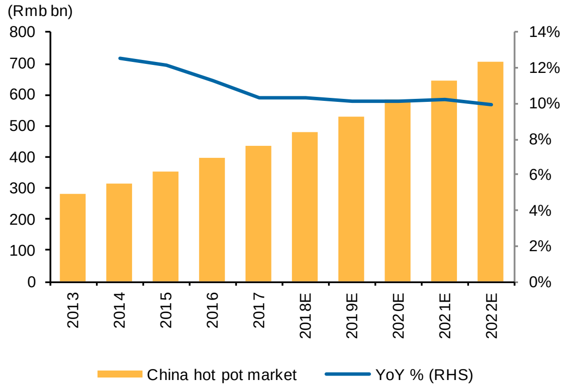


Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

Hot pot in the sweet spot

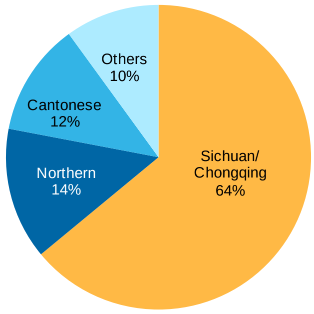
Hot pot has come into the spotlight with a higher than industry average growth rate thanks to changing demographics, suitability for multiple social occasions and diversified flavours. At the same time, we believe the seasonal factor will gradually play a smaller role in consumers' decisions. Frost & Sullivan data suggests that China's hot pot market will grow c.10% YoY in the next few years. Within the hot pot market, the Sichuan/Chongqing style hot pot is the crowd favourite and accounted for 64% of the market in 2018.

Fig 11 China hot pot market to outpace overall industry in the next few years



Source: Frost & Sullivan, Macquarie Research, March 2020

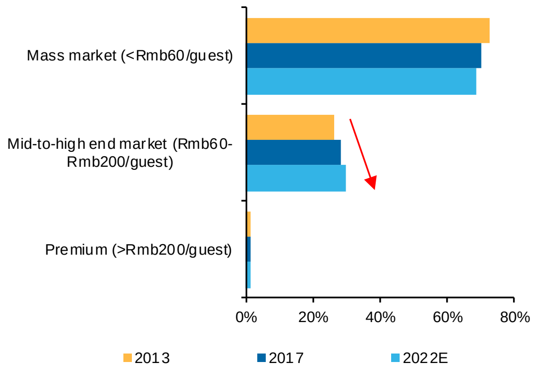
Fig 12 Sichuan/Chonqing style hot pot is the crowd favourite with 64% share



Source: Cbndata, Macquarie Research, March 2020

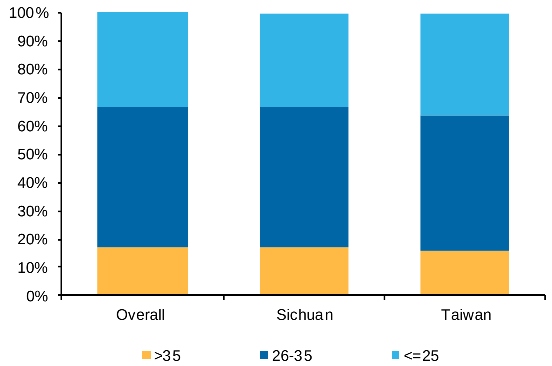
From a demographics perspective, hot pot consumers are heavily skewed towards the millennials or younger generation. Meanwhile, hot pot is more popular amongst female consumers and accounts for over half of consumption. Both trends are in-line with the industry average, and we view hot pot as being better positioned to benefit vs other cuisine types. The reason being hot pot is suitable for different social occasions, it has been favoured by millennials who value choices, the dining experience and ability to share.

Fig 13 In particular, mid-to-high end segment on the rise



Source: Meituan, Macquarie Research, March 2020

Fig 14 Hot pot is most favoured by millennials



Source: Meituan, Macquarie Research, March 2020; based on 1H18 data

Condiments

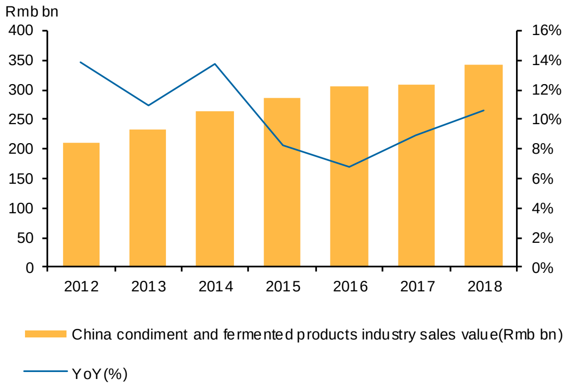
The China condiment industry recorded an 8.5% sales value CAGR during 2012-2018, reaching Rmb343bn in 2018, according to NBS. We maintain our positive view on the China condiment sector and believe it could deliver high-single-digit industry growth in the next three years. According to the mgmt. of Haitian, the industry sales value is likely to increase to ~Rmb500bn in 2023.

Channel-wise, the 2B channel enjoys the tailwind of a high-single-digit growth rate of the restaurant industry and strong delivery growth, though in the short term it might face destocking risk from the COVID-19 impact. On the other hand, we expect the 2C channel will benefit from the steady consumption upgrade trend and multi-category expansion, such as oyster sauce and compound condiments.

Meanwhile, consolidation is undergoing given the top 100 condiment and fermented enterprises outgrew the industry with double-digit sales growth in 2018, according to the China Condiment Industrial Association (CCIA). In the past decade, the enterprises above the designated size (annual sales above Rmb50m) in this industry grew from 921 in 2011 to 1,278 in 2017, leading to a 9.6% CAGR of total profit during 2011-2017. Given the rising brand awareness and consumption upgrade trend, we believe this consolidation trend will sustain in the next 10 years. In addition to a stricter environment protection policy, we believe Haitian and other branded players in sub-sectors will continue to consolidate the market as small regional players cannot bear the environment protection costs.

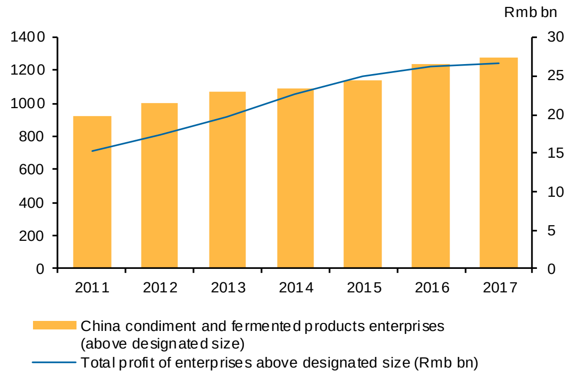
Fuling Zhacai and Angel Yeast are our top picks in the condiment sector. We believe both Fuling Zhacai and Angel Yeast, as segment leaders, will continue to consolidate the market on the back of the consumption upgrade trend. We expect the leading condiment players will demonstrate pricing power to pass through the raw materials pressure to consumers.

Fig 15 China condiment industry recorded an 8.5% CAGR of sales value during 2012-2018



Source: NBS, Macquarie Research, March 2020

Fig 16 China condiment industry is consolidating with more and more big enterprises



Source: NBS, Macquarie Research, March 2020

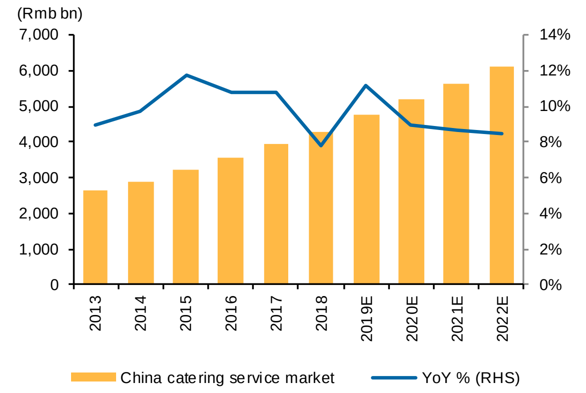
2B channel leads the way to drive the industry growth

According to the China Condiment Industrial Association, 70% of condiments are sold into the 2B channel, including 45% to restaurants and 25% to food process factories.

On the one hand, China's catering industry surpassed the Rmb4 trillion mark in 2018 and is expected to enjoy a 9% 2018-2022E CAGR based on Frost & Sullivan estimates. Category-wise, full service is the biggest category accounting for 43% of the overall market, supporting the growth of traditional Chinese condiments, such as soy sauce and vinegar. Hot pot is ranked No.3 with 12% share, outgrowing the overall catering industry with c.10% YoY growth per annum, which underpins the growth of hot pot-related compound condiments.

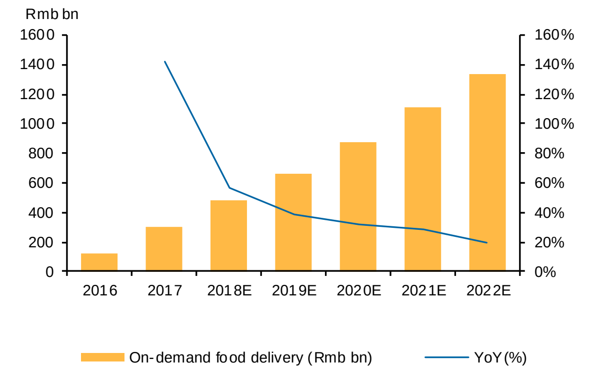
On the other hand, the on-demand food delivery business runs in the fast lane with an estimated 31% CAGR during 2017-2023E, according to iResearch. The rapidly rising on-demand food delivery business will facilitate the growth of condiment. The food delivery business requires standardization and timely food service to consumers. The compound condiment is a good solution to fulfil this requirement, especially for the fast-growing fast food sector.

Fig 17 China catering industry growing at high-single digits per annum



Source: Frost & Sullivan, Macquarie Research, March 2020

Fig 18 On-demand food delivery in the fast traffic lane



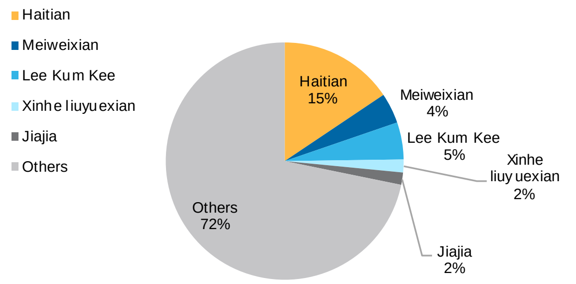
Source: iResearch, Macquarie Research, March 2020

- **Soy sauce – Haitian consolidating the market**

  Soy sauce is the biggest sub-sector in China condiments, which is widely used in Chinese style cooking and well received across the whole country.

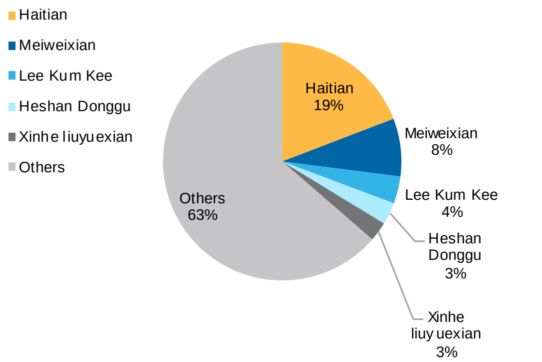
  Although soy sauce is relatively mature in the China condiment sub-sector, the market is still fragmented with the top five players accounting for 36% market share in 2018, improving from 27% market share in 2015. However, it is still far away from CR5 having 60% market share in Japan in 2016.

Fig 19 China soy sauce market share in 2015



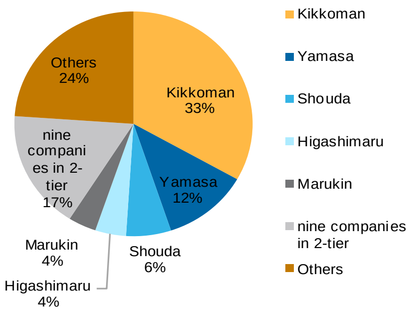
Source: Bloomberg, Macquarie Research, March 2020

Fig 20 China soy sauce market share in 2018



Source: China Condiment industrial Association, Macquarie Research, March 2020

Fig 21 Japan soy sauce market share in 2016



Source: Bloomberg, Macquarie Research, March 2020

Fig 22 Bundled sales of Haitian, including soy sauce, oyster sauce and soybean paste

Source: Bloomberg, Macquarie Research, March 2020

Haitian is the leading player with 19% volume market share in 2018 compared to 15% in 2015. Haitian is the most competitive player in the 2B market as this channel accounted for 60% of Haitian's total sales vs. 45% of the condiment industry (please refer to Figure 23 and 24). Haitian's competitive edge in restaurant/food delivery channels can be manifested in the following aspects:

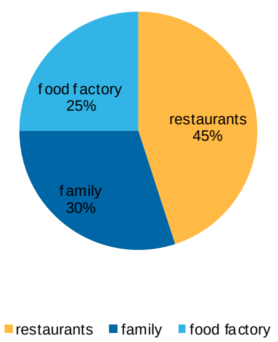
⇒ Strong cost advantage due to its large-scale production base and raw materials sourcing power. This cost advantage offers strong pricing power for Haitian to penetrate 2B channels.

⇒ User stickiness to soy sauce. The chefs seem unwilling to change the brand in order to keep the consistency of taste. This has cultivated a higher brand loyalty in the 2B channel compared to 2C.

⇒ Bundled sale of multi-category condiments. Haitian leverages its soy sauce distribution and bundled sales with other alternative condiments such as oyster sauce, vinegar, cooking wine, etc. This strategy helps the new category growth.

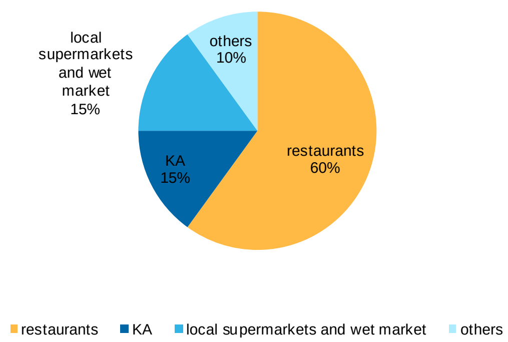
⇒ Lastly, the strong brand name also helps Haitian to cross the province board line and consolidate the regional brands.

Fig 23 China condiment sales by channel in 2017



Source: China industrial information website, Macquarie Research, March 2020

Fig 24 Haitian sales by channel in 2017



Source: Company data, Macquarie Research, March 2020

Besides the volume growth and market share gains, Haitian is also actively upgrading its products. In 2018, its high-end products represented 40% sales. The company aims at 50% in the next five years, indicating 1-2% expansion each year. There is also an expectation of a price hike in 2020 as the last price hike was in 2017, and the company has historically lifted its price every 3-4 years.

Therefore, we believe Haitian will continue to outgrow the industry in terms of both sales and net profit.

Sub-category condiments spring up along with consumption upgrade

The China condiment industry is an industry with many sub-sectors, such as vinegar, oyster sauce, pickled vegetables, yeast and yeast extract, cooking wine, paste, MSG, chicken essence and compound condiments. With the rising per capita disposable income, consumers are becoming more sophisticated and the condiment application has become more diversified. We believe the product line of sub-sectors will be more diversified with a higher than industry average growth. We expect sub-sectors with brand equity, quality products and precise marketing will become leaders.

Fig 25 Sub-category condiments springing up

Sub-sector	Leading brands	China market scale (Rmb bn)	Sector features	Sector life cycle	Sector growth rate in next 3 years
Soy sauce	Haitian, Weimeixian, Lee Kum Kee	>50	Fragmented, Haitian is the leading player with 19% market share	Relatively mature	5-10%
Vinegar	Hengshun, Zilin, Shuita	15-20	Regional leading players	Brand consolidating	5-10%
MSG (monosodium glutamate)	Meihua	15	Decline due to health concerns	Declining period	<0%
Chicken essence	Totole, Weihaomei	15	Concentrated	Mature	0-5%
Yeast Extract	Angel Yeast	7-8bn globally	Concentrated	Growing stage	>20%
Oyster sauce	Haitian, Lee Kum Kee	~5	Haitian is the leading player with rapid growth	Growing stage	15%
Cooking wine	Laohenghe, Laocaichen, Haitian, Hengshun	<5	Regional leading players	Incubation period	5-10%
Paste	Laoganma, Haitian, Lee Kum Kee	>40	Regional leading players	Brand consolidating	0-10%
Zhacai	Wujiang(Fuling), Jixiangju, Yuquan	10	Fuling is the nationwide leading player, with regional peers	Relatively mature	5-10%

Source: China Condiment Industrial Association, Company data, Macquarie Research, March 2020

- **Oyster sauce**

Oyster sauce, which originated from the Southern China region, is a dark sauce made from oyster extracts, sugar or caramel, salt, etc. It is usually added to food to increase flavours and initially was used by restaurants. Oyster sauce is the manifestation of the consumption upgrading trend as consumers use the product to enhance the food’s flavouring.

Haitian is the leading player with much more market share than the second one, Lee Kum Kee. Haitian has established a dedicated department for oyster sauce promotions. Nowadays, more and more people in Northern China are using oyster sauce for cooking, preserving meat and making fillings for dumplings. Meanwhile, the company is doing promotions for the premium oyster sauce products. According to Foshan Haitian management, the company expects this segment to grow at a ~15% CAGR in the next few years. We believe Haitian will leverage its competitive cost edge and brand to lead this market.

- **Pickled vegetables**

Pickling is the process of preserving or extending the shelf life of food either by fermentation in brine or immersion in vinegar. People in different regions prefer different flavours and vegetables, such as Zhacai in China, kimchi in Korea, pickled cucumbers in US.

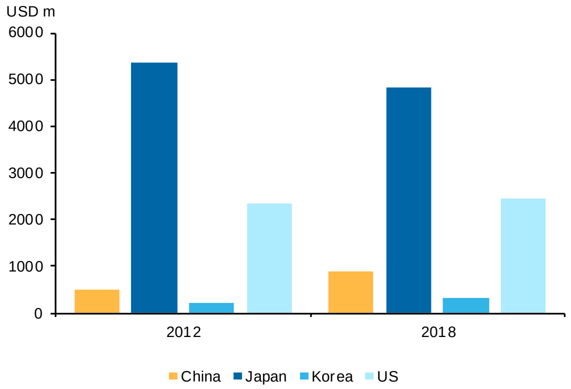
Based on Euromonitor estimates, China’s retail sales of packaged pickled vegetables enjoyed a CAGR of 9.4% during 2012-2018, driven by a 3.1% ASP CAGR and 5.6% volume CAGR. This is the fastest growth among Japan, Korea and the US. The volume growth mainly comes from the consumption shift to packaged pickles from unpackaged pickles in wet markets or home-made, echoing the consumption upgrade trend, in our view.

Fig 26 2012-2018 CAGR of pickled vegetables

	Total retail sales	ASP	Per capita value	Per capita volume
China	9.4%	3.1%	8.9%	5.6%
Japan	-1.7%	0.3%	-1.5%	-1.9%
Korea	7.3%	1.1%	6.8%	5.6%
US	0.9%	0.7%	0.3%	-0.5%

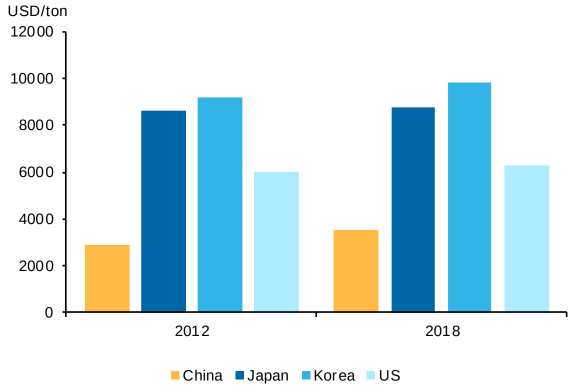
Source: Euromonitor, Macquarie Research, March 2020

Fig 27 China's picked vegetables retail sales rose at a 9.4% CAGR during 2012-2018, while still far behind peers



Source: Euromonitor, Macquarie Research, March 2020

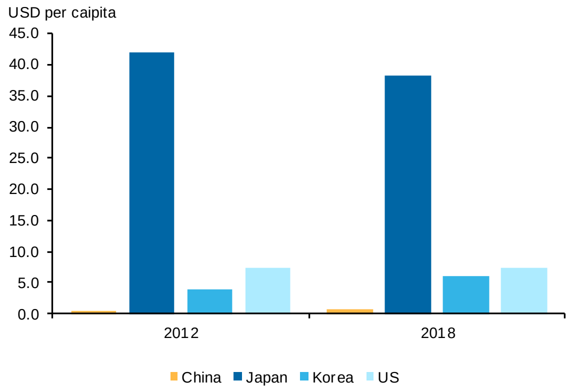
Fig 28 China's average retail price of pickled vegetables increased at a 3.1% CAGR during 2012-2018



Source: Euromonitor, Macquarie Research, March 2020

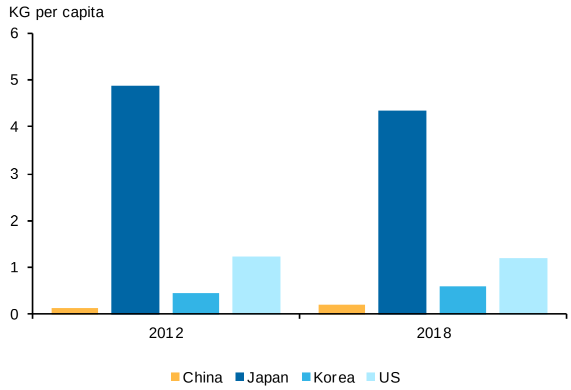
In terms of per capita consumption, China's per capita value was US$0.6 in 2018, far below its global peers, such as Japan's US$38.3 and US's US$7.5. Surprisingly, China's per capita volume was 0.2kg, also much lower than 4.4kg in Japan and 1.2kg in US. We believe this should be lower than the actual numbers in China due to a lower percentage of packaged pickles vs. peers. On the other hand, this also indicates potential upside for big players in the pickles industry.

Fig 29 China's per capita picked vegetables consumption value still far below its global peers in 2018



Source: Euromonitor, Macquarie Research, March 2020

Fig 30 China's per capita picked vegetables consumption volume also far below its global peers in 2018



Source: Euromonitor, Macquarie Research, March 2020

We expect the packaged Zhacai industry growth will be driven by consumption upgrading, as consumers are gradually shifting from wet markets to branded products due to rising hygiene consciousness and the consumption upgrade trend. Industry players are also actively educating consumers to use pickled vegetables in different consumption occasions, such as on-demand food delivery.

In this subsector, Fuling Zhacai is the leader with ~35% value market share and ~27% volume market share in 2019. We like this name and believe it will continue to consolidate the industry and gain share from wet markets and small regional players. Additionally, we also see Fuling's growth opportunity from category expansion, such as crunchy radish or potential M&A in the paste category.

- **Yeast extract**

Yeast extract (YE) is made from fresh yeast where enzymes break down the proteins in the yeast cell into smaller components and disintegrate the cell wall. It is often used to replace monosodium glutamate (MSG) in the food industry as a flavor booster. Sauces, soups, ready-to-eat meals, frozen products and snacks all use yeast extracts widely.

The global market size was estimated at US$1.3bn in 2018 and will achieve US$2.1bn in 2026 with a 5.9% CAGR during 2019-2026, according to Global Market Insights. The penetration rate of YE's used as flavor enhancers is c.50% in Europe, 40% in Korea, 30% in Japan, but merely 2% in China, according to the company. While China is the biggest market for condiments, we expect Angel to see substantial upside from YE along with the consumption upgrade trend and growing process food market. We expect this segment to see ~20% revenue growth for the next three years in China, driven by both volume and price.

Fig 31 YE is widely used in premium products - Lee Kum Kee premium soy sauce, no additives, with YE

Source: Frost & Sullivan, Macquarie Research, March 2020

Fig 32 YE is added in Yihai's packaged hot pot condiments

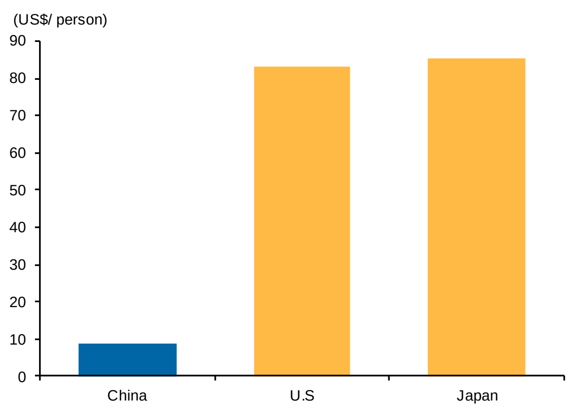
Source: Frost & Sullivan, Macquarie Research, March 2020

- **Compound condiments**

Frost & Sullivan estimates that China's compound condiment market amounted to Rmb75.1bn in 2015, accounting for 18.2% of the total condiment market. At the same time, the US's compound condiment market amounted to US$26.9bn, or 50.5% of the condiment market; while Japan's compound condiment market was US$10.8bn, or 49.5% of total.

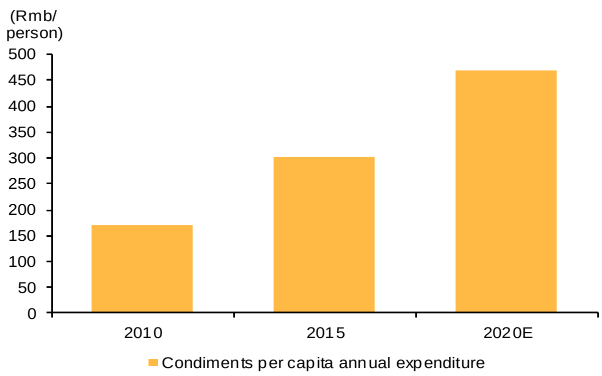
In terms of per capita consumption, China's per capita expenditure on compound condiments was US$8.8 in 2015 whereas the US and Japan have much higher per capita expenditures at US$83.3 and US$85.3, respectively. This implies that there's substantial upside potential for China's condiment market, in our view. We believe rising disposable income, a change in consumer lifestyles and rapid growing restaurant chains and delivery businesses are all factors supporting compound condiment manufacturers. According to Frost & Sullivan, China's condiment per capita consumption is expected to grow to Rmb105.4 in 2020E from Rmb54.6 in 2015 with a 14.1% CAGR.

Fig 33 China's per capita compound condiment consumption still far below its global peers



Source: Frost & Sullivan, Macquarie Research, March 2020

Fig 34 China's per capita compound condiment consumption to see faster 2015-20E CAGR of 14.1%



Source: Frost & Sullivan, Macquarie Research, March 2020

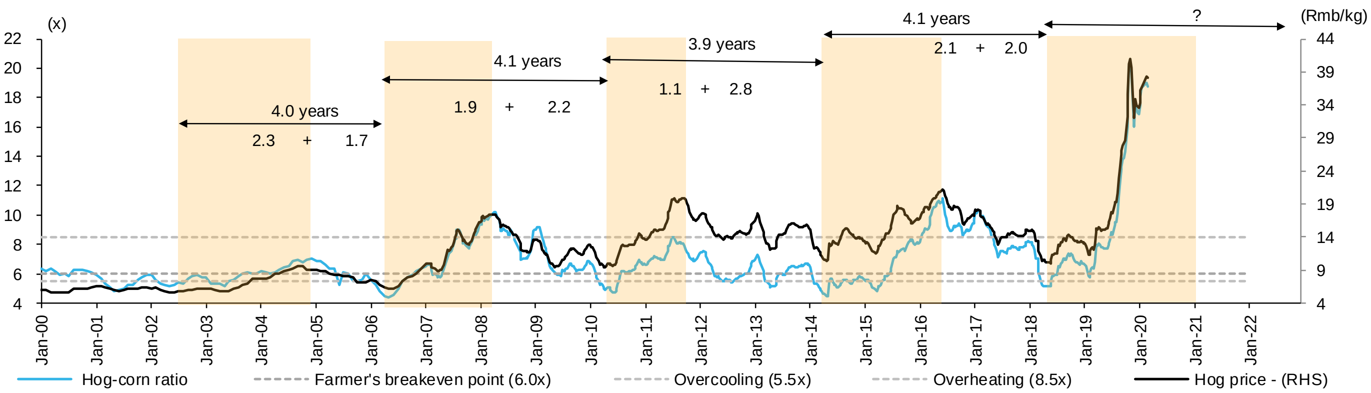
Restaurant GPM to normalize in 2H20, condiment price hikes in the cards

We expect restaurants' GPM may trend down in 1H20 before normalizing in 2H20 as restaurants gradually resume operations. We believe the animal protein cost pressure will gradually ease in 2020, given that we expect the hog price reflection point will occur in 2H20. The broiler price is likely to rebound in 2Q20 due to supply chain disruptions in 1Q20 amid COVID-19. As a result of this disruption, industry supply growth estimates for 2020 have declined from 13% to 10%. Based on our sensitivity analysis, for every 10% meat protein price change, it could result in a 6%, 15% and 17% OP change for YUMC, XiabuXiabu and Haidilao.

Raw materials prices tend to decrease gradually in 2020

The restaurant industry came under pressure given the historical highs of all kinds of meat in 2019. Looking into 2020, we believe meat prices will remain at a high level but decrease YoY, especially in 2H20, due to gradual supply coverage.

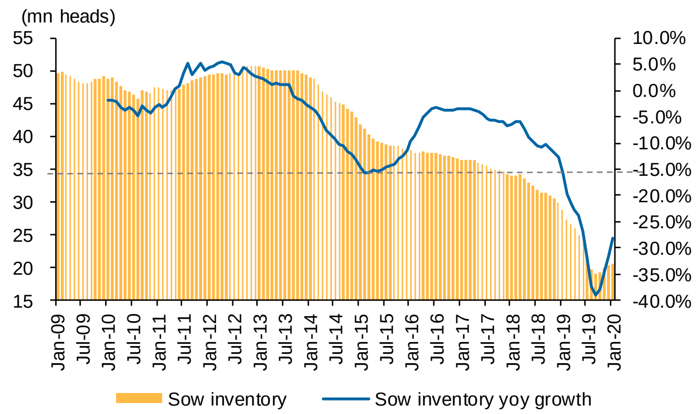
Fig 35 China hog price cycle to be prolonged by AFS



Source: Wind, Macquarie Research, March 2020

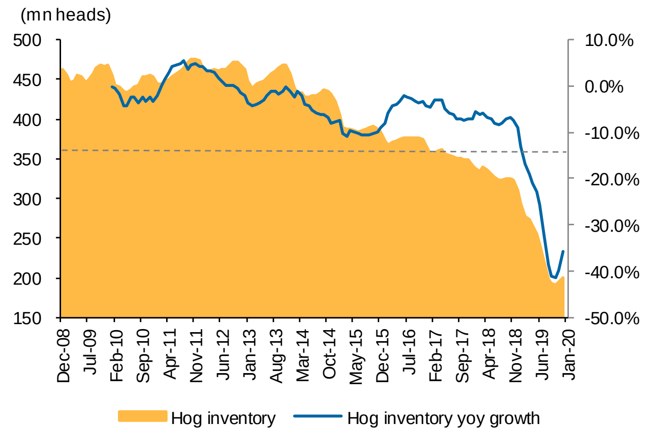
As of Feb 28, hog prices rebounded to Rmb37.20/kg, down 2.4% WoW and 229% YoY. According to MOA, the nationwide sow inventory increased 1.2% MoM in Jan 2020, or up 8% from the dip last Sept. Generally, it will take 10 months from a reproductive sow to a marketable hog. Therefore, if there is no African Swine Fever outbreak again, we believe the pork supply will gradually increase and the pork prices will tend to decrease YoY in 2H20.

Fig 36 Sow inventory increased 1.2% MoM in Jan



Source: Wind, PRC MOA, Macquarie Research, March 2020

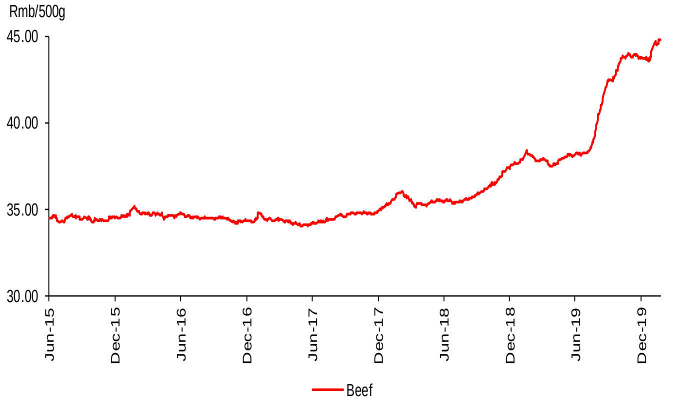
Fig 37 Hog inventory increased 2.7% MoM in Dec



Source: Wind, PRC MOA, Macquarie Research, March 2020

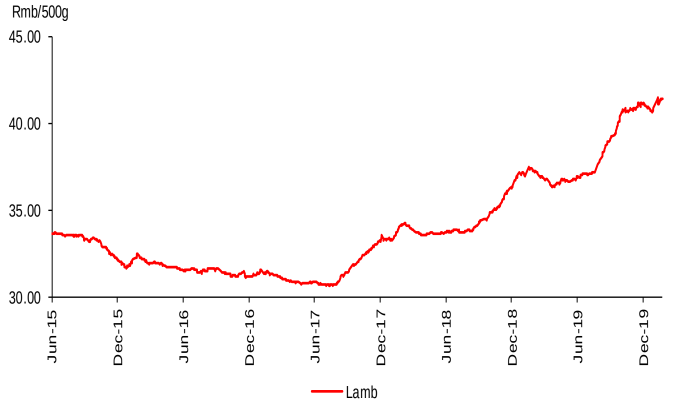
The prices of beef and mutton also increased to a record high level in 2019 due to the substitution effect of pork. Given a relatively stable supply side, we think it will go largely in line with the trend of pork prices, which would ease the cost pressure of restaurant industry.

Fig 38 China beef retail price



Source: Wind, Macquarie Research, March 2020

Fig 39 China mutton retail price

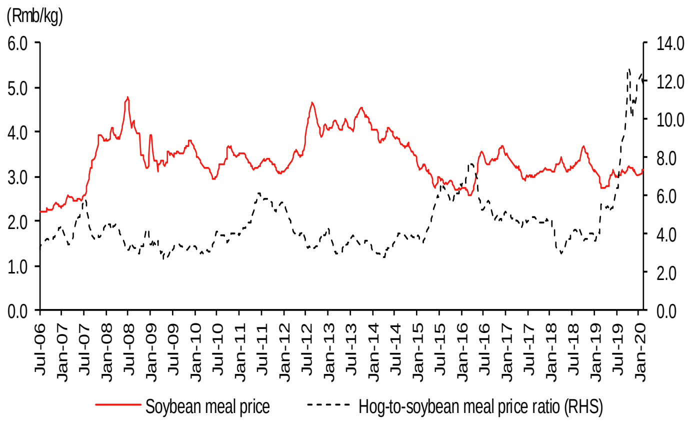


Source: Wind, Macquarie Research, March 2020

Rising prices of soybean could be a reason for condiment price hikes

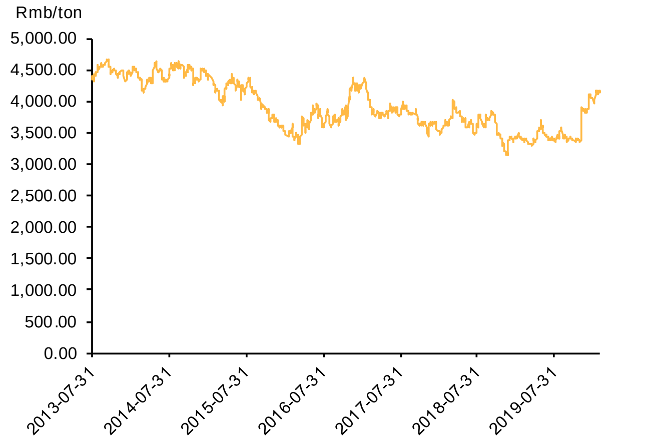
As for imported GMO soybeans, on the supply side, given the abundant supply from Brazil and truce between China and US, we think there is no pressure from the supply side. On the demand side, we think the increase of hog and sow inventory will drive up soybean prices to a mild growth. Given the relatively high level of pork prices, there should be no cost pressure for hog producers.

Fig 40 China's soybean meal price decreased 0.3% WoW, or up 1.6%YoY, to Rmb3.15/kg. (Updated as of 28 March 2020)



Source: Wind, Macquarie Research, March 2020

Fig 41 China's active future prices of non-GMO soybean increased by double digit since November 2019



Source: Wind, Macquarie Research, March 2020

As for the Non-GMO soybean produced domestically, we saw double-digit YoY growth since November 2019. The latest prices rose to above Rmb4,180/ton as of March 4th, up 23% YoY. This could be attributable to a smaller planting area in Northeast China, where the main planting area for non-GMO soybean in China resides. Farmers tend to grow more corn due to high corn prices in 2019 and the certainty of corn's government subsidiary.

Historically, condiment players have been able to leverage the raw material price hike to increase selling prices and ease margin pressure. As shown below, the condiment industry has increased its selling prices every three to four years. Raw material price hikes were the reason behind those in 2008, 2012 and 2017. The market is expecting the industry to raise prices in 2020 or 2021 given this historical trend. If there are any Non-GMO soybean price hikes, we think the industry will take the opportunity to increase selling prices to protect margins.

Fig 42 Condiment companies' price hike history

Year	Company	Product	Magnitude	Reason
2008	Haitian	Golden label superior soy sauce	10.0%	Raw material price hike driven
	Lee Kum Kee	Seasoned soy sauce for seafood(410ml)	4.5%	
		Soy sauce	7%-10%	
	Heinz's Master	Weijixian(380ml)	9.0%	
2011	Haitian	Soy sauce	8.5%	Branding or demand driven
	Jonjee Hi-Tech	Chubang soy sauce	6-7%	
2012	Haitian	Golden label superior soy sauce	10.0%	Raw material price hike driven
		Sliver label superior soy sauce	12.5%	
	Lee Kum Kee	Soy sauce, chilli sauce and chicken powder	5-10%	
	Heinz	Soy sauce, chilli sauce and chicken powder	5-10%	
2013	Haitian	Soy sauce	2.6%	
	Lee Kum Kee	Soy sauce	7-10%	Product upgrade
2014	Haitian	60% products	4.0%	
2017	Haitian	Soy sauce, seasoning and oyster sauce	5.0%	Raw material price hike driven
	Qianhe	Soy sauce	9.0%	
	Jonjee Hi-Tech	Soy sauce	5-6%	

Source: China Condiment Industrial Association, Macquarie Research, March 2020

EQUITIES

6862 HK	Outperform
Price (at 03:19, 05 Mar 2020 GMT)	HK$32.30

Valuation - DCF	HK$	39.00
12-month target	HK$	40.00
Upside/Downside	%	+23.8
12-month TSR	%	+24.3
Volatility Index		Medium
GICS sector		Consumer Services
Market cap	HK$m	171,190
Market cap	US$m	22,098
Free float	%	15
30-day avg turnover	US$m	36.1
Number shares on issue	m	5,300

Investment fundamentals

Year end 31 Dec		2018A	2019E	2020E	2021E
Revenue	m	16,969	26,959	34,128	46,314
EBIT	m	2,227	3,220	3,823	5,291
EBIT growth	%	36.8	44.6	18.7	38.4
Reported profit	m	1,646	2,299	2,644	3,654
Adjusted profit	m	1,646	2,299	2,644	3,654
EPS rep	Rmb	0.33	0.43	0.50	0.69
EPS rep growth	%	55.7	30.0	15.0	38.2
EPS adj	Rmb	0.33	0.43	0.50	0.69
EPS adj growth	%	55.4	30.3	15.0	38.2
PER rep	x	86.5	66.6	57.9	41.9
PER adj	x	86.7	66.6	57.9	41.9
Total DPS	Rmb	0.08	0.11	0.12	0.17
Total div yield	%	0.3	0.4	0.4	0.6
ROA	%	28.4	24.6	23.9	26.6
ROE	%	33.9	23.9	22.7	25.6
EV/EBITDA	x	47.6	35.6	29.3	21.8
Net debt/equity	%	-43.0	-35.2	-37.5	-42.3
P/BV	x	16.7	14.5	12.0	9.7

Source: FactSet, Macquarie Research, March 2020
(all figures in Rmb unless noted, TP in HKD)

Analysts

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Haidilao (6862 HK)

More than your average hot pot

Key points

- Accelerated expansion driven by proper incentive system.
- Operational efficiency paves way for healthy earnings growth.
- Initiate Outperform and HK$40 TP (24% TSR upside) on 50x FY21E PER.

Initiate with Outperform and TP of HK$40

Famously known for its superior service quality, Haidilao is a household name and the largest player in China's highly fragmented hot pot space. We expect continued robust earnings growth amid a growing store network on an effective incentive scheme and high operational efficiency. There's also potential upside from M&A-driven portfolio expansion as it forays into new cuisines. While the COVID-19 outbreak will materially impact 1H20 earnings and it's difficult to predict when the situation will stabilise, we believe long-term growth drivers are intact. Initiate with an Outperform rating and a TP of HK$40, based on 50x FY21E PER, in-line with its historical average. We believe its valuation premium is justified by 30% 2018-21E NP CAGR and 26% ROE.

Accelerated expansion driven by proper incentive system

Haidilao has enjoyed a high new restaurant success rate, thanks to its bottom-up expansion and unique apprenticeship system. Evidently, the breakeven and cash payback periods are 1.0-3.5 months and 6-13 months, respectively. The flat organizational structure gives restaurant mangers high autonomy to run operations and flexibility to cater to local preferences. Meanwhile, the well-structured incentive scheme ensures high store quality. It saw SSSg rose 4.7% driven by a 4.8x table turn in 1H19. Given the highly fragmented market, we see ample room for Haidilao to expand and expect its restaurant count to exceed 1,000 stores this year. This implies deliver of a 40% 2018-21E revenue CAGR.

Operational efficiency key to sustainable earnings growth

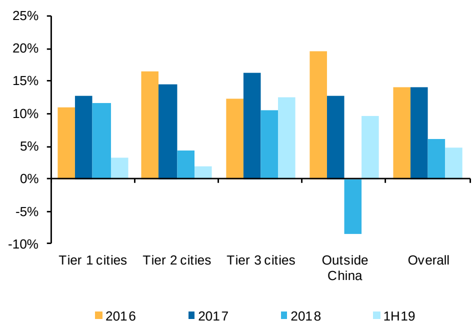
With an expanding store network in China and overseas, we expect Haidilao to maintain high operational efficiency via its 1) strong brand equity as a natural traffic generator, 2) supply chain management and 3) high level of restaurant level automation. Haidilao has built its brand power largely through its superior service quality and good dining experience, which ties directly with its customer satisfaction-driven KPI. For instance, it has been able to raise prices by 3-5% in 2H19 to manage rising meat cost pressure thanks to strong brand power. Moreover, Shuhai's comprehensive supply chain service enables simplified logistics and better inventory management amid the fast growth in its store network. While restaurant automation is still in the early stages, we are positive on long-term labour efficiency benefits without sacrificing service quality.

M&A-fuelled portfolio expansion

In an era of fickle consumer preferences, we believe it's crucial to have a multi-brand portfolio to diversify single brand and cuisine risks. Haidilao acquired U-Ding in March 2019 and signed an MOU to acquire Madam Zhu's Kitchen and Hao Noodle in November 2019. We believe mgmt is testing the water to see if it can replicate its successful management philosophy. Thanks to abundant cash on hand, Haidilao has financial resources without any strain on its financial position.

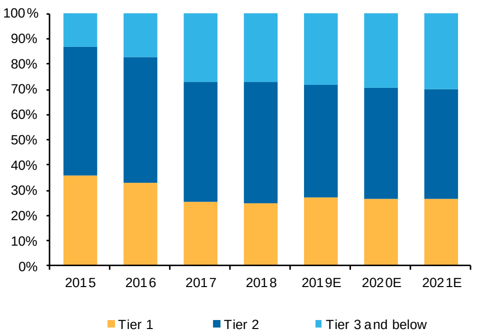
Inside

Historical SSSg breakdown by region



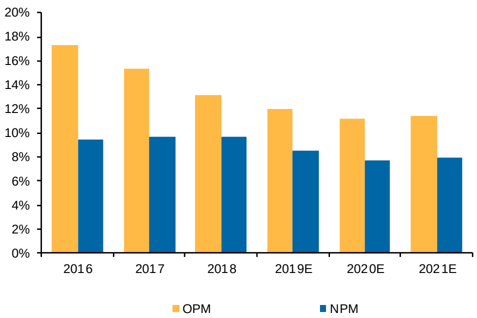
Source: Company data, Macquarie Research, March 2020

Haidilao's China store network breakdown



Source: Company data, Macquarie Research, March 2020

Haidilao's OPM and NPM



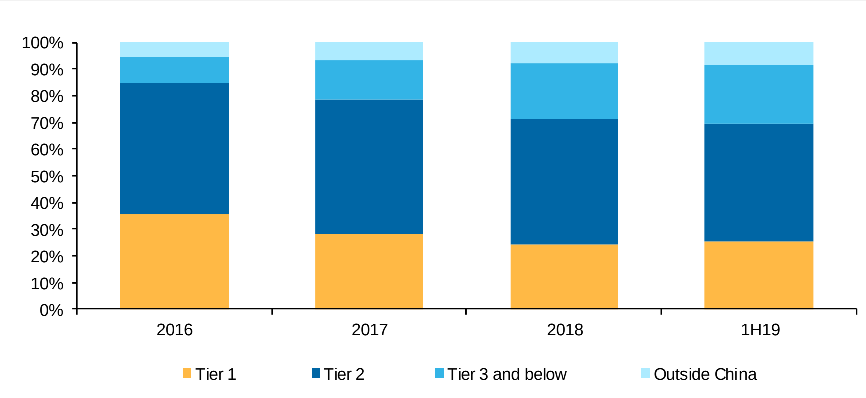
Source: Company data, Macquarie Research, March 2020

Haidilao

Company profile

- Founded in 1994, Haidilao is the largest hot pot player with operations in China and overseas. The restaurant is positioned in the mid-end segment where the average ticket size reached Rmb104.4 in 1H19. As of 1H19, the company had 593 restaurants where 93% of the stores are located in China and 7% are located overseas.
- Shareholding structure: Mr. Zhang and Ms. Shu 57.7%, Mr. Shi and Ms. Li 27.3%, other key mgmt 6.9% (as of 1H19).

