



Feihe (6186 HK) A leading player in China's infant milk formula product market

- The Group is one of the leading players in the infant milk formula (IMF) product market in China; in terms of retail sales value, its market share was ranked within the top five among domestic and foreign brands in China in 2018
- Extensive sales network with more than 109,000 retail points of sales as of Jun 30, 2019; the Group's revenue grew at 67.0% CAGR in FY16-18
- Development plan covers expansion in geographical coverage, product category, and capacity; we expect FY18A-21E revenue CAGR to be 26.7%
- Initiate with **BUY**; current TP implies 21.20x/16.65x 20E/21E P/E or 6.86x/5.18x 20E/21E P/B

A leading player in China's IMF product market. According to a report by Frost & Sullivan (F&S report), share of the Group's Feihe Brand (in terms of retail sales value) in China's IMF market increased from 3.4% in 2016 to 7.3% in 2018. Its market share in other product segments also rose in 2016-18, especially in the domestic IMF segment and the super-premium IMF segment.

An extensive distribution network and effective marketing strategies drove sales growth. The Group has built an extensive sales network with more than 109,000 retail points of sales as of Jun 30, 2019, while its marketing events included 300,000 face-to-face seminars in 2018.

A multitude of expansion strategies to support growth. The Group plans to expand its geographical coverage, product category, and capacity. Domestically, it is increasing its presence in higher-tier cities and South China; overseas. It also targets to expand in North America and Southeast Asia. As for capacity, the Group's current expansion projects would add 151,000 tonnes of capacity once the construction and the respective production ramp-up are completed.

Revenue CAGR of 26.7% in FY18-21E. For FY18-20E, we expect revenue of the Group's brands Astrobaby and Organic Zhenzhi would increase at 122.6% and 46.7% CAGRs. Growth would also come from the launch of goat milk IMF products and baby & toddler food products. Margins would be supported by control on raw material cost and improved production efficiency. We project GPM and NPM (to shareholders of the Company) to increase from 67.5% and 21.6% in FY18 to 71.0% and 31.2% in FY21E.

Initiate with BUY; TP at HK\$13.74. We believe the Group would be able to maintain its leadership in China's IMF product market, which would help maintain the valuation premium and growth momentum. Our DCF-derived TP represents 21.20x/16.65x 20E/21E P/E or 6.86x/5.18x 20E/21E P/B.

Risk factors: 1) Macroeconomic risk; 2) Demographic risk; 3) Product quality risk; 4) Supplier concentration risk; 5) Raw material cost risk; 6) Interest rate risk; 7) Foreign currency risk; 8) Product development risk.

Results and Valuation

FY ended Dec 31	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Revenue (RMB mn)	3,724	5,887	10,392	13,404	17,340	21,117
Chg (YoY %)	N/A	58.07	76.52	28.99	29.36	21.78
Net Profit – to shareholders of the Company (RMB mn)	417	1,160	2,242	3,751	5,180	6,594
Chg (% YoY)	N/A	178.24	93.26	67.30	38.08	27.30
Basic EPS (RMB)	0.05	0.14	0.28	0.42	0.58	0.74
Chg (YoY %)	N/A	180.00	100.00	49.97	38.08	27.30
P/E (x)	256.62	91.65	45.83	30.56	22.13	17.38
BVPS (RMB)	0.29	0.43	0.72	1.79	2.37	3.11
P/B (x)	43.85	29.66	17.75	7.16	5.41	4.13
Dividend (HK\$)	N/A	N/A	N/A	0.00	0.19	0.25
Dividend yield	N/A	N/A	N/A	0.00	1.69	2.16
ROAA (%)	N/A	19.82	23.76	22.14	20.81	21.21
ROAE (%)	N/A	38.92	47.85	34.43	27.86	26.93

Source(s): The Group, ABCI Securities estimates

Company Report Initiation

Mar 3, 2020

Rating: **BUY**

TP: HK\$ 13.74

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Share price (HK\$)	11.48
52WK H/L (HK\$)	12.3/6.26
Est. share price return	19.51%
Est. dividend yield	0.00%
Est. total returns	19.51%
Previous rating/TP	N/A / N/A
Previous report date	N/A

Source(s): Bloomberg, ABCI Securities estimates

Key data

Issued shares (mn)	8,933.34
Mkt cap (HK\$ mn)	101,482.74
ADT since IPO (HK\$mn)	148.79
Shareholding (%)	
Garland Glory Holdings	43.32
North Haven Private Equity Asia	18.59
Dasheng LTD	4.45