Fig 1 Haidilao's historical revenue breakdown



Source: Company data, Macquarie Research, March 2020. Note: based on 1H19 data

Fig 2 6862 HK rel HSI performance, & rec history

Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, March 2020

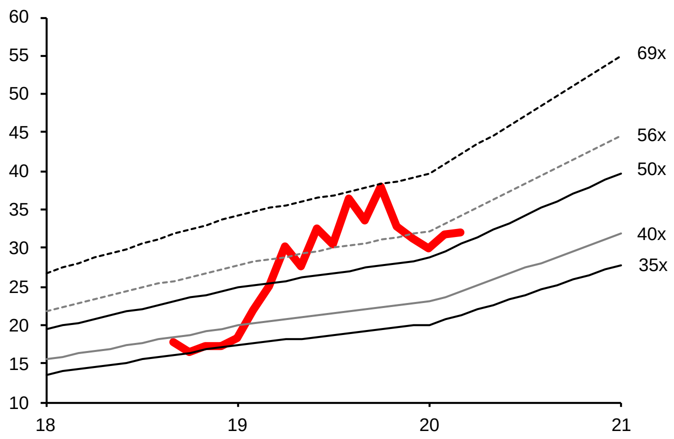
(all figures in Rmb unless noted, TP in HKD)

More than your average hot pot

We initiate coverage on Haidilao, a leading player in China's hot pot market known for its high service quality. We believe China's hot pot market is set to outpace the overall catering service market at c.10% YoY in coming years, although the market remains highly fragmented. Haidilao should continue to gain market share on the back of its rising scale, high operational efficiency and strong brand equity. The recent COVID-19 outbreak may lead to market consolidation and it's well positioned to capture market share loss from smaller players existing the market. While the COVID-19 outbreak will materially impact 1H20 earnings and it's difficult to predict when the situation will stabilize; however, we believe it doesn't affect long term growth drivers. In the medium to long term, we expect the company will deliver robust earnings growth amid a growing store network on the back of an effective incentive scheme and high operational efficiency. In addition, there's potential upside from the M&A-driven portfolio expansion as it forays into new cuisines.

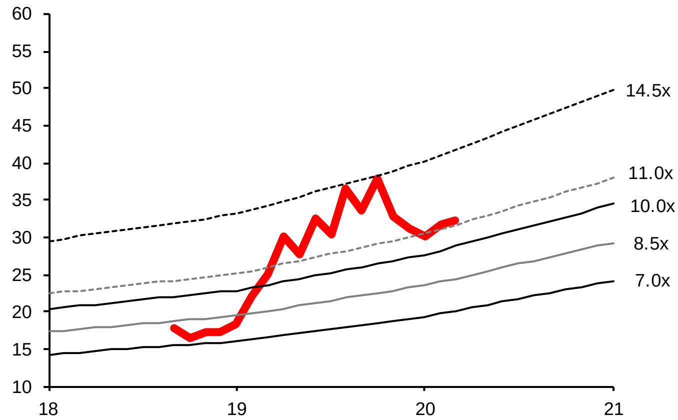
Initiate with Outperform and TP of HK$40, based on 50x FY21E PER, in-line with the historical average. We believe the valuation premium is justified by the 30% 2018-21E NP CAGR and 26% ROE. It also has the strongest earnings growth profile and ROE when compared to greater China restaurant peers.

Fig 3 Haidilao's historical PER band



Source: Bloomberg, Company data, Macquarie Research, March 2020

Fig 4 Haidilao's historical PBR band



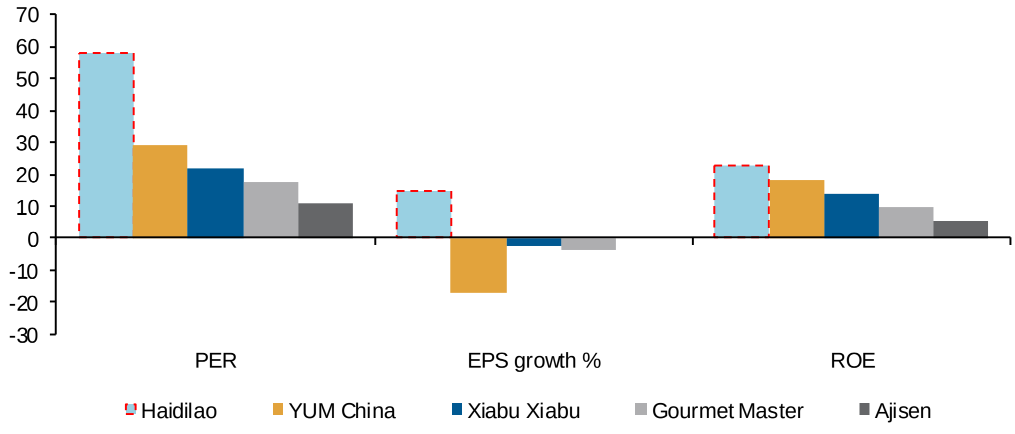
Source: Bloomberg, Company data, Macquarie Research, March 2020

Fig 5 Haidilao's DCF valuation (Rmb m)

WACC:		**DCF valuation**	
Risk Free Rate	3.0%	Sum of PV of FCF	$18,194
Market Risk Premium	7.0%	Terminal Value	$150,018
Equity Beta	55.0%	Investment Securities (book value)	$0
Cost of Equity	6.9%	Investment in Assoc. & JCEs (book value)	
Cost of Debt (Pre-tax)	3.3%	Enterprise Value	$168,212
Cost of Debt (After tax)	2.5%	Less: Minority Interests (book value)	($5)
Target Debt weight	20.0%	Less Net Debt (book value)	$3,708
Target Equity weight	80.0%	Equity Value	$171,915
Tax Rate	25.0%	No. of Ord shares (m), fully diluted	4,988
WACC	**6.0%**	**Value per Share, HK$**	**$39.4**
Terminal growth	**2.0%**		

Source: Macquarie Research, March 2020

Fig 6 Haidilao is the most expensive stock, but also has the highest EPS growth % and ROE among greater China restaurant peers



Source: Company data, Bloomberg, Macquarie Research, March 2020. Note: based on FY20E estimates

Fig 7 Global restaurant peer comparison table

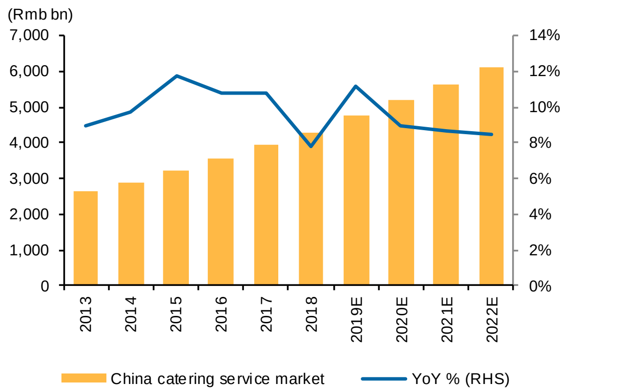
Company Name	Code	Price (lc$/sh)	Rating	TP (lc$/sh)	Upside (%)	Mkt Cap US$m	P/E (x) 2019E	P/E (x) 2020E	P/B (x) 2019E	P/B (x) 2020E	ROE (%) 2019E	ROE (%) 2020E	EPS Growth (%) 2019E	EPS Growth (%) 2020E	Dividend yield 2019E	Dividend yield 2020E	PEG 2020E
Greater China peers																	
YUM China	YUMC US	44.77	Neutral	39.60	-12%	16,997	24.4	29.4	5.5	5.0	24.0	17.9	3.0	-17.1	1.1	1.1	NM
Café de Coral	341 HK	17.10	OP	22.90	34%	1,284	22.0	19.4	2.9	2.9	13.3	15.1	-23.6	13.6	4.9	4.9	1.4
Xiabu Xiabu	520 HK	7.92	OP	9.40	19%	1,125	21.2	21.7	3.1	2.9	15.4	13.8	-21.6	-2.4	3.9	3.3	-9.2
Haidilao	6862 HK	32.30	OP	40.00	24%	22,131	66.7	58.0	14.5	12.0	23.9	22.7	30.3	15.0	0.4	0.4	3.9
Fairwood	52 HK	19.40	NR	NR	NR	322	12.0	11.4	NA	2.8	30.3	27.4	-19.7	5.3	7.3	4.5	2.1
Ajisen	538 HK	1.98	NR	NR	NR	292	11.0	11.0	0.7	NA	5.9	5.7	-8.6	0.0	4.8	5.1	NA
Tai Hing	6811 HK	1.31	NR	NR	NR	169	10.9	8.7	1.2	1.1	15.6	13.5	NA	25.0	4.4	6.2	0.3
Hop Hing	47 HK	0.09	NR	NR	NR	115	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jiumaojiu	9922 HK	9.33	NR	NR	NR	1,664	59.7	42.9	4.4	4.1	30.4	25.8	NA	39.3	0.4	0.5	1.1
Gourmet Master	2723 TT	96.20	Neutral	97.00	1%	570	17.0	17.6	1.7	1.6	16.4	9.7	-39.0	-3.4	3.0	2.9	-5.1
Wowprime	2727 TT	67.70	NR	NR	NR	173	15.4	16.7	NA	NA	7.6	6.5	-8.3	-8.2	5.9	5.9	-2.0
Global peers																	
Jollibee	JFC PM	168.00	UP	160.00	-5%	3,771	41.7	36.5	3.6	3.4	8.8	9.5	-42.3	14.0	1.4	1.1	2.6
Breadtalk	BREAD SP	0.76	NR	NR	NR	308	75.5	47.2	3.2	2.9	9.5	4.5	-52.4	60.0	1.3	0.7	0.8
YUM! Brands	YUM US	91.31	NR	NR	NR	28,467	24.6	23.3	NA	NA	-14.4	-14.9	0.3	5.5	1.8	2.1	4.2
McDonald's	MCD US	199.51	NR	NR	NR	154,322	25.4	23.4	NA	NA	-84.9	-64.6	1.2	8.7	2.4	2.6	2.7
Starbucks	SBUX US	78.60	NR	NR	NR	93,509	27.8	26.2	NA	NA	-122.8	-40.6	17.4	6.1	1.9	2.1	4.3
Luckin	LK US	38.26	NR	NR	NR	10,256	NA	NA	16.8	10.7	-79.8	-77.8	NA	-77.8	NA	NA	NA
Chipotle M. Grill	CMG US	736.07	NR	NR	NR	21,375	52.7	40.0	12.3	7.3	25.2	26.5	62.7	31.9	0.0	0.0	1.3
Darden	DRI US	95.31	NR	NR	NR	11,551	16.5	14.9	5.0	4.7	27.9	32.2	21.2	10.2	3.1	3.7	1.5
Dominos	DPZ US	339.47	NR	NR	NR	13,220	36.1	30.9	NA	NA	-13.7	-12.8	11.2	16.9	0.8	0.9	1.8
Cheesecake Factory	CAKE US	34.65	NR	NR	NR	1,598	13.1	12.5	2.4	2.4	25.7	23.2	7.9	4.8	4.0	4.3	2.6
Wendy's	WEN US	19.16	NR	NR	NR	4,472	32.3	30.9	8.0	10.0	23.7	27.3	4.0	4.5	2.1	2.5	6.8
Greater China average							**26.0**	**23.7**	**4.2**	**4.1**	**18.3**	**15.8**	**(10.9)**	**6.7**	**3.6**	**3.5**	**(0.9)**
Global average							**34.6**	**28.6**	**7.3**	**5.9**	**(17.7)**	**(8.0)**	**3.1**	**7.7**	**1.9**	**2.0**	**2.9**
Overall average							**30.3**	**26.1**	**5.7**	**4.9**	**(0.6)**	**3.4**	**(3.1)**	**7.2**	**2.7**	**2.7**	**1.2**

Source: Company data, Macquarie Research, March 2020. Note: based on closing price on 3rd March, 2020. Café de Coral refers FY20/21 data here

China catering service riding on structural tailwinds

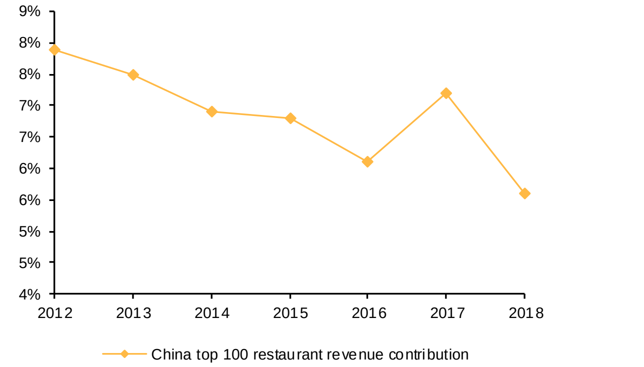
China's catering service industry surpassed the Rmb4 trillion mark in 2018 and is expected to register a 9% 2018-22E CAGR, based on Frost & Sullivan estimates. In terms of operation type, roughly 80% is a standalone operation, which coincides with the low revenue contribution from the top 100 restaurants. Evidently, China's top 100 restaurant brands only account for a mid-single digit percentage of the overall market, which means the market is highly fragmented. Interestingly, concentration is quite high among the top 100 brands where the top 30 accounted for 75% of sales in 2018. Among the top 30 brands, fast food and full service have the lion's share while hot pot is the smallest. With this in mind, we see ample room for chain operators to consolidate the market given their scale advantage and mature management system.

Fig 8 China catering service market to see high-single-digit annual growth



Source: Frost & Sullivan, Macquarie Research, March 2020

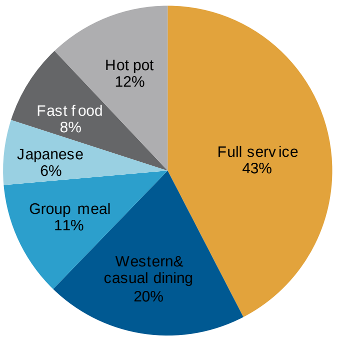
Fig 9 Market remains highly fragmented



Source: China Cuisine Association, Macquarie Research, March 2020

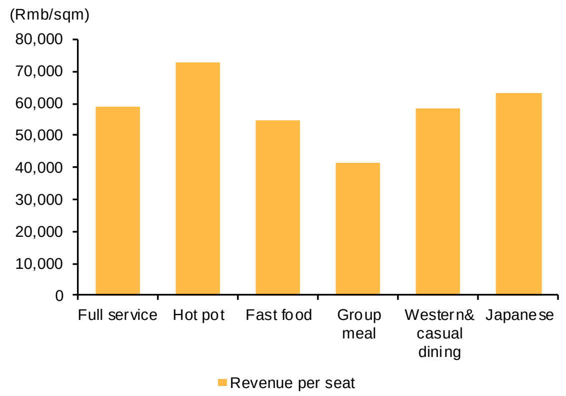
Category-wise, full service is the biggest category accounting for 43% of the overall market in 2018 and hot pot's popularity can be validated by the 12% share. At the same time, hot pot overtook full service and became the most efficient in terms of revenue per seat per year at Rmb72,800 in 2018. Despite competition continuing to be fierce in the catering industry, selective categories that capture current consumer preference and category restaurant leaders will be better positioned, in our view.

Fig 10 China catering industry breakdown by cuisine type



Source: China Hospitality Association, Macquarie Research, March 2020.
Note: based on FY18 data

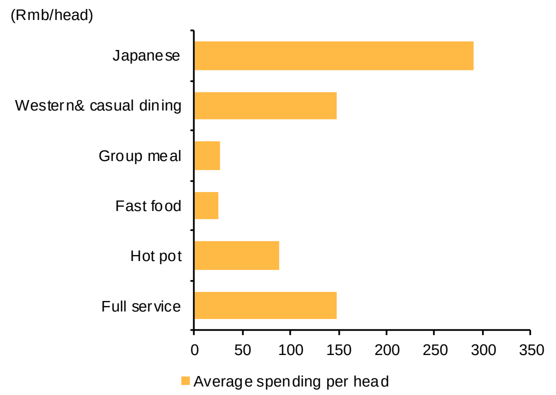
Fig 11 Hot pot generates the highest revenue per seat



Source: China Hospitality Association, Macquarie Research, March 2020.
Note: based on FY18 data

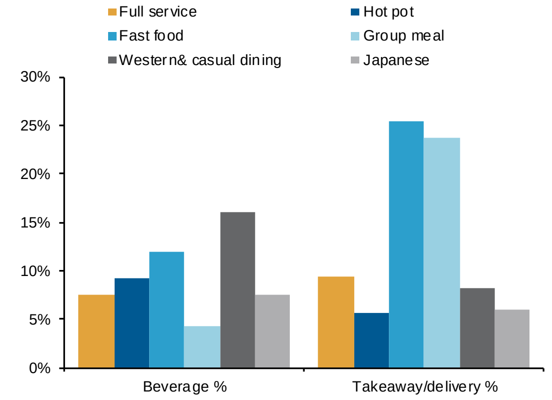
Japanese, western & casual dining and full service had over Rmb100 average spending per head in FY18 as these cuisine types provide table side service and tend to have lower table turns. On the other hand, group meal and fast food are the lowest with average spending below Rmb30 per head. Zooming into the rapidly rising delivery business, fast food unsurprisingly has the highest revenue exposure, while hot pot is the lowest. As for the high margin beverage business, western casual dining and fast food have over 10% revenue contribution, which paves the way for better NPM as well.

Fig 12 Japanese cuisine has the highest average spending



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

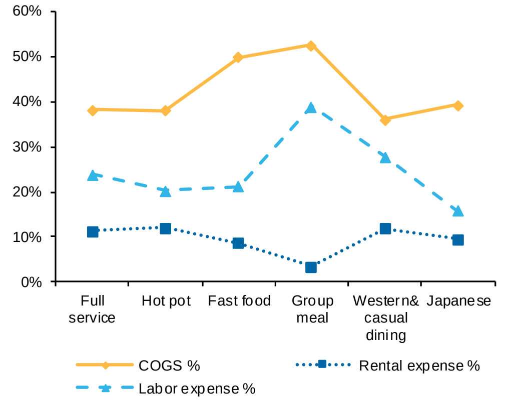
Fig 13 Unsurprisingly, takeaway/delivery is most popular for fast food



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

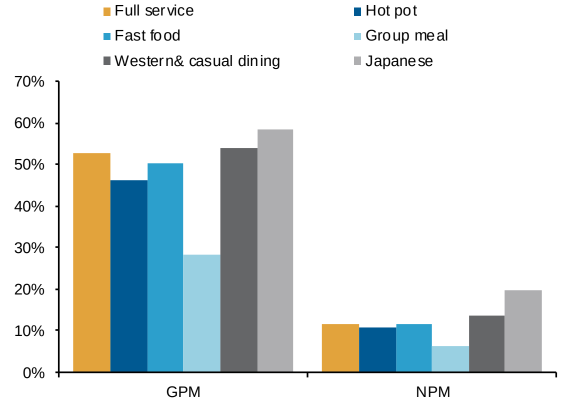
From a profitability perspective, Japanese cuisine has the highest margin profile thanks to low labour and rental expenses. As for group meal, it is a volume business so NPM is also the lowest as well. In particular, hot pot is also able to deliver double-digit NPM despite slightly lower GPM compared to other cuisine types.

Fig 14 Japanese cuisine has a favourable cost profile



Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

Fig 15 Japanese and group meal – the best and worst NPM

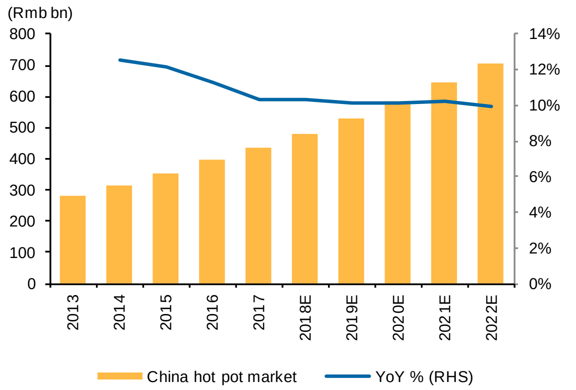


Source: China Hospitality Association, Macquarie Research, March 2020. Note: based on FY18 data

Hot pot in the sweet spot

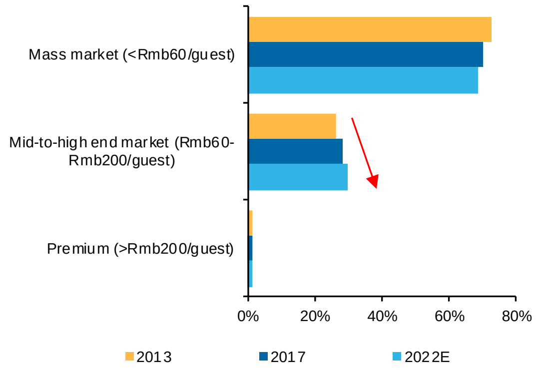
Hot pot restaurants have enjoyed immense popularity in recent years, and the category is set to outpace the overall catering industry with c.10% YoY growth per annum. While hot pot is traditionally perceived as a seasonal cuisine, the flexible menu offerings, interactive dining experience and improved dining environment have diminished the seasonality factor, in our view. In tune with the rising casual dining trend, the mid-to-high end (Rmb60-Rmb200/guest) segment is seeing the fastest growth and will account for 30% of total hot pot market by 2022 according to Frost& Sullivan.

Fig 16 China hot pot market to outpace overall industry in the next few years



Source: Frost & Sullivan, Macquarie Research, March 2020

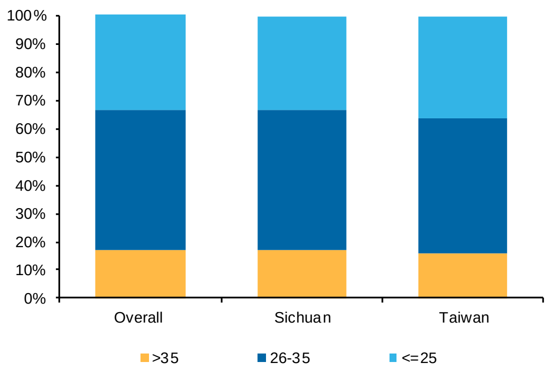
Fig 17 In particular, mid-to-high end segment on the rise



Source: Frost & Sullivan, Macquarie Research, March 2020

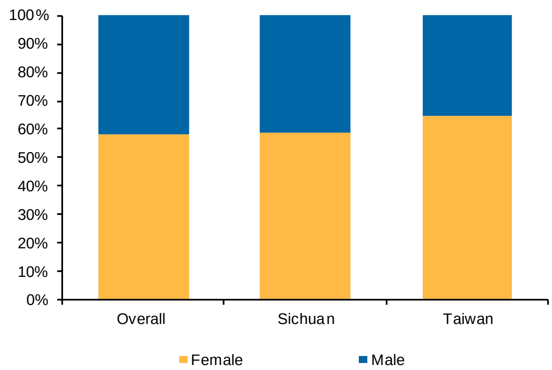
From a demographics perspective, hot pot consumers are heavily skewed towards the millennials or younger generation. Meanwhile, hot pot is more popular amongst female consumers and accounts for over half of consumption. Both trends are in-line with the industry average, and we view hot pot as being better positioned to benefit vs other cuisine types. The reason being hot pot is suitable for different social occasions, and this has been favoured by millennials who value choices, dining experience and the ability to share.

Fig 18 Hot pot is most favoured by millennials



Source: Meituan, Macquarie Research, March 2020

Fig 19 Customer mix skews towards female for all types of hot pot

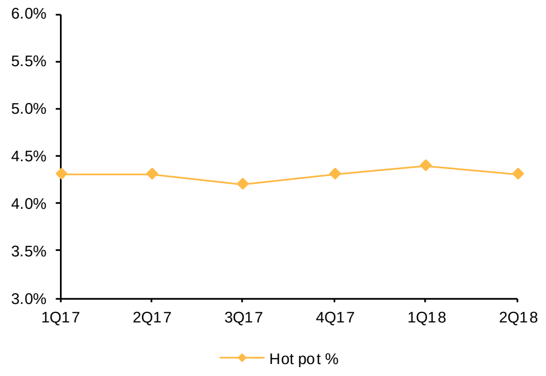


Source: Meituan, Macquarie Research, March 2020

Room for market share gains in a highly fragmented market

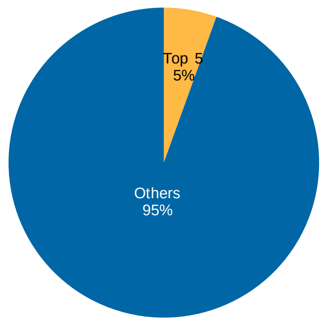
Thanks to a flexible menu offering and dining occasions, the hot pot industry is set to enjoy faster growth than overall catering industry in the coming years. Yet, the hot pot sub-segment is still small in terms of restaurant count given it accounted for <5% of total 1H18 China restaurant count. Meanwhile, it's a highly fragmented market where the top five players only account for mid-single digits of the total market, according to Frost & Sullivan. In particular, even though Haidilao is the largest player, it only has 2.2% market share (year 2017). This implies that there's ample room for chain operators like Haidilao to tap into blank spaces and gain market share from individual and regional players. The chain operators have a more sophisticated supply chain, management system, scale advantage and capital, which gives them an upper hand.

Fig 20 In terms of restaurant count, hot pot accounts for <5% of total China restaurant count



Source: Meituan, Macquarie Research, March 2020

Fig 21 China's hot pot market is highly fragmented

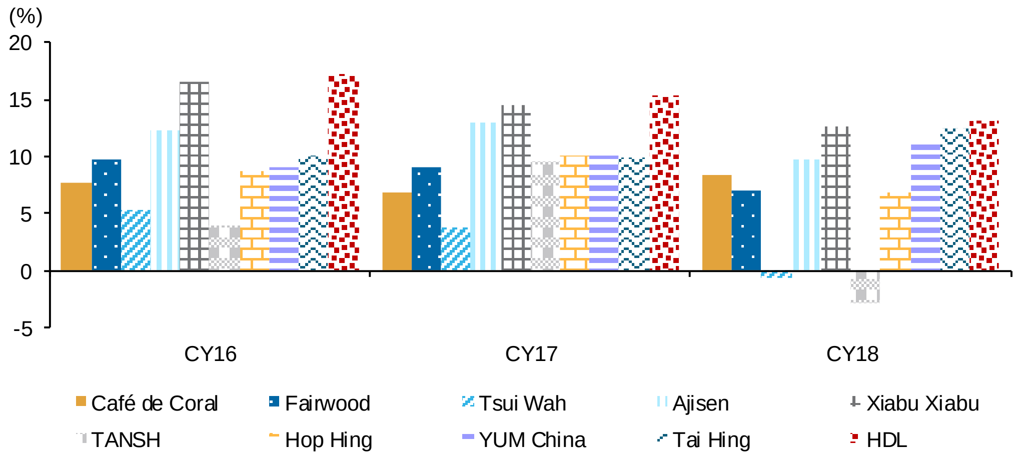


Source: Frost & Sullivan, Macquarie Research, March 2020. Note: based on FY17 data

Accelerated expansion driven by incentive system

Haidilao is able to enjoy higher-than-peer OPM thanks to a bottom-up expansion strategy coupled with an effective incentive system. A flat organization structure enables a high level of autonomy at the restaurant level, while the headquarters provides corporate support and guidance when needed. It also has a coaching system where coaches help to ensure restaurant manager and store quality. Moreover, we believe Haidilao has been able to speed up its expansion pace and maintain good store operational efficiency, thanks to we believe a well-designed incentive system. It's designed so that restaurant managers' compensation is directly linked with store profitability. At the same time, mentors' compensation is also linked with mentee store performance so that mentors are motivated to train and look after their own mentees.

Fig 22 Haidilao enjoys the highest OPM among restaurant peers



Source: Company data, Macquarie Research, March 2020

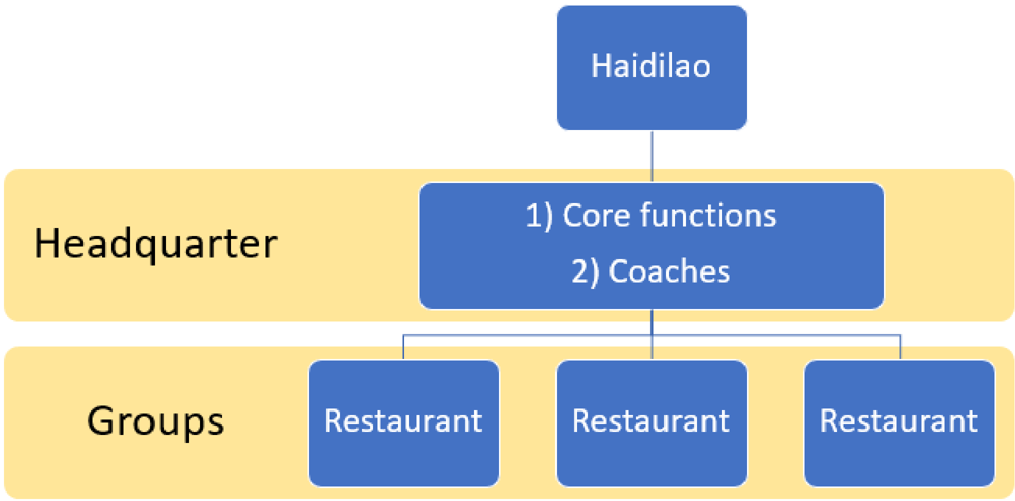
Flat organization structure

Post restructuring in 2016, Haidilao now adopts a flat organization structure where restaurants can report directly to senior management. At the headquarter level, it provides: 1) core corporate functions and 2) coaches to support each restaurant. The core corporate functions include food safety, procurement, IT and finance, which are similar to other restaurants. The differentiating part is the coach system where it provides guidance and support on a wide range of aspects to the company's restaurants. Namely, the coach system provides the following supporting services:

- ⇒ Strategic expansion - site selection and lease negotiations
- ⇒ Staff development and promotion - in charge of Haidilao University training program
- ⇒ Performance assessment - responsible for periodic restaurant manager performance assessments
- ⇒ Restaurant construction and decoration - restaurant decoration and renovation coordination
- ⇒ Product development - new menu SKU development and existing menu SKU improvement
- ⇒ Financial planning and budgeting - in charge of finances at the restaurant level
- ⇒ Performance enhancement - provides guidance for C-rated restaurants
- ⇒ New restaurant support - supervises the new restaurant opening process and provides support to new restaurant managers
- ⇒ Human resource - new talent hiring.

The coaching system is in place to ensure restaurant manager and new store quality. There are currently 12 coaches and many have worked as restaurant managers prior to being promoted to the coaching position. We believe the fact that many coaches have prior restaurant manager experience is advantageous as they can better understand the challenges and needs of the front line. Moreover, the close relationship between coaches and restaurant managers also helps to align its training program with actual qualities needed on the ground.

Fig 23 Haidilao has a flat organization structure



Source: Company data, Macquarie Research, March 2020

Instead of regional restaurant managers, Haidilao has group leaders as it requires restaurants within a region to form a "group" with its nearby restaurants. Each group typically consists of 5-18 restaurants, which is formed through the mentor-mentee relationships. Restaurants within each group share resources & local knowledge and leverage on the physical proximity to maximize operational efficiency in the region. This in turn creates effective regional support centres and a deep understanding of its respective regions' opportunities and challenges. As of 1H19, there were >50 groups covering 593 restaurantS.

At the restaurant level, restaurant managers are given high autonomy and are encouraged to incubate restaurant manager candidates as part of its bottom-up store expansion strategy. Overall, the flat organization structure has enabled restaurant managers to make real time decisions and to have flexibility to manage restaurants in the most optimal manner.

Profit sharing model to ensure restaurant managers are properly incentivized

We believe having a well-structured incentive plan is one of the key reasons behind Haidilao's success and its famous high-service quality. We believe this will also ensure new store quality in the future as mentors receive profit share of mentees' stores.

Profit sharing model

Haidilao restaurant managers' compensation is directly linked with its own restaurant and its mentee restaurant's profitability. There are two options where restaurant managers receive 2.8% of its own restaurant profit under option A and can receive up to 5% of its own and mentee restaurant profits under option B. In order to encourage mentor-mentee development, a restaurant manager receives a greater profit share % from mentee restaurants vs his/her own. We believe Haidilao has been able to deliver superior earnings growth and accelerated store expansion thanks to a proper incentive scheme and unique bottom-up driven expansion strategy.

Fig 24 Restaurant manager profit sharing scheme

Options	Profit sharing model
Option A	2.8% of own store net profit
Option B (i+ii+iii)	i) 0.4% of own store net profit ii) 2.8-3.1% of first generation mentee store net profit (the closer the distance, the higher the profit share) iii) 1.5% of second generation mentee store net profit

Source: Company data, Macquarie Research, March 2020

Secret guest reviews

On a quarterly basis, each restaurant will receive a rating (A-E) from at least 15 secret guest visits based on the following criteria:

- Service quality
- Server dedication
- Food quality
- Restaurant environment.

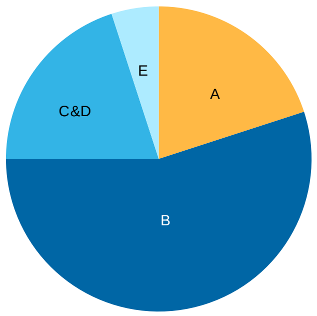
The rationale behind the secret guest review is to receive unbiased customer feedback as this is a qualitative rather than quantitative aspect of the restaurant operation. Haidilao places customer satisfaction as the most important performance indicator given its belief that customer experience goes hand-in-hand with restaurant performance. Besides the secret guest reviews, restaurants are also evaluated on: i) random inspection checks, ii) outcome from online restaurant review sites, iii) the employee attrition rate, iv) third party consultant survey results and v) financial and operation results. The final rating is based on secret guest review results and the abovementioned criteria.

As for restaurant managers, their performance review is directly linked with their restaurant ratings. A-rated restaurant managers enjoy new restaurant opening priority and better mentee promotional opportunities. For restaurant managers that receive a C or lower rating, they may face termination if there are no improvements over time.

Fig 25 Restaurant manager rating system

Source: Company data, Macquarie Research, March 2020

Fig 26 Majority of restaurants have B ratings



Source: Company data, Macquarie Research, March 2020

Sufficient restaurant manager candidates for future store expansion

The Haidilao University Program helps the company to incubate future restaurant managers and ensure consistent quality. It's mandatory for every restaurant manager to undergo training at the Haidilao University Program before managing a restaurant. First, mentors nominate mentees into a talent pool where mentees receive training on restaurant management, service offerings and internal policies. Second, successful mentees are required to serve in at least ten different positions within the restaurant and pass the Haidilao University Program before being promoted to floor manager. Lastly, floor managers are promoted to restaurant manager candidates once they're nominated by the restaurant manager and pass the additional training courses at the Haidilao University Program. After passing the qualification test, the company shifts the final decision power to each restaurant manager candidate's mentor in 1H19, vs. one becoming qualified after receiving the certificate previously. This should have no impact on restaurant manager quality as mentors are financially incentivized to select the best mentees. There are currently 900 restaurant manager candidates that provide enough headroom for store expansion in the near term.

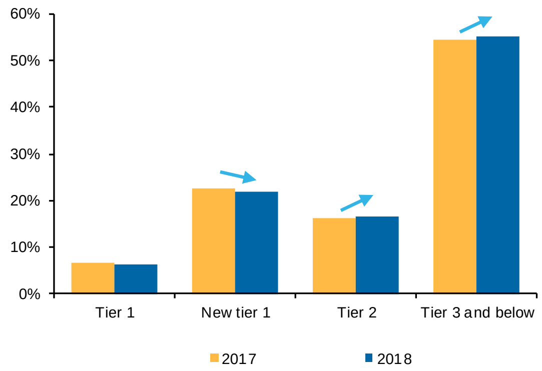
Fig 27 Road to becoming a restaurant manager

Source: Company data, Macquarie Research, March 2020

Eyes on lower-tier cities in China

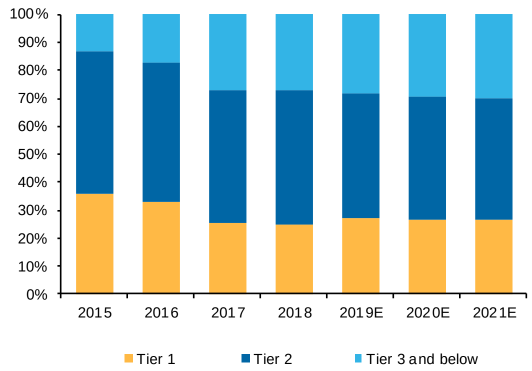
According to Meituan, there are roughly 0.4m hot pot restaurants in China, which accounts for 4% of the total restaurant store count in 2018. In terms of the store count breakdown by city tier, tier 1/ new tier 1 city markets have become more mature and more restaurants have opened in tier 2 and tier 3 & below cities. Overall, the hot pot market is poised to enjoy faster than industry average growth driven by ongoing market share gains in terms of cuisine type and change in lifestyle. For Haidilao, the store expansion pace has picked up in the past 3 years, and the company should be able to maintain steady momentum in the near term supported by sufficient restaurant manager candidates, strong brand power and market share gains from smaller brands. Within China, the split for tier 1/2/3 is 1:2:1, although we expect lower-tier cities to catch up as it deepens penetration in the next few years.

Fig 28 Lower-tier cities have seen faster hot pot expansion



Source: Meituan, Macquarie Research, March 2020

Fig 29 Most stores are located in tier-2 cities

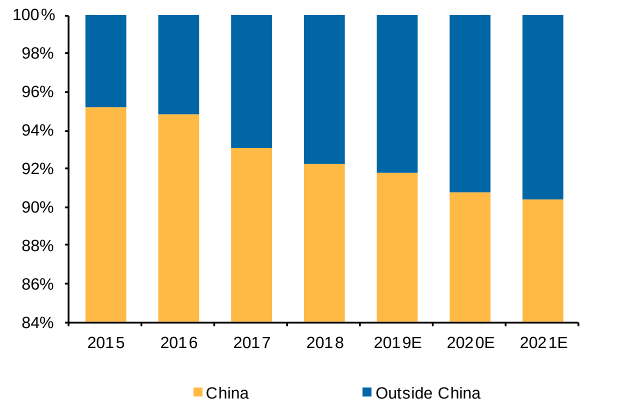


Source: Company data, Macquarie Research, March 2020

Overseas still small but ramping up nicely

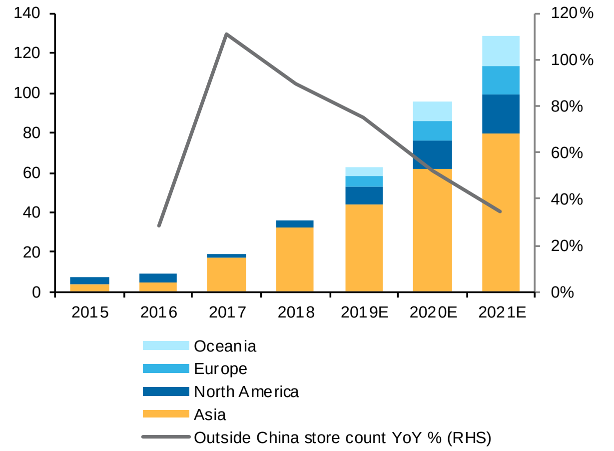
It took 18 years for the company to expand overseas as it exercised caution before entering unfamiliar markets. The company opened its first overseas restaurant in Singapore, followed by the U.S. then South Korea from 2012-14. Although overseas stores only accounted for 8% of overall store network in 2018, we expect Hadilao to ramp up its overseas network at a steady pace by leveraging its brand power.

Fig 30 Overseas restaurants account for 8% stores in 2018



Source: Company data, Macquarie Research, March 2020

Fig 31 Asia to remain Haidilao's biggest overseas market



Source: Company data, Macquarie Research, March 2020

Apprenticeship system to drive regional penetration rate

As discussed earlier, the apprenticeship system and the group's structure encourage mentees to open stores within the same region. This is also beneficial for Haidilao to fully capture a region's demand before expanding into new regions. There is also a higher success rate for new restaurants as the local demand is validated by existing stores' high traffic. Over time, the company has been able to gradually lower the customer waiting time from 3-4 hours to 1-2 hours.

Currently, the restaurant network split by city tier is 1:2:1 for tier 1:2:3 cities. Looking ahead, we expect the company to see the fastest expansion in tier-3 and below cities, while tier-2 cities will remain the biggest segment with incremental room for growth. We conducted a case study for tier-one cities and found the potential store capacity in China to be 2,950 stores if assuming China has the same average population/store as tier-one cities, namely Beijing, Shanghai, Guangzhou and Shenzhen.

Fig 32 Case study for tier-one cities

By city study	Beijing	Shanghai	Guangzhou	Shenzhen	Avg
Store count	57	50	22	37	
Population (m)	21.54	24.24	14.90	13.03	
Population/store (m)	0.4	0.5	0.7	0.4	0.5

Source: Wind, Macquarie Research, March 2020

Operational efficiency key for sustainable earnings growth

Haidilao's store expansion pace has picked up to >50% YoY since 2017 where the hot pot chain saw its store count more than double to 593 stores by 1H19. As discussed earlier, it has been able to ramp up new stores rapidly thanks to its unique apprenticeship system and sufficient restaurant manager candidates. Against the backdrop of an expanding store network, we expect Haidilao to maintain high operational efficiency via its 1) strong brand equity as a natural traffic generator, 2) supply chain management and 3) restaurant automation.

#1: Strong brand equity as a natural traffic generator

There are numerous ways to build one's brand equity, and Haidilao has done it largely through word of mouth thanks to its superior service quality and thus good dining experience. As customer satisfaction is the most important KPI for its employees, the company has been able to maintain high service quality and promote its brand through positive customer dining experiences. In an era where customers tend to check for prior customer reviews on major restaurant review websites such as Dianping in China, Yelp in the U.S. and Openrice in HK, real customer reviews often form the first impression for a customer before visiting the restaurant.

Evidently, Haidilao has been ranked as the top hot pot brand with the highest brand index, according to the China Catering Marketing Power Summit. Thanks to its strong brand power, there are often long queues outside the restaurants despite non-prime store locations. As such, this has helped to drive table turn as the peak dining hours are extended to digest the strong demand.

Fig 33 2019 top ten hot pot brands

Ranking	Brand	Brand index	Condiment/instant hot pot/snacks	Franchise
1	Haidilao	988.1	Yes	No
2	Xiabu Xiabu	984.5	Yes	No
3	Morals Village	979.8	Yes	Yes
4	Dong Lai Shun	971.3	Yes	Yes
5	Spice World	967.2	Yes	Yes
6	Banu	966.7	No	No
7	Xiao Long Kan	964.4	Yes	Yes
8	Little Sheep	962.9	Yes	Yes
9	Xia Chi Xia Shuan	959.6	No	Yes
10	Shu Daxia	950.3	Yes	Yes

Source: China Catering Marketing Power Summit, Company data, Macquarie Research, March 2020

Table turn already high, waiting customer traffic conversion is key

Given that its table turn is already high with a long average waiting time, we believe customer conversion rather than table turn growth is more important. The average waiting time is 1-2 hours per customer, and the robust waiting customer traffic means demand for another store. We believe Haidilao already does a good job at improving customer experience during the long wait time. In fact, it is also known for offering a wide range of services to keep the waiting customers entertained and happy. While the services differ at each location, it offers manicures shoe shining, board games, massage chairs, snacks and drinks, etc. This has been effective in retaining the waiting customers despite the long wait time.

Fig 34 Nail service

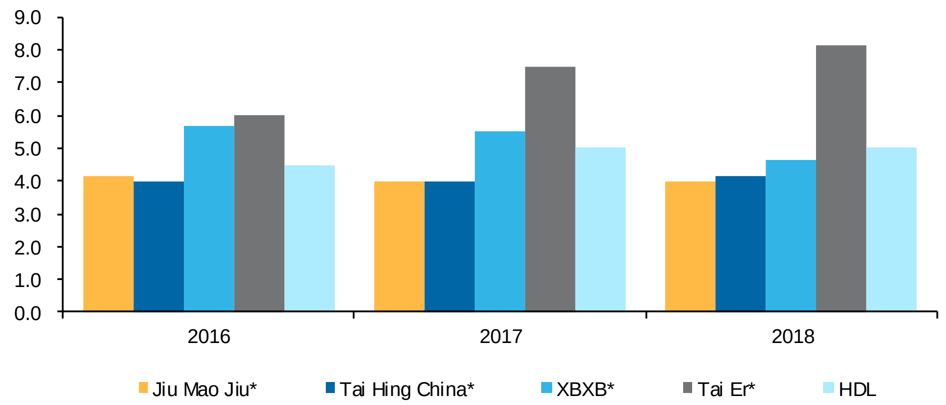
Source: Macquarie Research, March 2020

Fig 35 Snacks and games provided in waiting area

Source: Company data, Macquarie Research, March 2020

Moreover, Haidilao has been able to maintain higher table turns among its peers, which has been achieved through the strong brand equity and ability to retain waiting customers.