Source(s): Bloomberg, the Group

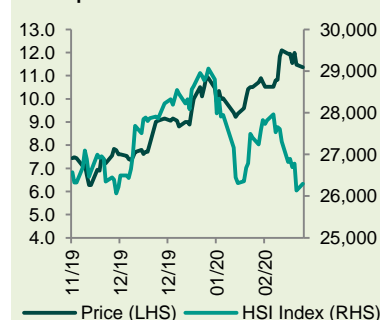
Price performance (%)

	Absolute	Relative*
1-mth	21.37	21.14
3-mth	50.46	50.73
6-mth	N/A	N/A

* Relative to HSI

Source(s): Bloomberg

Price performance since IPO



Source(s): Bloomberg, ABCI Securities

Note: Market data as of Mar 2, 2020

RMB/HKD: 1.1177



IPO

IPO at HK\$ 7.5/shr

The Group was listed on Nov 13, 2019 with an issue price of HK\$ 7.5, the low end of the offer price range. Total number of shares issued, before the exercise of overallotment option, was 1,027.34mn. The overallotment option was partially exercised and 309,000 shares were sold by shareholders in the process. According to the Group, proceeds from overallotment option exercise would be used as staff bonus. Total net proceeds from the IPO was HK\$ 6,563.8mn.

Exhibit 1: Post-IPO corporate structure

	Number of Shares	Approximate percentage of the Company's issued share capital (%)
Dasheng Limited	397,325,754	4.4
Public shareholders	8,536,014,246	95.6

Source(s): The Group

Planned use of proceeds

Exhibit 2: Planned use of proceeds and progress

#	Item	% of total net proceeds
1)	Repayment of offshore debts	40%
2)	Potential merger and acquisition opportunities	20%
3)	Funding the operation of Kingston Plant	10%
4)	Research and development activities of overseas IMF and nutritional supplement products	10%
5)	Expansion of Vitamin World USA operations	5%
6)	Marketing initiatives	5%
7)	Working capital and general corporate purposes	10%

Source(s): The Group, ABCI Securities

The Group plans to use 40% of net proceeds to repay offshore debts, 20% to conduct M&A, 10% to fund the operation of Kingston Plant in Canada, 5% to expand Vitamin World USA operations, and the rest will be used for R&D, marketing, working capital, and other general corporate purposes.



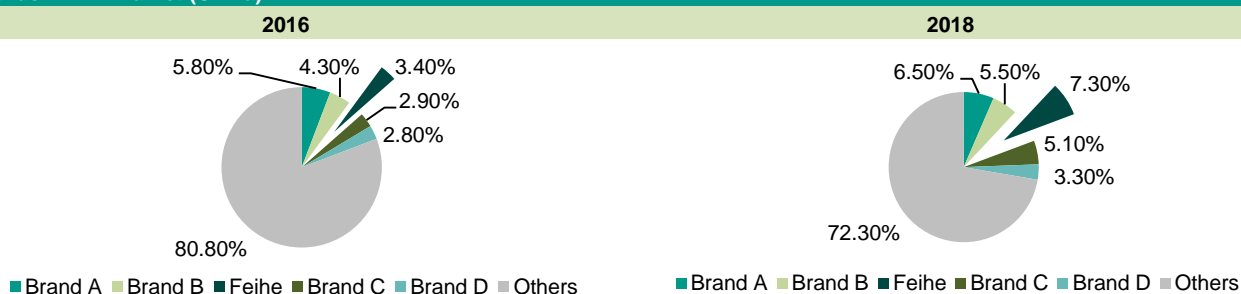
Investment highlights

1. A leading player in the IMF market

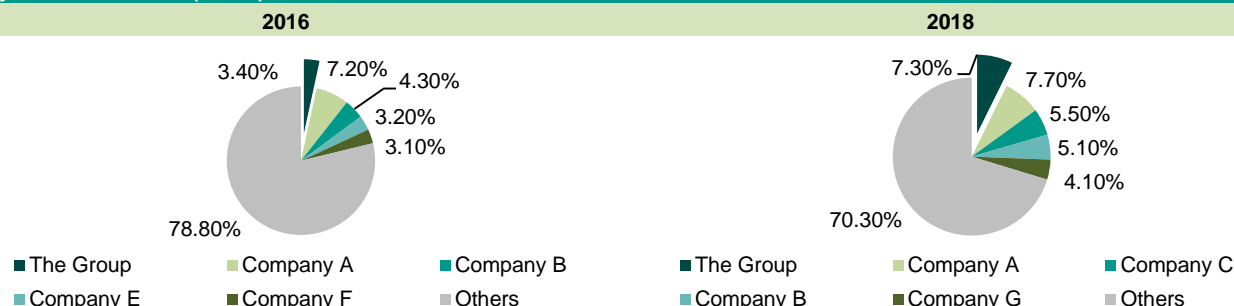
According to F&S report, the Group's Feihe Brand market share (by retail sales value) in China's IMF market in China increased from 3.4% in 2016 to 7.3% in 2018. The Group's market share also rose in 2016-18, especially in the domestic IMF and super-premium IMF segments in China. We believe high product quality, proper product positioning, effective market strategy, and comprehensive sales distribution channel management are keys to the Group's success.

Exhibit 3: Market shares of the Group in various market segments (in terms of retail sales value)

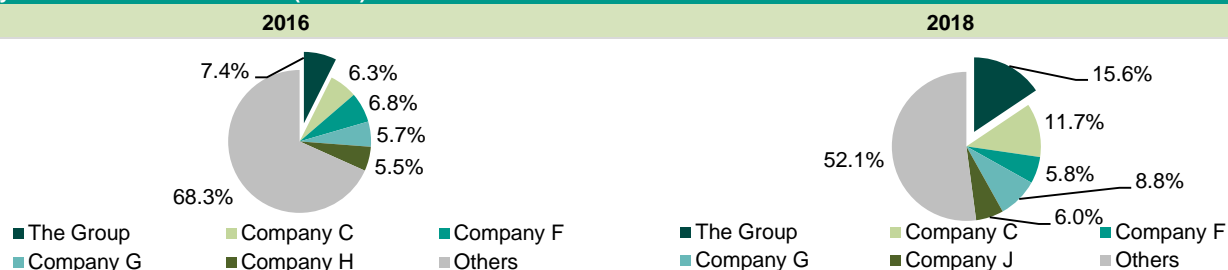
Brands in IMF Market (China)



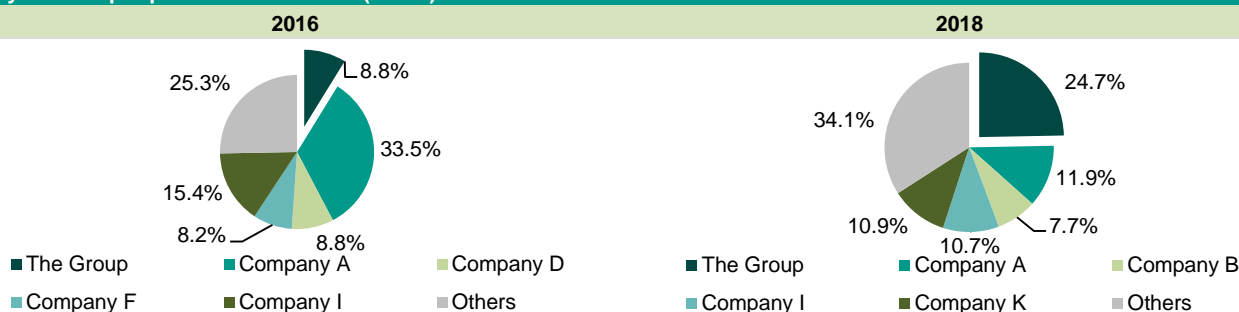
Players in IMF Market (China)



Players in Domestic IMF Market (China)



Players in Super-premium IMF Market (China)



Source(s): F&S report, ABCI Securities



2. Extensive distribution network and efficient management of inventory

The Group has an extensive nationwide distribution network. Its distribution channels are strategically scattered nationwide with a strong network in lower-tier cities; it has been expanding its presence in tier-1/2 cities over the past few years. The Group's retail points of sale grew from over 58,000 at end-2016 to over 90,000 at end-2018, representing a CAGR of more than 25.0%. As of Jun 30, 2019, the retail points of sale reached more than 109,000. The Group also sells its products online, although sales contribution from this channel has not been significant.

The Group adopts a single-layer distribution system, which helps maintain profit margins and visibility over customers' inventory as well as control over end-product sales. Also, the Group monitors the inventory levels of its customers and generally maintains an inventory-to-sales ratio of ~2, which is a healthy inventory level in the industry according to the F&S Report. The Group has a barcode scanning function that allows it to track products and receive auto-generated information on customers' inventory levels, thereby reducing labor costs and the risk of human error in information gathering. According to contracts signed with customers, the products have to be scanned before being distributed to the retail points of sale, thus enabling the Group to monitor and trace back the inventory.