Fig 36 Table turn peer comparison

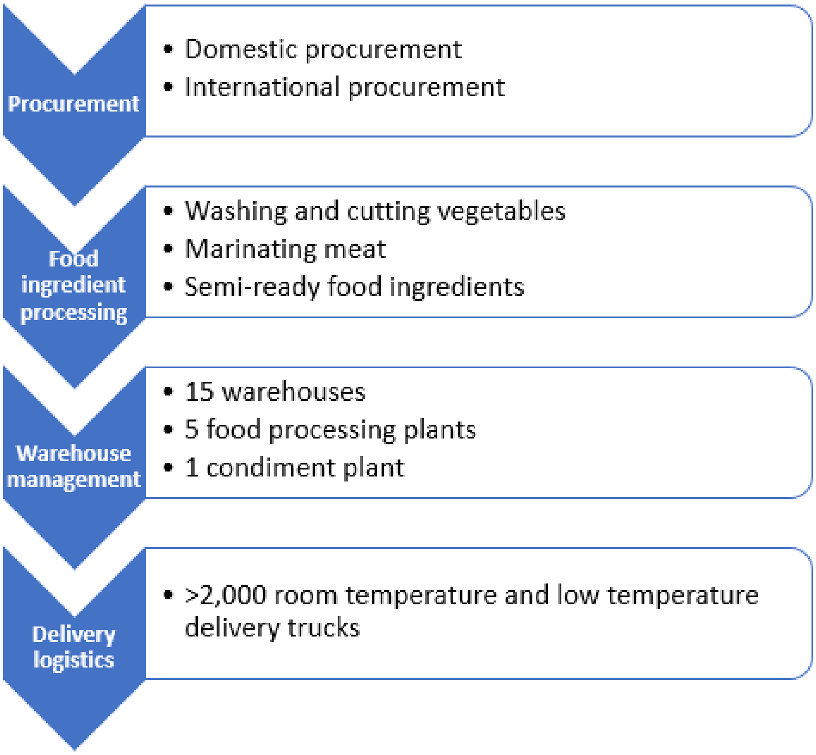


Source: Company data, Macquarie Research, March 2020. Note: *companies that reported seat turn and have been converted to table turn for comparison purpose. Chart based on FY18 data.

#2 Supply chain management

Supply chain management is one of the most important requirements to have a successful restaurant business, in our view. Whether or not a restaurant chain can scale up also depends on the capability and stability of the supply chain. Shuhai was initially founded to satisfy Haidilao's supply chain needs, but has since evolved into a supply chain platform serving a wide range of customers. Shuhai is a related party given Haidilao founders (Mr. Zhang, Ms. Shu, Mr. Shi and Ms. Li) own a majority stake, 69.4% (as of 2018). Evidently, Haidilao currently only accounts for 30% of Shuhai's revenue while the rest comes from third party customers. While Haidilao does its own procurement, Shuhai plays the important role of providing: 1) food processing, 2) logistics and 3) storage. Starting from January 2018, Haidilao procures food ingredients that do not require processing directly from third party suppliers. Meanwhile, processed food ingredients' (ex. vegetables that require washing & cutting, meat that requires flavouring, seafood paste) suppliers are selected by Haidilao and purchases/ processing are done by Shuhai. Besides Shuhai, the company also engages with four other independent third party logistics services providers to meet the demand in Fujian, Shandong, Hebei and Yunnan provinces.

Fig 37 Supply chain overview



Source: Company data, Macquarie Research, March 2020

Shuhai provides comprehensive supply chain services ranging from procurement, warehouse storage to logistics. The total solution provider position helps to simplify supply chain logistics, better inventory management and third party business to provide a procurement scale advantage.

- *Simplified supply chain logistics:* Shuhai provides storage and logistics services regardless of the procurement origin, which covers the majority of Haidilao's raw material supplies. According to Shuhai's website, it operates 15 warehouses, 5 food processing plants and 1 condiment plant. Given Shuhai's extensive warehouse network and logistics service expertise, Haidilao has been able to enjoy efficient raw material management and timely delivery to its restaurants.
- *Better inventory management:* the ERP system allows automatic inventory replenishment and real-time inventory tracking. One can set different inventory requirements for different food ingredients, and the procurement staff will be automatically notified whenever the inventory level at Shuhai's warehouses falls below such a requirement. At the restaurant level, restaurants can receive their orders within two days of placing the order on the same ERP system.
- *Third party business to provide procurement scale advantage:* Besides serving Haidilao, it also has over 1,000 clients spanning from CVS to restaurant operators. There are 10,000 SKUs available and a user friendly self-ordering system, which has enabled Shuhai to scale up the business and enjoy pricing power when it comes to procurement.

Fig 38 Shuhai serves over 1,000 clients

Source: Company data, Macquarie Research, March 2020

Fig 39 Extensive warehouse coverage

Source: Company data, Macquarie Research, March 2020

Moreover, it sources its hot pot soup base from Yihai (1579 HK, N, TP: HK$46.5 covered by Linda Huang). Both the Shuhai and Yihai purchase agreements have an initial term of three years and are expected to be renewed for a further term of three years subject to independent shareholders' approval.

#3 Automation without sacrificing service quality

There are currently two smart restaurants with one in Beijing and another one in Singapore. When Haidilao rolled out its first smart restaurant in Beijing in late 2018, there were concerns that the increase in automation would hurt service quality. However, the automation is mainly in the kitchen such as food preparation using robotic arms, an automated soup base assembly line with higher level of customisation etc. At the same time, customers still enjoy the same high level of service as the "human touch" hasn't been lost. Case in point, the order delivery/plate collection robots are meant to save the employees from repeatedly going back and forth to the kitchen while the dishes are still served by employees to customers.

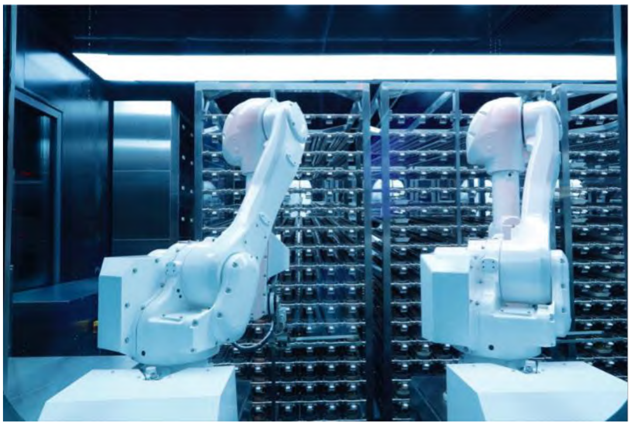
Fig 40 Haidilao's automation progress

Type	Robotic arm	Soup base machine	Robot
Capex (Rmb k)	100-200	1000-2000	10-20
Functions	Food preparation	soup base customization	order delivery, plate collection
Availability	testing stage	10-20 stores	1/3 of stores, 4-6 robots per store

Source: Company data, Macquarie Research, March 2020

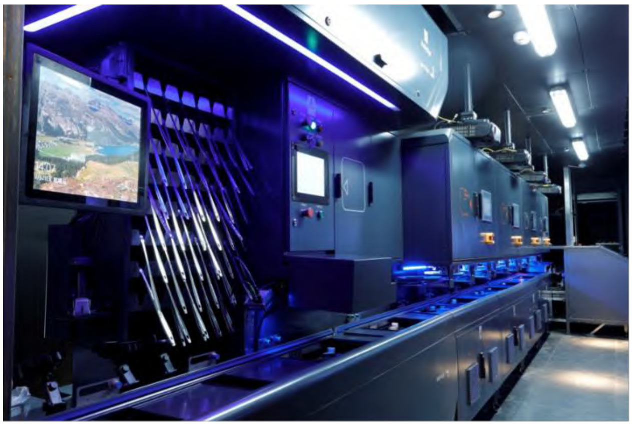
Per the above table, the capex is minimal for different types of automation and should be able to be rolled out quickly once it finishes fine tuning the equipment. As the company is still in early stages of automation implementation, it is difficult to gauge the staff per store optimisation benefit. Nevertheless, we appreciate management's efforts to utilize technology and ultimately provide room for margin expansion via better operational efficiency.

Fig 41 Robotic arms for food preparation



Source: Company data, Macquarie Research, March 2020

Fig 42 Automated soup base preparation with customization



Source: Company data, Macquarie Research, March 2020

M&A-fuelled brand portfolio expansion

Since listing, Haidilao has made three acquisitions in an effort to diversify its brand portfolio and expand globally. In our view, having a multi-brand portfolio also reduces single brand and single cuisine type risk. Note that Haidilao only signed an MOU for Madame Zhu's Kitchen and Hao Noodle, so there are no details of the valuation multiple yet. With abundant cash on hand, Haidilao has the financial resources to pursue suitable targets without adding any strain on its financial position. The acquisitions thus far appear to be small as we believe it's still testing the water to see if it can replicate its management system at other brands.

U-Ding

On 26th March, 2019, the company announced plans to acquire a 100% stake in U-Ding for a total consideration of Rmb204m. The transaction was deemed as a related party transaction as Mr. Zhang Yong, chairman and executive director, and his brother, Mr. Zhang Shuoyi, were part owners of U-Ding. Founded in 2012, U-Ding operates fast food style Maocai chain restaurants and generated a small loss of Rmb9m in 2018. Maocai uses Sichuan style mixed food ingredients boiled in spicy soup. Given the dish is pre-cooked, maocai is more suitable for delivery compared to hot pot and delivery has always been a key part of U-Ding's business model since inception. Currently, there are 37 stores, and we believe the standardized store format and menu should make the expansion process easier as it penetrates new provinces.

High standardization and set menus to ensure operation efficiency

U-Ding's menu consists of three key categories: 1) maocai, 2) local specialities and 3) a la carte. The meal preparation process is highly standardized where restaurant staff follows a strict guidance including weight of each ingredient, different cooking time/order for different ingredients, etc. Typically, restaurant staff prepares seasonings, meal sets before lunch & dinner rush hour based on the projected daily order volume. Meanwhile, the menu largely consists of meals with limited SKUs to help shorten the customer order and meal preparation time.

Leverage technology to better analyse sales data

U-Ding has partnered up with 5wei and TzxStar, both are restaurant management software companies, to handle order & payment, analyse sales data, launch marketing events and manage store level inventory, etc. For instance, U-Ding is able to track a new SKU's progress via 5wei data on order volume and frequency in order to have accurate marketing feedback. Based on the actual sales data, it can conduct in-depth market trend and product competitiveness analysis, which helps to improve the brand's competitive edge.

Fig 43 U Ding brand logo

Source: Company data, Macquarie Research, March 2020

Fig 44 U Ding's maocai offerings

Source: Company data, Macquarie Research, March 2020

Madam Zhu's Kitchen

Madam Zhu's Kitchen was founded in 2008 by Ms. Zhu Rong and is a full service Chinese chain restaurant with average per head spending of Rmb150-Rmb170. Ms. Zhu is a seasoned restaurateur who founded and managed "Yuxiang Family" and "Happy Family" in the 1990s prior to opening the Madam Zhu's Kitchen. The restaurant has been awarded as a Michelin Plate restaurant, which has helped to improve the brand profile.

There are currently 9 restaurants in Beijing, Shanghai and Hangzhou. Under the brand "Madam Zhu's Kitchen", there are four sub brands that have a different cuisine focus and own specialty dishes. As for the restaurant décor, it has adopted a contemporary and airy design with spacious seating where the contemporary style can be observed in the Hao Noodle restaurants as well. Given Madam Zhu's Kitchen is a more mature brand and has its own operations team, Haidilao doesn't need to spend too much effort on brand development and can focus on scaling up the brand using its successful business model, in our view.

Fig 45 Madam Zhu's Kitchen has contemporary restaurant interiors and spacious seating

Source: Macquarie Research, March 2020

Fig 46 Interior design with floral decoration

Source: Macquarie Research, March 2020

Hao Noodle

New York, USA

The same as Madam Zhu's Kitchen, Hao Noodle is also founded by Ms. Zhu Rong. This marks the first overseas venture for Ms. Zhu as she opened the first restaurant in New York's Greenwich Village. Positioned as modern Chinese cuisine, the décor is unlike the stereotypical Chinese restaurants and resembles more a hipster bistro with a loft-like interior. After opening in 2016, the restaurant successfully drew positive media coverage and received warm customer feedback. Two years later, it opened a second restaurant in Chelsea with a more spacious interior, slightly more friendly price point and different menu (grilled skewers available at second restaurant).

Fig 47 Hao Noodle's restaurant interior in New York

Source: Company data, Macquarie Research, March 2020

Fig 48 Multi-province Chinese cuisine available on the menu

Source: Company data, Macquarie Research, March 2020

The first restaurant, Hao Noodle and Tea, was designated a Bib Gourmand Selection restaurant by The Michelin Guide in 2019. Bib Gourmand restaurants are awarded by Michelin's inspectors for serving high quality and having good value (ticket size US$40 or less for two courses and a glass of wine/dessert on pre-tax/tip basis). With the added Michelin star power and Instagram-friendly interiors, Hao Noodle has amassed the key elements in generating social media buzz, in our view. This should serve as a tailwind for Hao Noodle's future in China and is unique in the sense that its expansion path is overseas first then China.

Fig 49 Hao Noodle's menu in New York

	Price range (US$)	
Dish type	**Greenwich Village**	**Chelsea**
Appetizers	8-15	8-15
Pot-stewed	3-20	3-20
Noodle and rice	12-22	12-22
Entrée	15-32	12-32
Dim sum	6	6
Desserts	8-12	8-12
Skewer		3-15

Source: Company data, Macquarie Research, March 2020

Shanghai, China

After finding initial success in New York, Hao Noodle opened its first store in Shanghai at the end of 2018. The store size is even smaller at 200sqm with a friendly price point at Rmb72/head per information provided by Dianping. In our view, the size and price point bode well with the rising casual dining trend and growing noodle wallet share within the catering industry in China. The restaurant has remained as the number one noodle restaurant in Shanghai's Pudong New Area and has a high customer rating on Dianping. Looking ahead, Hao Noodle should be able to leverage Haidilao's resources and scale advantage to expand its footprint should MOU go through.

Fig 50 First Hao Noodle in China is located in a shopping mall

Source: Macquarie Research, March 2020

Fig 51 Shanghai's Hao Noodle interior

Source: Macquarie Research, March 2020

Multi-brand strategy in the works

- U-Ding: its mass market per head spending and delivery friendly menu help make up for Haidilao's shortfall from hot pot's natural limitation on delivery scalability. At the same time, the highly standardized store format means it is easier to replicate and expand nationwide.
- Madam's Zhu Kitchen: a well-known brand with an experienced operations team that offers multi-region Chinese cuisine. This helps Haidilao to enter the Chinese full service segment without the long incubation period of a new brand.
- Hao Noodle: a young brand but has received praise from notable food critics and Michelin Bib Gourmand. Haidilao is set to gain exposure to one of the largest cuisine categories, noodles, via this addition.

Overall, we are positive on Haidilao's M&A-driven brand portfolio expansion strategy as it helps the company to lower single cuisine & brand risk, widen customer demographics and increase overseas exposure. Haidilao can also leverage its supply chain management (Shuhai), condiment (Yihai, 1579 HK, covered by Linda Huang) and human resource consulting (Weihai) to accelerate expansion for these brands.

Fig 52 Haidilao's expanding brand portfolio

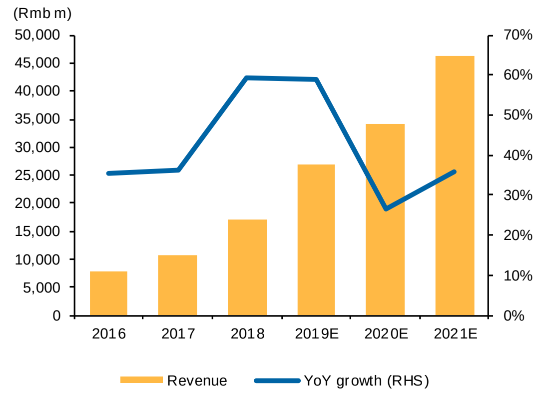
	U-Ding	Madam Zhu's Kitchen*	Hao Noodle*
Cuisine type	Sichuan	Guangdong, Shanghai, Sichuan	Regional Chinese, multi-provinces
Format	Casual dining	Full service	Casual dining
Store count (1H19)	37	9	3
Per head spending (lc$)	Rmb40	Rmb150-Rmb170	US$25-US$50 Rmb50-Rmb100
Operations hours	12	9.5-10	10
Customer review**	3.7-4.5	3.8-4.8	New York: 4-4.5 Shanghai: 4.6
Award	N/A	Michelin Plate	Michelin Bib Gourmand

Source: Company data, Macquarie Research, March 2020. Note: *Haidilao has signed an MOU but deal not completed yet. **based on Yelp for restaurants in the US and Dianping for restaurants in China.

Strong earnings growth and healthy balance sheet come into focus

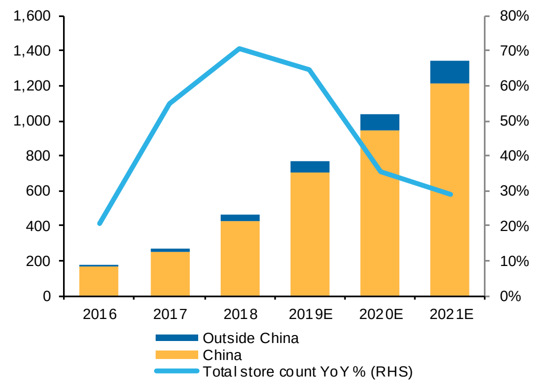
Thanks to the accelerated store expansion pace and healthy SSSg momentum, Haidilao's revenue rose 60% YoY in 2018 to Rmb17bn. Looking ahead, we expect the company will be able to maintain a robust revenue growth rate in the next couple of years with a 40% 2018-21E revenue CAGR but note that 1H20 revenue growth will slow down due to COVID-19 outbreak. As of 1H19, Haidilao had 593 stores where 93% of the stores are located in China and 7% located worldwide. Within China, the split by city tier is 1:2:1 for tier 1:2:3 cities. We expect to see more stores being added in tier-3 cities and overseas locations given the lower penetration rate.

Fig 53 Haidilao to deliver 40% 2018-21E revenue CAGR



Source: Company data, Macquarie Research, March 2020

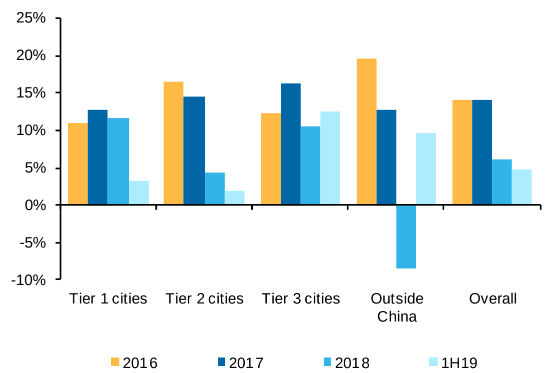
Fig 54 Meanwhile, store count to exceed 1,000 stores by 2020



Source: Company data, Macquarie Research, March 2020

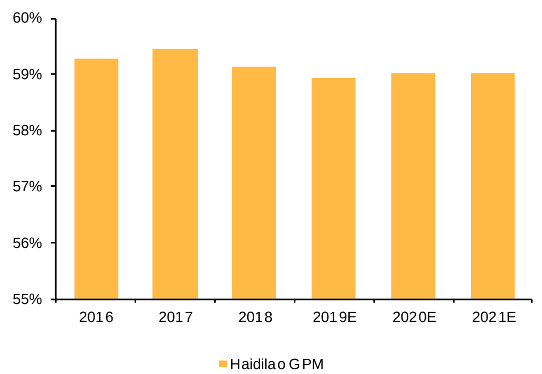
From an SSSg perspective, tier-3 cities and outside China were the strongest regions, while tier-2 cities saw the least growth in 1H19 likely due to having the highest store penetration rate and more mature stores. While recent accelerated store expansion may dilute some existing store sales, Haidilao's strong brand power should be able to provide sustainable traffic flow. As such, we're comfortable that it can maintain mid-single digit SSSg. Moreover, GPM has been largely stable, and the selective price hike in 2H19 should largely offset the higher raw material cost pressure in 2019. The 20xx current COGS breakdown is the following: 50% meat, 20% condiment, 10% vegetables and 20% dipping sauce. Although meat accounts for 50% of COGS, there's limited impact from the pork price rally due to a few pork related SKUs on the menu. Instead, beef and lamb are the biggest meat items where they account for half of the meat COGS. The company's scale advantage and strong brand equity provide protection to raw material cost fluctuations and room for ticket size growth.

Fig 55 Historical SSSg trend by city tiering



Source: Company data, Macquarie Research, March 2020.

Fig 56 Stable GPM outlook

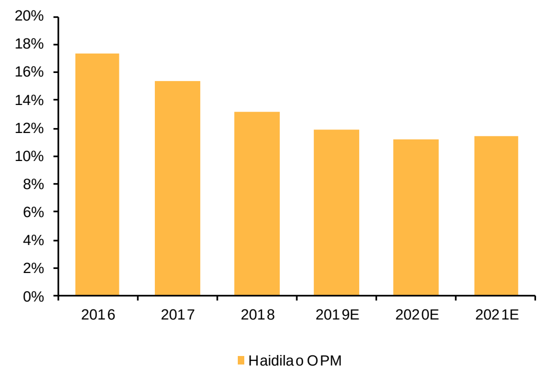


Source: Company data, Macquarie Research, March 2020

The biggest OPEX item is staff expense where it accounted for 29.6% of sales in 2018. In view of continuous wage inflation, we believe it will be crucial for Haidilao to improve operational efficiency such as through automation to lower back-end staff needed to keep staff expense at a reasonable level. Currently, each restaurant requires a staff of 100-150 where 60% of the staff is in the front and 40% is in the back-end area. On the other hand, low rental expense % (4.0% in 2018) is a key competitive advantage for Haidilao as shopping malls have been keen to have Haidilao as a tenant due to robust traffic flow. A non-prime location has not been necessary. The lease term is 8-15 years with 60-70% of the rent fixed and the rest being a variable rent.

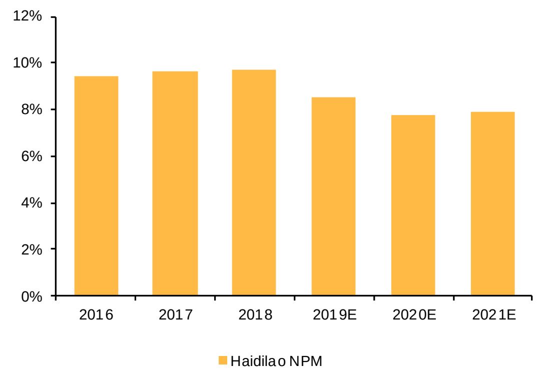
With a stable GPM outlook, we expect OPM to see gradual expansion over time on the back of operating efficiency improvement. As such, we expect FY19 and FY20 NPM to be 8.5% and 7.7% respectively where FY20 NPM to face transitory impact from COVID-19.

Fig 57 Meanwhile, OPM to see gradual upward trend driven by better operating efficiency



Source: Company data, Macquarie Research, March 2020

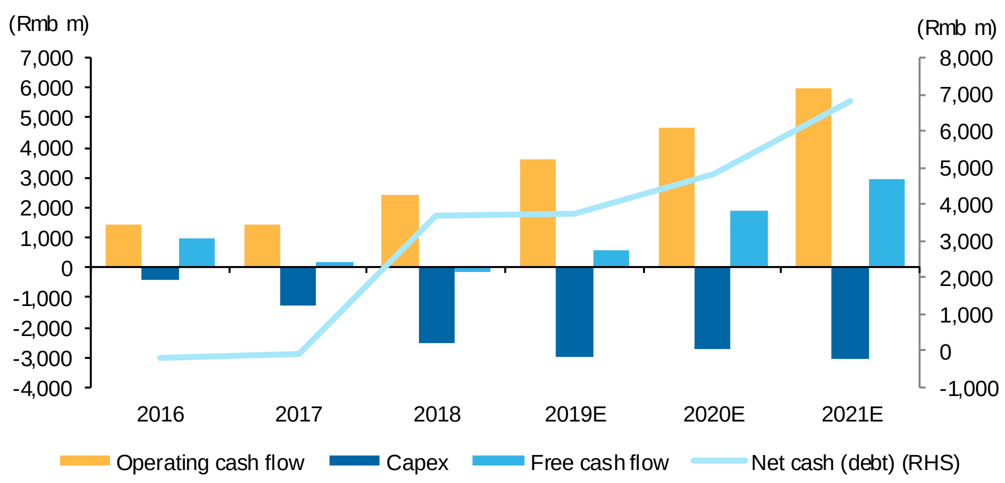
Fig 58 Haidilao's NPM to be 8.5% and 7.7% in FY19 and FY20



Source: Company data, Macquarie Research, March 2020

Haidilao continues to churn out steady operating cash flow as restaurants are a cash generative business. After listing on HKEX in late 2018, it has been able to speed up its store expansion pace, upgrade technology and improve technology and food safety standards using the IPO proceeds. With sufficient cash on hand, there's also headroom for potential M&A deals and to diversify its revenue steam. The company currently maintains a c.20% dividend payout policy. Overall, we expect the company to maintain a solid balance sheet and improve free cash flow ahead.

Fig 59 We expect Haidilao to maintain healthy net cash position



Source: Company data, Macquarie Research, March 2020

Appendix

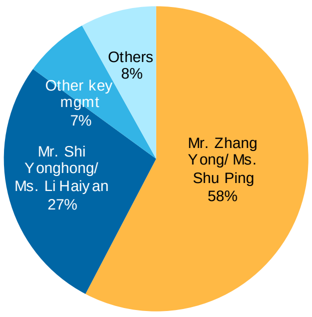
Fig 60 Greater China restaurant operator comparison table

Name	YUMC		Haidilao	Xiabu Xiabu	Hop Hing	Gourmet Master China	Café de Coral
Ticker	**YUMC US**		**6862 HK**	**520 HK**	**47 HK**	**2723 TT**	**341 HK**
	KFC	**Pizza Hut**					
Food delivery ratio	18%	26%	2%	<5%	Yoshinoya 39%	~10%	<1%
Aggregator	50-60%	70-80%	100%	100%	90-95%	100%	100%
Owned APP (Y/N)	Y	Y	Y	Y	Y	N	N
Membership (Y/N)	Y	Y	Y	Y (on wechat)	Y	Y (on wechat)	N
Own riders (Y/N)	Y	Y	N	N	Y	N	N
GPM	n.a.	n.a.	59%	64%	63%	n.a.	n.a.
OPM							
2016	9.0%		16.5%	17.3%	16.5%	8.5%	7.6%
2017	10.0%		16.7%	15.3%	14.4%	10.9%	6.8%
2018	11.2%			13.1%	12.6%	7.6%	8.3%
Table turn	n.a.	n.a.	5x	2-3x*	4.6x	n.a.	Café de Coral (HK): 10-14x Café de Coral (China): 4-6x
Ticket size	Rmb30	Rmb100-Rmb120	Rmb100-Rmb150	Xiabu Xiabu Rmb50-75 Cou Cou Rmb130-150	Yoshinoya Rmb33 Dairy Queen Rmb14	~25	Café de Coral (HK): HK$30-35 Café de Coral (China): Rmb 28-29 Super Super: HK$50-80 Mixian Series: HK$40-50 The Spaghetti House: HK$100-150
Delivery ticket size	Rmb60	~65	Rmb280-Rmb350	Xiazhuxiatang Rmb65 Xiabu Xiabu Rmb110	n.a.	n.a.	n.a.
SSSg							
2016	3%	-7%	14.1%	3.0%	2.3%	2%	Café de Coral: 4% Super Super: 1% China: 6%
2017	5.0%	1.0%	14.0%	9.3%	4.5%	3-4%	Café de Coral: 3% Super Super: 1% China: 12%
2018	2.0%	-5.0%	6.2%	2.1%	0.8%	negative low to mid teens	Café de Coral: 0% Super Super: 2% China: 2%
Labour to revenue ratio							
2016	~20%	~24%	~26%	~24%	~14%	~21%	~31%
2017	~20%	~25%	~29%	~23%	~14%	~20%	~31%
2018	~21%	~26%	~30%	~25%	~15%		~31%
Rental to revenue ratio							
2016	~10%	~10%	~4%	~13%	~13%	~14%	~12%
2017	~10%	~10%	~4%	~12%	~13%	~13%	~12%
2018	~10%	~10%	~4%	~12%	~13%		~12%
Store area (sqm/store)	400-500 sqm	200-400 sqm	800-1200 sqm	Xiabu Xiabu 200-500sqm Cou Cou 800-1000sqm	Yoshinoya 100-250sqm Dairy Queen 20-80sqm	150-200 sqm	Café de Coral: 3,000sq ft Super Super: 1,000-2,500sq ft Casual dining brands: 1,000-2,000sq ft
Average per store rev. (Rmb m/year)	7-8	6-7	35-45	Xiabu Xiabu 4-5 Cou Cou 20	Yoshinoya 5.9 Dairy Queen 1.4	5.1	n.a.
Capex (Rmb m)	2.6	3.3	10	Xiabu Xiabu Rmb1-1.2m Cou Cou Rmb7m	Yoshinoya: Rmb1.2-1.8m Dairy Queen Rmb0.5-0.8m	1.2	Café de Coral Rmb3-4m Super Super Rmb3m Other fast casual Rmb2-3m
Payback period	<2 years	<4 years	6-13 months	17.9 months	2 years	2-3 years	~2 years

Source: Company data, Macquarie Research, March 2020. Note: Café de Coral has March financial year-end and is based on FY16-FY19 figures.
*Xiabu Xiabu has seat turn

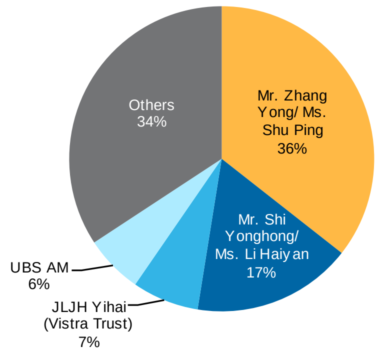
Shareholding structure (as of 2018)

Fig 61 Haidilao's shareholding structure



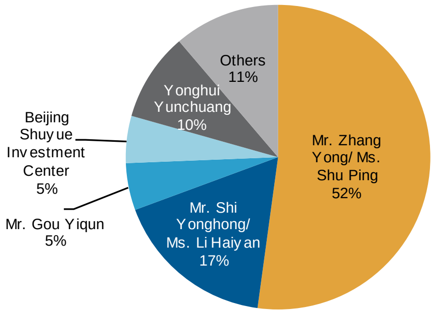
Source: Company data, Macquarie Research, March 2020

Fig 62 Yihai's shareholding structure



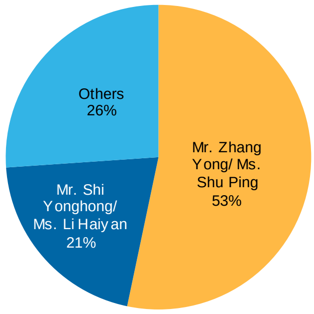
Source: Company data, Macquarie Research, March 2020

Fig 63 Shuhai's shareholding structure



Source: Company data, Macquarie Research, March 2020

Fig 64 Weihai's shareholding structure



Source: Company data, Macquarie Research, March 2020

Macquarie Quant Alpha Model Views

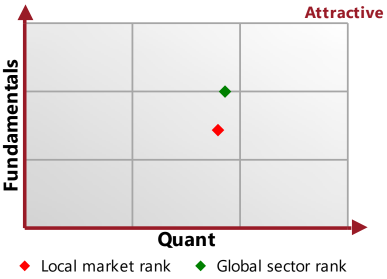
The Quant View page below has been derived from models that are developed and maintained by Sales and Trading personnel at Macquarie. The models are not a product of the Macquarie Research Department.

The quant model currently holds a marginally positive view on Haidilao. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Growth, indicating this stock has weak historic and/or forecast growth. Growth metrics focus on both top and bottom line items.

167/438

Global rank in
Consumer Services

% of BUY recommendations	69% (9/13)
Number of Price Target downgrades	0
Number of Price Target upgrades	1

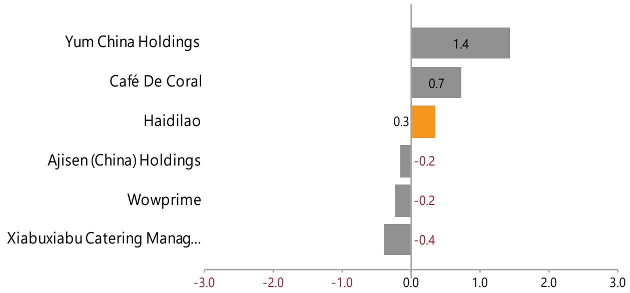


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Hong Kong) and Global sector (Consumer Services)

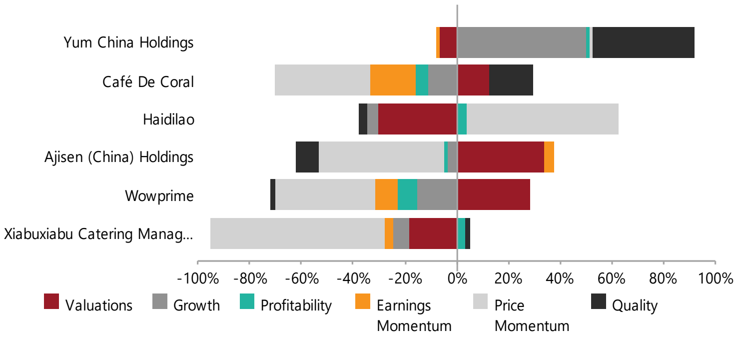
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



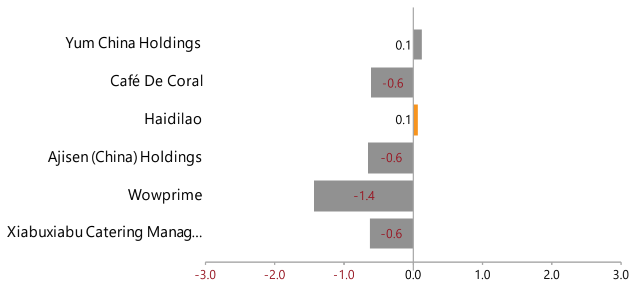
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



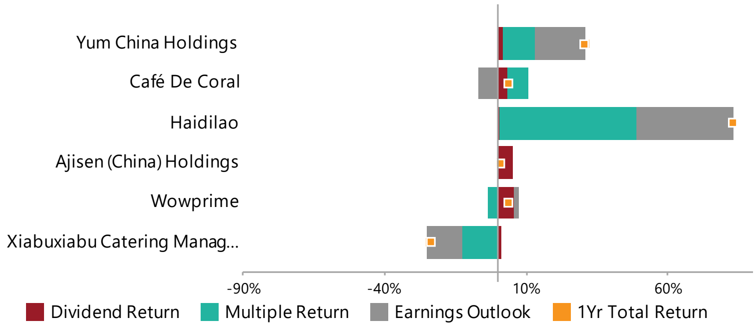
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



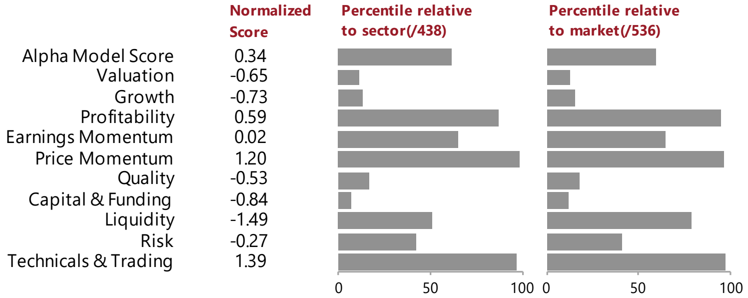
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.



Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Haidilao (6862 HK, Outperform, Target Price: HK$40.00)

Interim Results		1H/19A	2H/19E	1H/20E	2H/20E
Revenue	**m**	**11,695**	**15,264**	**12,830**	**21,298**
Gross Profit	**m**	**6,792**	**9,099**	**7,451**	**12,696**
Cost of Goods Sold	m	4,903	6,165	5,379	8,602
EBITDA	**m**	**1,796**	**2,360**	**1,584**	**3,468**
Depreciation	m	542	394	615	615
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**1,254**	**1,966**	**969**	**2,854**
Net Interest Income	m	-21	-96	-128	-128
Associates	m	22	20	20	20
Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	-4	0	0	0
Pre-Tax Profit	**m**	**1,251**	**1,890**	**861**	**2,745**
Tax Expense	m	-339	-499	-233	-725
Net Profit	**m**	**912**	**1,391**	**628**	**2,020**
Minority Interests	m	-1	-2	-1	-4
Reported Earnings	**m**	**911**	**1,388**	**627**	**2,017**
Adjusted Earnings	**m**	**911**	**1,388**	**627**	**2,017**
EPS (rep)		0.17	0.26	0.12	0.38
EPS (adj)		0.17	0.26	0.12	0.38
EPS Growth yoy (adj)	%	29.6	30.7	-31.2	45.3
EBITDA Margin	%	15.4	15.5	12.3	16.3
EBIT Margin	%	10.7	12.9	7.6	13.4
Earnings Split	%	39.6	60.4	23.7	76.3
Revenue Growth	%	59.3	58.6	9.7	39.5
EBIT Growth	%	38.7	48.6	-22.7	45.2

Profit & Loss		2018A	2019E	2020E	2021E
Revenue	**m**	**16,969**	**26,959**	**34,128**	**46,314**
Gross Profit	**m**	**10,034**	**15,891**	**20,148**	**27,341**
Cost of Goods Sold	m	6,935	11,068	13,981	18,972
EBITDA	**m**	**2,916**	**4,156**	**5,052**	**6,817**
Depreciation	m	689	936	1,230	1,526
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**2,227**	**3,220**	**3,823**	**5,291**
Net Interest Income	m	7	-117	-256	-346
Associates	m	30	42	40	40
Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	-2	-4	0	0
Pre-Tax Profit	**m**	**2,262**	**3,141**	**3,606**	**4,986**
Tax Expense	m	-613	-838	-958	-1,326
Net Profit	**m**	**1,649**	**2,303**	**2,648**	**3,660**
Minority Interests	m	-3	-4	-4	-6
Reported Earnings	**m**	**1,646**	**2,299**	**2,644**	**3,654**
Adjusted Earnings	**m**	**1,646**	**2,299**	**2,644**	**3,654**
EPS (rep)		0.33	0.43	0.50	0.69
EPS (adj)		0.33	0.43	0.50	0.69
EPS Growth (adj)	%	55.4	30.3	15.0	38.2
PE (rep)	x	86.5	66.6	57.9	41.9
PE (adj)	x	86.7	66.6	57.9	41.9
Total DPS		0.08	0.11	0.12	0.17
Total Div Yield	%	0.3	0.4	0.4	0.6
Basic Shares Outstanding	m	4,988	5,300	5,300	5,300
Diluted Shares Outstanding	m	4,932	5,300	5,300	5,300

Profit and Loss Ratios		2018A	2019E	2020E	2021E
Revenue Growth	%	59.5	58.9	26.6	35.7
EBITDA Growth	%	46.7	42.5	21.6	34.9
EBIT Growth	%	36.8	44.6	18.7	38.4
Gross Profit Margin	%	59.1	58.9	59.0	59.0
EBITDA Margin	%	17.2	15.4	14.8	14.7
EBIT Margin	%	13.1	11.9	11.2	11.4
Net Profit Margin	%	9.7	8.5	7.7	7.9
Payout Ratio	%	23.0	25.4	24.1	24.1
EV/EBITDA	x	47.6	35.6	29.3	21.8
EV/EBIT	x	62.2	45.8	38.7	28.0
Balance Sheet Ratios					
ROE	%	33.9	23.9	22.7	25.6
ROA	%	28.4	24.6	23.9	26.6
ROIC	%	139.2	48.0	40.9	48.8
Net Debt/Equity	%	-43.0	-35.2	-37.5	-42.3
Interest Cover	x	nmf	27.5	14.9	15.3
Price/Book	x	16.7	14.5	12.0	9.7
Book Value per Share		1.7	2.0	2.4	3.0

Cashflow Analysis		2018A	2019E	2020E	2021E
EBITDA	**m**	**2,916**	**4,156**	**5,052**	**6,817**
Tax Paid	m	-583	-838	-958	-1,326
Chgs in Working Cap	m	89	226	497	458
Net Interest Paid	m	38	82	85	115
Other	m	-73	-32	-45	-75
Operating Cashflow	**m**	**2,388**	**3,594**	**4,631**	**5,989**
Acquisitions	m	0	0	0	0
Capex	m	-2,512	-3,020	-2,730	-3,030
Asset Sales	m	0	0	0	0
Other	m	-1,355	2	-17	-24
Investing Cashflow	**m**	**-3,867**	**-3,018**	**-2,747**	**-3,054**
Dividend (Ordinary)	m	-461	-345	-481	-553
Equity Raised	m	0	0	0	0
Debt Movements	m	53	-410	0	0
Other	m	5,747	-199	-342	-461
Financing Cashflow	**m**	**5,339**	**-954**	**-823**	**-1,014**
Net Chg in Cash/Debt	**m**	**3,837**	**-391**	**1,061**	**1,922**
Free Cashflow	**m**	**-123**	**574**	**1,901**	**2,959**

Balance Sheet		2018A	2019E	2020E	2021E
Cash	m	4,119	3,727	4,789	6,711
Receivables	m	845	1,291	1,680	2,233
Inventories	m	457	430	810	827
Investments	m	2	2	2	2
Fixed Assets	m	4,000	6,093	7,609	9,137
Intangibles	m	52	123	210	325
Other Assets	m	2,471	2,589	2,674	2,819
Total Assets	**m**	**11,945**	**14,256**	**17,773**	**22,053**
Payables	m	1,636	2,084	3,116	3,748
Short Term Debt	m	410	0	0	0
Long Term Debt	m	0	0	0	0
Provisions	m	0	0	0	0
Other Liabilities	m	1,269	1,584	1,902	2,443
Total Liabilities	**m**	**3,315**	**3,668**	**5,018**	**6,191**
Shareholders' Funds	m	8,625	10,580	12,742	15,843
Minority Interests	m	5	8	13	18
Other	m	0	0	0	0
Total S/H Equity	**m**	**8,630**	**10,588**	**12,755**	**15,861**
Total Liab & S/H Funds	**m**	**11,945**	**14,256**	**17,773**	**22,053**

All figures in Rmb unless noted.
Source: Company data, Macquarie Research, March 2020

6 February 2020 United States

EQUITIES

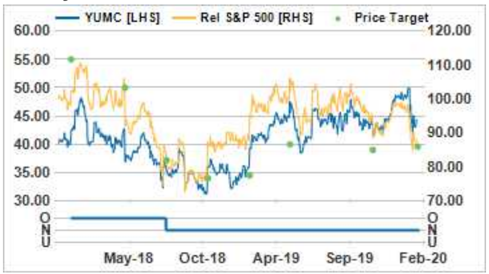
YUMC US	Neutral
Price (at 21:50, 05 Feb 2020 GMT)	US$44.31

Valuation - DCF	US$	39.60
12-month target	US$	39.60
12-month TSR	%	-9.7
GICS sector		Consumer Services
Market cap	US$m	16,657
30-day avg turnover	US$m	139.4
Number shares on issue	m	375.9

Investment fundamentals

Year end 31 Dec		2019A	2020E	2021E	2022E
Revenue	m	8,776	8,834	9,665	10,024
EBIT	m	901	836	1,052	1,033
Reported profit	m	713	590	750	764
Adjusted profit	m	713	590	750	764
Gross cashflow	m	1,171	1,043	1,267	1,340
CFPS	US$	3.02	2.69	3.26	3.45
CFPS growth	%	1.0	-10.9	21.5	5.8
PGCFPS	x	14.7	16.5	13.6	12.8
EPS adj	US$	1.84	1.52	1.93	1.97
EPS adj growth	%	3.0	-17.1	27.1	1.9
PER adj	x	24.1	29.1	22.9	22.5
Total DPS	US$	0.48	0.48	0.31	0.10
Total div yield	%	1.1	1.1	0.7	0.2
ROA	%	16.7	12.0	14.0	12.7
ROE	%	24.0	17.9	19.7	17.4
EV/EBITDA	x	11.7	12.8	10.5	10.2
Net debt/equity	%	-32.9	-27.8	-46.3	-44.8
P/BV	x	5.4	4.9	4.2	3.7

YUMC US rel S&P 500 performance, & rec history



Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Research, February 2020
(all figures in USD unless noted)

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Yum China Holdings (YUMC US)
Operation materially impacted by Coronavirus

Key points

- Coronavirus impact is material, but the outlook remains fluid.
- Labour/commodity inflation pressure remains, sufficient CF for operations.
- Lower 2020 NP forecasts by 19% and maintain Neutral rating.

Event

- YUMC reported 4Q19 results, with net sales up 6% to US$2.03bn and net income up 22% to US$90m. Excluding the impact of mark to market gains, adjusted net income increased 2% YoY. Apparently, the coronavirus will hit the company's 1Q20 operations severely, and management expects it may experience operating losses for the first quarter of 2020 and, if the sales trend continues, for the full year 2020. We therefore lower our NP forecast by 19% for 2020. Our TP rises to US$39.6 from USD$39 previously based on our DCF model as we lower our capex assumptions.