Exhibit 4: No. of offline customers as of Jun 30, 2019, based on geographic location



Note: Excludes customers from e-commerce platform and end-customers to whom the Group directly sell products as well as educational bureaus and schools

Source(s): The Group

3. Effective marketing strategy

According to the Group, it is the pioneer in China to position its brand as “More Suitable for Chinese Babies” (更適合中國寶寶體質) and has established a strong brand association with this message. Besides, the Group has three major components in its marketing strategy, which includes (1) holding face-to-face seminars for in-depth education; (2) maximizing online interactivity with consumers; (3) having targeted and result-driven exposure on media. In 2018, it held over 300,000 face-to-face seminars, including more than 5,500 “Mother’s Love” (“媽媽的愛”) seminars which had over 600,000 attendees in total; the Group’s WeChat accounts have over 7mn subscribers as of Oct 22, 2019. We believe the Group’s accelerating sales growth can be attributed to its effective marketing strategies in the past few years.






4. Commitment to high-quality products

The Group has been operating a stringent quality control system throughout the value chain, which comprises 25 comprehensive procedures with over 300 checkpoints from the inspection of feed used by the Group's raw materials suppliers, throughout its production process, to the delivery of finished products. The Group also has a well-trained team of 290 staff in its quality control department. Members of this department are stationed at manufacturing facilities to supervise the implementation of the Group's quality assurance program, evaluate all product quality and production conditions, as well as optimizing its quality control processes. Besides, the Group also stations its staff at some of its suppliers' dairy farms and production plants to supervise production operations and inspect the quality of raw materials.

The Group has been sourcing fresh milk from YST Group to preserve the freshness and nutrients distribution crucial to the quality of its IMF products. Fresh milk is delivered to its production plants within 24 hours of delivery; lactose and other natural ingredients are used in its products to avoid artificial flavoring. The e-commerce operation is streamlined so that it only takes 28 days from online order placement online and manufacturing to delivery of the product.

Exhibit 5: Product standard comparison

Fresh milk main content	Feihe's standards 	China standards 	European standards 
Protein content	≥3.4%	≥2.8%	≥3.2%
Fat content	≥4.2%	≥3.1%	≥3.7%
Aerobic plate count (/mL)	≤10,000	≤2,000,000	≤100,000
Somatic cell count (/mL)	≤200,000	N/A	≤400,000

Note: Fat content, protein content, aerobic plate count, and somatic cell count are the four major measuring standards of fresh milk. Generally, a higher protein and fat content indicates higher quality. Aerobic plate count and somatic cell count are two major indicators of safety quality of fresh milk; a lower aerobic plate count means improved sanitation, and a lower somatic cell count indicates better animal health.

Source(s): F&S report

5. Growth on new expansion plans and robust product pipeline

Geographical expansion

The Group plans to expand into higher-tier cities and South China to solidify its dominance in markets. According to the Group, its solid brand reputation, extensive sales channels, and targeted positioning in high-end product offerings have enabled it to broaden the customer base and penetrated tier-1, new tier-1, and tier-2 cities. The Group's annual sales in Beijing increased at 80.0% CAGR in 2016-18 from RMB 60.3mn to RMB 195.4mn. The Group also has achieved progress in expanding into South China - annual sales in Shanghai increased from RMB 5.8mn in 2017 to RMB 9.6mn in 2018, representing an increase of ~64.8% YoY. Moreover, its products will be available in North America and Southeast Asia after the Group completes the construction of Kingston Plant in Ontario Canada.

Product category expansion

Supported by its strong R&D team, the Group had more than 10 new milk products for infants and adults in the pipeline as of Oct 22, 2019. According to the Group, it plans to enhance the



Astrobaby formulations by adjusting the composition of fatty acid and the level of carbohydrates to simulate the content of Chinese mothers' breast milk.

Also, the Group is planning to broaden its product categories beyond IMF products. According to the Group, baby & toddler food products are highly complementary to IMF products. Based on F&S Report, China's baby & toddler food market, by retail sales value, increased from RMB 13.5bn in 2014 to RMB 25.4bn in 2018 (2014-18 CAGR: 17.1%), and is expected to reach RMB 42.8bn in 2023.

Goat milk IMF is another product category that the Group seeks to expand. The market in China is forecasted to grow from RMB 17.2bn in 2018 to RMB 37.6bn in 2023 at a CAGR of 16.9%, according to F&S Report. The Group's new plant expansion would include the addition of production lines for goat milk IMF products.

Capacity expansion

The Group plans to build new plants or expand its existing production facilities. The total added production capacity would be 151,000 tonnes upon the completion of all expansion projects and production ramp-up. It is worth noting that the Kingston Plant would serve the North American and Southeast Asian market.