Impact

- **Coronavirus impact is material, but the outlook remains fluid.** Since the coronavirus outbreak, the company has temporarily closed >30% of stores, mainly in Hubei, Hunan, and Henan provinces; tourist spots and transportation hub stores (which account for 5-6% of store counts); and stores with transportation restrictions in lower-tier cities. Even for the stores remaining open, SSSg dropped by 40-50% during the Chinese New Year period. As the coronavirus situation remains fluid, mgmt may close even more shops if it keeps evolving. We now lower our SSSg forecast to -13.3% and 0.7% for 1Q/2Q20 from 2.3% and 2.3% previously but maintain SSSg the same for the rest of the year and 2021.
- **Labour and commodity inflation pressure remains.** Management expect wage inflation to be mid-to-high single digits compared to 5-6% in 2019, with commodity inflation low-to-mid single digits for 1H20 compared to 2-3% in 2019. Regarding chicken prices, although they have come down in 1Q20, the company factored in the market price spike in Nov 2019, and the import chicken benefit is not significant given the market is small. One thing worth watching is if chicken prices rebound strongly, given Hunan had the avian flu outbreak and China chicken prices are almost hitting historical low as farmers are in loss right now. As for G&A costs, mgmt will try to control such expenses as travel and service fees at this critical moment.
- **Sufficient cash flows to maintain operation.** YUMC declared a US$0.12/sh cash dividend, the same as in 4Q18. During 4Q19, the company repurchased 1.3 million shares of stock for US$57.2 million at an average price of US$43.94/share. As at the end of 2019, the company held US$1,046m cash, sufficient to fend off operational disruption and manage working capital.

Earnings and target price revision

- We lower our 2020/2021 net profit by 18.5%/1.3% and raise our TP to US$39.6 from US$39 based on our DCF model with lower capex assumptions.

Price catalyst

- 12-month price target: US$39.60 based on a DCF methodology.
- Catalyst: coronavirus, 1Q20 result

Action and recommendation

- Maintain Neutral.

Investment thesis: Maintain Neutral with TP at US$39.6

- We lower our FY20 and FY21 net income by 18.5% and 1.3%, respectively, to factor in 4Q19 results as well as the impact of the coronavirus outbreak.
- We maintain our Neutral rating with TP of US$39.6, still based on a DCF valuation.

Fig 1 YUMC DCF model gives ~US$40.00 fair value

Risk Free Rate	5.0%	Sum of PV of FCF	$3,008
Market Risk Premium	8.0%	Terminal Value	$10,805
Equity Beta	106.0%	Long term Investment	$0
Cost of Equity	13.5%	Investment in Assoc. & JCEs (book value)	706
Cost of Debt (Pre-tax)	2.0%	Enterprise Value	$14,519
Cost of Debt (After tax)	1.5%	Less: Minority Interests (book value)	($124)
Target Debt weight	25.0%	Less Net Debt (book value)	$970
Target Equity weight	75.0%	Equity Value	$15,365
Tax Rate	25.0%	No. of Ord shares (m), fully diluted	388
WACC	**10.5%**	Value per Share, USD	$39.60
Terminal growth	3.0%	Share Price Upside to Valuation	-10.9%

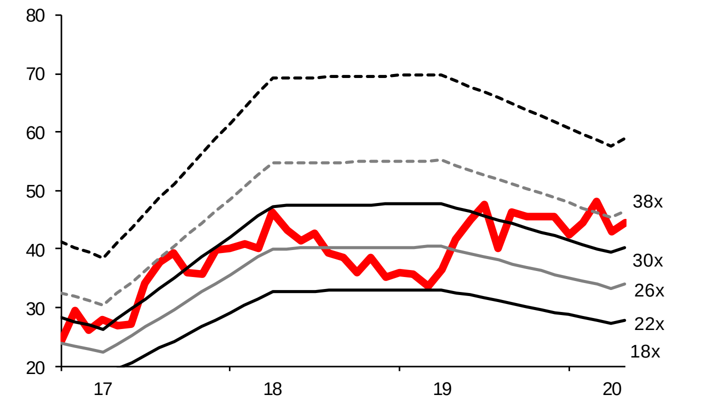
Source: Company data, Macquarie Research, February 2020

Fig 2 DCF scenario analysis based on different discount rate and terminal growth rate

Discount Rate	**Value Per Diluted Share (d)** 2.0%	3.0%	4.0%
8.49%	$47.2	$54.0	$63.7
9.49%	$40.9	$45.7	$52.2
10.49%	$36.1	$39.6	$44.2
10.99%	$34.1	$37.1	$41.1
11.49%	$32.3	$35.0	$38.4

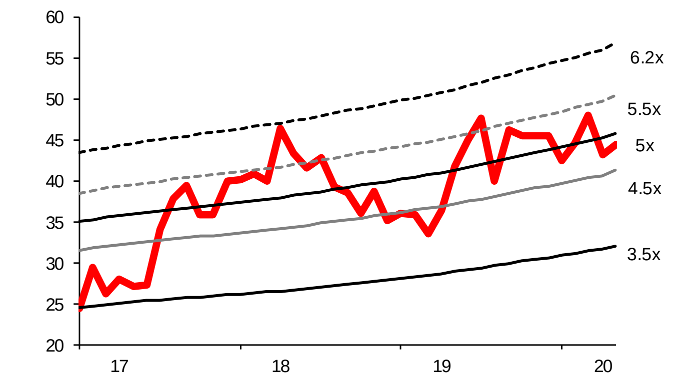
Source: Company data, Macquarie Research, February 2020

Fig 3 Historical PER bands



Source: Bloomberg, Macquarie Research, February 2020

Fig 4 Historical PB bands



Source: Bloomberg, Macquarie Research, February 2020

Earnings revisions

Post 4Q19 results, we lower our FY20 and FY21 net profit forecasts by 18.5% and 1.3%, respectively.

- **Revenue:** we adjust our FY20/21 revenue forecasts by -3.2% and 1.8%, respectively.
- **Operating margin:** We adjust our operating margin forecasts by -1.2ppt and 0.3ppt for FY20/21.
- **Net margin:** We lower our net margin assumptions by 1.2ppt and 0.2ppt for FY20/21.

Fig 5 Earnings revisions

(US$m)	Old 2019E	Old 2020E	Old 2021E	2019A	New 2020E	New 2021E	% diff. 2019A/E	% chg. 2020E	% chg. 2021E
Revenue	8,761	9,129	9,499	8,776.0	8,834.4	9,665.2	0.2%	(3.2%)	1.8%
EBITDA	1,416	1,506	1,580	1,329.0	1,261.9	1,537.1	(6.1%)	(16.2%)	(2.7%)
Operating profit	933	975	1,003	901.0	836.0	1,052.1	(3.5%)	(14.3%)	4.9%
Pre-tax	1,020	1,045	1,096	1,003.0	850.8	1,082.5	(1.7%)	(18.6%)	(1.2%)
Net income	725	724	760	713.0	590.4	750.2	(1.6%)	(18.5%)	(1.3%)
Margin (%)									
EBITDA Margin	16.2%	16.5%	16.6%	15.1%	14.3%	15.9%	-1.0ppt	-2.2ppt	-0.7ppt
OP Margin	10.7%	10.7%	10.6%	10.3%	9.5%	10.9%	-0.4ppt	-1.2ppt	0.3ppt
Net Margin	8.3%	7.9%	8.0%	8.1%	6.7%	7.8%	-0.1ppt	-1.2ppt	-0.2ppt

Source: Macquarie Research, February 2020

Earnings review

YUM China reported 4Q19 results, with net profit of US$90m, missing our estimates by 11.5%.

- 4Q19 SSSg was 2%, flattish QoQ. In terms of performance by brand, KFC SSSg remained at 3%, same as in 3Q19, while Pizza Hut's SSSg was flattish vs. 1% in 3Q19.
- 4Q19 revenue increased 6.0% YoY to US$2,029m, 0.7% above our estimates.
- EBITDA margin decreased by 0.3ppt YoY to 9.9%.
- Operating margin rose 0.2ppt YoY to 4.6%.

Fig 6 Earnings review

US$m	4Q18 Actual	4Q19 Actual	YoY growth	4Q19 MQ Fcst	% dif. to actual
Revenue	1,914	2,029	6.0%	2,014	0.7%
EBITDA	195	201	2.9%	247	(18.6%)
Operating profit	84	94	11.9%	126	(25.6%)
Pre-Tax Profit	65	128	96.9%	145	(11.6%)
Net Income	74	90	21.6%	102	(11.5%)
EPS (USD cents/sh)	19.53	23.94	22.6%	26.21	(8.7%)
Margin (%)					
EBITDA Margin	10.2%	9.9%	(0.3%)	12.3%	(2.4%)
OP Margin	4.4%	4.6%	0.2%	6.3%	(1.6%)
Net Margin	3.9%	4.4%	0.6%	5.0%	(0.6%)

Source: Company data, Macquarie Research, February 2020

Macquarie Quant Alpha Model Views

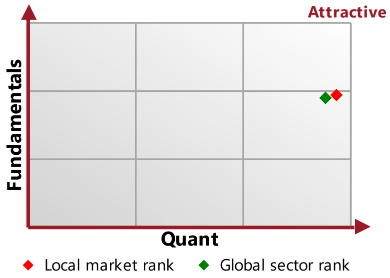
The Quant View page below has been derived from models that are developed and maintained by Sales and Trading personnel at Macquarie. The models are not a product of the Macquarie Research Department.

The quant model currently holds a strong positive view on Yum China Holdings. The strongest style exposure is Growth, indicating this stock has good historic and/or forecast growth. Growth metrics focus on both top and bottom line items. The weakest style exposure is Valuations, indicating this stock is over-priced in the market relative to its peers.

35/442

Global rank in Consumer Services

% of BUY recommendations	82% (14/17)
Number of Price Target downgrades	0
Number of Price Target upgrades	4

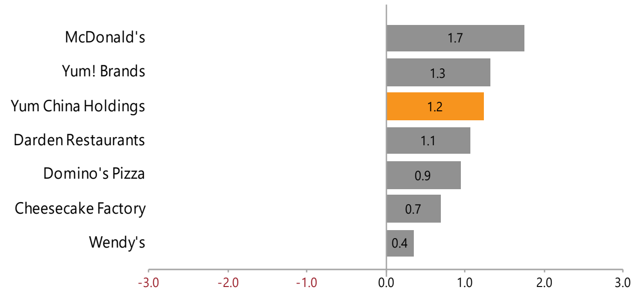


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Consumer Services)

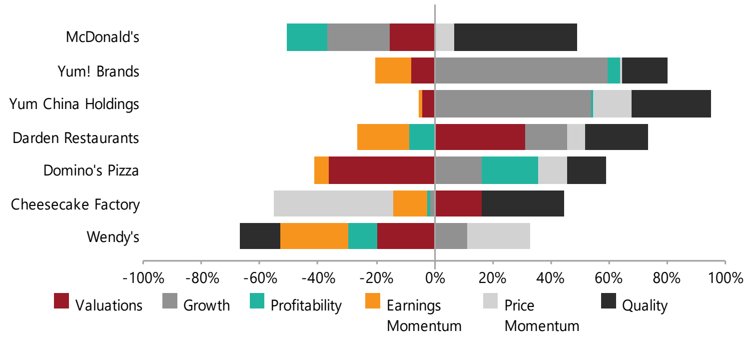
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



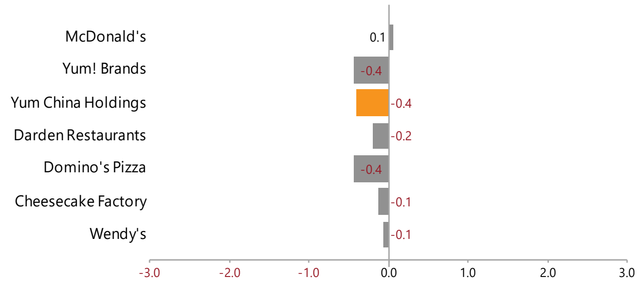
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



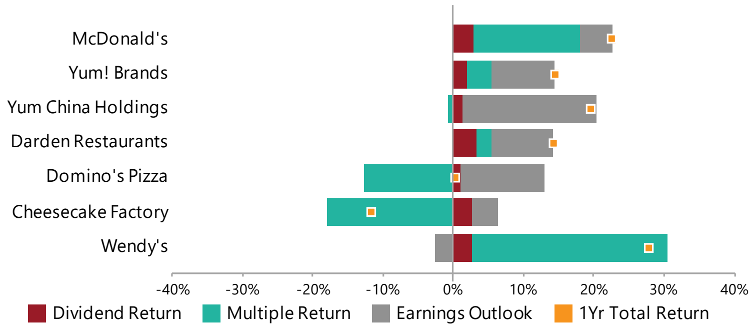
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



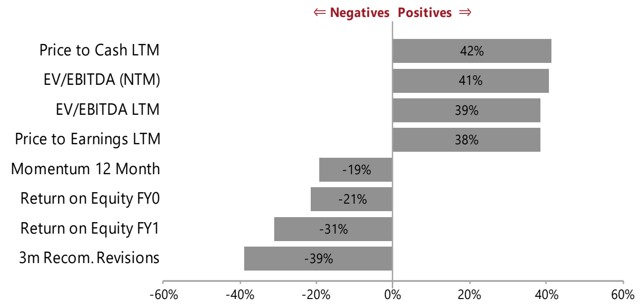
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



What drove this Company in the last 5 years

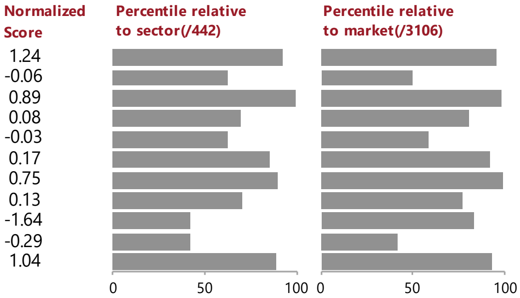
Which factor score has had the greatest correlation with the company's returns over the last 5 years.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.

	Normalized Score
Alpha Model Score	1.24
Valuation	-0.06
Growth	0.89
Profitability	0.08
Earnings Momentum	-0.03
Price Momentum	0.17
Quality	0.75
Capital & Funding	0.13
Liquidity	-1.64
Risk	-0.29
Technicals & Trading	1.04



Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Macquarie Research | MACQUARIE

6 March 2020 Hong Kong

EQUITIES

520 HK	Outperform
Price (at 04:09, 05 Mar 2020 GMT)	HK$7.92

Valuation - PER	HK$	9.40
12-month target	HK$	9.40
Upside/Downside	%	+18.7
12-month TSR	%	+22.2
Volatility Index		High
GICS sector		Consumer Services
Market cap	HK$m	8,569
Market cap	US$m	1,125
Free float	%	38
30-day avg turnover	US$m	4.9
Number shares on issue	m	1,082

Investment fundamentals

Year end 31 Dec		2018A	2019E	2020E	2021E
Revenue	m	4,734.1	6,012.9	6,462.0	7,381.0
EBIT	m	595.6	550.4	553.2	711.6
EBIT growth	%	12.6	-7.6	0.5	28.6
Reported profit	m	462.5	357.5	347.4	454.1
Adjusted profit	m	462.5	357.5	347.4	454.1
EPS rep	Rmb	0.43	0.33	0.33	0.43
EPS rep growth	%	9.5	-21.6	-2.3	30.7
EPS adj	Rmb	0.43	0.33	0.33	0.43
EPS adj growth	%	9.5	-21.6	-2.4	30.7
PER rep	x	16.7	21.3	21.8	16.7
PER adj	x	16.7	21.3	21.8	16.7
Total DPS	Rmb	0.21	0.28	0.24	0.24
Total div yield	%	3.0	4.0	3.4	3.4
ROA	%	19.5	15.5	14.4	16.7
ROE	%	21.9	15.4	13.8	16.4
EV/EBITDA	x	7.4	7.0	6.3	5.3
Net debt/equity	%	-59.7	-62.0	-55.8	-82.6
P/BV	x	3.4	3.1	2.9	2.6

520 HK rel HSI performance, & rec history

Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Research, March 2020
(all figures in Rmb unless noted, TP in HKD)

Analysts
Macquarie Capital Limited

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sunny.chow@macquarie.com

Linda Huang, CFA +852 3922 4068
linda.huang@macquarie.com

Xiabuxiabu Catering (520 HK)
Waiting for dawn

Key points

- Earnings recovery to be delayed by COVID-19 but still on the right track.
- Brand image rejuvenation and operational efficiency gains underway.
- Reducing FY19/20 estimates. Maintain Outperform with a 37% lower TP of HK$9.40, based on 22x blended FY20/21E PER.

Conclusion

- Despite an unexciting 2019 amid a mgmt reshuffle, we appreciate mgmt's efforts to refresh its brand image and aim to deliver quality sustainable growth. While the COVID-19 outbreak will delay the pace of earnings recovery and it is difficult to project when there will be a return to normality, we view the impact as transitory and expect consumption to gradually recover once it stabilises. Maintain Outperform but cut our TP from HK$15.0 to HK$9.40, still based on 22x but with a roll-over to blended FY20/21 PER.

Impact

- **Brand image rejuvenation to improve SSSg.** Admittedly, Xiabu Xiabu's SSSg performance was disappointing in 2019 where several key regions were in the red. Meanwhile, Cou Cou maintained healthy SSSg and continues to be well received by consumers. As Xiabu Xiabu and Cou Cou's footprint exceed 1,000 and 100 stores, respectively, we believe it's imperative for management to rejuvenate the brand image to keep customers enticed. Ongoing branding activities highlighting food quality and strengthen the brand image will continue in 2020. For the A&P strategy, more allocation will be given to brand building instead of promotional discounts.

- **Operating efficiency improvement underway.** It strategically adjusted its menu mix (used chicken/fish to offset beef/lamb cost pressure) and introduced more premium SKUs to alleviate cost pressure. Note there's very limited impact from the pork price rally as there are only 1-2 pork SKUs. Mgmt is going back to its roots and rolling out more meal sets to improve operation efficiency and retain younger customers. It will retain the value for money proposition with an ASP of Rmb50-80 which we believe is the right strategy.

- **Reset in 2019 to gear up for a better 2020.** Under Ms. Zhao's guidance, the company has laid out three key strategies: 1) re-branding with a focus on quality, 2) sales strategy shift from promotion to branding and 3) quality over quantity store expansion. After laying the groundwork in 2H19, we expect 2H20 to see an earnings recovery once the COVID-19 impact fades.

Earnings and target price revision

- We are lowering our FY19E and FY20E net income by 20.3% and 42.3%.

Price catalyst

- 12-month price target: HK$9.40 based on a PER methodology.
- Catalyst: SSSg, new strategy execution

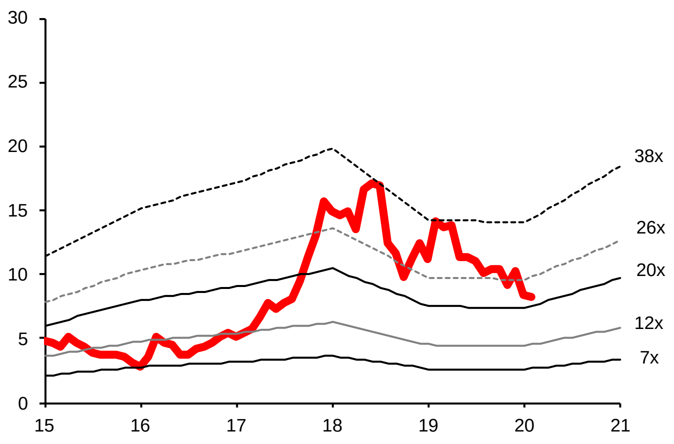
Action and recommendation

- Maintain Outperform.

Investment thesis: Maintain Outperform and lower TP to HK$9.40

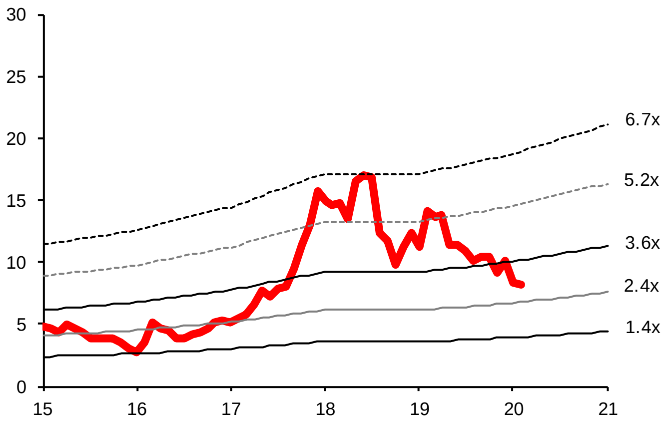
- Xiabu Xiabu is strategically positioned in the fast-growing fast casual market and offers increasingly popular hot-pot cuisine. Meanwhile, its scalable business model should allow the company to rapidly expand nationwide under a dual-brand strategy. In addition, the delivery and condiment businesses are still in the early ramp-up stage, which should provide additional growth drivers in the long run, in our view. Overall, we lower our FY19E and FY20E net income estimates by 20.3% and 42.3%, respectively to reflect softer 2H19 earnings and COVID-19 impact on 1H20 earnings.
- We lower our target from HK$15.0 to HK$9.40, still based on 22x but roll over to blended FY20/21E PER.

Fig 1 Historical PER bands



Source: Bloomberg, Macquarie Research, March 2020

Fig 2 Historical PBR bands



Source: Bloomberg, Macquarie Research, March 2020

Earnings revision

We lower our FY19E and FY20E net income by 20.3% and 42.3% and now project Xiabu Xiabu's net profit will decrease 22.7% YoY and 2.8% YoY in 2019 and 2020 respectively. Our new earnings assumptions are based on the following:

- **Revenue:** We lower our FY19 and FY20 revenue forecasts by 2.1% and 15.4%, respectively, mainly to reflect COVID-19 impact.
- **Gross margin:** We raise our FY19 and FY20 GPM assumptions by 0.3ppt and 0.2ppt to 62.6% and 62.6%, respectively.
- **Operating margin:** We lower our FY19 and FY20 OPM assumptions by 1.7ppt and 2.8ppt to 9.2% and 8.6%, respectively.

Fig 3 Earnings revisions

(Rmb m)	Old 2019E	Old 2020E	New 2019E	New 2020E	% chg. 2019	% chg. 2020
Revenue	6,142.2	7,639.1	6,012.9	6,462.0	(2.1%)	(15.4%)
Gross Profit	3,821.4	4,763.5	3,761.9	4,044.2	(1.6%)	(15.1%)
Operating Profit	665.3	864.9	550.4	553.2	(17.3%)	(36.0%)
Pre-Tax	585.6	788.0	470.1	449.5	(19.7%)	(43.0%)
Net Income	448.7	602.2	357.5	347.4	(20.3%)	(42.3%)
Margin (%)						
Gross Margin	62.2%	62.4%	62.6%	62.6%	0.3ppt	0.2ppt
OP Margin	10.8%	11.3%	9.2%	8.6%	-1.7ppt	-2.8ppt
Net Margin	7.3%	7.9%	5.9%	5.4%	-1.4ppt	-2.5ppt

Source: Macquarie Research, March 2020

Macquarie Quant Alpha Model Views

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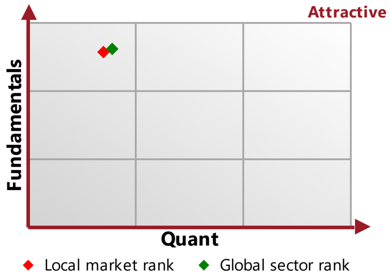
The quant model currently holds a reasonably negative view on Xiabuxiabu Catering Management (China) Holdings. The strongest style exposure is Profitability, indicating this stock is efficiently converting investments to earnings; proxied by ratios like ROE or ROA. The weakest style exposure is Price Momentum, indicating this stock has had weak medium to long term returns which often persist into …

324/437

Global rank in Consumer Services

% of BUY recommendations	75% (6/8)
Number of Price Target downgrades	1
Number of Price Target upgrades	0



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Two rankings: Local market (Hong Kong) and Global sector (Consumer Services)

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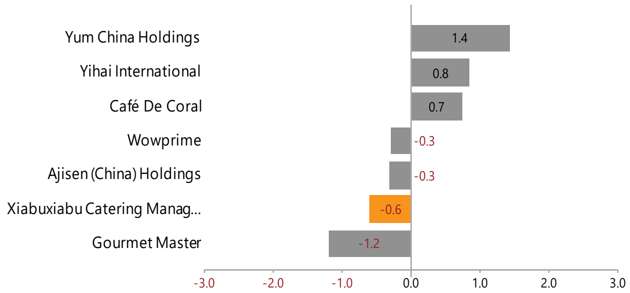

Factors driving the Alpha Model

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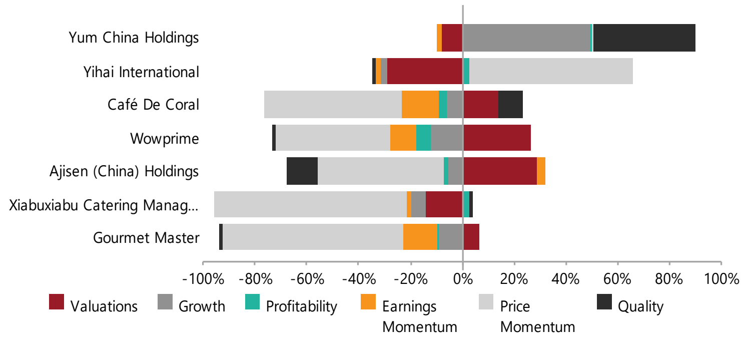

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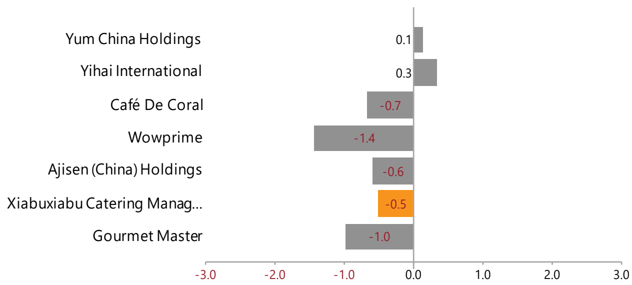

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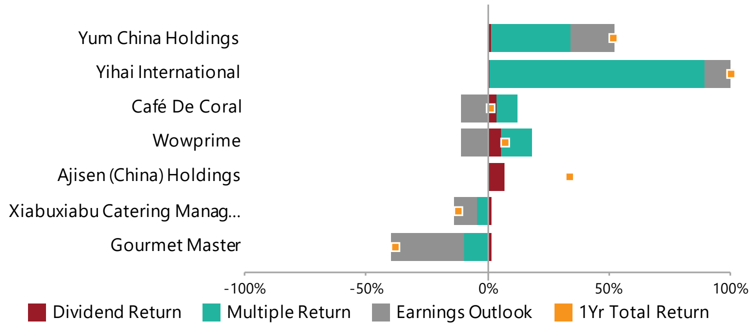

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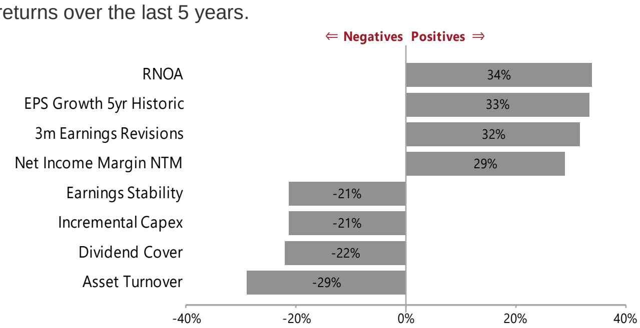

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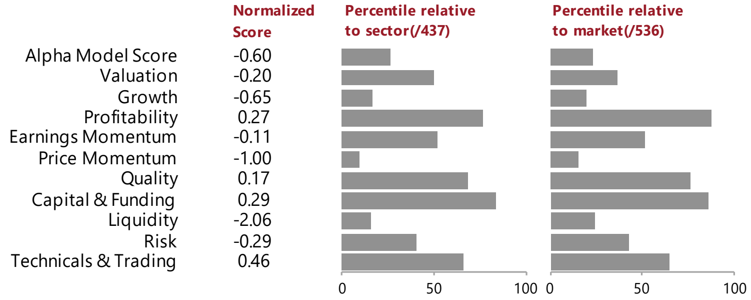

Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Xiabuxiabu Catering Management (China) Holdings (520 HK, Outperform, Target Price: HK$9.40)

Interim Results		**1H/19A**	**2H/19E**	**1H/20E**	**2H/20E**
Revenue	**m**	**2,713**	**3,300**	**2,516**	**3,946**
Gross Profit	**m**	**1,716**	**2,046**	**1,594**	**2,450**
Cost of Goods Sold	m	997	1,254	922	1,496
EBITDA	**m**	**414**	**454**	**383**	**583**
Depreciation	m	148	170	207	207
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**266**	**284**	**177**	**377**
Net Interest Income	m	-41	-39	-52	-52
Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	0	0	0	0
Pre-Tax Profit	**m**	**225**	**245**	**125**	**325**
Tax Expense	m	-63	-52	-35	-69
Net Profit	**m**	**162**	**193**	**90**	**256**
Minority Interests	m	2	0	1	1
Reported Earnings	**m**	**164**	**193**	**91**	**257**
Adjusted Earnings	**m**	**164**	**193**	**91**	**257**
EPS (rep)	fen	15.3	18.2	8.5	24.1
EPS (adj)	fen	15.3	18.2	8.5	24.1
EPS Growth yoy (adj)	%	-20.7	-22.4	-44.0	32.6
EBITDA Margin	%	15.3	13.8	15.2	14.8
EBIT Margin	%	9.8	8.6	7.0	9.5
Earnings Split	%	45.9	54.1	26.2	73.8
Revenue Growth	%	27.4	26.7	-7.3	19.6
EBIT Growth	%	-6.1	-8.9	-33.7	32.6

Profit & Loss		**2018A**	**2019E**	**2020E**	**2021E**
Revenue	**m**	**4,734**	**6,013**	**6,462**	**7,381**
Gross Profit	**m**	**2,950**	**3,762**	**4,044**	**4,627**
Cost of Goods Sold	m	1,784	2,251	2,418	2,754
EBITDA	**m**	**817**	**869**	**966**	**1,156**
Depreciation	m	221	318	413	444
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**596**	**550**	**553**	**712**
Net Interest Income	m	14	-80	-104	-123
Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	0	0	0	0
Pre-Tax Profit	**m**	**609**	**470**	**450**	**588**
Tax Expense	m	-147	-115	-104	-136
Net Profit	**m**	**462**	**355**	**346**	**452**
Minority Interests	m	1	2	2	2
Reported Earnings	**m**	**462**	**357**	**347**	**454**
Adjusted Earnings	**m**	**462**	**357**	**347**	**454**
EPS (rep)	fen	42.6	33.4	32.6	42.7
EPS (adj)	fen	42.6	33.4	32.6	42.7
EPS Growth (adj)	%	9.5	-21.6	-2.4	30.7
PE (rep)	x	16.7	21.3	21.8	16.7
PE (adj)	x	16.7	21.3	21.8	16.7
Total DPS	fen	21.2	28.5	24.3	24.0
Total Div Yield	%	3.0	4.0	3.4	3.4
Basic Shares Outstanding	m	1,080	1,064	1,064	1,064
Diluted Shares Outstanding	m	1,085	1,070	1,064	1,064

Profit and Loss Ratios		**2018A**	**2019E**	**2020E**	**2021E**
Revenue Growth	%	29.2	27.0	7.5	14.2
EBITDA Growth	%	20.1	6.4	11.2	19.6
EBIT Growth	%	12.6	-7.6	0.5	28.6
Gross Profit Margin	%	62.3	62.6	62.6	62.7
EBITDA Margin	%	17.3	14.4	15.0	15.7
EBIT Margin	%	12.6	9.2	8.6	9.6
Net Profit Margin	%	9.8	5.9	5.4	6.2
Payout Ratio	%	49.7	85.2	74.3	56.1
EV/EBITDA	x	7.4	7.0	6.3	5.3
EV/EBIT	x	10.2	11.0	11.0	8.5
Balance Sheet Ratios					
ROE	%	21.9	15.4	13.8	16.4
ROA	%	19.5	15.5	14.4	16.7
ROIC	%	84.8	45.9	46.4	47.3
Net Debt/Equity	%	-59.7	-62.0	-55.8	-82.6
Interest Cover	x	nmf	6.9	5.3	5.8
Price/Book	x	3.4	3.1	2.9	2.6
Book Value per Share		2.1	2.3	2.5	2.7

Cashflow Analysis		**2018A**	**2019E**	**2020E**	**2021E**
EBITDA	**m**	**817**	**869**	**966**	**1,156**
Tax Paid	m	-150	-115	-104	-136
Chgs in Working Cap	m	-93	331	-364	516
Net Interest Paid	m	5	14	15	19
Other	m	-86	-94	-118	-142
Operating Cashflow	**m**	**493**	**1,004**	**396**	**1,412**
Acquisitions	m	0	0	0	0
Capex	m	-492	-660	-289	-311
Asset Sales	m	0	0	0	0
Other	m	93	14	15	19
Investing Cashflow	**m**	**-399**	**-646**	**-274**	**-292**
Dividend (Ordinary)	m	-177	-188	-145	-141
Equity Raised	m	0	0	0	0
Debt Movements	m	0	0	0	0
Other	m	-36	-14	-15	-19
Financing Cashflow	**m**	**-213**	**-202**	**-160**	**-160**
Net Chg in Cash/Debt	**m**	**-112**	**156**	**-39**	**960**
Free Cashflow	**m**	**1**	**344**	**107**	**1,101**

Balance Sheet		**2018A**	**2019E**	**2020E**	**2021E**
Cash	m	1,341	1,497	1,458	2,418
Receivables	m	308	301	406	379
Inventories	m	390	513	505	610
Investments	m	0	0	0	0
Fixed Assets	m	911	1,257	1,138	1,010
Intangibles	m	2	2	1	1
Other Assets	m	302	297	292	288
Total Assets	**m**	**3,253**	**3,867**	**3,800**	**4,706**
Payables	m	847	1,266	989	1,564
Short Term Debt	m	0	0	0	0
Long Term Debt	m	0	0	0	0
Provisions	m	0	0	0	0
Other Liabilities	m	159	186	196	216
Total Liabilities	**m**	**1,006**	**1,452**	**1,185**	**1,779**
Shareholders' Funds	m	2,241	2,411	2,613	2,926
Minority Interests	m	6	4	2	0
Other	m	0	0	0	0
Total S/H Equity	**m**	**2,247**	**2,415**	**2,615**	**2,926**
Total Liab & S/H Funds	**m**	**3,253**	**3,867**	**3,800**	**4,706**

All figures in Rmb unless noted.
Source: Company data, Macquarie Research, March 2020

Macquarie Research | MACQUARIE

6 March 2020 Taiwan

EQUITIES

2723 TT	Neutral
Price (at 08:50, 04 Mar 2020 GMT)	NT$96.20

Valuation - DCF	NT$	97.00
12-month target	NT$	97.00
Upside/Downside	%	+0.8
12-month TSR	%	+3.7
Volatility Index		High
GICS sector		Consumer Services
Market cap	NT$m	17,316
Market cap	US$m	575
Free float	%	76
30-day avg turnover	US$m	3.8
Number shares on issue	m	180.0

Investment fundamentals

Year end 31 Dec		2018A	2019E	2020E	2021E
Revenue	m	24,115	23,135	20,624	21,735
Reported profit	m	1,668	1,018	983	1,098
Profit bonus exp	m	1,668	1,018	983	1,098
Adjusted profit	m	1,668	1,018	983	1,098
EPS rep	NT$	9.27	5.66	5.46	6.10
EPS rep growth	%	-22.0	-39.0	-3.4	11.7
EPS bonus exp	NT$	9.27	5.66	5.46	6.10
EPS bonus growth	%	-22.0	-39.0	-3.4	11.7
PER rep	x	10.4	17.0	17.6	15.8
PER bonus exp	x	10.4	17.0	17.6	15.8
Total DPS	NT$	5.00	2.83	2.73	0.00
Total div yield	%	5.2	2.9	2.8	0.0
ROA	%	14.3	10.3	9.6	10.4
ROE	%	16.4	9.7	9.1	9.7
EV/EBITDA	x	3.7	2.8	4.0	3.7
Net debt/equity	%	-44.4	-40.0	-39.5	-50.8
P/BV	x	1.7	1.6	1.6	1.5

2723 TT rel TAIEX performance, & rec history

Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Research, March 2020
(all figures in NT$ unless noted, TP in TWD)

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Gourmet Master (2723 TT)
Recovery? Not so soon

Key points

- China recovery will take time with slow SSSg recovery and COVID-19.
- U.S. to focus more on store efficiency improvements this year; TW to stay flat.
- We lower our FY19/20 earnings estimates by 14-32%, mtn N with a lower TP.

Event

- We refresh our earnings to reflect a delayed China recovery amid the COVID-19 outbreak and slower US new store expansion speed, while we expect Taiwan to remain flattish this year. We retain our Neutral rating and lower our TP from NT$150 to NT$97, still based on DCF.

Impact

- **Delayed China recovery amid COVID-19.** The road to recovery isn't always easy as China SSSg only recorded flattish to 1% growth in 4Q19 after rising low teens in Sep 2019. The slow recovery pace could be due to sluggish old store sales, while new stores haven't ramped up quickly enough. Meanwhile, the recent COVID-19 outbreak will hurt sales in the near term as it faces temporary store closures and reduced offline traffic. In view of lower-than-expected successful new stores, mgmt is prudent on the new store expansion pace this year. It kicked off gen 3.5 store remodels last Fall where remodelled stores saw SSSg pick up to mid- to high-single digits, and it renovated 30-40 more stores this year. We acknowledge mgmt's efforts to rejuvenate sales; yet, we expect recovery will take time..
- **Store efficiency improvements the key focus for the U.S. this year.** The key focus for the U.S. market this year is store efficiency improvements after stagnant SSSg in the past few years. Instead of new store-driven top-line growth, mgmt hopes to drive the top line via existing store efficiency improvements this year. Given a more moderate store expansion plan this year, there's a smaller likelihood to see the Texas central kitchen in 2020 as the existing California central kitchen has sufficient capacity.
- **Muted Taiwan performance; new concept store still in early days.** The Taiwan market likely recorded flattish SSSg in 2019, and we don't expect to see a meaningful improvement this year given stiff competition. It launched a new concept store in late Dec 2019, and the biggest differences compared to existing stores are hot food and a younger brand image. Ultimately, the company plans to introduce hot food to the existing store menus if the new SKUs turn out to be successful and replicable. Although the new concept store has a new name, Day by Day by 85 degrees, it's too early to tell if this format can rejuvenate its brand image.

Earnings and target price revision

- We lower our FY19 and FY20 earnings by 14.1% and 32.9%, respectively, to reflect a delayed China recovery as the recent COVID-19 outbreak will hurt near-term sales.

Price catalyst

- 12-month price target: NT$97.00 based on a DCF methodology.
- Catalyst: 4Q19 results

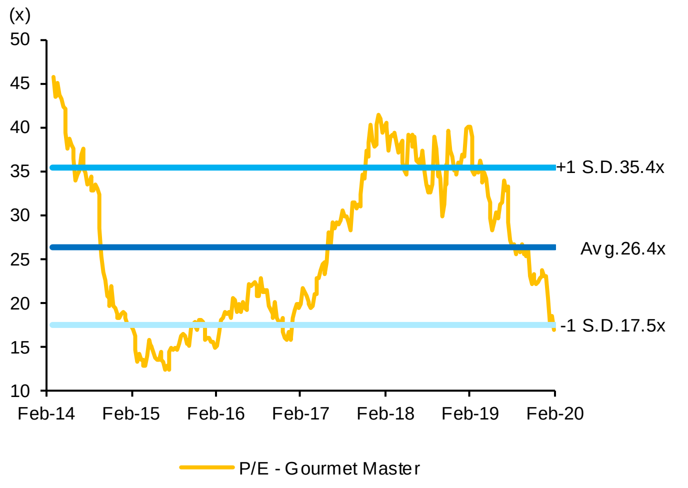
Action and recommendation

- Maintain Neutral.

Investment thesis: Maintaining a Neutral rating with a lower TP of NT$97

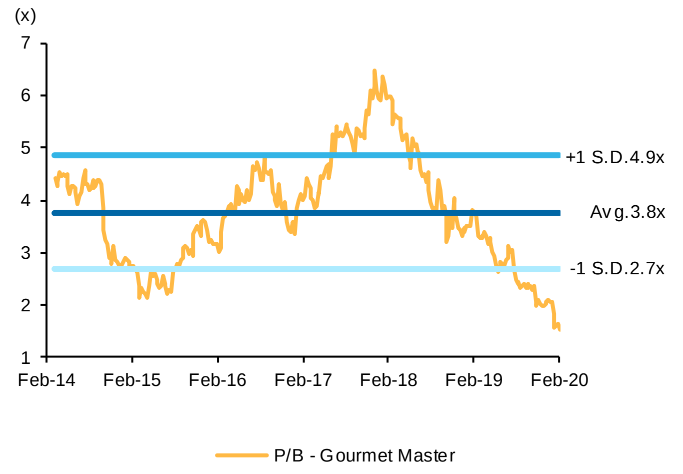
- We are lowering our FY19 and FY20 net income estimates by 14.1% and 32.9%, respectively, mainly to reflect a delayed China recovery amid COVID-19 and a muted outlook in Taiwan.
- Based on our new earnings forecasts, we are lowering our target price to NT$97 from NT$150, still based on a DCF valuation.

Fig 1 Gourmet Master – Historical P/E



Source: Bloomberg, Macquarie Research, March 2020

Fig 2 Gourmet Master – Historical P/BV



Source: Bloomberg, Macquarie Research, March 2020

Earnings revisions

- We are lowering our FY19 and FY20 net income estimates 14.1% and 32.9%, respectively, mainly to reflect a delayed China recovery as COVID-19 disrupts near-term sales, a slower US expansion pace and a muted Taiwan outlook. We are now estimating FY19 and FY20 net profit of NT$1,018m and NT$983m, respectively.
  - ⇒ We are lowering our FY19 and FY20 revenue estimates 1.6% and 18.7%, respectively.
  - ⇒ We are raising our FY19 gross margin assumptions by 0.2ppt to 59.4% but lowering our FY20 gross margin assumption by 0.6ppt to 59.0%.
  - ⇒ We are lowering our FY19 and FY20 EBIT margin assumptions by 0.1ppt and 0.6ppt to 7.1% and 7.4%, respectively.

Fig 3 Gourmet Master – Earnings revisions

(NT$m)	Old 2019	Old 2020	New 2019	New 2020	% chg. 2019	% chg. 2020
Revenue	23,514.8	25,358.3	23,135.5	20,623.9	(1.6%)	(18.7%)
Gross Profit	13,942.7	15,126.4	13,753.6	12,170.6	(1.4%)	(19.5%)
EBIT	1,699.5	2,030.2	1,646.6	1,518.4	(3.1%)	(25.2%)
Pre-Tax	1,698.6	2,053.0	1,576.0	1,438.0	(7.2%)	(30.0%)
Net Income	1,185.5	1,465.2	1,018.1	983.0	(14.1%)	(32.9%)
Margin (%)						
Gross Margin	59.3%	59.7%	59.4%	59.0%	0.2ppt	-0.6ppt
EBIT Margin	7.2%	8.0%	7.1%	7.4%	-0.1ppt	-0.6ppt
Net Margin	5.0%	5.8%	4.4%	4.8%	-0.6ppt	-1.0ppt

Source: Macquarie Research, March 2020

Macquarie Quant Alpha Model Views

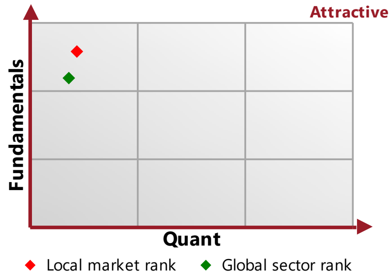
The Quant View page below has been derived from models that are developed and maintained by Sales and Trading personnel at Macquarie. The models are not a product of the Macquarie Research Department.

The quant model currently holds a strong negative view on Gourmet Master. The strongest style exposure is Valuations, indicating this stock is under-priced in the market relative to its peers. The weakest style exposure is Price Momentum, indicating this stock has had weak medium to long term returns which often persist into the future.

390/442

Global rank in Consumer Services

% of BUY recommendations	38% (5/13)
Number of Price Target downgrades	0
Number of Price Target upgrades	0

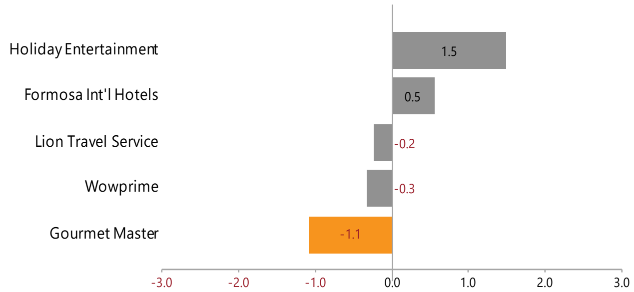


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Taiwan) and Global sector (Consumer Services)

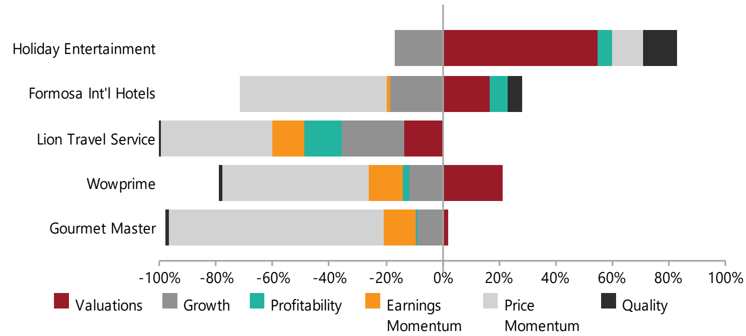
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



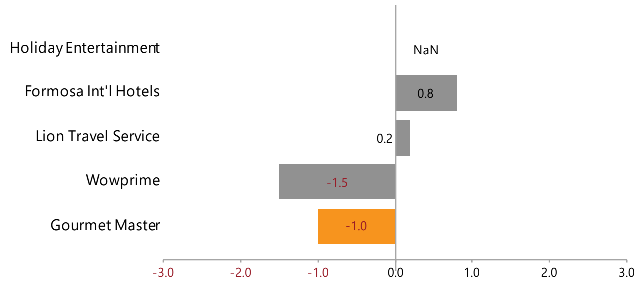
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



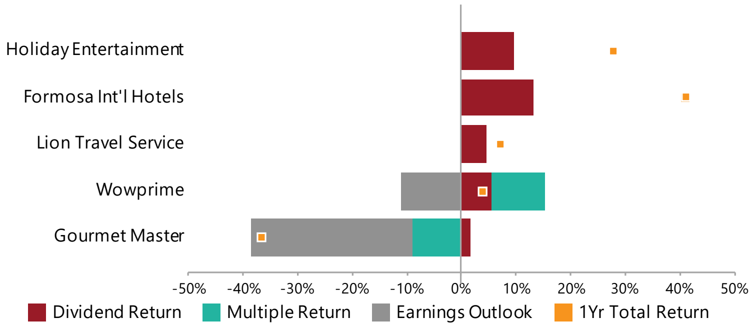
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



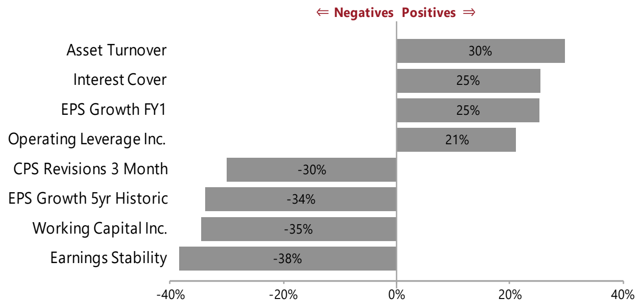
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



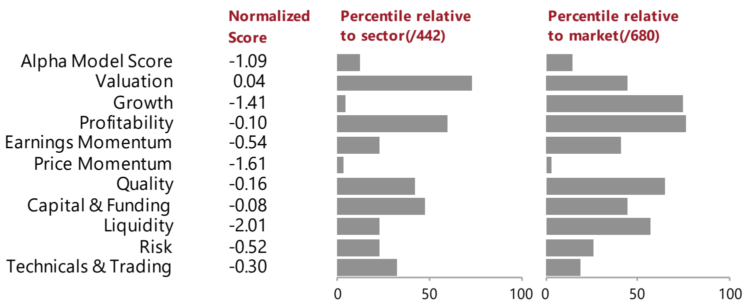
What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.



Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Gourmet Master (2723 TT, Neutral, Target Price: NT$97.00)

Quarterly Results		3Q/19A	4Q/19E	1Q/20E	2Q/20E
Revenue	**m**	**5,886**	**5,731**	**3,938**	**4,681**
Gross Profit	**m**	**3,481**	**3,360**	**2,296**	**2,788**
Operating Expenses	m	-3,045	-2,956	-1,982	-2,469
Operating Income	**m**	**436**	**404**	**313**	**319**
Net Non-operating income	m	-61	11	23	-51
Pre-Tax Income	**m**	**375**	**416**	**336**	**269**
Tax Expense	m	-133	-177	-123	-97
Exceptionals	m	0	0	0	0
Minority Interests	m	-4	8	-1	4
Reported Earnings	**m**	**238**	**247**	**212**	**176**
Reported Earnings (bonus exp)	m	238	247	212	176
Bonus exp / Reported Earnings	%				
Adjusted Earnings	**m**	**238**	**247**	**212**	**176**
EBITDA	**m**	**1,290**	**760**	**731**	**735**
EPS (rep)	NT$	1.32	1.37	1.18	0.98
EPS pcp growth (rep)	%	-33.3	-15.2	-33.1	-18.2
EPS (rep bonus exp)	NT$	1.32	1.37	1.18	0.98
EPS pcp growth (rep bonus exp)	%	-33.3	-15.2	-33.1	-18.2
EPS (adj)	NT$	1.32	1.37	1.18	0.98
EPS pcp growth (adj)	%	-33.3	-15.2	-33.1	-18.2
Revenue pcp growth	%	-1.5	-2.2	-31.0	-19.4
Operating Income pcp growth	%	1.1	-13.1	-30.9	-17.9
Reported Earnings pcp growth	%	-33.3	-15.2	-33.1	-18.2
Gross Profit Margin	%	59.1	58.6	58.3	59.6
Operating Income Margin	%	7.4	7.1	8.0	6.8
Reported Earnings Margin	%	4.1	4.3	5.4	3.8
EBITDA Margin	%	21.9	13.3	18.6	15.7

Profit and Loss Ratios		2018A	2019E	2020E	2021E
Revenue Growth	%	4.8	-4.1	-10.9	5.4
Gross Profit Growth	%	3.7	-2.9	-11.5	5.6
Operating Income Growth	%	-19.2	-27.5	-7.8	11.4
Reported Earnings Growth	%	-22.0	-38.9	-3.4	11.7
EBITDA Growth	%	-11.2	32.5	-30.7	6.9
Gross Profit Margin	%	58.7	59.4	59.0	59.1
Operating Income Margin	%	9.6	7.3	7.5	8.0
Reported Earnings Margin	%	6.9	4.4	4.8	5.1
EBITDA Margin	%	14.5	20.1	15.6	15.8
Payout Ratio	%	54.0	50.0	50.0	0.0
EV/EBITDA	x	3.7	2.8	4.0	3.7
EV/EBIT	x	5.6	7.7	8.3	7.5
Balance Sheet Ratios					
ROE	%	16.4	9.7	9.1	9.7
ROA	%	14.3	10.3	9.6	10.4
ROIC	%	35.3	18.1	16.2	16.9
Net Debt/Equity	%	-44.4	-40.0	-39.5	-50.8
Interest Cover	x	nmf	nmf	nmf	nmf
Price/Book	x	1.7	1.6	1.6	1.5
Book Value per Share	NT$	58.1	58.8	61.4	64.8

Profit & Loss		2018A	2019E	2020E	2021E
Revenue	**m**	**24,115**	**23,135**	**20,624**	**21,735**
Gross Profit	**m**	**14,165**	**13,754**	**12,171**	**12,855**
Operating Expenses	m	-11,845	-12,071	-10,619	-11,127
Operating Income	**m**	**2,320**	**1,682**	**1,552**	**1,728**
Net Non-operating income	m	99	-106	-114	-99
Pre-Tax Income	**m**	**2,419**	**1,576**	**1,438**	**1,629**
Tax Expense	m	-759	-566	-463	-539
Exceptionals	m	0	0	0	0
Minority Interests	m	8	8	8	8
Reported Earnings	**m**	**1,668**	**1,018**	**983**	**1,098**
Reported Earnings (bonus exp)	m	1,668	1,018	983	1,098
Bonus exp / Reported Earnings	%				
Adjusted Earnings	**m**	**1,668**	**1,018**	**983**	**1,098**
EBITDA	**m**	**3,502**	**4,639**	**3,214**	**3,436**
EPS (rep)	NT$	9.27	5.66	5.46	6.10
EPS growth (rep)	%	-22.0	-39.0	-3.4	11.7
EPS (rep bonus exp)	NT$	9.27	5.66	5.46	6.10
EPS growth (rep bonus exp)	%	-22.0	-39.0	-3.4	11.7
EPS (adj)	NT$	9.27	5.66	5.46	6.10
EPS growth (adj)	%	-22.0	-39.0	-3.4	11.7
PE (rep)	x	10.4	17.0	17.6	15.8
PE (rep bonus adj)	x	10.4	17.0	17.6	15.8
PE (adj)	x	10.4	17.0	17.6	15.8
Total DPS	NT$	5.00	2.83	2.73	0.00
Total Div Yield	%	5.2	2.9	2.8	0.0
Basic Shares Outstanding	m	179.9	179.9	179.9	179.9
Diluted Shares Outstanding	m	180.0	180.0	180.0	180.0

Cashflow Analysis		2018A	2019E	2020E	2021E
Reported Earnings	**m**	**1,668**	**1,018**	**983**	**1,098**
Depreciation & Amortisation	m	1,217	2,993	1,695	1,745
Chgs in Working Cap	m	863	5,608	775	439
Other	m	-612	-7,321	-1,599	-930
Operating Cashflow	**m**	**3,136**	**2,298**	**1,854**	**2,352**
Acquisitions	m	855	2,123	0	0
Capex	m	-1,899	-1,216	-1,618	-738
Asset Sales	m	41	5	0	0
Other	m	104	95	0	0
Investing Cashflow	**m**	**-900**	**1,007**	**-1,618**	**-738**
Dividend (Ordinary)	m	-978	-900	-509	-492
Equity Raised	m	0	0	0	0
Debt Movements	m	-614	0	0	0
Other	m	57	-1,525	57	57
Financing Cashflow	**m**	**-1,535**	**-2,425**	**-452**	**-435**
Net Chg in Cash/Debt	**m**	**702**	**745**	**-216**	**1,180**
Free Cashflow	m	1,237	1,082	236	1,615
FCF per Share	NT$	6.87	6.01	1.31	8.97
P/FCF	x	14.0	16.0	73.3	10.7

Balance Sheet		2018A	2019E	2020E	2021E
Cash	m	5,214	4,807	4,938	6,499
Receivables	m	315	302	270	284
Inventories	m	762	790	783	905
Investments	m	0	0	0	0
Fixed Assets	m	6,144	6,210	6,156	5,173
Intangibles	m	0	0	0	0
Other Assets	m	3,731	3,801	3,710	3,729
Total Assets	**m**	**16,166**	**15,909**	**15,856**	**16,590**
Payables	m	1,549	1,407	1,281	1,359
Short Term Debt	m	405	405	405	405
Long Term Debt	m	160	160	160	160
Provisions	m	0	0	0	0
Other Liabilities	m	3,574	3,342	2,942	2,992
Total Liabilities	**m**	**5,688**	**5,314**	**4,788**	**4,916**
Total S/H Equity	**m**	**10,478**	**10,595**	**11,069**	**11,675**
Total Liab & S/H Funds	**m**	**16,166**	**15,909**	**15,856**	**16,590**

All figures in NT$ unless noted.
Source: Company data, Macquarie Research, March 2020

EQUITIES

AShare Research

002507 CH		Outperform
Price (at 08:50, 06 Feb 2020 GMT)		Rmb24.15
Valuation - PER	Rmb	34.50
12-month target	Rmb	34.50
Upside/Downside	%	+42.9
12-month TSR	%	+44.1
GICS sector		Food, Beverage & Tobacco
Market cap	Rmbm	19,063
Market cap	US$m	2,727
Free float	%	53
30-day avg turnover	US$m	30.2
Number shares on issue	m	789.4

Investment fundamentals

Year end 31 Dec		2018A	2019E	2020E	2021E
Revenue	m	1,914.4	1,973.4	2,255.0	2,660.0
EBIT	m	750.9	752.2	853.7	1,001.6
EBIT growth	%	62.1	0.2	13.5	17.3
Reported profit	m	661.7	666.4	757.0	888.4
Adjusted profit	m	638.3	642.9	733.5	864.9
EPS rep	Rmb	0.84	0.84	0.96	1.13
EPS rep growth	%	46.5	0.7	13.6	17.4
EPS adj	Rmb	0.81	0.81	0.93	1.10
EPS adj growth	%	49.5	0.7	14.1	17.9
PER rep	x	28.8	28.6	25.2	21.5
PER adj	x	29.9	29.6	26.0	22.0
Total DPS	Rmb	0.26	0.26	0.30	0.35
Total div yield	%	1.1	1.1	1.2	1.4
ROA	%	27.5	23.1	22.3	22.2
ROE	%	29.0	23.8	22.9	22.7
EV/EBITDA	x	21.6	21.4	18.7	15.9
Net debt/equity	%	-45.7	-53.1	-49.1	-56.5
P/BV	x	7.7	6.5	5.5	4.6

Source: FactSet, Macquarie Research, February 2020
(all figures in Rmb unless noted, TP in CNY)

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Fuling Zhacai (A-Share) (002507 CH)
Bottoming out

Key points

- No.1 Zhacai player to consolidate market with channel/product expansion.
- Raw material tailwind ongoing and reserve cash ammunition for M&A
- Initiate with OP rating and TP at Rmb34.5/sh.

We initiate coverage on Fuling Zhacai (pickled mustard root producer) with an Outperform rating and 44% TSR. We believe it will bottom out in 2020 and continue to consolidate the market with channel and product expansion in the long term. Due to the outbreak of the coronavirus, its packaged food characteristic should benefit along with other convenient foods. Our TP of Rmb34.5 is based on a 36x 2020E PER, in line with its peak valuation and 36x 2020E avg of other condiment peers. The company is trading at a 25x 2020E PER, in line with the avg of global peers and below China peers of 33x.

No.1 market share in Zhacai industry with a household brand

China's condiment industry recorded an 8.5% sales CAGR during 2012-2018, and we think it could continue to deliver high-single-digit industry growth in the next three years driven by solid growth of the restaurant channel and category expansion. Zhaicai's market size is estimated by CCIA at around Rmb10bn, while packaged products only accounted for ~60% in 2019. Among the packaged Zhacai companies, Fuling is the leading company with a household brand, named Wujiang. Its market share has gradually improved from 13% in 2008 to 35% in 2018, more than twice the No 2's market share (Yuquan, ~12%).

Consolidating the market with channel and product expansion

Looking forward, given the rising brand awareness and hygiene consciousness, we believe Fuling will continue to gain market share from unpackaged products sold in wet markets. In addition, the stricter environment protection policy should facilitate Fuling's consolidation as small regional players cannot bear the rising costs. Fuling has solved its inventory issues with a healthy inventory level. It also restructured its distribution channel in 2019. The number of regional sales centres expanded to 67 in 2019 from 37 in 2018, and distributors were up to ~1,800 in 2019, up 50% from ~1,200 in 2018. Moreover, the company has strong pricing power and has lifted the price ten times in the last ten years. We believe its sales have bottomed out and forecast it will grow 14%/18% in 2020/21.

Raw material tailwind and continuous investment into channel

The raw materials accounted for 70-80% of total COGS, and the key material is mustard root. Fuling Zhacai has in the biggest plant area of mustard root, and thus enjoys cost advantages, which we expect will be further strengthened by cheaper purchases from Sichuan. We project GPM will remain high at 58.9%/59.0% in 2020/21 due to favourable raw material costs and OPM will be slightly down to 37.9%/37.7% in 2020/21 due to investments in channel penetration and new products.

Reserve cash ammunition for potential M&A

As of 3Q19, the company held ~Rmb1,110m in cash and cash equivalents on hand, indicating a 40% net cash to equity ratio. In addition, the company has generated Rmb500m in operating cash on average over the last three years. We see this serving as ammunition as the company is actively looking for M&A opportunities. It is particularly interested in the paste segment with a market size above Rmb40bn, according to CCIA estimates.

Catalysts: stockpile during the coronavirus outbreak, channel penetration and expansion, new products, price hike.

Risks: slower-than-expected new category expansion, raw material and packaging price increases and food safety issues.

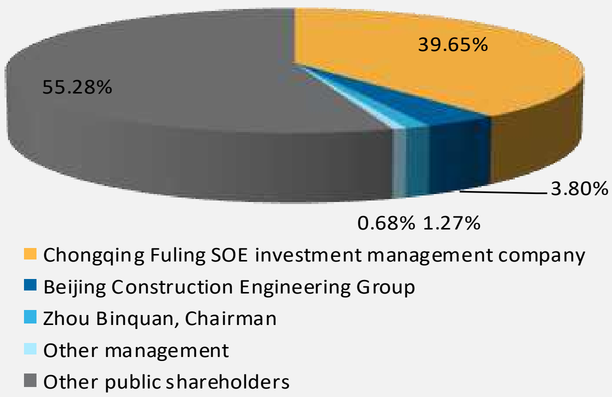
Inside

Fuling Zhacai

Company profile

- Established in 1988, Fuling Zhacai develops, produces and sells pickled mustard roots, pickled radish roots, pickled mustard sauce and other appetizers under two brands, Wujiang and Huitong. Wujiang is the No.1 household brand in China in the field of Zhacai. Fuling's market value share in 2018 reached ~30% in packaged Zhacai, more than twice the No 2's market share (Yuquan, ~12%).
- As of the end of 3Q19, Chongqing Fuling SOE investment management company was the biggest shareholder with 39.65% of total shares. Beijing Construction Engineering Group held 3.8% of total shares. Chairman Mr. Zhou Binquan held 1.27% outstanding shares. The remaining shares are in other public shareholders.

Fig 1 Shareholding structure (as of 3Q19)



Source: Company data, Macquarie research, February 2020

Fig 2 Rel CSI 300 performance, & rec history

Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, February 2020

(all figures in Rmb unless noted, TP in CNY)

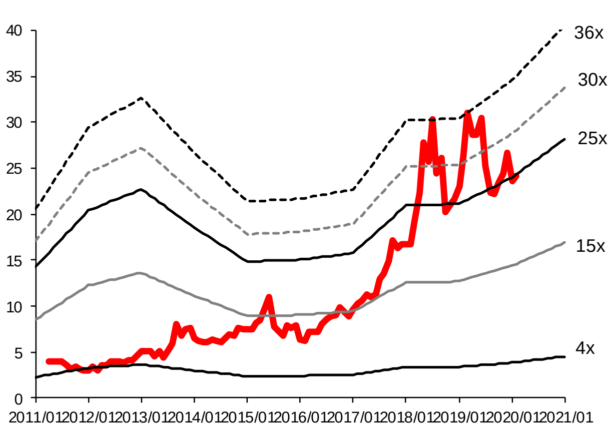
Initiate with Outperform rating and TP of Rmb34.5

Valuation and recommendation

We initiate coverage on Fuling Zhacai with an Outperform rating. Fuling Zhacai owns the No.1 Zhacai brand named Wujiang, and thus has a strong pricing power in the history. We believe it will continue to consolidate the Zhacai market on the back of the strong brand equity, a nationwide distribution channel as well as new products. Moreover, its expansion into other pickled vegetables and potential M&A could provide additional upside.

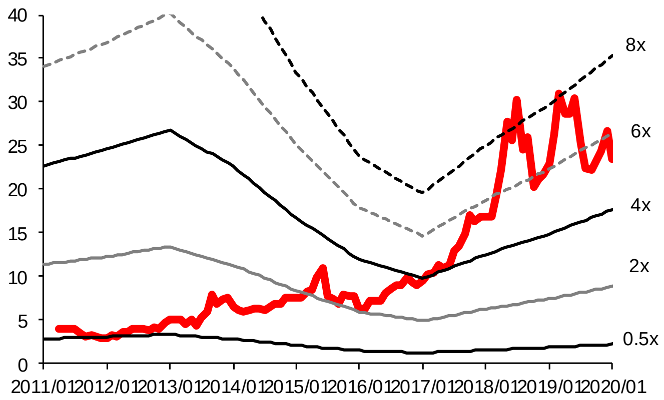
Our TP of Rmb34.5 is based on a 36x 2020E PER multiple, a historical high level, in line with 36x 2020E average of other condiment peers.

Fig 3 Fuling Zhacai's historical PER band



Source: Bloomberg, Macquarie Research, February 2020

Fig 4 Fuling Zhacai's historical PBR band



Source: Bloomberg, Macquarie Research, February 2020

Risks

- **New product expansion is not as good as expected.** The company is constructing a pickled radish factory in Northeast China with 50k tons of capacity, and plans to sell the new products via its established distribution network. If the new category is not well accepted by the market, the company could have a slower sales growth rate.
- **Raw material and packaging price hike.** Raw material costs and packaging material account for ~45% and ~20-25% of total COGS respectively. Rising raw material and packaging prices would lead to a material margin decrease.
- **Food safety issue.** Food safety is crucial in the food industry. Once there is a food safety issue, the brand equity would likely be damaged, and the company would face fines or legal punishment from related authorities.

Fig 5 Valuation comp table – Condiment

Company Name	Code	Price (lc$/sh)	Rating	TP (lc$/sh)	Upside (%)	Mkt Cap (US$m)	P/E (x) FY19	P/E (x) FY20	P/B (x) FY19	P/B (x) FY20	ROE (%) FY19	ROE (%) FY20
China peers												
Foshan Haitian	603288 CH	104	OP	83.3	-20%	41515.8	49.9	40.8	15.3	12.8	33.4	34.1
Jonjee Hi-Tech	600872 CH	36.5	NR	NR	NR	4325.1	40.7	32.6	7.3	7.0	17.5	19.0
Hengshun Vinegar	600305 CH	16.08	NR	NR	NR	1869.7	36.2	32.4	5.2	5.5	14.7	14.7
Fuling Zhacai	002507 CH	24.15	OP	34.5	44%	2665.8	28.6	25.2	6.5	5.5	23.8	22.9
Jia Jia Food	002650 CH	3.24	NR	NR	NR	583.2	NA	NA	NA	NA	NA	NA
China peer average							**38.9**	**32.7**	**8.6**	**7.7**	**22.3**	**22.7**
Hong Kong peers												
Yihai	1579 HK	46.95	Neutral	46.5	-1%	5953.7	55.0	41.8	15.7	12.1	32.3	32.8
Want Want	151 HK	6.27	Neutral	7.0	12%	10314.9	20.2	18.0	4.6	4.3	23.3	24.7
Dali Foods	3799 HK	5.54	UP	4.2	-24%	9684.1	17.4	16.6	3.9	4.1	23.9	24.2
UPC	220 HK	8.34	OP	11.0	32%	4428.8	22.4	20.2	2.4	2.4	10.8	11.7
Tingyi	322 HK	14.06	Neutral	12.5	-11%	9533.2	25.3	23.5	3.6	3.5	14.2	15.1
HK peer average							**28.1**	**24.0**	**6.0**	**5.3**	**20.9**	**21.7**
Global peers												
Kraft Heinz	KHC US	29.37	NR	NR	NR	35657.9	10.6	11.6	0.5	0.7	6.4	5.9
Conagra Foods	CAG US	32.67	NR	NR	NR	16025.9	15.8	15.5	3.3	2.2	15.9	13.2
McCormick	MKC US	162.01	NR	NR	NR	21719.8	30.3	30.7	5.1	6.1	21.1	19.4
Kikkoman	2801 JP	5670	NR	NR	NR	9479.7	40.5	39.5	4.0	4.1	10.5	10.0
Ajinomoto	2802 JP	1947	NR	NR	NR	9025.2	49.0	45.5	1.5	1.6	3.2	3.3
Pickles	2925 JP	2778	NR	NR	NR	164.7	NA	13.0	NA	NA	NA	NA
Kewpie	2809 JP	2241	NR	NR	NR	3120.7	17.8	20.7	1.2	1.3	7.8	6.6
Global average							**27.3**	**25.2**	**2.6**	**2.7**	**10.8**	**9.8**
HK, China and global average							**31.4**	**27.3**	**5.7**	**5.2**	**18.0**	**18.0**

Source: Bloomberg, Macquarie Research, February 2020. Prices as of 5th February 2020; estimates for not-rated stocks are based on Bloomberg conser

Consolidation ongoing in overall condiment and Zhacai industry

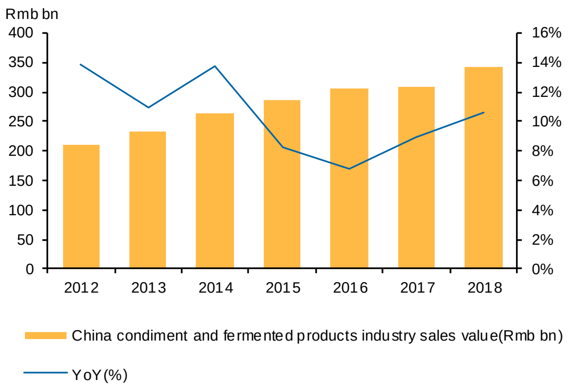
Condiment industry is expected to increase by a high-single digit

The China condiment industry recorded an 8.5% sales value CAGR during 2012-2018, reaching Rmb343bn in 2018, according to NBS. We maintain our positive view on the China condiment sector and believe it could deliver high-single-digit industry growth in the next three years. According to the mgmt. of Haitian, the industry sales value is likely to increase to ~Rmb500 in 2023.

Channel-wise, the 2B channel enjoys the tailwind of a high-single-digit growth rate of the restaurant industry and strong delivery growth. On the other hand, the 2C channel will benefit from the steady consumption upgrade trend and multi-category expansion, such as oyster sauce and compound condiment.

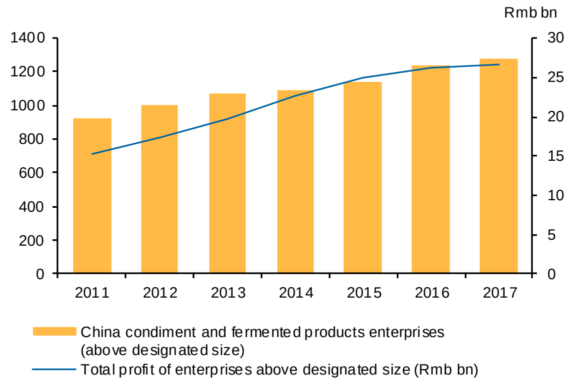
Meanwhile, consolidation is undergoing given the top 100 condiment and fermented enterprises outgrew the industry with double-digit sales growth in 2018, according to the China Condiment Industrial Association(CCIA). In the past decade, the enterprises above designated size in this industry grew from 921 in 2011 to 1,278 in 2017, leading to a 9.6% CAGR of total profit during 2011-2017. Given the rising brand awareness and consumption upgrade trend, we believe this trend consolidation trend will sustain in the next 10 years. In addition to stricter environment protection policy, we believe Haitian and other branded players in sub-sectors will continue to consolidate the market as small regional players cannot bear the environment protection costs.

Fig 6 China condiment industry recorded an 8.5% sales value CAGR during 2012-2018



Source: NBS, Macquarie Research, February 2020

Fig 7 China condiment is consolidating with more and more big enterprises



Source: NBS, Macquarie Research, February 2020

Sub-category condiments spring up along with consumption upgrades

The China condiment industry is an industry with many sub-sectors, such as vinegar, oyster sauce, pickled vegetables, yeast and yeast extract, cooking wine, paste, MSG, chicken essence and compound condiments. With the rising per capita disposable income, consumers are becoming more sophisticated and the condiment application has become more diversified. We believe the product line of sub-sectors will be more diversified with a higher than industry average growth. We expect sub-sectors with brand equity, quality products and precise marketing will become leaders.

Fig 8 Sub-category condiments spring up

Sub-sector	Leading brands	China market scale (Rmb bn)	Sector features	Sector life cycle	Sector growth rate in next 3 years (E)
Soy sauce	Haitian, Weimeixian, Lee Kum Kee	>50	Fragmented, Haitian is the leading player with 19% market share	Relatively mature	5-10%
Vinegar	Hengshun, Zilin, Shuita	15-20	Regional leading players	Brand consolidating	5-10%
MSG (monosodium glutamate)	Meihua	15	Decline due to health concerns	Declining period	<0%
Chicken essence	Totole, Weihaomei	15	Concentrated	Mature	0-5%
Yeast Extract	Angel Yeast	7-8bn globally	Concentrated	Growing stage	>20%
Oyster sauce	Haitian, Lee Kum Kee	~5	Haitian is the leading player with rapid growth	Growing stage	15%
Cooking wine	Laohenghe, Laocaichen, Haitian, Hengshun	<5	Regional leading players	Incubation period	5-10%
Paste	Laoganma, Haitian, Lee Kum Kee	>40	Regional leading players	Brand consolidating	0-10%
Zhacai	Wujiang(Fuling), Jixiangju, Yuquan	10	Fuling is the nationwide leading player, with regional peers	Relatively mature	5-10%

Source: China Condiment Industrial Association, Company data, Macquarie Research, February 2020

Consumption upgrading in pickled vegetables

Pickling is the process of preserving or extending the shelf life of food either by fermentation in brine or immersion in vinegar. People in different regions prefer different flavours and vegetables, such as Zhacai in China, kimchi in Korea, pickled cucumbers in US.

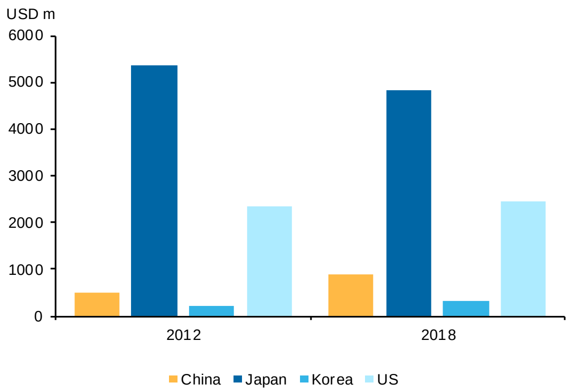
Based on the estimates of Euromonitor, China's retail sales of packaged pickled vegetables enjoyed a CAGR of 9.4% during 2012-2018, driven by a 3.1% ASP CAGR and 5.6% volume CAGR. This is the fastest among Japan, Korea and the US. The volume growth mainly come from the consumption shift to packaged pickles from unpackaged pickles in wet markets or home-made, echoing the consumption upgrade trend, in our view.

Fig 9 2012-2018 CAGR of pickled vegetables

	Total retail sales	ASP	Per capita value	Per capita volume
China	9.4%	3.1%	8.9%	5.6%
Japan	-1.7%	0.3%	-1.5%	-1.9%
Korea	7.3%	1.1%	6.8%	5.6%
US	0.9%	0.7%	0.3%	-0.5%

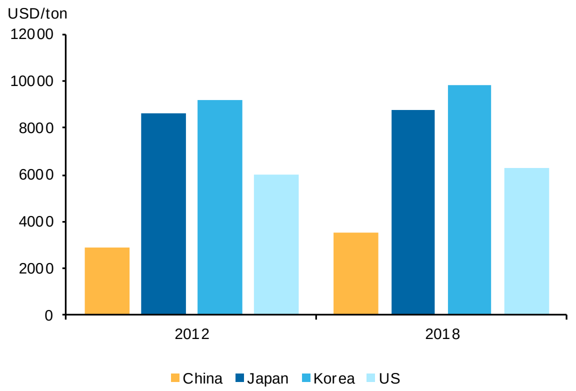
Source: Euromonitor, Macquarie Research, February 2020

Fig 10 China's picked vegetables retail sales rose at a 9.4% CAGR during 2012-2018, still far behind peers



Source: Euromonitor, Macquarie Research, February 2020

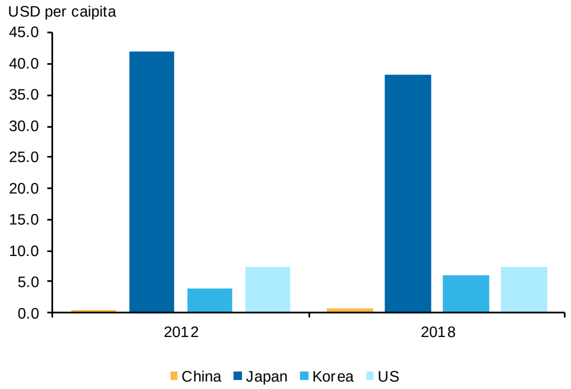
Fig 11 China's average retail price of pickled vegetables increased at a 3.1% CAGR during 2012-2018



Source: Euromonitor, Macquarie Research, February 2020

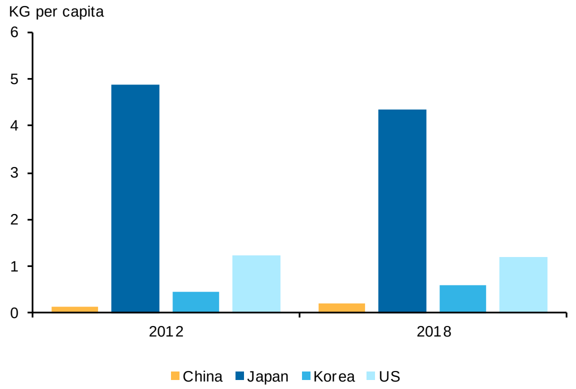
In terms of per capita consumption, China's per capita value was US$0.6 in 2018, far below its global peers, such as Japan's US$38.3 and US's US$7.5. Surprisingly, China's per capita volume was 0.2kg, also much lower than 4.4kg in Japan and 1.2kg in the US. We believe this should be lower than the actual numbers in China due to a lower percentage of packaged pickles vs. peers. On the other hand, this also indicates potential upside for big players in this pickles industry.

Fig 12 China's per capita pickled vegetables consumption value still far below its global peers in 2018



Source: Euromonitor, Macquarie Research, February 2020

Fig 13 China's per capita pickled vegetables consumption volume also far below its global peers in 2018



Source: Euromonitor, Macquarie Research, February 2020

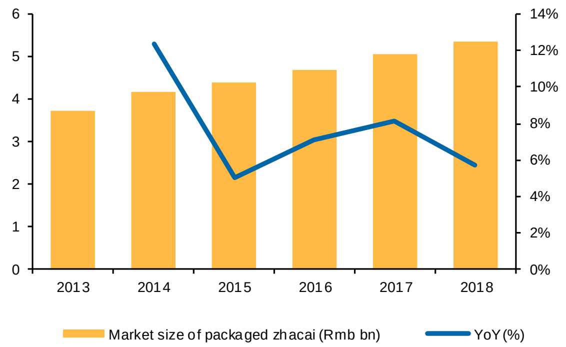
Zhacai industry - both consumption upgrading and consolidation are underway

Based on the estimates of the China Condiment Industrial Association (CCIA), Zhacai's market size is around Rmb10bn in China. We estimate the total industry market size is also at a similar level, given the below industry data. In 2018, the average ex-factory selling price of Fuling was Rmb13,255kg per ton. The total plant area in China was capped at ~1.1mou, which could output ~2.5m tons of fresh mustard root. The conversion rate between fresh mustard root and Zhacai was ~3:1.

- **Consumption upgrading – from unpacked to packaged Zhacai**

According to the Zhongshang Industry Research Institution, the market size of packaged Zhacai was estimated at Rmb5.4bn in 2018, with a CAGR of 8% during 2013-2018. On one hand, given rising hygiene consciousness and brand awareness, packaged Zhacai is gradually replacing unpacked Zhacai in wet markets. On the other hand, Fuling Zhacai is leading the whole industry to higher selling prices with a direct price hike and product mix upgrades.

Fig 14 Market size of packaged Zhacai was estimated at Rmb5.4bn in 2018



Source: Zhongshang Industry Research Institution, Macquarie Research, February 2020

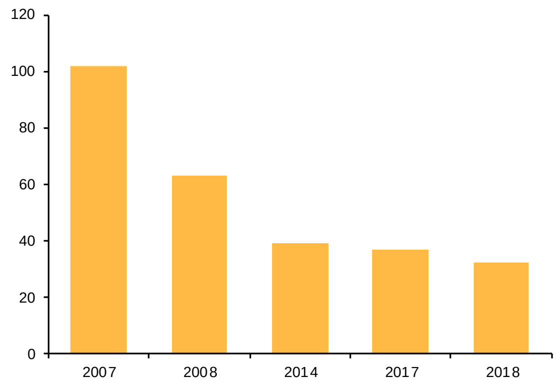
Fig 15 From unpackaged Zhacai to packaged Zhacai

Source: Company, Macquarie Research, February 2020

- **Consolidation by branded companies**

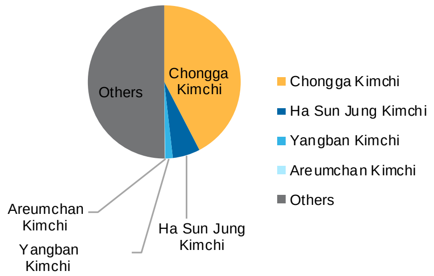
Meanwhile, consolidation is undergoing, as the number of Zhacai companies in Fuling has decreased to 32 in 2018 from 102 in 2007. The market share of Fuling also expanded to 35% in 2018 from 13% in 2008, according to the estimates of Euromonitor, as shown in the below charts. However, there is still upside if compared to the kimchi market leader in Korea, named Chongga Kimchi, which accounted for 42% of total sales in 2018 and a ~50% historical high level. The Zhacai industry in China is still quite fragmented with lots of local brands owning minor shares.

Fig 16 The number of Zhacai companies in the Fuling area decreased to 32 in 2018 from 102 in 2007



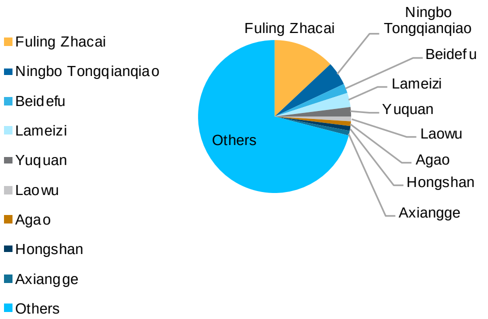
Source: Euromonitor, Macquarie Research, February 2020

Fig 17 No.1 kimchi player in Korea accounted for 42% of total sales in 2018



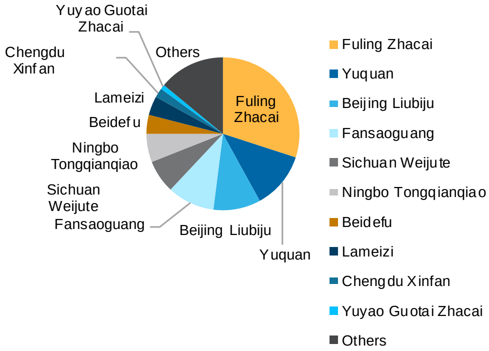
Source: Euromonitor, Macquarie Research, February 2020

Fig 18 Zhaicai market share in 2008



Source: Euromonitor, Macquarie Research, February 2020

Fig 19 Zhaicai market share in 2017



Source: Euromonitor, Macquarie Research, February 2020

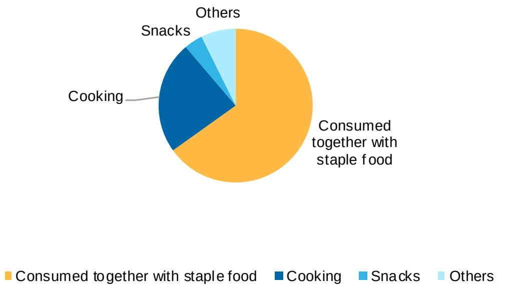
Looking forward, we expect Zhacai industry growth will be mainly driven by the following factors.

⇒ Along with the consumption upgrade trend, consumers are gradually shifting from wet markets to branded products due to rising hygiene consciousness. Packaged Zhacai accounted for ~60% of total sales in 2019, according to our estimations.

⇒ Price hike and product mix upgrades. Fuling Zhacai has led the industry to lift the retail price from Rmb0.5/70g in 2008 to Rmb2.2/80g in 2018, up 285% or at a 14% CAGR during 2008-2018.

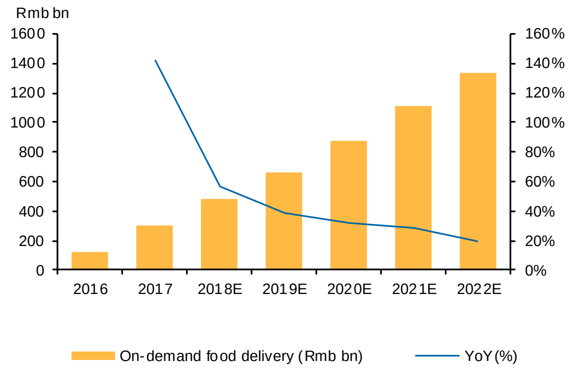
⇒ Industry players are also actively educating consumers to consume Zhacai through different ways of consumption, such as delivery. Currently, ~65% of Zhaicai is consumed together with staple food, while 24% of Zhacai is used for cooking. The on-demand food delivery business runs in the fast lane with an estimated 31% CAGR during 2017-2023E, according to iResearch. Zhacai fits well with the most popular delivery category, i.e. fast food, such as noodles and dumplings, in our view. Penetration into food delivery is likely to cultivate a new consumer base with the young generation.

Fig 20 Consumption types of Zhacai



Source: China Industrial Information website, Macquarie Research, February 2020

Fig 21 On-demand food delivery in the fast lane



Source: iResearch, Macquarie Research, February 2020

Other pickled vegetables - ample room for expansion

According to the China Condiment Industrial Association, current total volume of pickled vegetables in China is around 4.5m tons, among which Zhacai is less than 1m tons. The remaining categories include vegetables pickled in soy sauce or spicy sauce.

However, unlike the zhaicai segment, the market of other pickled vegetables is still highly fragmented with more than 300 enterprises but no household brand across China. Most of the manufacturing companies are in Sichuan, Chongqing and Shandong, which are also the consumers' residences. Therefore, we see great potential opportunities for Fuling to leverage its existing distribution channel to market other pickled vegetables.

Fig 22 Sichuan style pickled vegetables

Source: Company, Macquarie Research, February 2020

Fig 23 Pickled cabbage

Source: Company, Macquarie Research, February 2020

Fuling's advantages: raw material and pricing power, expansion in channel and products

Advantage in raw material sourcing

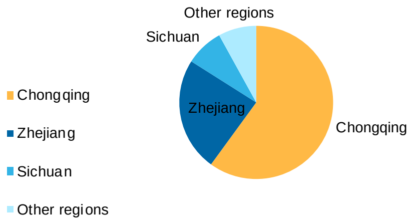
Mustard root is the most import raw material for Zhacai. It was seeded in September and will be harvested in next February. Due to climate and soil conditions, the plant regions of mustard root are concentrated in Chongqing, Zhejiang and Sichuan. Before 2016, Chongqing accounted for ~60% of total production volume, followed by 24% of Zhejiang. However, the growing area in Zhejiang has almost diminished given diseconomy. The profit from mustard root cannot justify the land and labour costs in Zhejiang, one of the most developed provinces in China. Meanwhile, Sichuan's plant area is growing. In 2019, according to the company, Chongqing and Sichuan could represent ~90% of total production.

Fuling Zhacai is best positioned in this industry in terms of raw materials due to the following reasons:

⇒ The best quality mustard root grows in Fuling.

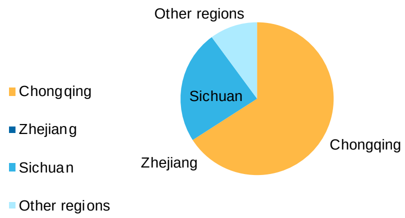
⇒ The least transportation costs for the heavy mustard root, as its manufacturing factory is built in Fuling and close to the second source, Sichuan. Whereas other competitors need to transport the heavy raw materials back to the factories somewhere else.

Fig 24 Mustard root production volume by region before 2016



Source: China Industrial information website, Macquarie Research, February 2020

Fig 25 Mustard root production volume by region in 2019



Source: China Industrial information website, Macquarie Research, February 2020

Fig 26 Planting process of mustard root

Source: Company, Macquarie Research, February 2020

Fig 27 Packaging factory in Fuling area

Source: Company, Macquarie Research, February 2020

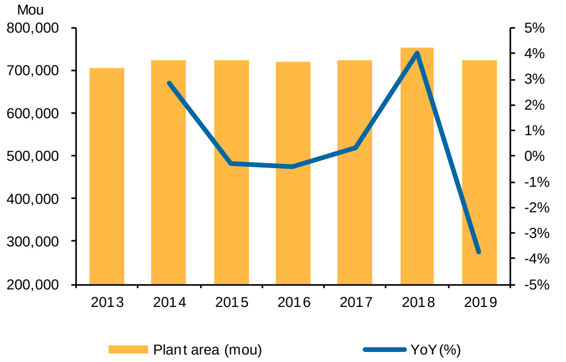
The prices of mustard root depend on the dynamics of demand and supply. On the demand side, it is quite stable given the condiment characteristics. On the supply side, the growing area plays an important role.

With the biggest plant area in China, the Fuling government has kept the area above 700k mou in the past several years with a minimum purchase price every year to guarantee the farmers' income. As the growing area in Zhejiang is diminishing and local mustard root quality is getting worse, Zhacai factories in Zhejiang are shifting its local purchase to Fuling. The prices of mustard roots increased 9% YoY to Rmb819/ton in 2016 and were up a further 12% YoY to Rmb920/ton in 2017 given a big snow.

Meanwhile, the growing area in Sichuan is increasing due to a favourable geography and the trend of immigrants going back to one's hometown. In the harvest season of 2018/2019, the selling price of mustard root in Sichuan was Rmb450-600/ton vs. Rmb690 in Fuling.

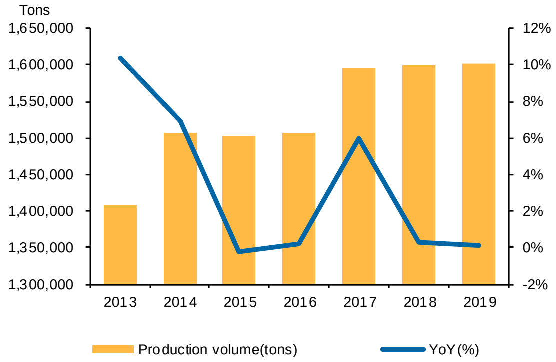
Fuling Zhacai has signed contracts with farmers to guarantee at least 250k tons of fresh mustard root supply in Fuling. Moreover, it will purchase from the Sichuan area first to lower the purchasing price in Fuling. In the future, it targets to purchase 1/3 mustard root from Sichuan eventually meeting the demand from 53k tons of Zhacai production capacity in Sichuan, Meishan. On the back of capacity expansions in Sichuan, we believe Fuling Zhacai will strengthen further its advantages in raw materials and lower the cost in the long term.