Exhibit 6: Expansion plans

Plant /Location	Nature of project	Total annual designed capacity	Added annual designed capacity	CapEx to be incurred	Expected completion of project	Product type
Kingston Plant/ Kingston, Ontario, Canada	Newly constructed plant	40,000 tonnes	40,000 tonnes	C\$330.0 mn (RMB 1,711.7mn), of which C\$278.9 mn (RMB 1,446.6mn) was incurred as of Jun 30, 2019	1H20	Goat milk IMF & Cow milk IMF
Tailai Plant/ Tailai county, Heilongjiang province, China	Newly constructed plant	20,000 tonnes	20,000 tonnes	RMB 400.0mn, of which RMB 267.2mn was incurred as of Jun 30, 2019	2H19	Goat milk IMF & Goat milk powder products
Jilin Plant/ Zhenlai county, Jilin province, China	Newly constructed plant	20,000 tonnes	20,000 tonnes	RMB 400.0mn, of which RMB 131.0mn was incurred as of Jun 30, 2019	1H20	IMF products
Kedong Plant/ Qiqihar city, Heilongjiang province, China	Expansion of existing plant	52,000 tonnes	40,000 tonnes	RMB 530.0mn, of which RMB 98.9mn was incurred as of Jun 30, 2019	1H20	IMF products and liquid milk products
Longjiang Plant/ Qiqihar city, Heilongjiang province, China	Expansion of existing plant	59,000 tonnes	31,000 tonnes	RMB 442.8mn, of which RMB 38.0mn was incurred as of Jun 30, 2019	1H21	IMF products

Note: According to the Group, it takes ~2 years from plant design to completion of construction and the commencement of trial production; it takes ~ 3 years to ramp up output before a plant reaches its full production capacity

Source(s): The Group, ABCI Securities



6. An experienced management team

The majority of the Group's management team has over a decade of experience in the IMF market. Mr. Leng Youbin, Chairman and Chief Executive Officer of the Group, has over 30 years of experience in the dairy industry in China. Mr. Leng has received various honors and awards for his entrepreneurship and leadership, including, among others, the Top 10 Economic Persons of the Year in 2018 (2018 十大經濟年度人物) award given his significant contribution to the development of the China IMF sector. Mr. Cai Fangliang, the Group's President, has over ten years of experience in the dairy industry in China; before joining the Group in 2010, he served various management roles at two dairy product companies in China. Mr. Liu Hua, Vice Chairman and Chief Financial Officer of the Group, has served the Group for over 18 years; he was involved in the financing activities of the Group, including the listing of Flying Crane U.S. on the OTCBB in 2003 and the listing of Flying Crane U.S. on the NYSE in 2009. Ms. Judy Tu, Vice President and Joint Company Secretary, joined the Group in 2006 and has been extensively involved in the international business development and capital market matters of the Group, such as the Group's expansion in Canada in 2015 and the acquisition of Vitamin World in 2018. Mr. John Cheung, Chairman of Vitamin World USA, has over 20 years of experience in the food and beverage industry. He had worked in blue-chip consumer companies, such as Coca-Cola and Procter & Gamble. Before joining the Group in 2019, he held various senior positions within the Nestle Group in 2012-18.



Growth and profitability outlook

Revenue CAGR at 26.7% CAGR in FY18-21E

Based on our estimates, the Group's revenue would increase at 26.7% CAGR in FY18-21E. We expect super-premium products (Astrobaby and Organic Zhenzhi) would be the major growth drivers, with revenue growing at CAGRs of 122.6% and 46.7% for the same period. Also, the launch of goat milk IMF products, baby & toddler food products, and nutritional supplement products would add to revenue growth in coming years.

The Group's IMF business would be driven by sales volume. We estimate the ASP and volume CAGR of its existing cow milk IMF products to be 2.7% and 21.9% for FY18-21E based on the following assumptions: 1) the Group would be able to ramp up production of the underutilized production plants; 2) newly constructed plants and expansion of existing facilities would increase production capacity; 3) construction of new plants and production ramp-up would be completed as scheduled; 4) the Group would be able to deploy effective marketing strategies to promote its products. The goat milk IMF products would see lower price points initially due to its nascent nature; the volume contribution of such products would not be significant before the production facilities can operate in full capacity.

Moreover, even though the outbreak of coronavirus in China has incapacitated a large part of the consumer market, we believe that the Group would be able to leverage its online platforms, such as Wechat Account and official stores on JD.com/Tmall, to facilitate product sales.