Fig 28 Mustard root's plant area in Chongqing Fuling



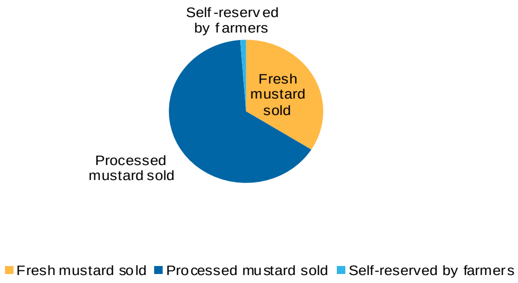
Source: Chongqing Fuling government website, Macquarie Research, February 2020

Fig 29 Mustard root's production volume in Chongqing Fuling



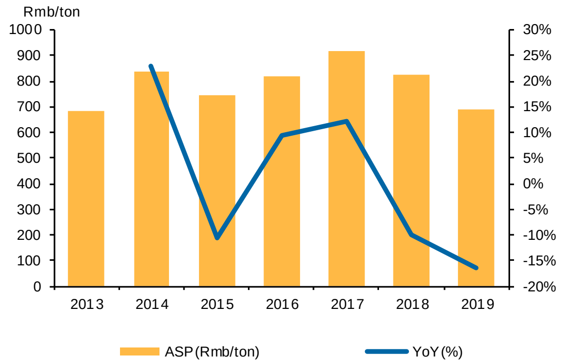
Source: Chongqing Fuling government website, Macquarie Research, February 2020

Fig 30 Mustard root sales breakdown in 2018



Source: Euromonitor, Macquarie Research, February 2020

Fig 31 Mustard root's average selling price in Chongqing Fuling



Source: Chongqing Fuling government website, Macquarie Research, February 2020

Strong pricing power – 10 price hikes from 2008 to 2018

Fuling Zhacai has gradually lifted the retail price from Rmb0.5/70g in 2008 to Rmb2.2/80g in 2018, up 285% in total or at a 14% CAGR during 2008-2018. We attribute strong pricing power to the following reasons. On one hand, consumers are not very price sensitive to Zhacai due to the low selling price per package. On the other hand, Fuling did build up a strong brand image of Wujiang and leveraged the household name to lift prices. As a leader, Fuling is always the first one to lift price.

Fig 32 Price hike history

Year	Magnitude	Products	Region	How	Reason
2008	40%	Key packaging size of pickled mustard	China	Rmb0.5/70g->Rmb1/100g	Raw materials price hike >20% due to 30% production decrease
2012	25%	Key packaging size of pickled mustard	China	Rmb1/100g->Rmb1/80g	n.a.
2013Q1	14%	Key packaging size of pickled mustard	China	Rmb1/80g->Rmb1/70g	n.a.
2014.01	17%	Key packaging size of pickled mustard	China	Rmb1/70g->Rmb1/60g	n.a.
2015	2%	Key packaging size of pickled mustard	Guangdong	Rmb1/60g->Rmb1.5/88g	n.a.
2016	2%	Key packaging size of pickled mustard	China	Rmb1/60g->Rmb1.5/88g	n.a.
2016.07	8-12%	11 products, mainly KA channel products and crunchy series	China	like-for-like price hike	n.a.
2017.02	15-17%	Key packaging size of pickled mustard, 70%~ total sales	China	like-for-like price hike	Raw materials price hike
2017.11	10%	Key packaging size of pickled mustard	China	Rmb1.7/88g->Rmb1.7/80g	n.a.
	17%	Crunchy products	China	175g->150g	n.a.
2018.10	10%	7 main products with package size at 80g	China	like-for-like price hike	n.a.

Source: Company data, Macquarie Research, February 2020

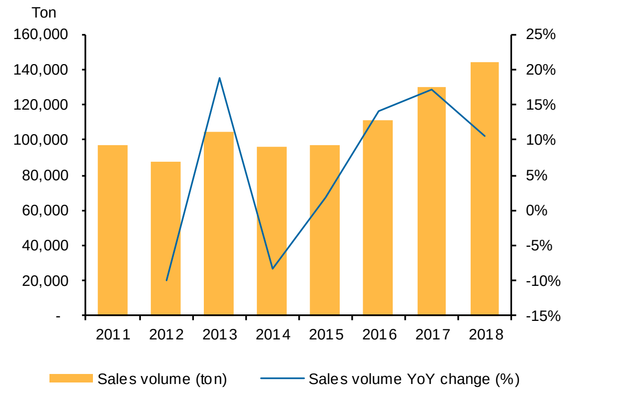
Fuling Zhacai has the following two ways to lift the price:

⇒ **Like-for-like price hike.** Historically, whenever there is a raw material price hike, Fuling has transferred the cost to the consumers. As the company has advantages in raw materials prices, competitors are not able to launch a price war to gain share in the face of raw materials price hikes.

⇒ **Change the package to raise the price per unit.** The company has raised the price per unit through either lowering the package size with an unchanged price or changing the package size and price together.

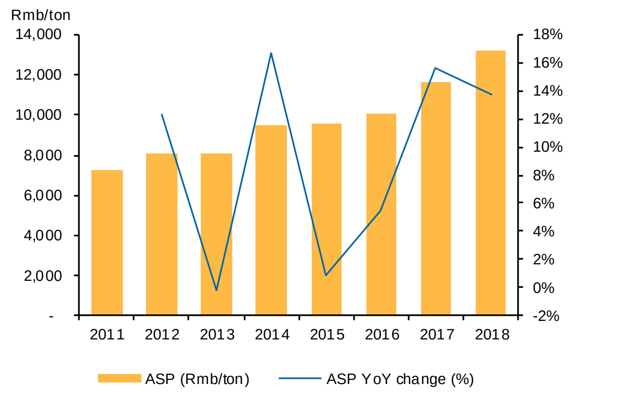
As shown in the below chart, the company's average selling price increased gradually from Rmb7,223/ton in 2011 to Rmb13,255/ton in 2018. Especially in face of a volume reduction, the company tends to leverage the pricing power to smooth sales growth, such as in 2012 and 2014.

Fig 33 Sales volume and YoY (%)



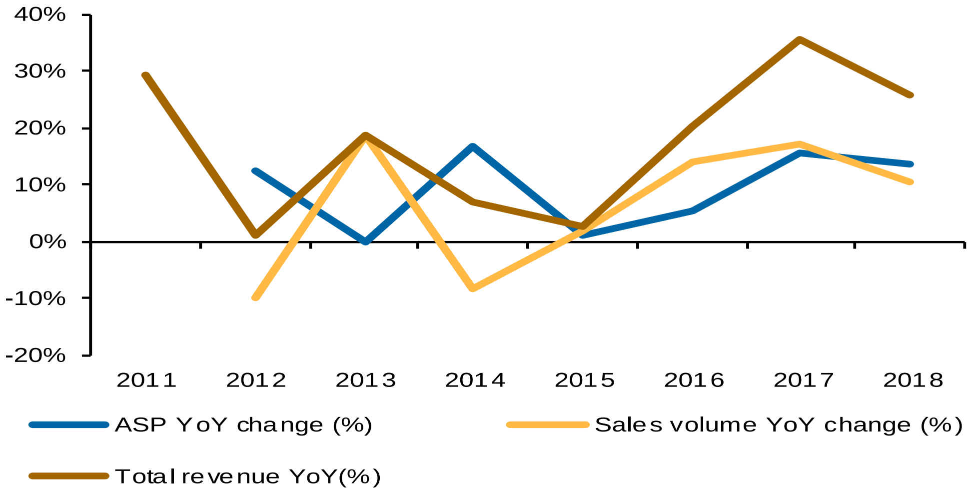
Source: Company data, Macquarie Research, February 2020

Fig 34 ASP and YoY (%)



Source: Company data, Macquarie Research, February 2020

Fig 35 YoY growth of Fuling's revenue, sales volume and ASP



Source: Company data, Macquarie Research, February 2020

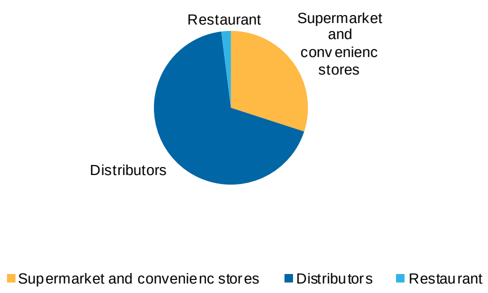
Channel expansion in tier 1-2 cities and penetration in lower tier cities

Fuling has the most developed distribution network among the Zhacai industry. By the end of FY18, it covered 264 cities out at total of 293 in China and 1,000+ counties out of a total of 1,710 in China, via 1,200 distributors and KA channels. However, compared to Haitian, we think there is still room to grow at the county level, especially in North China, Central China and Northwest China.

In 2019, the company started to expand into new channels in tier 1-2 cities and penetrate lower tier cities at the same time.

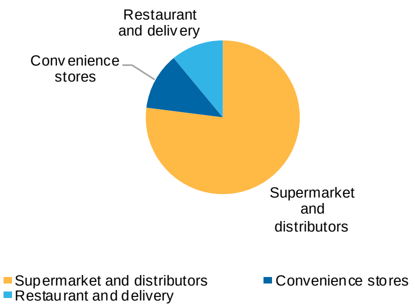
⇒ **Channel expansion in tier 1-2 cities.** Given the rapid life pace in tier 1-2 cities, people are tending to purchase groceries via a new retail platform rather than physical stores and part of home dining consumption has shifted to restaurants and on-demand delivery. Therefore, the company is embracing the changes and expanding to new channels, such as new retail and community group purchases and delivery. Currently, ~68% of Fuling's sales comes from the traditional distributor channel, followed by ~30% from the KA channel, such as supermarkets and convenience stores. Restaurants only account for ~2% of total sales, compared to 11% of sales from restaurants and delivery in Pickles (2925 JP, not rated) in Japan.

Fig 36 Fuling Zhacai's sales by channel in 2018



Source: Company data, Macquarie Research, February 2020

Fig 37 Pickles has a higher percentage of sales from Restaurants and delivery in 2018



Source: Company data, Macquarie Research, February 2020

⇒ **Channel penetration in lower tier cities.** The company has further penetrated the traditional channel in lower tier cities, especially at the county level. As of the end of 1H19, Fuling Zhacai had restructured and expanded its regional sales centres to 67 from 37 and added 600 new distributors in lower cities. According to the company, the sales at the county level increased by >20% in 1H19. It will invest more in channel penetration to cultivate new distributors and new sales teams. During the process of channel penetration, the company will leverage star products to open new markets and provide the new distributors with promotional expenses and incentives. Meanwhile, the sales team will take time to train the new distributors in terms of product display, store management as well as promotional activity organisation.

New products and related capacity expansion

Fuling is also actively exploring growth opportunities in new categories with a related capacity expansion plan. We think this will serve as an important sales growth driver in the coming years.

Fig 38 Capacity expansion plan

Category	Capex (Rmb m)	Capacity	Area	Begin	Construction period
Radish	720	50k	Liaoning, Panjin	2018/03	3years
Crunchy series	100	16k	Chongqing, Baiheliang	2018/08	12m
Zhacai	170	53k (40k new)	Sichuan, Meishan	2018/08	15m

Source: Company data, Macquarie Research, February 2020

- **Entered other pickled segments via M&A in 2015, moved under Wujiang brand now**

As we mentioned in the industry section, other pickled vegetables have a ~Rmb50bn market size, compared to Zhacai's Rmb10bn. However, there is no nationwide leading brand in the sector yet.

Fuling Zhacai is positive about the opportunities of other pickled vegetables and thus acquired a 100% share of Huitong in March 2015, one of the regional leaders in Sichuan pickled vegetables. Total consideration was Rmb129.2m, indicating a 27.5x 2014 PER. The company paid Rmb63m in cash, of which Rmb32.1m was raised through private placement to seven senior managers at Rmb25.65/share, including Chairman Mr. Zhou Binquan. The remaining 51% consideration was settled by a share issuance to Huitong's owners.

Meishan, location of Huitong, is the biggest production base of pickled vegetables in China. It accounted for 1/3 of total sales of pickled vegetables in China and >50% of Sichuan in 20xx. The total sales in Menshan increased to Rmb18.2bn in 2018 and is expected to exceed Rmb20bn in 2019, from Rmb3bn in 2009.

The sales of Huitong were Rmb74m in 2014, before the acquisition. Now the other pickled sales in Fuling have increased to Rmb147m, accounting for ~8% of total sales in 2018. The company has moved the products of other pickled veggies under the Wujiang brand to facilitate sales in 2019.

Fig 39 The brand of other bottled pickled vegetables was changed to Wujiang from Huitong

Source: Company, Macquarie Research, February 2020

Fig 40 Crunchy Zhacai and Crunch radish

Source: Company, Macquarie Research, February 2020

- **Innovative crunchy series products - radish and Zhacai**

The company successfully developed a crunchy series product, such as crunchy Zhacai and crunchy radish, with less salt and a crunchy taste. It is one of the star products right now. During 2013-2015, its sales increased beyond its original capacity of 6k tons, and thus the company added another 18k tons in 2017.

In August 2018, Fuling Zhacai again announced a 16k tons capacity expansion for crunchy products in Chongqing, Baiheliang, with a construction period of 12 months. As it gradually ramps up, the company expects total capacity to reach 40k tons in 2020, up by 67% vs. 24k tons in 2018.

In view of the successful growth of crunchy products, the company plans to expand the radish category and chose Liaoning, Panjin as the location of the factory. Panjin is close to the radish plant area as well as close to the large base of radish consumers in Northeast China.

Potential M&A in the paste segment

As for M&A, Fuling is particularly interested in the paste segment, which has a market size above Rmb40bn, according to China Condiment Industrial Association estimates. The company tried to acquire two companies in 2017 and 2018, respectively. The one in 2017 was too expensive and the one in 2018 failed due to horizontal competition issues.

The company would like to acquire a candidate with quality products and an existing brand at a reasonable valuation. If it happens, we believe the company could leverage its existing distribution network to market the new products.

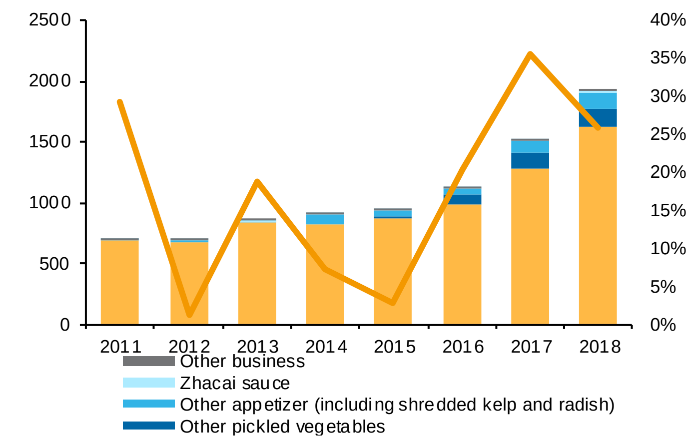
Financial analysis

Revenue structure and outlook

We project sales of Fuling Zhacai to bottom out from 3% growth in 2019E to 14%/18% in 2020/21 respectively, mainly driven by volume. The company is expanding 50k tons of pickled radish production capacity in Northeast China, 16k tons of Crunchy pickles in Chongqing, Baiheliang and 54k tons of mustard root in Sichuan, Meishan. Therefore, the total capacity in 2020 should increase ~40% to 210k tons from 144k tons produced in 2018.

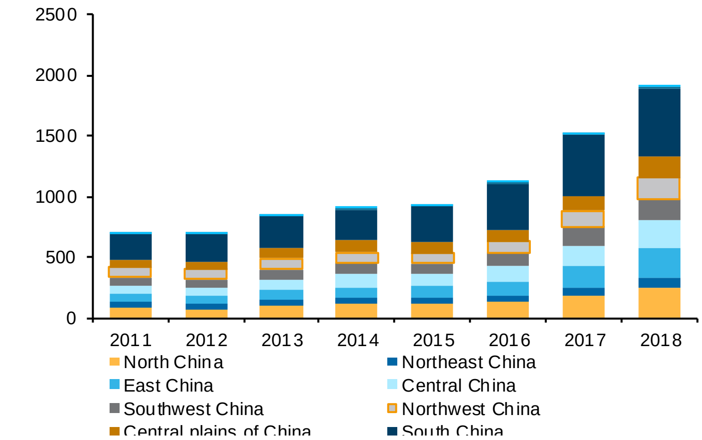
Meanwhile, Fuling has well-diversified revenue by regions. In 2018, South China was the biggest source and contributed 30% of total sales, followed by 13% from North China, 13% from East China and 12% from Central China.

Fig 41 Revenue breakdown by product



Source: Company data, Macquarie Research, February 2020

Fig 42 Revenue breakdown by region

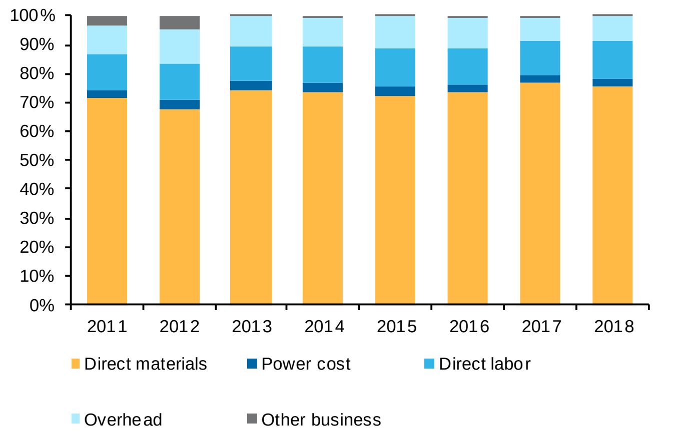


Source: Company data, Macquarie Research, February 2020

GPM to rise due to lower mustard root prices; investment needed for channel expansion

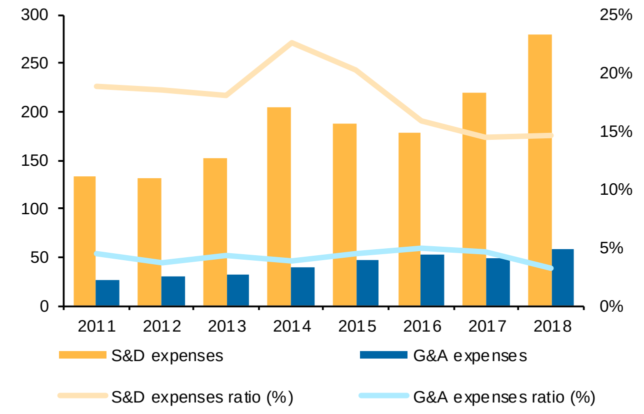
- **COGS structure – the price of mustard root is the key.** The key COGS of Fuling Zhacai is direct materials, representing 70-80% of total COGS (mustard root ~45%). The company is purchasing more mustard root from Sichuan and building up capacity there to lower costs. With the ramp-up of Sichuan's capacity, the company aims to purchase ~1/3 from Sichuan. We believe this will further strengthen its advantages in raw materials against other competitors. We estimate GPM will arrive at 58.8%/58.9% in 2019/2020, up 3.0ppt and up 0.1ppt, respectively.
- **OPM to retreat as more investment is needed for channel expansion.** As the company invests more into channel penetration and the sales team restructure, we estimate the 2019/2020 OPM at 38.1% and 37.9%, down 1.1ppt and 0.2YoY, respectively. However, we think this should be value-added to the company in the long term.

Fig 43 COGS structure breakdown



Source: Company data, Macquarie Research, February 2020

Fig 44 Operating expense breakdown



Source: Company data, Macquarie Research, February 2020

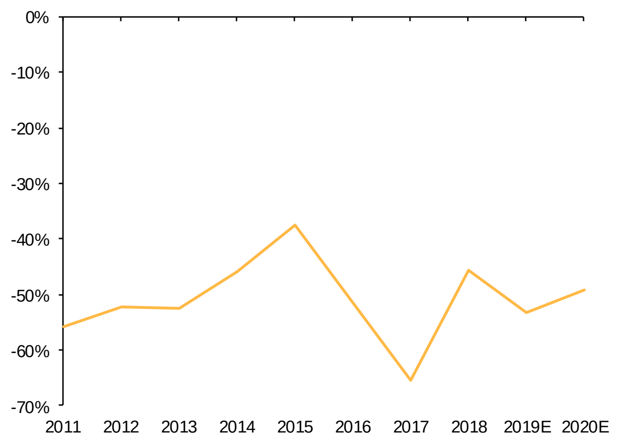
Net cash position and strong cash generative capability

Fuling Zhacai maintained a net cash position during 2011-2018. As of 3Q19, the company held ~Rmb1,110m in cash and cash equivalents on hand, indicating a 40% net cash to equity ratio. In addition, the company has generated Rmb500m in operating cash on average over last three years. We see this serving as ammunition as the company is actively looking for M&A opportunities.

Meanwhile, the company will fund Rmb990m in capex-itself, for the three production capacity expansion plans mentioned above.

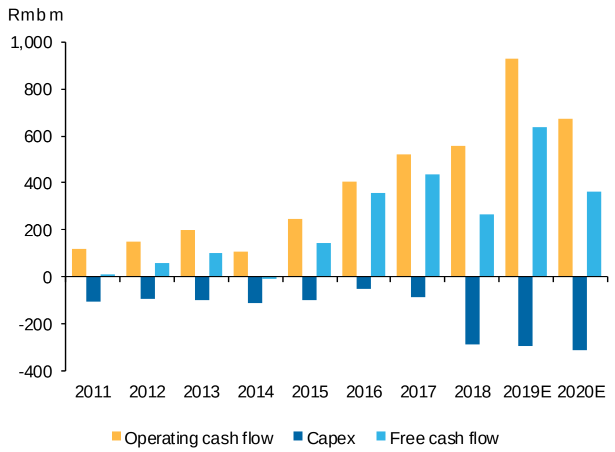
The dividend payout ratio was increased to ~31% in 2018 from 28.6% in 2017. We think it is likely to maintain a flattish level given the upcoming capex plans for capacity expansion.

Fig 45 Net cash/equity ratio



Source: Company data, Macquarie Research, February 2020

Fig 46 Strong cash generative capability



Source: Company data, Macquarie Research, February 2020

Macquarie Quant Alpha Model Views

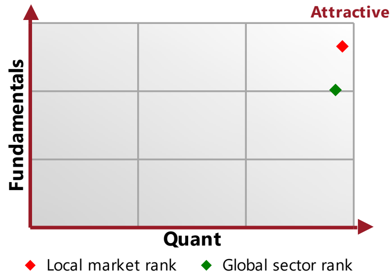
The Quant View page below has been derived from models that are developed and maintained by Sales and Trading personnel at Macquarie. The models are not a product of the Macquarie Research Department.

The quant model currently holds a strong positive view on Chongqing Fuling Zhacai {A-Share). The strongest style exposure is Quality, indicating this stock is likely to have a superior and more stable underlying earnings stream. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

32/562

Global rank in
Food Beverage & Tobacco

% of BUY recommendations	88% (7/8)
Number of Price Target downgrades	0
Number of Price Target upgrades	1

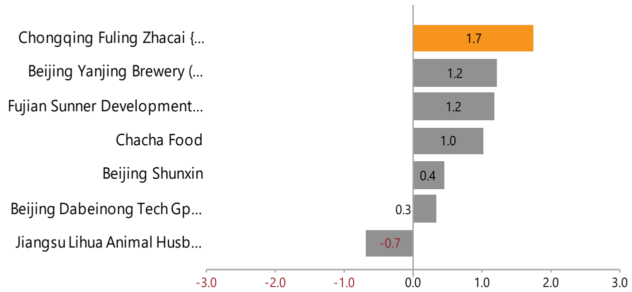


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (China A) and Global sector (Food Beverage & Tobacco)

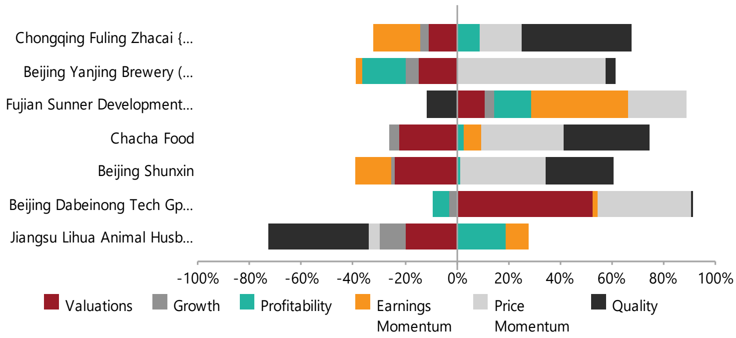
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



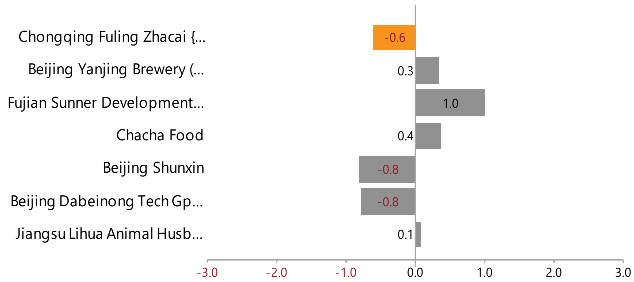
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



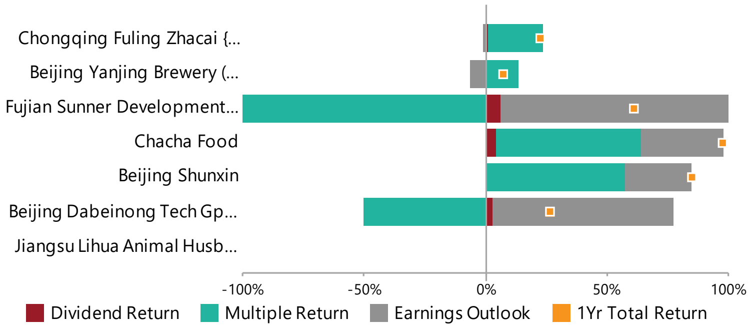
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



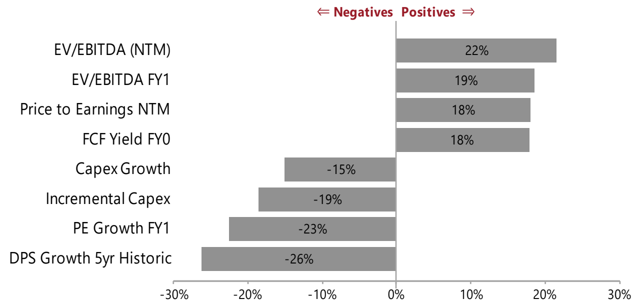
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



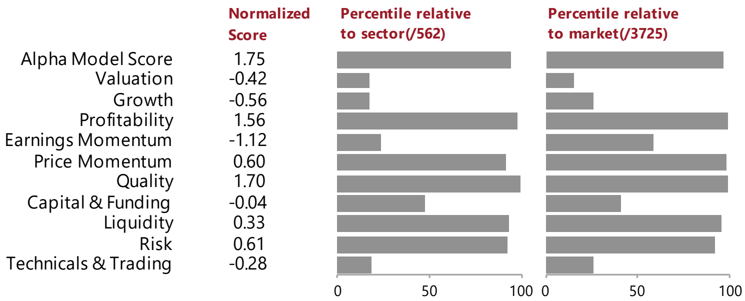
What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.



Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Chongqing Fuling Zhacai {A-Share) (002507 CH, Outperform, Target Price: Rmb34.50)

Interim Results		1H/19A	2H/19E	1H/20E	2H/20E
Revenue	**m**	**1,086**	**887**	**1,240**	**1,015**
Gross Profit	**m**	**636**	**524**	**728**	**600**
Cost of Goods Sold	m	450	364	512	414
EBITDA	**m**	**400**	**417**	**458**	**477**
Depreciation	m	33	33	40	40
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**368**	**385**	**417**	**437**
Net Interest Income	m	2	2	2	2
Associates	m	0	0	0	0
Exceptionals	m	3	21	12	12
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	-2	10	-10	23
Pre-Tax Profit	**m**	**371**	**417**	**421**	**474**
Tax Expense	m	-56	-66	-64	-74
Net Profit	**m**	**315**	**352**	**357**	**400**
Minority Interests	m	0	0	0	0
Reported Earnings	**m**	**315**	**352**	**357**	**400**
Adjusted Earnings	**m**	**312**	**331**	**346**	**388**
EPS (rep)		0.40	0.45	0.45	0.51
EPS (adj)		0.40	0.42	0.44	0.49
EPS Growth yoy (adj)	%	2.6	-0.9	10.8	17.2
EBITDA Margin	%	36.9	47.0	36.9	47.0
EBIT Margin	%	33.8	43.3	33.6	43.0
Earnings Split	%	48.5	51.5	47.1	52.9
Revenue Growth	%	2.1	4.3	14.2	14.3
EBIT Growth	%	3.7	-3.0	13.5	13.5

Profit & Loss		2018A	2019E	2020E	2021E
Revenue	**m**	**1,914**	**1,973**	**2,255**	**2,660**
Gross Profit	**m**	**1,067**	**1,160**	**1,329**	**1,569**
Cost of Goods Sold	m	847	814	926	1,090
EBITDA	**m**	**809**	**818**	**935**	**1,099**
Depreciation	m	58	66	81	97
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**751**	**752**	**854**	**1,002**
Net Interest Income	m	3	4	5	6
Associates	m	0	0	0	0
Exceptionals	m	23	23	23	23
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	1	8	13	19
Pre-Tax Profit	**m**	**778**	**788**	**895**	**1,051**
Tax Expense	m	-117	-122	-138	-162
Net Profit	**m**	**662**	**666**	**757**	**888**
Minority Interests	m	0	0	0	0
Reported Earnings	**m**	**662**	**666**	**757**	**888**
Adjusted Earnings	**m**	**638**	**643**	**733**	**865**
EPS (rep)		0.84	0.84	0.96	1.13
EPS (adj)		0.81	0.81	0.93	1.10
EPS Growth (adj)	%	49.5	0.7	14.1	17.9
PE (rep)	x	30.5	30.3	26.7	22.7
PE (adj)	x	31.6	31.4	27.5	23.4
Total DPS		0.26	0.26	0.30	0.35
Total Div Yield	%	1.0	1.0	1.2	1.4
Basic Shares Outstanding	m	789	789	789	789
Diluted Shares Outstanding	m	789	789	789	789

Profit and Loss Ratios		2018A	2019E	2020E	2021E
Revenue Growth	%	25.9	3.1	14.3	18.0
EBITDA Growth	%	54.8	1.1	14.3	17.6
EBIT Growth	%	62.1	0.2	13.5	17.3
Gross Profit Margin	%	55.8	58.8	58.9	59.0
EBITDA Margin	%	42.2	41.4	41.4	41.3
EBIT Margin	%	39.2	38.1	37.9	37.7
Net Profit Margin	%	33.3	32.6	32.5	32.5
Payout Ratio	%	32.2	32.1	32.0	31.9
EV/EBITDA	x	23.1	22.8	19.9	17.0
EV/EBIT	x	24.8	24.8	21.8	18.6
Balance Sheet Ratios					
ROE	%	29.0	23.8	22.9	22.7
ROA	%	27.5	23.1	22.3	22.2
ROIC	%	35.7	47.4	52.5	47.8
Net Debt/Equity	%	-45.7	-53.1	-49.1	-56.5
Interest Cover	x	nmf	nmf	nmf	nmf
Price/Book	x	8.2	6.9	5.8	4.9
Book Value per Share		3.1	3.7	4.4	5.2

Cashflow Analysis		2018A	2019E	2020E	2021E
EBITDA	**m**	**809**	**818**	**935**	**1,099**
Tax Paid	m	0	0	0	0
Chgs in Working Cap	m	-154	199	-162	-162
Net Interest Paid	m	0	0	0	0
Other	m	-96	-85	-97	270
Operating Cashflow	**m**	**559**	**931**	**676**	**1,207**
Acquisitions	m	0	0	0	0
Capex	m	-292	-296	-316	-346
Asset Sales	m	0	0	0	0
Other	m	837	0	0	0
Investing Cashflow	**m**	**545**	**-296**	**-316**	**-346**
Dividend (Ordinary)	m	-118	-205	-207	-235
Equity Raised	m	0	0	0	0
Debt Movements	m	0	0	0	0
Other	m	0	0	0	0
Financing Cashflow	**m**	**-118**	**-205**	**-207**	**-235**
Net Chg in Cash/Debt	**m**	**986**	**430**	**153**	**626**
Free Cashflow	**m**	**267**	**635**	**360**	**861**

Balance Sheet		2018A	2019E	2020E	2021E
Cash	m	1,128	1,558	1,712	2,338
Receivables	m	12	6	14	10
Inventories	m	330	225	407	337
Investments	m	336	336	336	336
Fixed Assets	m	761	995	1,233	1,486
Intangibles	m	193	190	186	182
Other Assets	m	218	222	220	225
Total Assets	**m**	**2,978**	**3,532**	**4,108**	**4,914**
Payables	m	176	172	224	242
Short Term Debt	m	0	0	0	0
Long Term Debt	m	0	0	0	0
Provisions	m	81	83	93	107
Other Liabilities	m	251	345	309	428
Total Liabilities	**m**	**507**	**600**	**625**	**778**
Shareholders' Funds	m	2,471	2,932	3,483	4,136
Minority Interests	m	0	0	0	0
Other	m	0	0	0	0
Total S/H Equity	**m**	**2,471**	**2,932**	**3,483**	**4,136**
Total Liab & S/H Funds	**m**	**2,978**	**3,532**	**4,108**	**4,914**

All figures in Rmb unless noted.
Source: Company data, Macquarie Research, February 2020

EQUITIES

AShare Research

600298 CH	Outperform
Price (at CLOSE#, 05 Mar 2020)	Rmb30.12

Valuation - PER	Rmb	41.60
12-month target	Rmb	41.60
Upside/Downside	%	+38.1
12-month TSR	%	+39.5
GICS sector		Food, Beverage & Tobacco
Market cap	Rmbm	24,822
Market cap	US$m	3,775
Free float	%	52
30-day avg turnover	US$m	50.2
Number shares on issue	m	824.1

Investment fundamentals

Year end 31 Dec		2018A	2019E	2020E	2021E
Revenue	m	6,686	7,619	8,587	10,019
EBIT	m	976	1,117	1,241	1,517
EBIT growth	%	0.3	14.5	11.1	22.2
Reported profit	m	857	903	1,004	1,225
Adjusted profit	m	818	865	965	1,187
EPS rep	Rmb	1.04	1.10	1.22	1.49
EPS rep growth	%	1.1	5.4	11.1	22.1
EPS adj	Rmb	0.99	1.05	1.17	1.44
EPS adj growth	%	2.7	5.7	11.6	23.0
PER rep	x	29.0	27.5	24.7	20.3
PER adj	x	30.3	28.7	25.7	20.9
Total DPS	Rmb	0.35	0.37	0.41	0.50
Total div yield	%	1.2	1.2	1.4	1.7
ROA	%	11.5	11.9	12.1	13.3
ROE	%	20.1	18.6	17.9	18.8
EV/EBITDA	x	18.6	16.8	15.3	13.0
Net debt/equity	%	39.5	23.8	14.9	3.8
P/BV	x	5.8	5.0	4.3	3.6

Source: FactSet, Macquarie Research, March 2020
(all figures in Rmb unless noted, TP in CNY)

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Angel Yeast (A-Share) (600298 CH)
Flying Angel

Key points

- Global expansion and Yeast extract to drive sales growth.
- GPM expansion on price hike and better mix, new incentive plan to come.
- Initiate with OP rating, TP at Rmb41.6/sh, indicating 40% TSR.

We initiate coverage on Angel Yeast with an Outperform rating and Rmb41.6 TP, 40% TSR. Angel Yeast is the largest yeast producer in China, the 3rd largest globally after Lesaffre and AB Mauri. It is also the largest yeast extract (YE) producer globally. We believe its global expansion and promising YE growth will drive the top line to grow by 13%/17% respectively in 2020/21. As yeast is a baking staple, we think it is a safer choice under the COVID-19 outbreak as rising 2C yeast sales with higher margins should partially offset 2B decline. Our Rmb41.6 TP is based on a 28x 2021E PER, in line with mid-cycle avg and lower than the 33x 2021avg of other condiment peers. It is trading at a 25x 2020E PER.

Dominant yeast share in China; YE riding on consumption upgrade trend

In China, Angel Yeast gradually expanded its share to 55% in 2018 from 30% in 2007, thanks to localised product offerings, cost advantages over competitors, a strong channel & follow-up services. Riding on the rising demand of baked goods and modernised production of Chinese pastries, we expect China yeast could deliver mid- to high-single-digit growth in 19-23E and for Angel to gain ~2/3 of the new market given its nationwide distribution network. Meanwhile, clients are not price sensitive to yeast as it only accounts for <1% of costs in baked goods. The company has lifted its price 15 times from 2004 to 2019, and it is likely to raise the price in 2H20 due to tight capacity. In addition, we expect the consumption upgrade trend will drive YE to grow ~20% in 20/21 p.a., which replaces MSG and serves as a flavour enhancer in high-end condiments and processed foods. Overall, we project 9%/16% top line growth for 1H/2H20 for yeast and related products.

Deploy capacity in emerging markets with rising demand and lower costs

On the back of global capacity expansion, Angel will become the 2nd largest yeast producer globally, in our view. Its global share rose from 7% in 2009 to 16% in 2019. Unlike its competitors' focus on fresh yeast in developed areas, Angel is replicating its success in China and offers dry yeast (cheaper and longer shelf life) in emerging markets, such as the Middle East and Africa, to meet fast-growing demand. Moreover, factories in Egypt/Russia are margin accretive, as they have enjoyed cheaper raw materials, lower transportation and labour costs and less tariffs. It is likely to resume Russia II expansion in 1H20.

GPM expansion on price hike and better mix, new incentive plan to come

Raw materials account for 50-60% of total COGS, among which molasses (by-products of sugar) represents ~40% of the total. We expect flattish or slightly higher molasses prices for 2020 as Angel has secured 70% with a flattish price. We project GPM will increase 1.1/0.3ppt to 37.2%/37.5% in 20/21 thanks to price hikes and a favourable mix. We expect OPM will slightly decrease to 14.5% in 2020 due to global expansion and potential incentive plan expenses, while we expect it to increase to 15.1% in 2021 on the back of operating leverage. Overall, we estimate 11%/22% growth for 20/21 NP.

Catalysts: 2C sales increase due to COVID-19 outbreak, price hikes, ESOP.

Risks: slower-than-expected expansion, raw material price increases, F/X fluctuation, food safety issues.

Inside

Angel Yeast

Company profile

- Angel Yeast's core business is the production of yeast and by-products, such as yeast extract and products for human health and microbial/animal/plant nutrition. In addition, it is also engaged in related businesses in the supply chain, i.e. upstream sugar and packaging. The sales of its core business accounted for ~90% of total sales in 2018.
- The company is the largest yeast manufacturer in China and the third largest globally, with 60% and 16% capacity share respectively in 2019. Headquartered in Yichang, Hubei, it has 12 factories in China, Egypt and Russia with total capacity of ~250k tons in 2019.

Shareholding structure

- The controlling shareholder of Angel Yeast is the State-owned Asset Supervision and Administration Commission (SASAC) of Yichang City, Hubei Province. The SASAC of Yichang owns 39.98% of Angel Yeast's total outstanding shares via its 100%-owned subsidiary, named Hubei Angel Biological Group. Free float is 54.36%.
- **Management and employees the 2nd largest shareholders given SOE reform.** In June 2010, Angel Yeast issued 34.6m shares to Hubei Risheng Technology at Rmb18.67/sh to acquire 30%/10.5%/65% equity in Angel Yili/Angel Chifeng/Hongyu Plastic Company. As such, Risheng held 10.51% of total shares in 2010. As of 3Q19, the management and employees remained the second largest shareholder, holding a combined 5.66% via Hubei Risheng Technology. We believe the management team is crucial for Angel's development given it does not have raw material or end market advantages. This shareholding structure further incentives the management team and benefits Angel's long-term growth.

Fig 1 Shareholding structure (As of 3Q19)

Source: Company data, Macquarie research, March 2020

Fig 2 600298 CH rel CSI 300 performance, & rec history

Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, March 2020 (all figures in Rmb unless noted, TP in CNY)

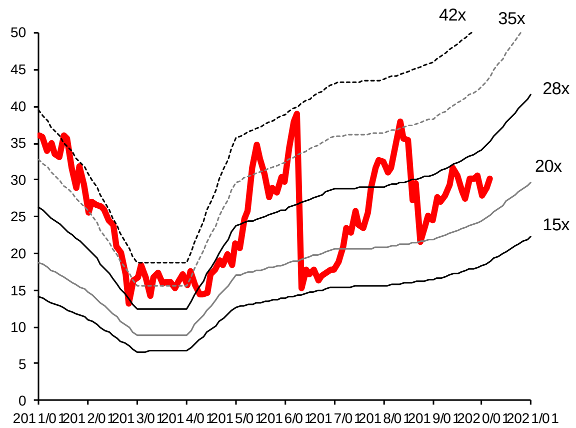
Initiate with Outperform rating and TP of Rmb41.6

Valuation and recommendation

We initiate coverage on Angel Yeast with an Outperform rating. We believe global expansion and yeast extract growth on the back of the consumption upgrade trend will drive 13%/17% 20/21 top line growth. Potential M&A could provide additional upside. We expect margins will continue to expand on the back of price hikes and a favourable product mix. Moreover, the company is working on an incentive plan for employees, likely to be announced in 2020, which could benefit the company in the long term.

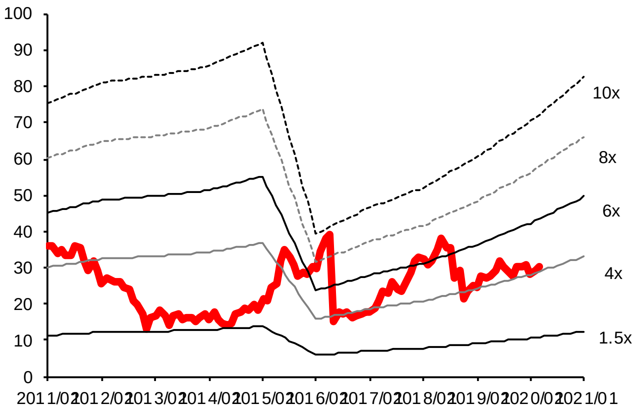
Our TP of Rmb41.6 is based on a 28x 2021E PER multiple, in line with its historical average and lower than the 33x 2021E average of other condiment peers.

Fig 3 Angel Yeast's historical PER band



Source: Bloomberg, Macquarie Research, March 2020

Fig 4 Angel Yeast's historical PBR band



Source: Bloomberg, Macquarie Research, March 2020

Risks

- **Slower-than-expected expansion.** The company has postponed its Russia II expansion plan (12kt capacity) due to delayed approvals. The company would like to push it through in 1H20. If capacity expansion plans were further delayed, the tight capacity could be a bottleneck for sales growth.
- **Raw material and packaging price hike.** For the main yeast and yeast derivative business, raw material costs account for 50-60% of total COGS, among which molasses (by-products of sugar) represent ~40% of total COGS. Rising raw material and packaging prices would lead to a material margin decrease.
- **F/X fluctuation.** Given the company's international deployment, ~30% sales are exposed to other currency fluctuations, mainly including the US dollar, Euro, Egyptian pound, Russian rouble.
- **Food safety issues.** Food safety is crucial in the food industry. Once there is a food safety issue, the brand equity would likely be damaged, and the company would face fines or legal punishment from related authorities.

Fig 5 Valuation comp table – Condiment

Company Name	Code	Price (lc$/sh)	Rating	TP (lc$/sh)	Upside (%)	Mkt Cap (US$m)	P/E (x) FY19	P/E (x) FY20	P/B (x) FY19	P/B (x) FY20	ROE (%) FY19	ROE (%) FY20
China peers												
Foshan Haitian	603288 CH	103.75	OP	83.3	-20%	40,345	49.5	40.5	15.2	12.7	33.4	34.1
Jonjee Hi-Tech	600872 CH	41.45	NR	NR	NR	4,962	46.4	37.8	8.3	7.9	17.6	18.5
Hengshun Vinegar	600305 CH	18.48	NR	NR	NR	2,193	41.6	37.2	6.0	6.3	14.6	14.7
Fuling Zhacai	002507 CH	28.82	OP	34.5	20%	3,377	31.7	27.8	7.0	5.9	23.8	22.9
Angel Yeast	600298 CH	30.12	OP	41.6	40%	3,775	27.5	24.7	5.0	4.3	18.6	17.9
China peer average							39.3	33.6	8.3	7.4	21.6	21.6
Hong Kong peers												
Yihai	1579 HK	55.2	Neutral	46.5	-16%	7,504	64.4	48.8	18.4	14.2	32.3	32.8
Want Want	151 HK	6.1	Neutral	7.0	15%	9,889	19.6	17.4	4.4	4.2	23.3	24.7
Dali Foods	3799 HK	5.13	UP	4.2	-18%	9,375	16.0	15.3	3.6	3.8	23.9	24.2
UPC	220 HK	8.02	OP	11.0	37%	4,674	21.4	19.5	2.3	2.3	10.8	11.6
Tingyi	322 HK	14.06	Neutral	15.7	12%	10,522	24.0	23.2	3.5	3.5	14.8	15.1
HK peer average							29.1	24.8	6.5	5.6	21.0	21.7
Global peers												
Kraft Heinz	KHC US	25.5	NR	NR	NR	31,146	9.1	11.3	0.4	0.6	6.6	5.4
Conagra Foods	CAG US	27.67	NR	NR	NR	13,470	13.4	13.7	2.8	1.8	15.9	12.8
McCormick	MKC US	149.9	NR	NR	NR	19,931	28.0	28.6	4.7	5.6	21.1	19.3
Kikkoman	2801 JP	5030	NR	NR	NR	9,139	35.9	35.0	3.5	3.6	10.5	10.1
Ajinomoto	2802 JP	1875.5	NR	NR	NR	9,437	47.2	45.8	1.4	1.6	3.2	3.5
Pickles	2925 JP	2193	NR	NR	NR	132	NA	10.2	NA	NA	NA	NA
Kewpie	2809 JP	1982	NR	NR	NR	2,793	15.7	18.9	1.1	1.2	7.8	6.6
Global average							24.9	23.4	2.3	2.4	10.9	9.6
HK, China and global average							31.1	27.3	5.7	5.1	17.8	17.6

Source: Bloomberg, Macquarie Research, March 2020. Prices as of 3rd March 2020; estimates for not-rated stocks are based on Bloomberg consensus.