Exhibit 7: Revenue growth projections (YoY %)

As of Dec 31	FY17A	FY18A	FY19E	FY20E	FY21E
Total revenue	58.1	76.5	29.0	29.4	21.8
Cow milk IMF products	70.3	69.8	31.4	30.8	14.2
- High-end IMF products	139.3	75.4	29.9	28.1	10.7
- Super-premium Astrobaby	244.9	108.2	29.6	28.7	10.5
- Super-premium Organic Zhenzhi	N/A	620.3	70.3	55.7	18.9
- Premium product	47.7	(7.7)	18.8	13.4	6.6
- Regular IMF products	1.6	56.8	35.5	37.6	22.3
Other dairy products	(13.4)	16.9	18.2	16.8	12.2
Other products*	N/A	N/A	3.5	15.0	17.0

Note: Other products include nutritional supplement and baby & toddler food products

Source(s): The Group, ABCI Securities estimates

Exhibit 8: ASP and volume growth projections (YoY %)

As of Dec 31	FY17A	FY18A	FY19E	FY20E	FY21E
ASP					
Cow milk IMF products					
- High-end	11.18	8.74	2.02	2.26	1.12
Super-premium Astrobaby	(1.8)	0.72	0.77	0.78	0.62
Super-premium Organic Zhenzhi	N/A	9.34	1.97	1.79	1.22
Premium product series	0.87	(4.8)	1.3	1.2	1.0
- Regular	5.83	8.31	7.07	7.07	4.95
VOL					
Cow milk IMF products					
- High-end	115.2	61.3	27.3	25.3	9.5
Super-premium Astrobaby	251.2	106.7	28.6	27.7	9.9
Super-premium Organic Zhenzhi	N/A	558.8	67.1	53.0	17.5
Premium product series	46.5	(3.1)	17.3	12.1	5.6
- Regular	(3.9)	44.7	26.5	28.5	16.5

Source(s): The Group, ABCI Securities estimates



Margin improvement on better production cost management

We expect GPM and NPM (to shareholders of the Company) to increase from 67.5% and 21.6% in FY18A to 71.0% and 31.2% in FY21E as the Group effectively manages its raw material costs and invest in facilities to enhance production efficiency. For individual products, we expect GPM of the cow milk IMF product to increase from 72.7% in FY18A to 75.4% in FY21E; GPM of the Super-premium Astrobaby series would be the highest among all at 82.5% in FY21E.

Exhibit 9: Margin projections (%)

FY ends at Dec 31	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Overall margins						
GPM	54.6	64.4	67.5	68.5	70.7	71.0
Pretax margin	16.0	28.0	30.7	39.5	42.0	43.8
NPM (to shareholders of the Company)	11.2	19.7	21.6	28.0	29.9	31.2
GPM by products						
COW - IMF	61.8	69.4	72.7	73.0	74.7	75.4
High-end IMF product series	68.9	74.1	76.5	76.8	78.8	79.9
Super-premium Astrobaby	75.5	77.7	79.3	79.6	81.2	82.5
Super-premium Organic Zhenzhi	N/A	57.7	64.4	65.7	68.3	69.0
Premium product series	63.6	68.0	67.8	68.5	71.9	72.6
Regular iIMF product series	54.7	58.4	62.7	63.3	65.2	65.9
GOAT - IMF	N/A	N/A	N/A	N/A	N/A	64.8
Other dairy products	12.5	6.2	18.9	18.8	19.0	20.8
Other products	N/A	N/A	35.9	37.0	38.5	38.8

Note: Other products include nutritional supplement and baby & toddler food products;

Source(s): The Group, ABCI Securities estimates



Valuation

DCF-derived TP at HK\$ 13.74

Assumptions in our DCF model include:

- A beta of 0.89, which is the average beta of the listed dairy product companies;
- A risk-free rate of 2.74%;
- An expected market return of 13.3%;
- Terminal growth rate at 5%;
- Based on the current leverage level, we assume the target total debt-to-asset ratio to be 5%

Based on our DCF model, we set the TP at HK\$ 13.74, which represents 21.20x/16.65x 20E/21E P/E or 6.86x/5.18x 20E/21E P/B.

Peer valuation analysis

As of Mar 2, 2020, the average 20E/21E P/E of the HK-listed comparable peers were 17.80x/14.34x. Valuations of comparable peers listed in the PRC market and the international market are higher. As of Mar 2, 2020, the 20E P/E of PRC and international peers were 24.12x/20.86x, and the 21E P/E of PRC and international peers were 21.09x and 18.28x.

Exhibit 10: Peer valuation comparison

Ticker	ENG name	CHI name	P/E(x)		P/B (x)		Yield (%)		ROAA (%)		ROAE (%)	
			20E	21E	20E	21E	20E	21E	20E	21E	20E	21E
HK peers												
2319 HK	Mengniu	蒙牛	21.89	18.39	3.03	2.67	1.08	1.29	6.31	7.10	14.28	14.92
1112 HK	H&H	健合	14.13	12.19	2.82	2.53	1.98	1.98	10.31	11.41	22.86	22.04
1230 HK	Yashili	雅士利	26.42	19.81	0.46	0.45	0.00	0.00	0.71	1.13	1.70	2.34
1117 HK	Modern Dairy	现代牧业	8.76	6.98	0.71	0.66	0.23	0.23	4.51	5.49	9.61	11.19
PRC peers												
600887 CH	Yili	伊利	23.65	20.29	5.44	4.91	2.72	3.13	13.26	14.03	23.40	24.57
600597 CH	Bright dairy	光明乳业	24.58	21.88	2.22	2.09	1.44	1.63	3.96	4.36	9.19	9.30
Intl. peers												
BN FP	Danone	达能	15.85	15.03	2.29	2.12	3.38	3.59	5.64	5.69	14.82	14.60
NESN SW	NESTLE SA	雀巢	22.05	20.45	5.97	5.78	2.74	2.90	9.58	10.11	27.73	28.66
EMMN SW	EMMI AG	Emmi	24.13	22.81	2.50	2.32	1.32	1.44	7.00	7.10	10.44	10.26
2270 JP	MEGMILK SNOW BRAND	雪印惠乳业 株式会社	12.84	11.08	0.84	0.80	1.81	1.81	5.29	5.75	6.90	7.14
FSF NZ	FONTERRA	恒天然集团	16.87	12.60	1.02	0.98	2.55	4.07	5.71	6.43	6.18	7.87
A2M AU	A2 MILK	A2 牛奶	33.41	27.73	10.63	7.71	0.06	0.40	32.45	28.28	36.06	30.68
6186 HK	Feihe	飞鹤	22.13	17.38	5.41	4.13	1.69	2.16	20.81	21.21	27.86	26.93
Average - HK peers			17.80	14.34	1.75	1.58	0.82	0.88	5.46	6.28	12.11	12.62
Average - PRC peers			24.12	21.09	3.83	3.50	2.08	2.38	8.61	9.20	16.29	16.93
Average - International peers			20.86	18.28	3.88	3.29	1.98	2.37	10.95	10.56	17.02	16.54

Note: Data as of closing on Mar 2, 2020

Source(s): Bloomberg, ABCI Securities estimates



Risk factors

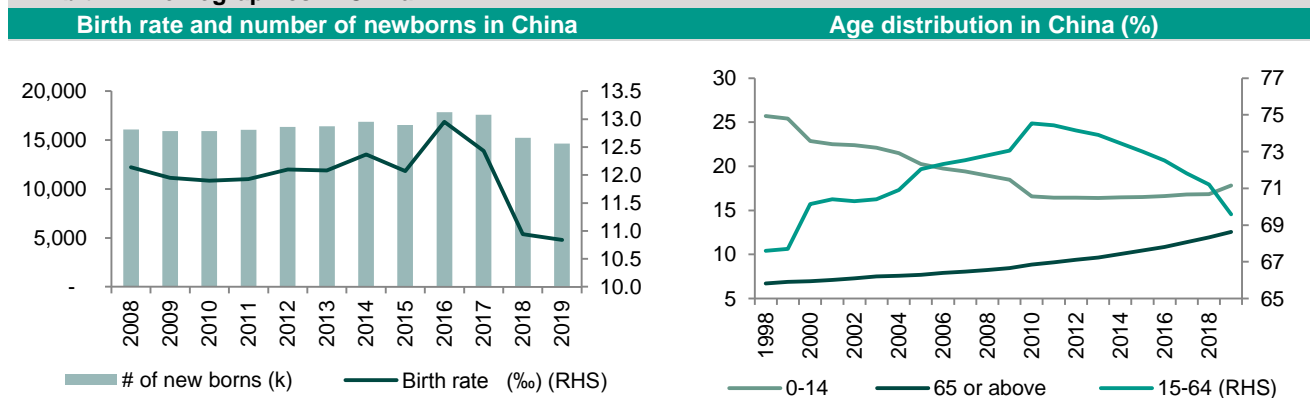
Macroeconomic risk

China's economic growth has been slowing. According to National Bureau of Statistics (NBS), the nominal GDP growth in China declined to 6.1% YoY in 2019 vs. 6.7% YoY in 2018. Meanwhile, the average per capita income grew at a nominal rate of 8.9% YoY and a real rate of 5.8% YoY in 2019. If the national GDP growth rate declines further, the per capita income will follow suit. As a result, the Group's product sales may be affected, especially when it relies rather heavily on its premium product category.