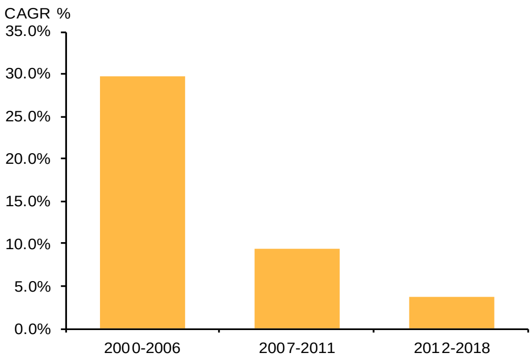
No.1 yeast player in China with strong pricing power

We estimate that the China yeast industry will continue to grow in the mid- to high-single digits during 2019-2023E, driven by a 3% volume CAGR and mid-single-digit price CAGR. We believe Angel Yeast's domestic yeast sales growth will achieve 8~10%, due to higher than industry volume growth and a mid-single-digit price CAGR. The market share of Angel Yeast will continue to grow from 55% in 2018 to ~60% in 2021E at the expense of small players, in our view.

China yeast volume is estimated to grow at a 3% CAGR during 2019-2023E

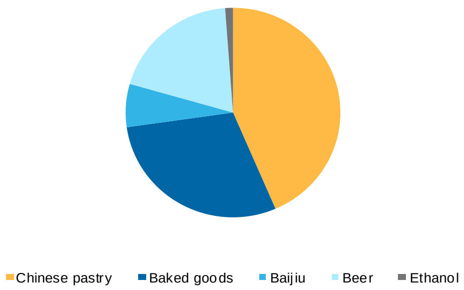
China yeast production volume has outgrown the global industry in last two decades. According to the China Biotech Fermentation Industry Association, the yeast industry's volume CAGR reached ~30% during 2000-2006 and then recorded high-single-digit growth during 2007-2011. During 2012-2018, the yeast industry's volume CAGR slowed down to mid-single digits, following downstream demand growth moderation.

Fig 6 CAGR of China yeast production volume



Source: China Biotech Fermentation Industry Association, Macquarie Research, March 2020

Fig 7 Downstream demand breakdown in 2018



Source: NBS, Company data, Macquarie Research, March 2020

According to our estimates, China yeast production volume reached 342k tons in 2018. The most important downstream demand is Chinese pastry, accounting for ~45% of total end demand. The second largest source is baked goods, representing ~30% of total. The rest is mainly for alcohol brewing, such as beer, baijiu and ethanol.

Looking into the future, we estimate that China yeast production volume will grow at a ~3% CAGR during 2019-2023E and reach 392kt in 2023E. The key drivers are rising consumption of baked goods as well as the replacement of laomian in Chinese pastry production. As for the alcohol brewing demand, we think the alcohol volume will remain stable as it has been the past several years.

Fig 8 China yeast volume is estimated to grow at 3%2019-2023E CAGR

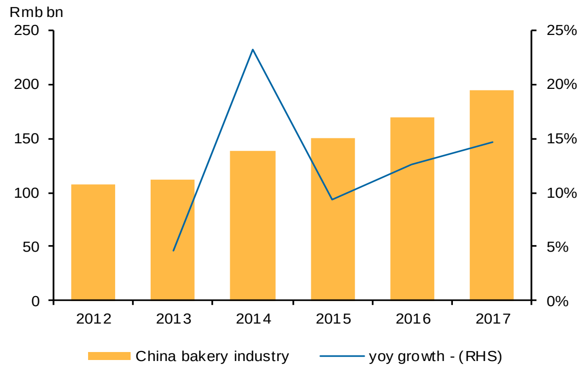
Downstream	Downstream demand (kt)	Yeast usage %	Volume in 2018 (kt)	2019-2023E CAGR	Volume in 2023 (kt)	Volume increase 2019-2023(kt)	Breakdown% in 2018	Breakdown% in 2023E
Baked goods	10,330	1.00%	103	6.5%	142	38	30%	36%
Chinese pastry	23,667	0.5-0.8%	154	1.5%	166	12	45%	42%
Baijiu	6,874	0.15-0.5%	21	0.0%	21	-	6%	5%
Beer	30,079	0.05-0.5%	60	0.0%	60	-	18%	15%
Ethanol	9,240	0.03-0.06%	4	0.0%	4	-	1%	1%
Total			**342**	**2.8%**	**392**	**50**	**100%**	**100%**

Source: NBS, company data, Macquarie Research, March 2020

- **Rising consumption of baked goods**

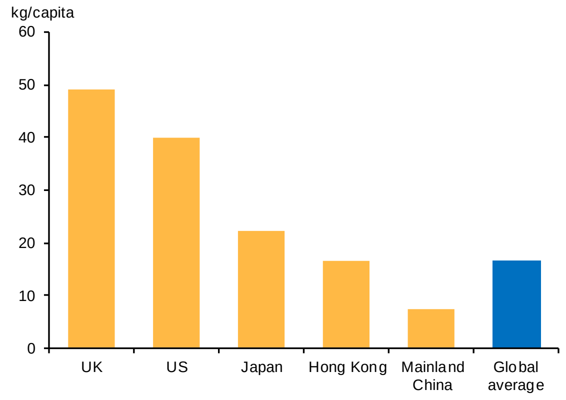
Based on Euromonitor's estimates, China's baked goods will achieve a mid-to-high single digit volume CAGR during 2018-2023. From the perspective of per capita consumption, we believe there is still plenty of room for baked goods growth, driven by consumption upgrades and a faster life pace. According to Bloomberg, per capita baked goods consumption in China was 7.4kg/capita in 2018, not only much lower than 40.1kg/capita in United States and 22.4kg/capita in Japan, but also less than half of global average at 16.7kg/capita. We project 38kt of additional yeast volume from baked goods, based on Euromonitor's mid-single-digit volume growth guidance on baked goods.

Fig 9 China bakery industry sales growth



Source: Bloomberg, Macquarie Research, March 2020

Fig 10 Per-capita consumption of baked goods by regions (2018)



Source: Euromonitor, Macquarie Research, March 2020

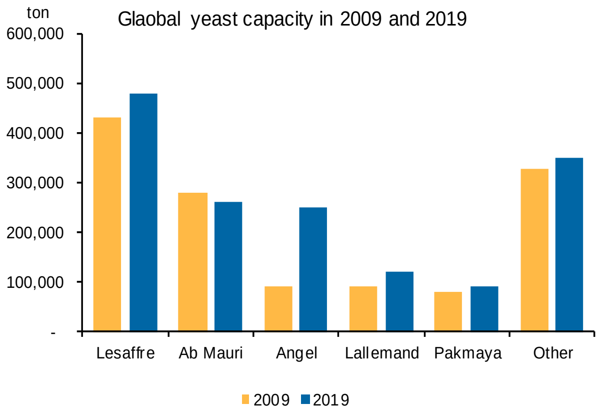
- **Modernised production of Chinese pastries**

According to the company, 40% of total flour production is used for Chinese pastry production, such as steamed buns and stuffed buns. The basic ingredients of Chinese pastries include flour, water and a fermentation agent. Currently, ~2/3 of the fermentation agent has shifted to yeast while the remaining 1/3 is still using laomian（老面）. Laomian is a traditional fermentation agent, which is a small preserved part of fermented dough. The key advantages of yeast over laomian are as follows: 1) shorter fermentation process, 1-3 hour vs. 12-24 hours, which fits production on a large scale, 2) better consistency in downstream product and 3) better food safety.
We think these advantages will continue to drive the yeast replacement of laomian in the production of Chinese pastries. We assume a 1% replacement pace, which would contribute 12kt of additional volume during 2019-2023.

Angel is a successful market consolidator in China

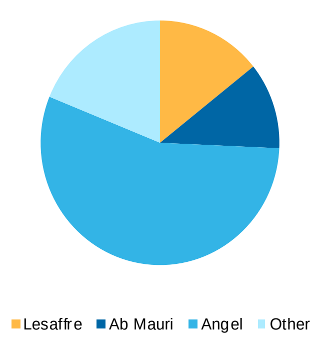
We expect Angel will slightly outgrow the industry in terms of volume and consolidate the market further to ~60% in 2021 at the expense of small players. In 2018, CR3 owned more than 80% of the market in China, a typical oligopoly market. Capital expenditures and yeast and fermentation technology set high entry barriers for this industry. Historically, Angel Yeast gradually increased its market share from 30% in 2007 to 55% in 2018, underpinned by its localised product offerings, cost advantages over competitors, well penetrated channels & strong follow-up services.

Fig 11 Angel's capacity CAGR was 11% during 2009-2019 vs. a 2% CAGR for global capacity



Source: Company data, Macquarie Research, March 2020

Fig 12 CR3 owns more than 80% market share in China in 2018

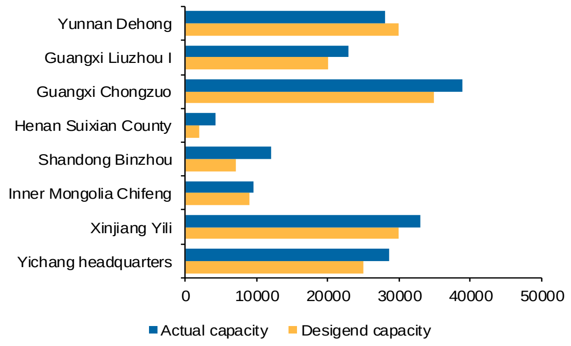


Source: Company data, Macquarie Research, March 2020

- **Capacity expansion**

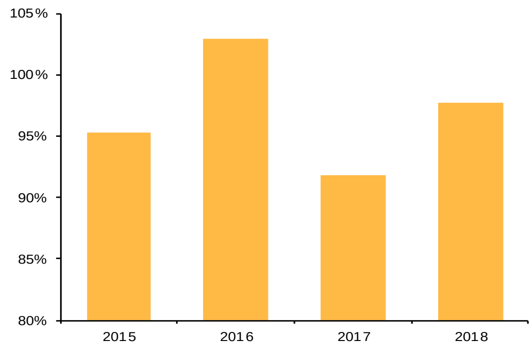
The company guides for 8% capacity expansion for 2019-2021E. We expect 2020 capacity expansion mainly from the ramp-up of Egypt II, existing production line upgrades and a higher utilisation rate in 2020. Historically, the utilisation rates the company has reached above 100% to meet market demand. Yeast production involves the multiplication of cells in optimal conditions (molasses, temperature, pH, etc.), which is key knowledge that could impact production efficiency. For instance, every 1 ton of yeast production requires <5 tons of molasses currently, vs 5.6 tons of molasses in 1997. Angel has been investing in optimizing the manufacturing process, and the overall capacity was improved by 10% in 2016.

Fig 13 Yeast designed capacity vs actual in 2016



Source: Company data, Macquarie Research, March 2020

Fig 14 Yeast utilisation rate



Source: Company data, Macquarie Research, March 2020

For 2021, the supply will be tight as the Yili factory is scheduled to be relocated in 1Q20 to solve environmental protection issues. We believe Angel will raise the utilisation rate of Yili and other factories in 2020 to prepare for sales in 1Q20. Meanwhile, the company is likely to resume the Russia II factory with 12kt of capacity in 1H20. Once it is approved by the Board, the construction period will be one year, and Russia II could contribute to ~6kt in 2021. Moreover, the company will keep a 1-2 month inventory level, which could also help tight supply if needed.

In the face of tight supply, we believe the company will raise the price to achieve Rmb10bn sales growth in 2021.

Fig 15 Yeast capacity

Plant	Chinese name	Foundation year	2018 Yeast capacity(t)	2019 Yeast capacity(t)	2020 Yeast capacity(t)
Yichang headquarters	宜昌总部	1986	25,000	25,000	25,000
Inner Mongolia Chifeng	安琪赤峰	2003	9,000	9,000	9,000
Xinjiang Yili	安琪伊犁	2004	24,000	30,000	30,000
Shandong Binzhou	安琪滨州	2005	7,000	7,000	7,000
Henan Suixian County	安琪睢县	2005	2,000	2,000	2,000
Guangxi Chongzuo	安琪崇左	2006	35,000	35,000	35,000
Guangxi Liuzhou I	安琪柳州	2012	20,000	20,000	20,000
Yunnan Dehong	安琪德宏	2014	30,000	30,000	30,000
Guangxi Liuzhou II	安琪柳州（二期）	2017.07	20,000	20,000	20,000
Chifeng	安琪赤峰（搬迁改造）	2018.06	6,000	16,000	16,000
China subtotal	**中国总计**		**178,000**	**194,000**	**194,000**
Egypt	安琪埃及	2013	23,000	23,000	23,000
Egypt II	安琪埃及（二期）	2019.04	-	8,000	12,000
Russia	安琪俄罗斯	2017.08	20,000	20,000	20,000
Russia II	安琪俄罗斯 (二期)	2021.06(TBC)	-	-	-
Overseas subtotal	**海外总计**		**43,000**	**51,000**	**55,000**
Total			**221,000**	**245,000**	**249,000**
YoY %				**10.9%**	**1.6%**

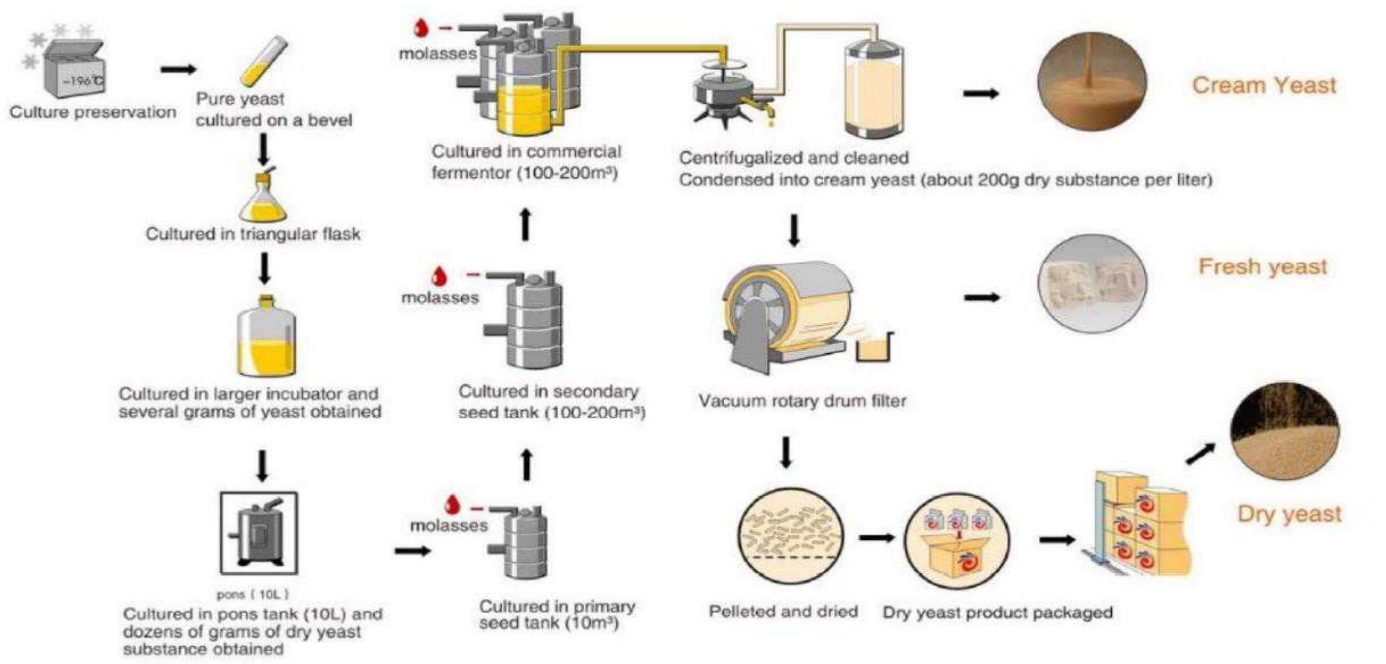
Source: Macquarie Research, March 2020

- **Localised products offerings**

⇒ **Dry yeast fits well in China, compared to fresh yeast in developed area**

Unlike global competitors' focus on fresh yeast in developed countries, Angel Yeast produces highly active dry yeast (or so-called instant yeast) for the China market. Fresh yeast is more time efficient in the fermentation process, and its end products have a better taste. However, it requires cold chain logistics at 0-4 degree, and the shelf life is around one month. On the contrary, highly active dry yeast could be stored at room temperature with a two-year shelf life. Although dry yeast will take a longer time in the fermentation process, it fits well in the China market.

Fig 16 Different production process of cream yeast, fresh yeast and dry yeast



Source: Company data, Macquarie Research, March 2020

⇒ **Localised product solutions for traditional Chinese food**

The company understands the Chinese food culture better than its global competitors, and thus launched a series products for Chinese style cuisines, such as an aluminium-free raising agent for deep-fried sticks (无铝油条膨松剂), steamed bun improvers (馒头改良剂) and sweet rice leaven (甜酒曲). These localised products pave the way for Angel to penetrate the traditional Chinese pastry industry, which is the largest downstream demand source and accounts for ~45% of total yeast consumption.

Fig 17 Angel offers solutions for traditional Chinese pastries

Source: Company data, Macquarie Research, March 2020

Fig 18 Angel offers solutions for rice wine and Laozao (醪糟)

Source: Company data, Macquarie Research, March 2020

- **Cost advantages over competitors**

AB Mauri entered China in 1985 and built its main factories in the 1990s. Lesaffre built the first factory in 1999 and the largest one in 2006. Angel has gradually expanded its capacity from 58kt in 2005 to 194kt in 2018, and the automation rate of Angel's product lines is much higher than that of its competitors. With the scale effect kicking in gradually, Angel is enjoying cost advantages over both its global peers and domestic small players, which enables it to gain market share with a lower pricing strategy.

Moreover, the locations of Angel's factories are well planned and near the raw materials plant area, whereas AB Mauri closed one YE factory in Harbin in 2013 due to decreasing beet sugar production volume.

Fig 19 Automated production line of Angel Yeast

Source: Company data, Macquarie Research, March 2020

Fig 20 Top 3 players' capacity deployment in China

Source: Company data, Macquarie Research, March 2020

- **Well penetrated channel and strong follow-up services**

Angel has the largest sales force among peers and 7 technical service centres nationwide to provide follow-up services to its clients. With 11,245 distributors, Angel is well penetrated at the county level, vs. Lesaffre and AB Mauri.

Fig 21 Top 3 players' channel force in China (2018)

Name	Sales office	Service centre	Salesperson	Distributors	Penetration
Angel	27	7	1330	11245	county level
Lesaffre	5	4	150	n.a.	city level
AB Mauri	4	1	200	n.a.	city level

Source: Company data, Macquarie Research, March 2020

⇒ **2B: distributors + direct sales to key clients with customised services**

2B clients account for ~80% of Angel Yeast's domestic sales. Its key 2B clients include Danone, Toly (603866 CH, not rated) and Babi Steamed Bun etc. For the large 2B clients, the product quality of the top 3 players is similar. The key is follow-up services and fermentation technical support, which enhances the consistency and quality of baked goods. Angel usually sells products directly to the large 2B clients, provides follow-up services, collects feedback from clients and even produces customized ingredients based on their needs. Meanwhile, it is time consuming for those big clients to adapt a new yeast, and product consistency is important to their business. Therefore, the client stickiness is very high.

To secure a growing market share, the company is also actively building up the brand among professionals in the bakery industry by establishing bakery learning centres and endorsing bakery competitions.

Fig 22 Follow-up and fermentation technical services

Source: Company data, Macquarie Research, March 2020

Fig 23 Developing 2C clients with a monthly bakery magazine issued by Betty's Kitchen

Source: Company data, Macquarie Research, March 2020

⇒ **2C: distributors + E-commerce**

Although 2C customers only represent ~20% of domestic sales, it enjoys a much higher GPM at ~50%, vs. ~30% for 2B sales. Angel's 2C products are distributed by KA channels, grocery stores as well as e-commerce platforms. In 2015, Angel Yeast acquired a home cooking magazine named Betty's Kitchen (贝太厨房), with the largest circulation in China, to cultivate the 2C market. Both Lesaffre and AB Mauri have not set up an official T-mall yet.

Strong pricing power, 5% CAGR for blended ASP in 2019-2021E

As we expect supply will remain tight, we believe Angel will raise its ASP up by a 5% CAGR for 2019-2021, driven by both price hike and product mix change. Given the outbreak of COVID-19 and the Yili factory relocation in 1Q21, we think the company will **raise the yeast price by ~5% in 2H20** to achieve its growth target. Angel Yeast lifted its blended ASP at a 6.1% CAGR during 2016-2018 post its fast expansion from 2011-2015.

- **Passing through cost pressure to price insensitive downstream**

According to the company, the cost of yeast accounts for less than 1% of total costs. Therefore, the clients in the downstream industry, such as bakery, are price insensitive and the company is able to lift the selling price whenever there is cost pressure from molasses, which accounts for ~40% of total COGS.

Fig 24 Price history of Angel Yeast

Date	Products	Magnitude %	Driver
Dec, 2004	Domestic yeast	5-8%	Cost pressure from molasses
Jun, 2005	Oversea yeast	5%	Cost pressure
Jan, 2006	Domestic yeast	5-8%	Tight supply
Jan, 2007	Part of yeast	5%	Tight supply
Mar, 2008	Almost all products	5%	Cost pressure from molasses
Oct, 2008	All yeast	7-15%	Cost pressure from molasses
2019	No change	No change	Decreasing molasses price
Mar, 2010	Oversea yeast	7-8%	Cost pressure from molasses
Feb, 2011	Domestic yeast	5-10%	Cost pressure from molasses
Mar, 2012	Domestic 2C yeast	10%	Cost pressure
May, 2012	Domestic yeast for baked foods and Chinese pastry	5%	Cost pressure
2013-2015	No change	No change	To digest expanded capacity
Dec, 2015	Egypt's yeast, YE	5%	Raising price closer to competitors' products
Jan, 2016	Domestic YE	5%	Tight supply
May, 2016	Domestic yeast for baked foods and Chinese pastry	5%	Tight supply
2017	No change	No change	Decreasing molasses price
Jan, 2018	Part of YE	1-2%	Raising price actively on the back of easing off competition
Oct, 2018	60% of domestic products	3-4%	Tight capacity
1Q19	Russia's products	4-5%	Raising price closer to competitors' products
4Q19	Egypt's yeast, YE	3%	Raising price closer to competitors' products

Source: Company data, Macquarie Research, March 2020

- **Better competitive landscape strengthens the pricing power**

As we discussed above, Angel has leveraged its cost advantages to gradually expand its market share to 55% in 2018, vs. Lesaffre's 14% and AB Mauri's 11%. Given Angel's dominant market share and Lesaffre and AB Mauri's lower profitability, Lesaffre and AB Mauri have historically followed the price hike of Angel to improve profitability.

- **Current ASP is >10% higher than competitors**

According to management, Angel's product pricing is the highest among peers in China. According to our channel checks on T-mall, taking the 2B package (500g) of instant yeast for example, Angel's retail price is the highest among all, with a 13% premium over Lesaffre and 46% over AB Mauri. The highest sold volume per item of Angel reach ~11,000, while that of Lesaffre is 430.

Fig 25 Angel's retail price of 2B products are sold at a premium over peers'

Company name	Chinese name	Rmb/500g	Angel's Premium
Angel	安琪	24.8	0%
Lesaffre	乐斯福	22.0	13%
AB Mauri	英联马利	17.0	46%
Sunkeen	圣琪	16.5	50%
Sungain	三桂	11.0	125%

Source: T-mall, Macquarie Research, March 2020

Impact from COVID-19

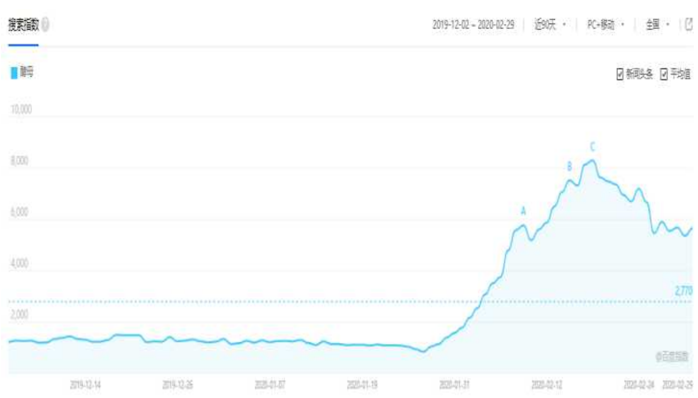
Overall, we see a manageable downside impact from COVID-19 in the near term and a more positive impact in the long term, from the perspective of cultivating 2C clients and potential market share gains from competitors.

- **Higher margin 2C yeast sales boosted by home cooking, partially offsetting 2B decline**

  The company has witnessed strong sales growth of 2C yeast products during the COVID-19 outbreak, evidenced by the surging Baidu Index shown below. Bakery-related short videos also went viral on TikTok, with millions of "Like". According to Meituan, online sales of yeast on Meituan were boosted by home cooking, up 40 times during the prolonged CNY holiday.

  Angel has added two 2C yeast production lines from one previously to meet the strong demand. Meanwhile, 2B packages (500g) are already on sale in KA channels in Tier-1 and Tier-2 cities to make up for the tight 2C product supply.

Fig 26 Baidu Index of yeast surged in Feb, 2020



Source: Baidu, Macquarie Research, March 2020

Fig 27 Bakery related short videos go virus on TikTok

Source: TikTok, Macquarie Research, March 2020

- **Capacity disruption is manageable**

  There is only one factory facing capacity disruption issues, which is in the Hubei province. 15kt of yeast capacity was suspended in February, leading to ~2,000 tons less production, or 0.8% of annual production volume, according to our estimates. It is gradually coming back to normal in March. All other factories in China and global capacity are not impacted, according to the company.

- **Transportation restriction is easing but could lead to higher costs**

  In China, the logistics are coming back with a several-day delay vs. normal. The distributors have actively increased the inventory level to >2 months from 1-2 months. Exported products are facing more inspection and the quarantine at local customs and some countries requires 14 days before clearance, which will lead to higher costs.

- **Opportunity to further gain market share**

  According to the company, its competitors are facing more challenges during the COVID-19 impact due to no nationwide capacity deployment and distribution network. Angel will take advantage of this opportunity to gain market share.

Yeast extract riding on a consumption upgrade trend

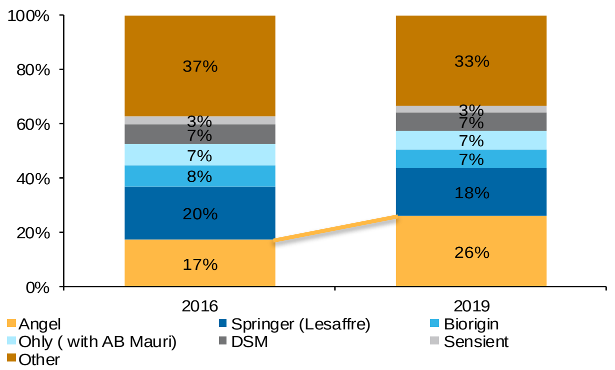
Yeast extract (YE) is made from fresh yeast where enzymes break down the proteins in the yeast cell into smaller components and disintegrate the cell wall. It is often used to replace monosodium glutamate (MSG) in the food industry as a flavor booster. Sauces, soups, ready-to-eat meals, frozen products and snacks all use yeast extracts widely. According to Angel's estimates, the penetration rate of YEs used as flavor enhancers is c.50% in Europe, 40% in Korea, 30% in Japan, but merely 2% in China. Given the rising health awareness and the consumption upgrade trend, we believe Angel could see ~20% YE sales growth over the next three years, driven by both volume and ASP.

Angel is the largest YE producer domestically and globally

The global market size was estimated at US$1.3bn in 2018 and will achieve US$2.1bn in 2026 with a 5.9% CAGR during 2019-2026, according to Global Market Insights. From 2016 to 2019, along with the 20kt YE capacity expansion in Guangxi Liuzhou and 12kt capacity in Egypt, Angel has surpassed Springer of Lesaffre to become the largest YE producer globally. Accordingly, its YE capacity share expanded to 26% in 2019 from 17% in 2016. Top five players represented 77% of total market share in 2019.

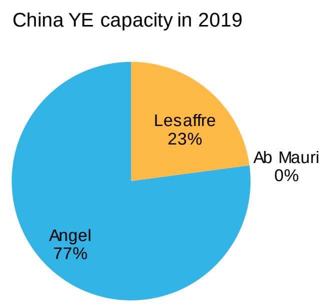
As for China, total YE capacity reached 85.6kt in 2019, with 77% from Angel and 23% from Lesaffre. The new Egypt capacity is still in the ramp up period and the company has no plan to expand YE capacity at least in 2020.

Fig 28 Angel expanded its global market share to 26% in 2019



Source: Company data, Macquarie Research, March 2020

Fig 29 Angel is also the dominant player in China



Source: Company data, Macquarie Research, March 2020

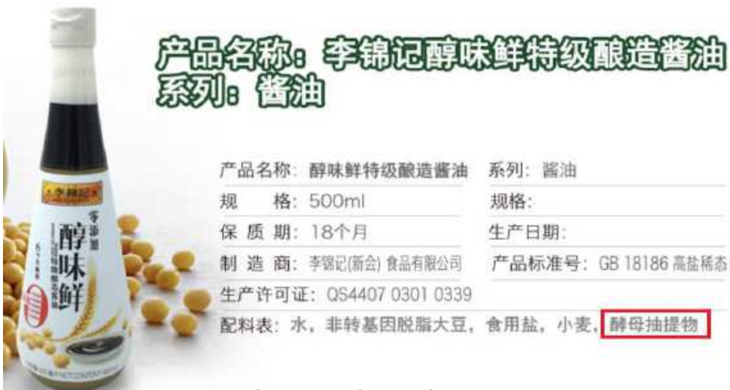
Yeast extract is expected to grow ~20% in next three years in China

We expect Angel to see substantial upside from YE along with the consumption upgrade trend and the growing process food market. We expect this segment to see ~20% revenue growth over the next three years, driven by both volume and price.

- **Consumption upgrade trend to lead the YE volume growth**

China's condiments market is the biggest market worldwide, which could deliver a healthy growth at high-single-digit over the next three years, in our view. Meanwhile, consumers increasingly understand the MSG's impact on health and prefer products without MSG but still with good taste. Zero additive concept is getting popular among condiment consumers. We have seen YE shown in the ingredients of high-end condiments, such as premium soy sauce and compound condiment for hot pot. Although YE's ASP is at Rmb25-30k per ton, much higher than MSG s Rmb7-10k/ton and chicken essence s Rmb10-15k/ton, it is only necessary to use a third of the amount of any other flavour enhancer to achieve the same effect. Therefore, we believe the condiment producers are willing to replace MSG with YE to upgrade its products with no additional costs.

Fig 30 YE is widely used in premium products - Lee Kum Kee premium soy sauce, no additives, with YE



Source: JD.COM, Macquarie Research, March 2020

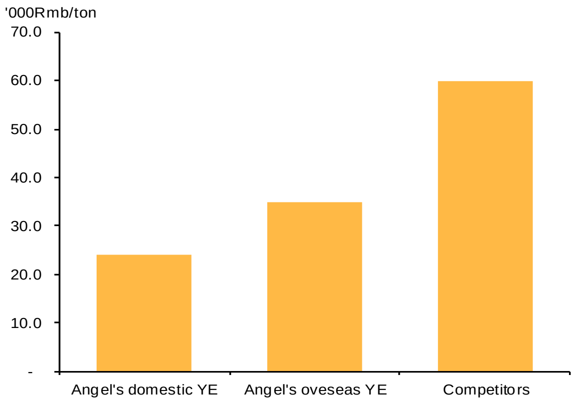
Fig 31 YE is added in Yihai's packaged hot pot condiments

Source: JD.COM, Macquarie Research, March 2020

- **ASP upside potential**

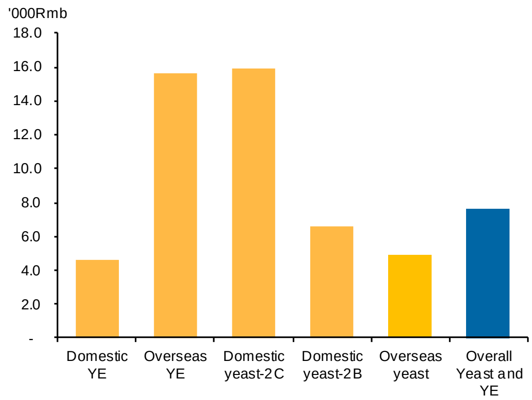
As YE is still in the promoting stage, Angel's ASP of domestic YE as well as overseas YE are much cheaper than other players' prices in Europe. Angel has lifted YE selling prices by 5% and 1-2% in 2016 and 2018 respectively and it raised Egypt plant's YE prices by 5% in 4Q19. Currently, ~2/3 of YE sales come from domestic clients. Haitian has been the biggest YE client of Angel. Once YE are well adopted by condiment producers, Angel will have the pricing power given its dominant shares in China. The remaining 1/3 come from overseas, mainly from Korea and Japan. With the ramp up of Egypt's YE production line, more sales should come from Europe due to its competitive pricing. Overall, we think YE's ASP still have great upside compared to competitors.

Fig 32 Angel's YE ASP vs. competitors'



Source: Company data, Macquarie Research, March 2020

Fig 33 GP per ton by-product



Source: Company data, Macquarie Research, March 2020

- **Long term YE market size has a significant potential in China**

The annual consumption of MSG in China is c. 2.2mn tons. If assuming a 0.5% replacement rate p.a., we estimate YE to gain the market at a 11kt p.a., vs. 86k tons of total capacity in China currently, indicating ~13% annual volume growth.

If assuming a 25% penetration rate in China in the long term (vs.2% currently), compared to 30% in Japan and 40% in Korea currently, the YE market size could reach 660kt, indicating significant potential.

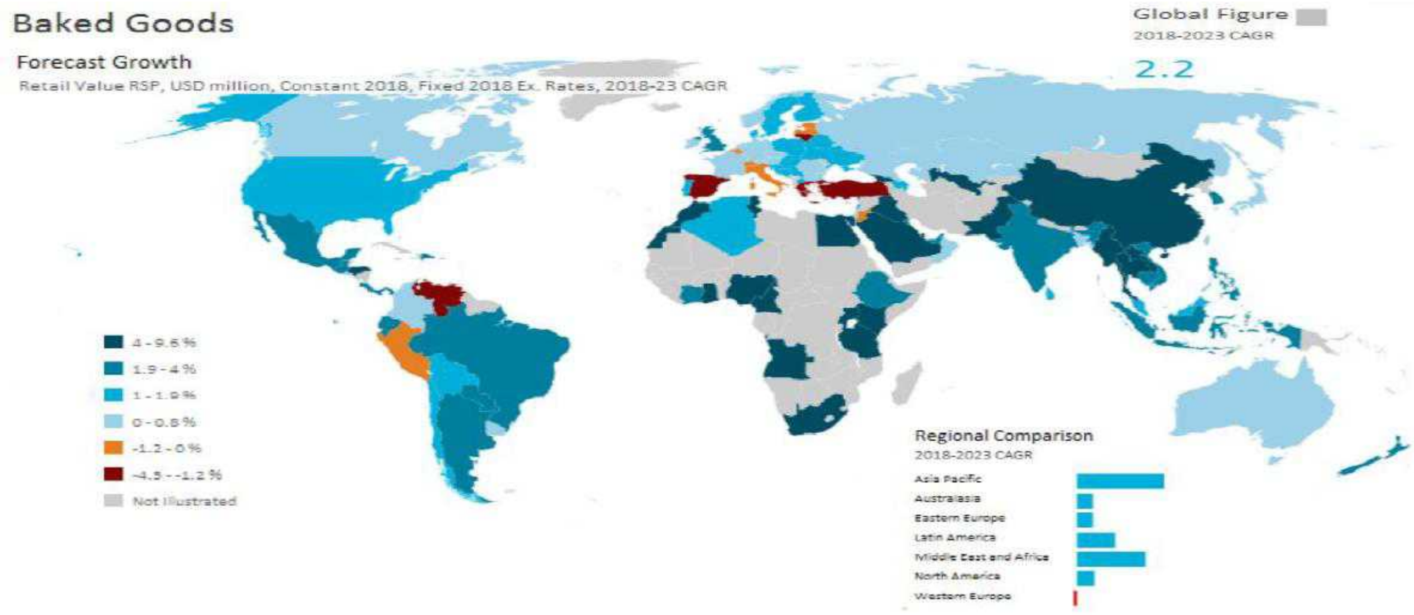
Deploy capacity in emerging markets with rising yeast demand and lower costs

We estimate Angel's oversea sales to outgrow domestic sales at ~12% in 20/21, supported by both volume and average selling price growth. In the long run, we see overseas sales could be an important driver for top line growth and Angel has proved its capability of global expansion by building profit accretive plants in Egypt and Russia.

Rising demand leads emerging markets to outgrow domestic market

According to Euromonitor's estimates, Asia Pacific, Middle East and some regions in Africa will enjoy highest growth of baked goods, i.e. 4.0-9.6% 2018-2023 CAGRs, followed by SEA and Latin America. The top three regions are exactly where Angel's factories are located.

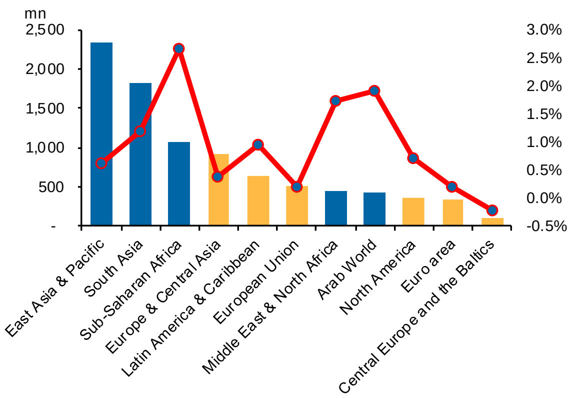
Fig 34 Asia Pacific, Middle East and some regions in Africa will enjoy highest growth of baked goods, followed by SEA and Latin America



Source: Euromonitor, Macquarie Research, March 2020

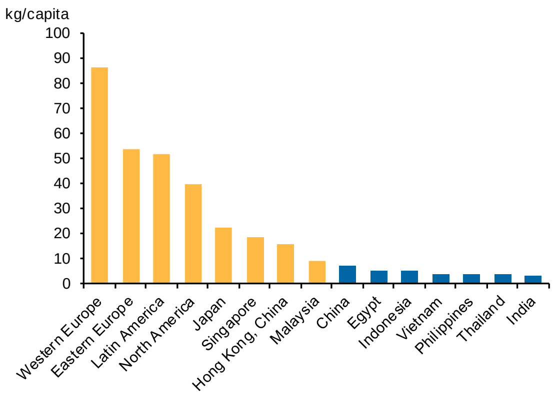
The emerging markets are expected to outgrow the developed markets, due mainly to their large population base and rising per capita consumption of baked goods. As shown below, the emerging markets with high growth rank top three in terms of the population base or the growth rate, while their per capita consumption of baked goods are much lower than developed markets.

Fig 35 Angel eyeing on the emerging markets (in blue) …



Source: World Bank, Macquarie Research, March 2020

Fig 36 … where the per capita consumption is still low



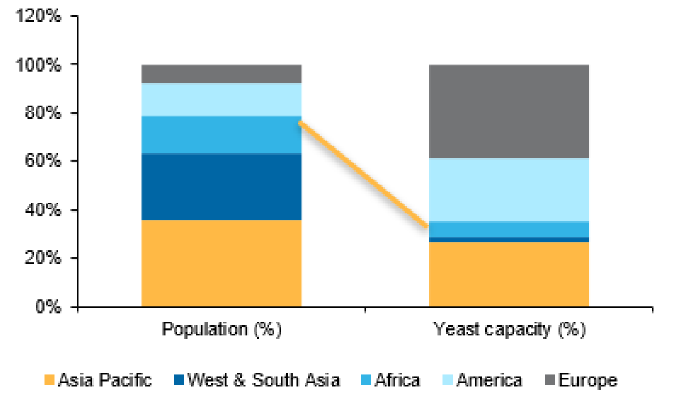
Source: Euromonitor, Macquarie Research, March 2020

Mismatching of global yeast capacity and demand – Angel eyeing on it

79% of world population are living in emerging markets, namely Asia Pacific, West & South Asia and Africa. However, only 35% of worldwide yeast capacity is located in the above emerging markets. The mismatching issue is especially severe in West & South Asia and Africa.

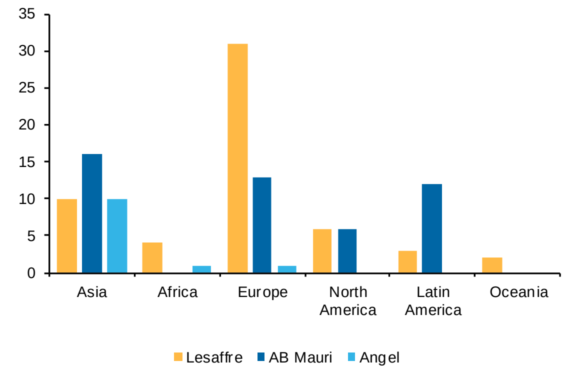
Angel noticed the mismatching of supply and demand and took this opportunity to expand its global capacity in Egypt (2013) for Middle East and Africa, in Russia (2017) for itself and Middle East.

Fig 37 Emerging markets have 79% of world population but 35% of total yeast capacity



Source: Company data, Macquarie Research, March 2020

Fig 38 Production plants deployment of Top 3 producers



Source: Macquarie Research, March 2020

By contrast, global leaders have skewed capacity in Europe due to highest per capita baked good consumption. Lesaffre and AB Mauri have a long history in developed markets and have harvested the low hanging fruits, recorded Rmb17.3bn and Rmb12.7bn sales in FY18.

Fig 39 Top 3 players global deployment

Name	Headquarters	Key market	FY18 annual sales (Rmb bn)	No. of plants	Distribution covered countries	Global yeast capacity (kt)	Global YE capacity (kt)	China yeast capacity (kt)	China YE capacity (kt)
Lesaffre	France	Europe, US	17.3	69	185	480	53	71	20
AB Mauri	UK	Europe, US, Australia, South America	12.7	52	>100	260	20	40	0
Angel	China	China, Africa, South East Asia	6.7	12	155	250	78	194	66

Source: Company data, Macquarie Research, March 2020

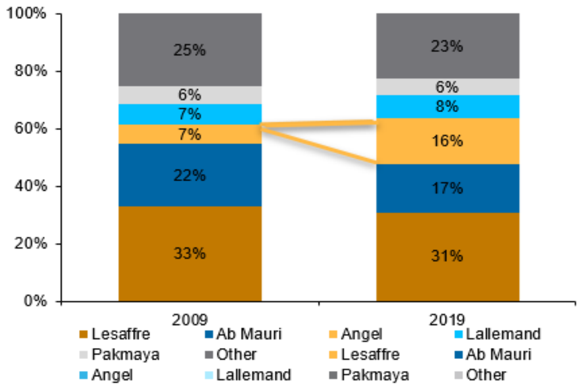
Fig 40 Lesaffre and AB Mauri are more focusing on developed markets, while Angel is springing up in emerging markets

Source: Company data, Macquarie Research, March 2020

Replicating its successful domestic strategy in emerging markets

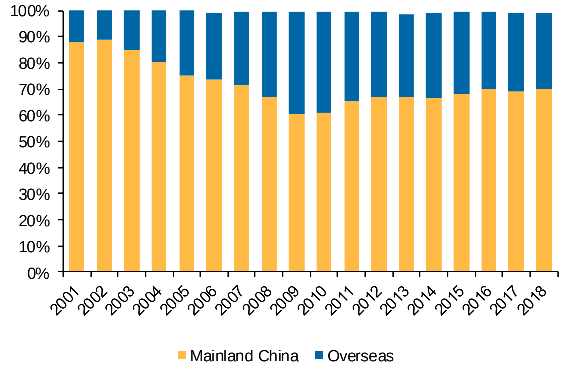
From 2009 to 2019, Angel expanded its global capacity share from 7% to 16%. During the same period, its total yeast capacity rose from 90kt to 250kt, indicating a 11% 2009-2019 CAGR, vs. a 2% CAGR for global average, 1% for Lesaffre and -1% for AB Mauri.

Fig 41 Angel Yeast's global share rose to 16% in 2019…



Source: Company data, Macquarie Research, March 2020

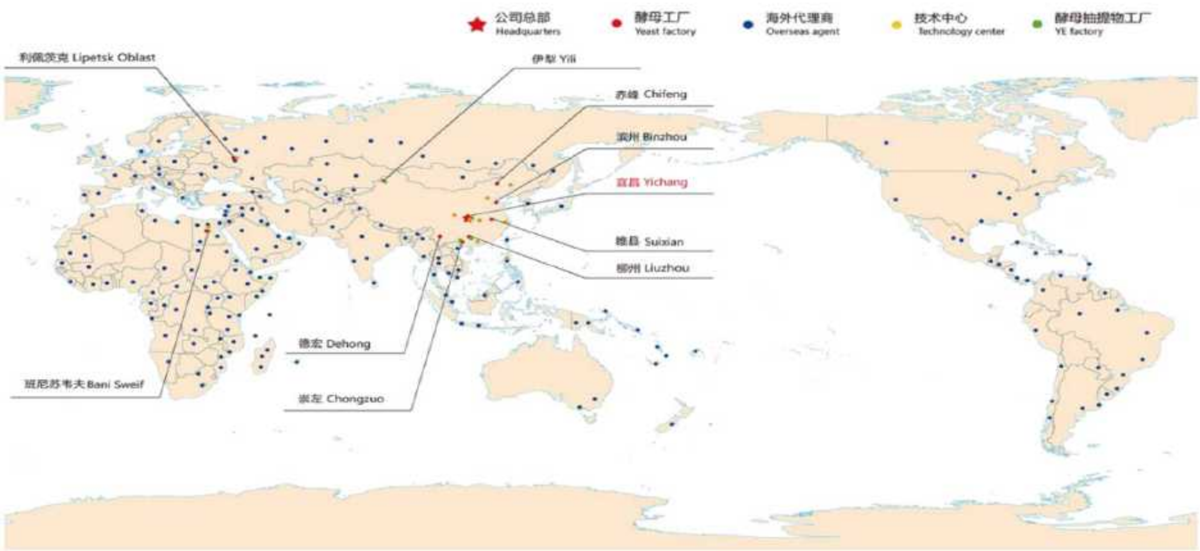
Fig 42 Angel's overseas revenue contribution



Source: Company data, Macquarie Research, March 2020

It replicates the successful domestic strategy, 1) offering dry yeast, easy for transportation and a longer shelf life; 2) providing follow up technical support; 3) gaining shares with lower pricing than competitors, on the back of more efficient automated factories; 4) building up strong distribution channel, i.e. 2832 at the end of FY18.

Fig 43 Angel Yeast's global footprint



Source: Company data, Macquarie Research, March 2020

⇒ **Europe, North America and Australia** are key markets for Lesaffre and AB Mauri. Although it is hard for Angel to gain share in the developed markets, the company is trying to enter the developed market with its YE products given higher demand here.

⇒ **Africa.** The Africa market is underpinned by its large population and high growth. The low staff costs are attractive and thus Lesaffre has built up 4 plants in Africa. Lesaffre, AB Mauri and Angel each accounts for a quarter of the market, the rest belongs to local companies. Angel's factory in Egypt enjoys zero tariff for export to Europe. As the market share is stable, Angel is gradually lifting its selling prices. In 4Q19, Angel lifted the selling prices by 3% for its products in Egypt and there is potential upside as the pricing is still 10-20% lower than peers'.

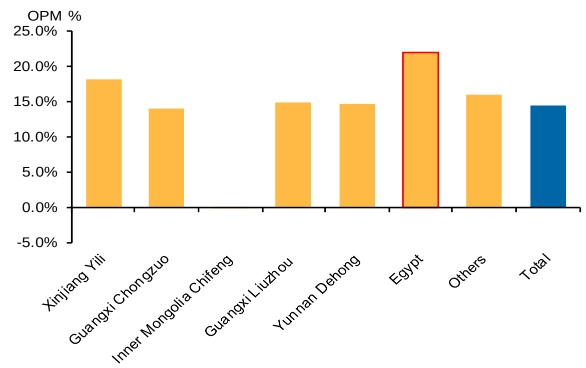
- ⇒ **Middle East.** Middle East will enjoy mid to high single digit growth of baked goods during 2019-2023E based on the estimates of Euromonitor. Whereas limited yeast capacity was deployed by key players. Angel is tapping into this promising market by leveraging its capacity in Egypt and Russia.
- ⇒ **Latin America.** AB Mauri has the largest market share in Latin America, while Angel has its impact in Brazil. According to the company, it owns 30% bakery yeast share in Brazil. Brazil is the largest producer of fuel alcohol and more than 60% of fuel alcohol manufacturers here are using Angel's products. The company is also accessing the feasibility of expanding into Brazil. Brazil is the largest sugar producing country with more than 20% share in global production, followed by India, Thailand and China.
- ⇒ **South East Asia.** SEA's fast-growing consumption demand gains attentions of key players. Angel indicated that its capacity in Guangxi (South China) can support the market expansion in SEA. In India, Angel is the No.1 yeast brand for bakeries and owns >40% share in the field of brewing, according to the company.

In 1H20, the company is likely to resume the Russia II expansion with 12kt of capacity upon the approval of the Board. Meanwhile, it is also considering potential M&A worldwide. Ideally, potential acquisition targets are regional players with >50kt of capacity.

Location, location, location - margin accretive cases in Egypt and Russia

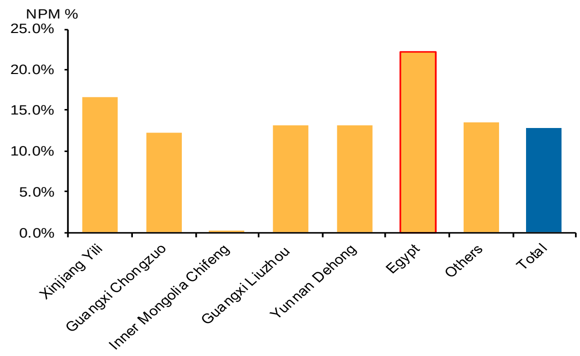
Angel's expansion in Egypt and Russia have been proved successfully as both OPM and NPM were higher than the company average level. The Egypt plant's NPM was 37.8% in 2017, while declining to 22.1% due to the F/X impact. The Russia plant's NPM was not disclosed in FY18, while the company stated that it reached >20% in 1Q19.

Fig 44 OPM of Angel's key plants (2018)



Source: Company data, Macquarie Research, March 2020.

Fig 45 NPM of Angel's key plants (2018)



Source: Company data, Macquarie Research, March 2020.

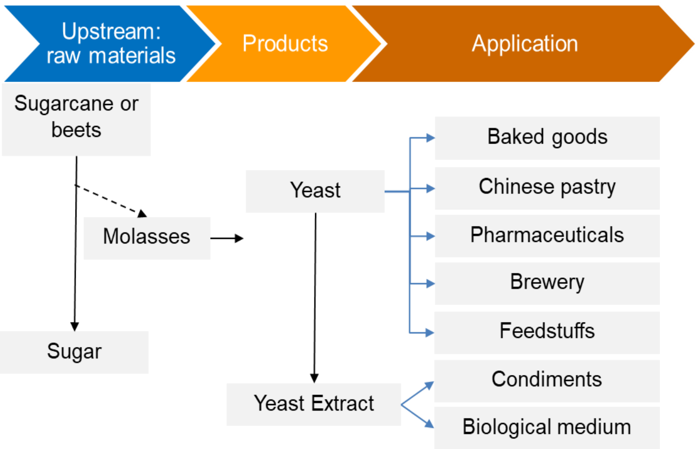
Growing demand and lower costs are the key reasons behind the better profitability. On the demand side, Egypt and Russia are the world's 4th and 9th largest markets for baked goods, respectively, and they are closer to the company's targeted markets: the Middle East, Africa and Europe. On the cost side, Egypt and Russia enjoy structurally lower cost benefits such as:

- ⇒ **Lower molasses and fuel prices than China.** Take the 2018/2019 milling season as an example, molasses prices were ~Rmb800/ton in China, while in Russia they were ~Rmb300/ton, the lowest worldwide. Molasses prices in Egypt were also lower than in China.
- ⇒ **Lower staff costs.** Most of Angel's overseas plant managers and staff are hired locally and sent to headquarters for training, which means lower staff costs.
- ⇒ **Lower transportation costs for exports to Middle East, Africa and Europe**.
- ⇒ **Tariff benefits.** ~70% of products produced in Egypt and Russia are for export, while the remaining 30% is for local markets. The export tariffs from Egypt to Europe and the US is zero, vs. 15%/25% from China respectively.

Broad applications of yeast derivatives provide long-term potential

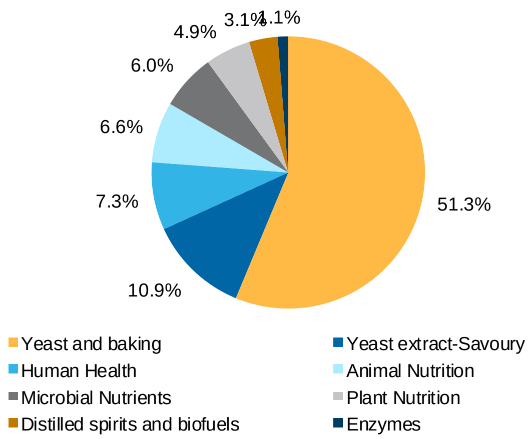
Yeasts are single-celled microorganisms that are classified, along with moulds and mushrooms, as members of the Kingdom Fungi. It has broad downstream applications other than baked goods and YE, such as brewing for wine or fuel alcohol, microbial nutrients for pharmaceuticals, human health products and feedstuffs, etc. Angel has developed a series of yeast derivative products, shown in the charts below, all belonging to core yeast and yeast derivative segments, with >20% sales growth in 2019.

Fig 46 Various downstream applications



Source: Macquarie Research, March 2020

Fig 47 Revenue breakdown by-products (2018)



Source: Company data, Macquarie Research, March 2020

- **Human health products**

Children and senior citizens are Angel's targeted clients. Sales from human health products recorded a 34% CAGR during 2014-18, higher than the company sales CAGR at 16% during the same period. The star product is protein powder, with more than Rmb100 in sales in 2019. The company guides for >20% sales growth for this segment for the next three years.

Fig 48 Angel's human health products-Taurine protein powder and Yeast protein powder

Source: Company data, Macquarie Research, March 2020

Fig 49 Angel's animal nutrition products

Source: Company data, Macquarie Research, March 2020

- **Animal nutrition products**

Angel's animal nutrition products help to strengthen an animal's immunity and were sold well during the outbreak of the Africa Swine Fever. Moreover, Angel is a supplier for Nestle's pet food business line, which has a rigorous selection criterion. As pets are gaining popularity in China, we believe pet nutrition products will have a bright future and could provide potential upside in the future.

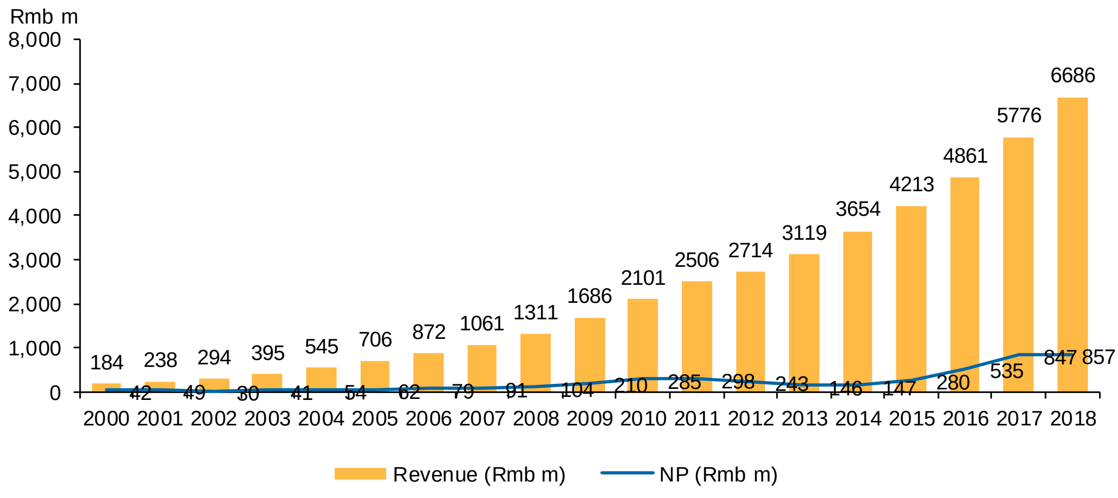
Financial analysis

Revenue structure and outlook

We project sales of Angel Yeast to grow 13%/17% in 2020/21, respectively, mainly driven by global expansion and higher YE growth. Meanwhile, the tight supply, dominant market share as well as <1% costs of downstream clients should support the company to raise prices, likely in 2H20.

Angel recorded a 22% sales CAGR and 18% NP CAGR during 2000-2018. We believe this decent track record proves the quality of the company.

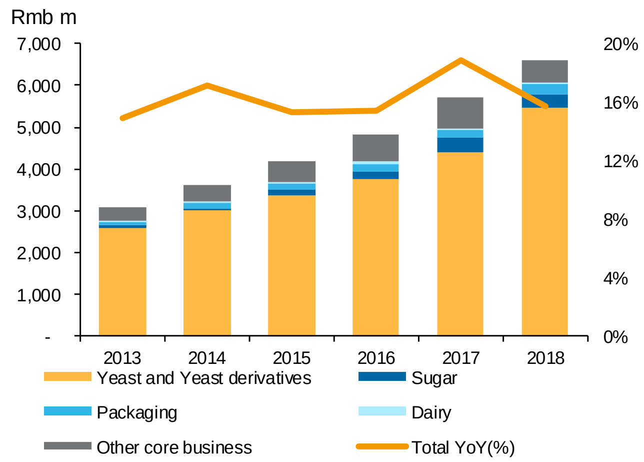
Fig 50 Angel Yeast recorded a 22% sales CAGR and 18% NP CAGR during 2000-2018



Source: Company data, Macquarie Research, March 2020

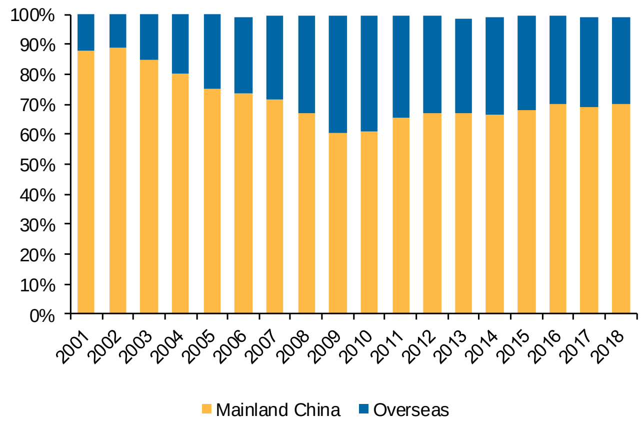
Yeast and yeast derivatives are the core business and key driver of Angel, representing >80% of total sales in FY18.The company is also engaged in the upstream sugar business and packing business along the supply chain. The dairy business is mainly focusing on regional yogurt consumption, and the company is seeking potential buyers to divest the non-core business. By regions, sales from overseas gradually picked up from ~10% in 2001 and have stabilised around 30% in recent years. We believe the overseas sales proportion will further rise gradually along with Angel's global expansion.

Fig 51 Revenue breakdown by segments



Source: Company data, Macquarie Research, March 2020

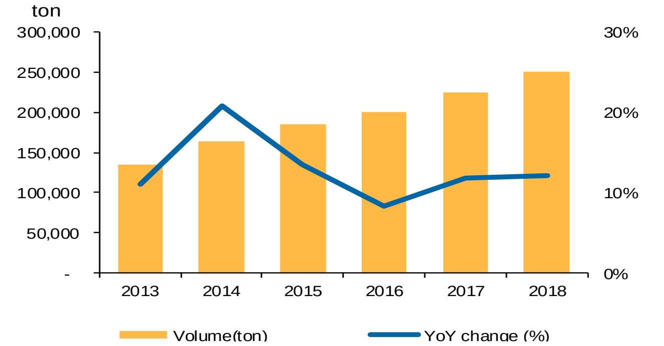
Fig 52 Revenue breakdown by regions



Source: Company data, Macquarie Research, March 2020

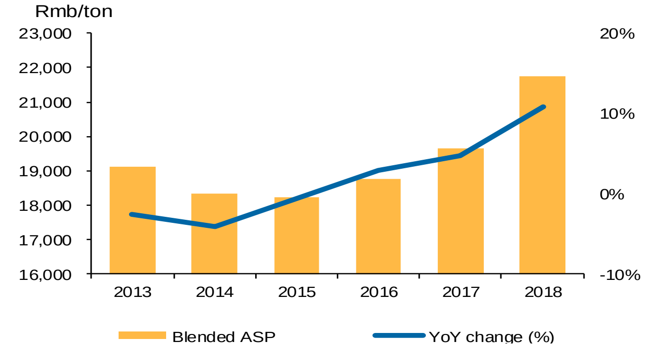
Yeast and derivatives' volume recorded 13% CAGR during 2013-2018, underpinning by 9% CAGR capacity expansion. Meanwhile, the blended ASP reached 3% CAGR during the same period, driven by price hikes as well as product mix, as higher ASP products, such as YE and human health products outgrowing yeast. Moreover, the blended ASP CAGR was further improved to 6% during 2016-2018, as the company was able to lift the price after the previously expanding capacity had been digested. The company is likely to lift the blended ASP at 5% CAGR during 2019-2021 to meet Rmb10bn sales target in 2021.

Fig 53 Yeast and derivatives volume growth



Source: Company data, Macquarie Research, March 2020

Fig 54 Yeast and derivatives blended ASP growth



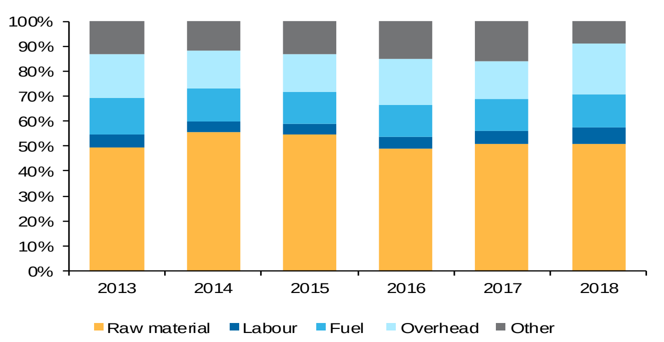
Source: Company data, Macquarie Research, March 2020

GPM – molasses prices and utilisation rate are key swing factors

We project GPM will increase 1.1/0.3ppt to 37.2%/37.5% in 2020/21 due to a higher utilisation rate, price hikes and a favourable mix.

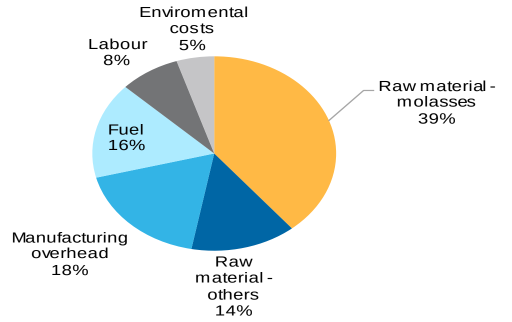
- **COGS structure.** The key COGS of Angel Yeast is direct materials, which represent 50-60% of total COGS. Molasses is the main materials, accounting for ~40% of total COGS. Based on our analysis, a 10% price increase of molasses would lead to 2.5% GPM downside. Manufacturing overhead and fuel costs 18% and 16% of the total, respectively. Labour costs are relatively low, i.e. 8%, due to automated production lines. Environmental costs accounted for 5%, and this could be higher for small players due to disadvantages on scale effects.
- **Molasses costs to be flattish or slightly higher in 2020/2021.** The company has secured 70% of molasses with a flattish price before the COVID-19 outbreak, with a -7% price decline in the North, 2-3% increase in South China, and flattish prices in Egypt. The remaining purchases have been suspended due to the COVID-19 outbreak and will be purchased in South China. We think the molasses price increase, driven up by Ethanol production, will be short-lived as the MIIT (Ministry of Industry and Information Technology) has addressed ethanol oversupply issues (link). We believe overall molasses prices will be flattish or slightly higher in 2020/2021.

Fig 55 COGS structure breakdown



Source: Company data, Macquarie Research, March 2020

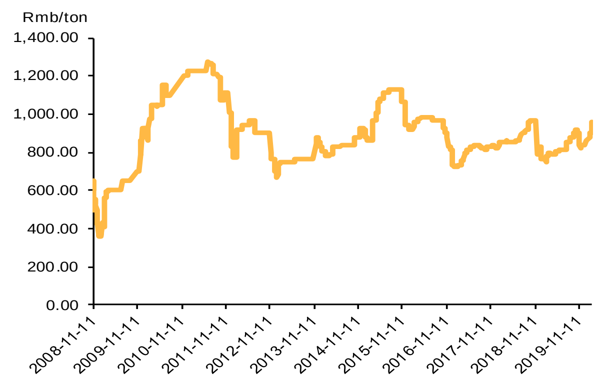
Fig 56 Molasses accounts for ~40% of COGS (2018)



Source: Company data, Macquarie Research, March 2020

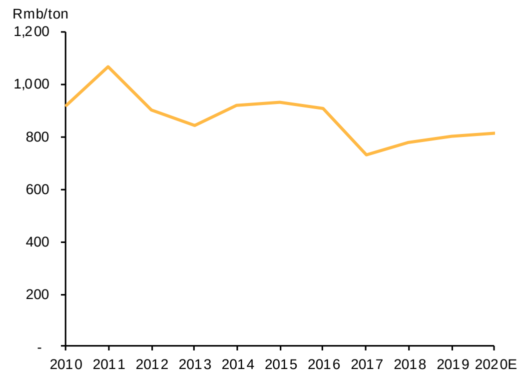
Molasses is the by-product of sugar production, in a liquid form. The prices of molasses have trended down since 2015 due to a dynamic change in demand-supply. The biggest demand for molasses is alcohol/ethanol production, which has been falling since 2015, as oversupplied capacity is being squeezed out by stricter environmental policies and there is fermented corn as a cheaper substitute for molasses. Moreover, yeast, as the second largest demand for molasses, has passed the period of fast capacity expansion in China. Therefore, in the long term, we think molasses prices should be less volatile and remain at a relatively low level.

Fig 57 Molasses prices in Nanning, Guangxi



Source: Wind, Macquarie Research, March 2020

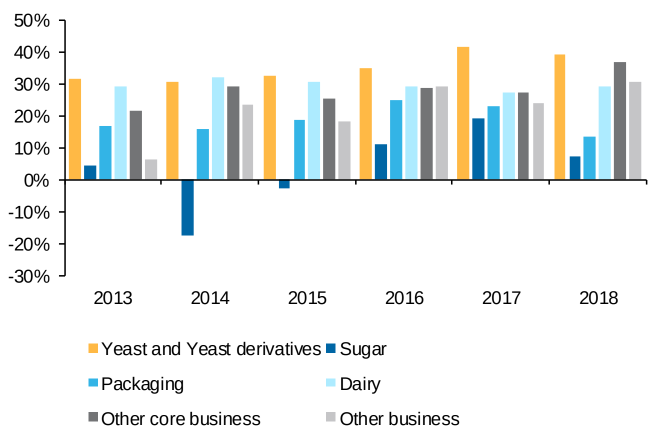
Fig 58 Angel's historical molasses purchase price



Source: Company data, Macquarie Research, March 2020

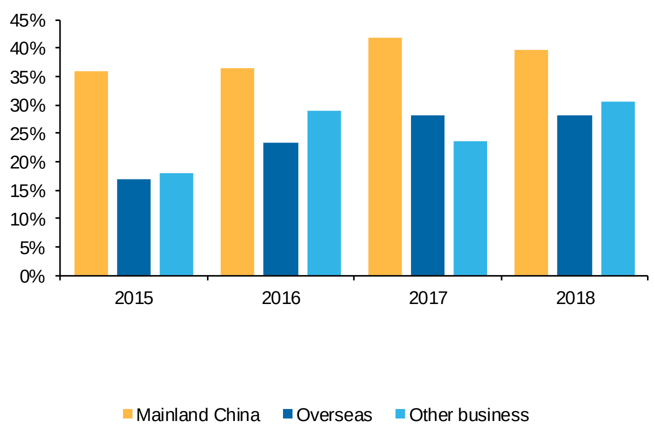
- **Gross margin expansion on higher utilisation rate, better mix and potential price hikes.** In 2018, the gross margin declined due to a lower utilisation rate at the Yili factory due to environmental protection issues. As Yili's utilisation rate has gone back of normal from 60% in 2H18, we believe the 2019 margin could expand on a higher utilisation rate. The company will leverage its other factories to prepare for the relocation of Yili in 1Q21, which will further push up the utilisation rate in 2020. Moreover, we expect higher margin 2C yeast and yeast derivatives products will outgrow the main products, and thus lift the margin in 1H20. Last, we factor in a 5% price hike in 2H20, which raises our GPM up in 2H20 and 1H21. According to our sensitivity analysis, a 1% price hike would lead to a 0.6% GPM increase.

Fig 59 Gross margin by segment



Source: Company data, Macquarie Research, March 2020

Fig 60 Gross margin by regions



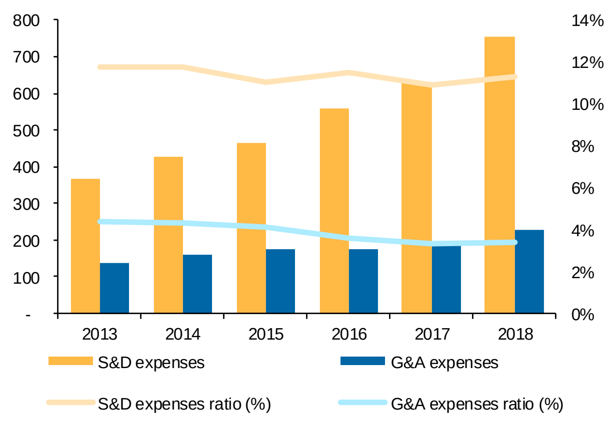
Source: Company data, Macquarie Research, March 2020

OPM – under pressure due to global channel expansion and incentive expenses

We estimate that OPM will slightly decrease to 14.5% in 2020 due to global expansion and incentive plan expenses, while we expect it reach 15.1% in 2021 on the back of operating leverage.

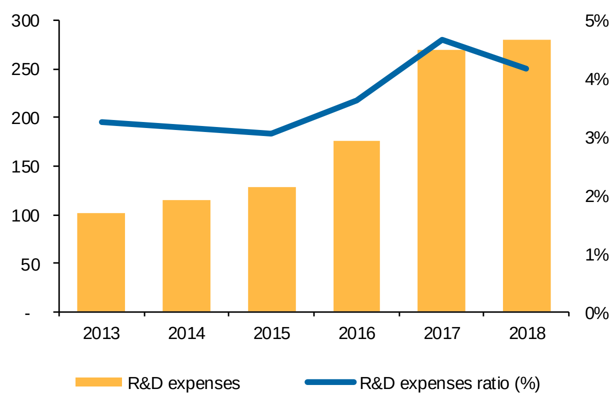
- **More investment in global channel expansion and incentive plans.** The distribution channel has been well penetrated in China and the future focus will be on global channel expansion. Meanwhile, the company is currently working on employee benefit and incentive plans and expects more expenses as a result. This expense increase will be partially offset by cost savings from an internal streamline.
- **Constant investment in R&D.** The company is constantly investing in R&D for product innovation and owned 625 patents by the end of 2018. We believe the R&D expense ratio will remain at 4-5% of total sales in the future.

Fig 61 Operating expense breakdown



Source: Company data, Macquarie Research, March 2020

Fig 62 Constant R&D investment



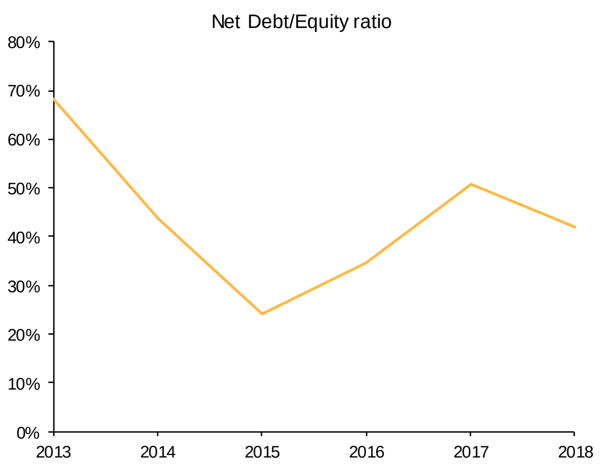
Source: Company data, Macquarie Research, March 2020

Improving cash flow and steady dividend payout

Angel's net debt to equity ratio has decreased from a high of 68% in 2013 to 42% in 2018 as capacity expansion is slowing down. The company plans for ~Rmb600m in capex p.a. over the next three years for expansion as well as maintenance flow. We think there is a chance that the net debt to equity ratio will decline further.

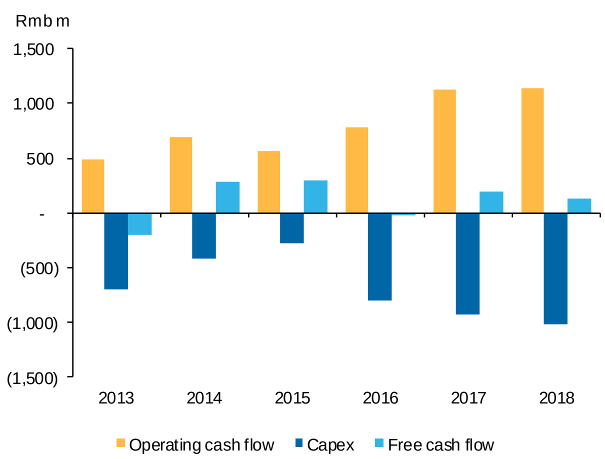
The dividend payout ratio was 33.7% in 2018, with a high of 46.2% in 2016. The company has said they will keep the dividend payout ratio higher than 30% and will decide on the exact ratio depending on the profit and expansion plan. We think it is likely to maintain at a flattish level given the upcoming capex plans for capacity expansion, which could be covered by its operating cash.

Fig 63 Net cash/equity ratio



Source: Company data, Macquarie Research, March 2020

Fig 64 Strong cash generative capability



Source: Company data, Macquarie Research, March 2020

Appendices - competitors' profiles

Lesaffre (Private) – steady capacity expansion via M&A and JVs

Lesaffre Group, a family group based in Northern France, is the biggest yeast producer globally, with more than 165 years of expertise in the field of yeast and related products. It operates 69 production sites and distributes its products and services in 185 countries. Lesaffre achieved a turnover of more than €2.2bn, including over 40% emerging markets, in FY18.

In the early 1980s, Lesaffre was the first international player that entered the China market by importing Saf-instant yeast. Then the group basically expanded its capacity in China with M&A and JVs (details in the table below). Currently, Lesaffre owns 3 factories with 91k tons of yeast capacity and 20k tons of yeast extract capacity in China. There are an additional 20k tons of yeast capacity and 10kt tons of YE capacity under construction.

Fig 65 Lesaffre's M&A and JVs in China

Year	Factory	Chinese name	Factory location	Yeast capacity	YE capacity	M&A/JV	Note
1999	Lesaffre(Mingguang)	安徽明光乐斯福	Mingguang, Anhui	13kt	0	M&A	Lesaffre acquired Anhui Mingguang and reorganized it into Lesaffre as its first large-scale production base in China. In Nov 2019, Lesaffre signed an agreement with the local government to establish a production base for bread-marking ingredients.
2006	Guangxi Danbaoli Yeast	广西丹宝利酵母	Laibin, Guangxi	48kt	19.6kt	JV	Lesaffre and Donta Group (东糖集团) entered into a Joint Venture agreement to set up the two companies.
	Guangxi Yi Pin Xian Biotechnology	广西一品鲜生物科技	Laibin, Guangxi				
2015	Guangxi Sungain Yeast Guangxi Sungain Biotechnology	广西湘桂酵母科技 广西湘桂生物科技	Chongzuo, Guangxi Chongzuo, Guangxi	10kt, added 20kt in 2019	10kt (under construction)	JV, 70% equity JV, 70% equity	Lesaffre signed an agreement with Guangxi Sungain Group to establish a new partnership and acquired 70% equity of the two companies with a capital increase. In all, both parties have invested a total of Rmb500mn in this project to expand 20k tons of yeast and 10k tons of YE. Sungain Yeast and Sungain Biotechnology are based in Chongzuo, the sugar city in China. Chongzuo is the most important base for sugarcane production, accounting for ~20% of China sugar production. Sungain Group is one of the top 8 sugar production companies in Guangxi with 300kt of sugar production capacity per year.

Source: Company data, Macquarie Research, March 2020

AB Mauri (a division of ABF.UK) – losing its track

AB Mauri is an operating division of Associated British Foods (ABF.UK, not rated). ABF Ingredients is another company under the Ingredient Division, with a focus on yeast derivative products, such as YE. It was formed in 2004 from the bakery ingredients businesses that ABF had acquired. With 52 plants, operations in 32 countries and sales in over 100 countries, it is the second largest yeast producer with ~260k tons of annual capacity. Yeast-related business accounted for ~10% of group sales in FY18.

In China, there are 5 yeast factories with ~40kt of yeast capacity, 1 bakery ingredient factory and 1 fats and margarine factory. In 2013, AB Mauri closed one YE factory in Harbin in 2013 due to decreasing beet sugar production volume and losses. In Aug 2019, the company signed an agreement to form a yeast and bakery ingredients joint venture in China with Wilmar International (F34.SG, not rated). The joint venture will build a yeast plant to be co-located with Wilmar's food processing plant in Tsitsihar, northeast China. Completion is subject to the receipt of regulatory approvals.

Macquarie Quant Alpha Model Views

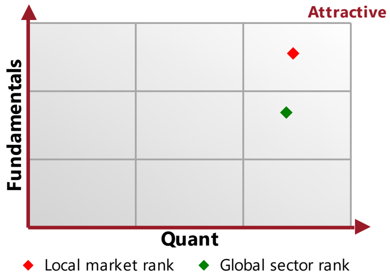
The Quant View page below has been derived from models that are developed and maintained by Sales and Trading personnel at Macquarie. The models are not a product of the Macquarie Research Department.

The quant model currently holds a reasonably positive view on Angel Yeast (A-Share). The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Growth, indicating this stock has weak historic and/or forecast growth. Growth metrics focus on both top and bottom line items.

113/562

Global rank in
Food Beverage & Tobacco

% of BUY recommendations	73% (8/11)
Number of Price Target downgrades	1
Number of Price Target upgrades	0

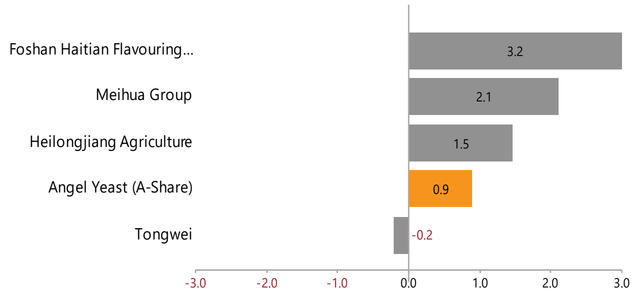


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (China A) and Global sector (Food Beverage & Tobacco)

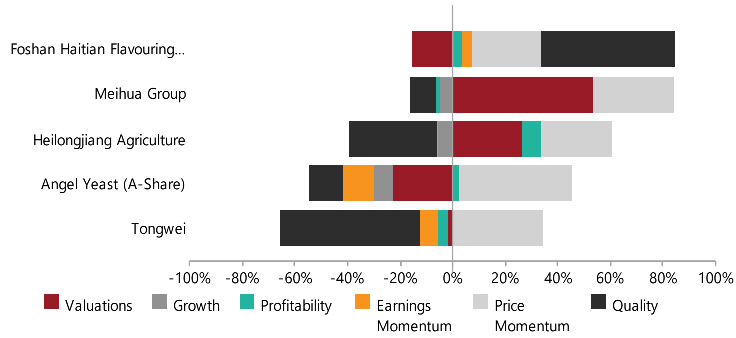
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



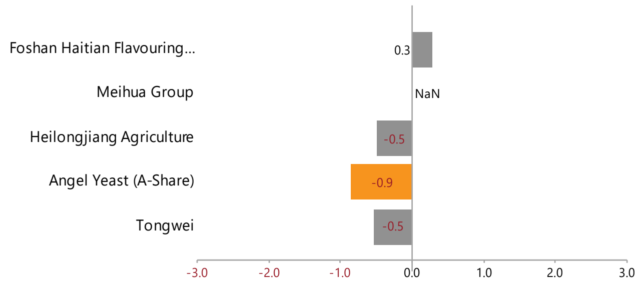
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



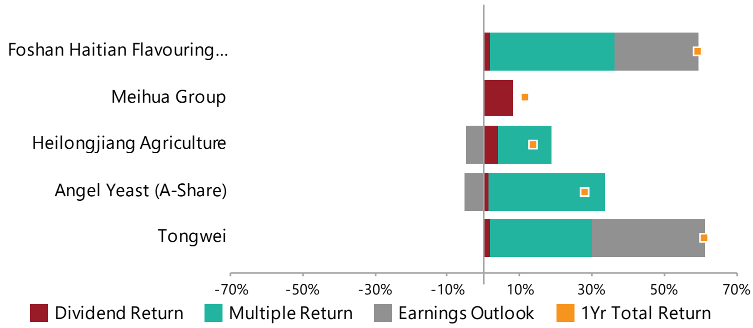
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



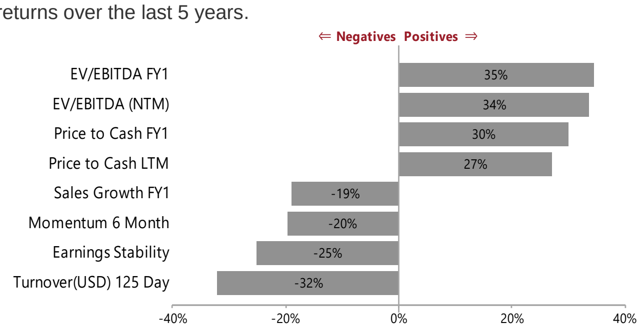
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



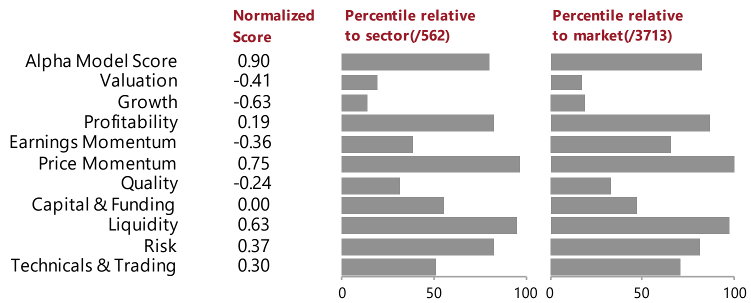
What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.



Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Angel Yeast (A-Share) (600298 CH)

Interim Results		1H/19A	2H/19E	1H/20E	2H/20E
Revenue	m	**3,714**	**3,905**	**4,064**	**4,524**
Gross Profit	m	**1,346**	**1,409**	**1,499**	**1,697**
Cost of Goods Sold	m	2,368	2,496	2,564	2,826
EBITDA	m	**816**	**736**	**844**	**854**
Depreciation	m	239	195	228	228
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	m	**577**	**541**	**616**	**626**
Net Interest Income	m	-52	-44	-47	-47
Associates	m	0	0	0	0
Exceptionals	m	28	10	19	19
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	29	31	33	25
Pre-Tax Profit	m	**582**	**538**	**621**	**623**
Tax Expense	m	-100	-70	-107	-81
Net Profit	m	**482**	**468**	**514**	**542**
Minority Interests	m	-17	-29	-19	-34
Reported Earnings	m	**464**	**439**	**496**	**508**
Adjusted Earnings	m	**436**	**429**	**477**	**489**
EPS (rep)		0.56	0.53	0.60	0.62
EPS (adj)		0.53	0.52	0.58	0.59
EPS Growth yoy (adj)	%	-9.3	27.0	9.3	14.0
EBITDA Margin	%	22.0	18.8	20.8	18.9
EBIT Margin	%	15.5	13.8	15.1	13.8
Earnings Split	%	50.4	49.6	49.4	50.6
Revenue Growth	%	11.6	16.3	9.4	15.8
EBIT Growth	%	1.6	32.4	6.8	15.7

Profit & Loss		2018A	2019E	2020E	2021E
Revenue	m	**6,686**	**7,619**	**8,587**	**10,019**
Gross Profit	m	**2,428**	**2,755**	**3,197**	**3,759**
Cost of Goods Sold	m	4,258	4,864	5,391	6,261
EBITDA	m	**1,401**	**1,552**	**1,698**	**2,003**
Depreciation	m	425	434	457	486
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	m	**976**	**1,117**	**1,241**	**1,517**
Net Interest Income	m	-88	-96	-94	-93
Associates	m	0	0	0	0
Exceptionals	m	38	38	38	38
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	56	60	59	57
Pre-Tax Profit	m	**982**	**1,120**	**1,244**	**1,519**
Tax Expense	m	-82	-171	-188	-230
Net Profit	m	**900**	**949**	**1,056**	**1,289**
Minority Interests	m	-43	-46	-52	-64
Reported Earnings	m	**857**	**903**	**1,004**	**1,225**
Adjusted Earnings	m	**818**	**865**	**965**	**1,187**
EPS (rep)		1.04	1.10	1.22	1.49
EPS (adj)		0.99	1.05	1.17	1.44
EPS Growth (adj)	%	2.7	5.7	11.6	23.0
PE (rep)	x	29.0	27.5	24.7	20.3
PE (adj)	x	30.3	28.7	25.7	20.9
Total DPS		0.35	0.37	0.41	0.50
Total Div Yield	%	1.2	1.2	1.4	1.7
Basic Shares Outstanding	m	824	824	824	824
Diluted Shares Outstanding	m	824	824	824	824

Profit and Loss Ratios		2018A	2019E	2020E	2021E
Revenue Growth	%	15.8	14.0	12.7	16.7
EBITDA Growth	%	5.5	10.7	9.4	18.0
EBIT Growth	%	0.3	14.5	11.1	22.2
Gross Profit Margin	%	36.3	36.2	37.2	37.5
EBITDA Margin	%	21.0	20.4	19.8	20.0
EBIT Margin	%	14.6	14.7	14.5	15.1
Net Profit Margin	%	12.2	11.4	11.2	11.8
Payout Ratio	%	35.2	35.2	35.0	34.8
EV/EBITDA	x	18.6	16.8	15.3	13.0
EV/EBIT	x	26.7	23.3	21.0	17.2
Balance Sheet Ratios					
ROE	%	20.1	18.6	17.9	18.8
ROA	%	11.5	11.9	12.1	13.3
ROIC	%	14.5	14.9	16.3	18.8
Net Debt/Equity	%	39.5	23.8	14.9	3.8
Interest Cover	x	11.0	11.7	13.2	16.3
Price/Book	x	5.8	5.0	4.3	3.6
Book Value per Share		5.2	6.1	7.0	8.3

Cashflow Analysis		2018A	2019E	2020E	2021E
EBITDA	m	**1,401**	**1,552**	**1,698**	**2,003**
Tax Paid	m	0	0	0	0
Chgs in Working Cap	m	-352	-34	-303	-303
Net Interest Paid	m	-90	-98	-98	-98
Other	m	184	53	40	63
Operating Cashflow	m	**1,144**	**1,473**	**1,337**	**1,664**
Acquisitions	m	0	0	0	0
Capex	m	-1,012	-533	-584	-601
Asset Sales	m	0	0	0	0
Other	m	1	0	0	0
Investing Cashflow	m	**-1,012**	**-533**	**-584**	**-601**
Dividend (Ordinary)	m	-414	-288	-304	-338
Equity Raised	m	0	0	0	0
Debt Movements	m	277	-98	-98	-98
Other	m	-0	0	0	0
Financing Cashflow	m	**-137**	**-386**	**-402**	**-436**
Net Chg in Cash/Debt	m	**-4**	**554**	**351**	**628**
Free Cashflow	m	**131**	**940**	**753**	**1,063**

Balance Sheet		2018A	2019E	2020E	2021E
Cash	m	374	928	1,279	1,907
Receivables	m	913	960	1,151	1,312
Inventories	m	1,870	2,022	2,291	2,719
Investments	m	109	109	109	109
Fixed Assets	m	4,807	4,895	5,007	5,107
Intangibles	m	321	306	292	278
Other Assets	m	587	586	618	636
Total Assets	m	**8,980**	**9,806**	**10,746**	**12,067**
Payables	m	1,212	1,370	1,481	1,813
Short Term Debt	m	1,530	1,530	1,530	1,530
Long Term Debt	m	640	640	637	637
Provisions	m	228	252	287	330
Other Liabilities	m	816	799	842	836
Total Liabilities	m	**4,427**	**4,592**	**4,777**	**5,147**
Shareholders' Funds	m	4,717	5,424	6,232	7,246
Minority Interests	m	260	214	162	98
Other	m	-424	-424	-424	-424
Total S/H Equity	m	**4,553**	**5,214**	**5,969**	**6,920**
Total Liab & S/H Funds	m	**8,980**	**9,806**	**10,746**	**12,067**

All figures in Rmb unless noted.
Source: Company data, Macquarie Research, March 2020

Important disclosures:

Recommendation definitions

Macquarie – Asia and USA
Outperform – expected return >10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie – Australia/New Zealand
Outperform – expected return >10%
Neutral – expected return from 0% to 10%
Underperform – expected return <0%

Note: expected return is reflective of a Medium Volatility stock and should be assumed to adjust proportionately with volatility risk

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to select stocks in Asia/Australia/NZ

Recommendations – 12 months
Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 31 December 2019

	AU/NZ	Asia	USA	
Outperform	43.93%	56.89%	63.64%	(for global coverage by Macquarie, 4.01% of stocks followed are investment banking clients)
Neutral	37.86%	29.43%	35.23%	(for global coverage by Macquarie, 3.45% of stocks followed are investment banking clients)
Underperform	18.21%	13.68%	1.14%	(for global coverage by Macquarie, 3.39% of stocks followed are investment banking clients)

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