Demographic risk

The birth rate and the no. of newborns in China hit new lows at 10.84‰ and 14,650k in 2019. Meanwhile, the Chinese population is also aging. The percentage of population aged 65 or above trended up to 12.6% in 2019, while the percentage of population aged 15-64 has been steadily declining to 69.6%. The declining birth rate and growing aged population may mean the downtrend in newborns would continue. The lower number of newborns in China may negatively impact the Group's future growth.

Exhibit 11: Demographics in China



Source(s): NBS, ABCI Securities

Product quality risk

The Group's product quality is vital to maintaining its leading position. If the Group is not able to source quality raw materials or maintain the high standards in supply-chain management, incidents of product contamination or spoilage may occur and tarnish sales and reputation.

Supplier concentration risk

The Group sources raw milk mainly from YST Dairy Group (YST). The purchase from YST represented 86.8% of the Group's total fresh milk procurement costs in 2018. Such heavy reliance on a single supplier means that the Group is susceptible to production interruption of YST. If such disruption occurs, sourcing raw milk in adjacent areas with similar quality may add to the cost of production and increase the product quality risks.

Exhibit 12: Fresh milk purchase from YST Dairy

	2016	2017	2018
Purchases from YST Group (RMB mn)	456.4	531.2	762.9
% of total fresh milk procurement costs	84.2%	83.5%	86.8%

Source(s): The Group, ABCI Securities



Raw material cost risk

The Group's margins are sensitive to changes in raw material prices. For 2018, a 15% increase in raw material prices would lead to 13% decline in net profit. As the Group's product series will further evolve to meet consumers' needs, new ingredients may be added to its IMF products, which may increase the raw material costs.

Exhibit 13: Impact of hypothetical changes in the price of raw materials, including fresh milk and other raw materials

For FY18

% change in raw material price	15%	5%	1%	(1%)	(5%)	(15%)
Corresponding change in net profit (RMB'000)	(293,355)	(97,785)	(19,557)	19,557	97,785	293,355
% change in net profit	(13%)	(4%)	(1%)	1%	4%	13%

Source(s): The Group, ABCI Securities

Interest rate risk

The Group is exposed to interest rate risk because of its interest-bearing financial assets and liabilities. Exhibit 14 demonstrates the sensitivity of changes in interest rates to pretax profit (through the impact on floating rate borrowings).

Exhibit 14: Impact of change in interest rate on pretax profit

Year/Period	US\$		RMB		CAD	
	+/- in basis	+/- in pretax profit	+/- in basis	+/- in pretax profit	+/- in basis	+/- in pretax profit
	points	(RMB k)	points	(RMB k)	points	(RMB k)
Dec 31, 2018	50	1,449	50	30,163	50	206
	(50)	(1,449)	(50)	(30,163)	(50)	(206)

Source(s): The Group, ABCI Securities

Foreign currency risk

Foreign currency risk increases as the Group expands its operations outside China. The table below shows the sensitivity of changes in the US\$ and HK\$ exchange rate to pretax profit (due to changes in the fair value of monetary assets and liabilities).

Exhibit 15: Impact of change of foreign exchange rate on pretax profit

Year/Period	US\$		HK\$		CAD	
	+/- in foreign currency rate	+/- in pretax profit	+/- in foreign currency rate	+/- in pretax profit	+/- in foreign currency rate	+/- in pretax profit
	(%)	(RMB k)	(%)	(RMB k)	(%)	(RMB k)
Dec 31, 2018	5	(1,913)	5	(2,590)	5	(74,397)
	(5)	1,913	(5)	2,590	(5)	74,397

Source(s): The Group, ABCI Securities

Product development risk

The Group is diversifying its product portfolio from cow milk IMF products to goat milk IMF products, nutritional supplement products, and baby & toddler food products. The Group may encounter challenges in promoting these products in their respective market segments, and the growth resulted from these new products could be below our estimates.



Financial statement of the Group

Consolidated income statement

FY ends at Dec 31 (RMB mn)	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Revenue	3,724	5,887	10,392	13,404	17,340	21,117
COW Milk - IMF	3,181	5,417	9,199	12,089	15,816	18,055
- High-end IMF product series	1,586	3,795	6,658	8,647	11,079	12,263
- Super-premium Astrobaby	711	2,454	5,108	6,621	8,524	9,423
- Super-premium Organic Zhenzhi	0	50	357	609	948	1,127
- Premium product series	875	1,292	1,192	1,417	1,607	1,713
- Regular IMF product series	1,595	1,621	2,542	3,443	4,737	5,792
GOAT Milk - IMF	0	0	0	0	0	1,315
Other dairy products	543	471	550	650	760	853
Other products	0	0	642	665	764	894
Cost of sales	(1,690)	(2,097)	(3,373)	(4,216)	(5,084)	(6,125)
Gross profit	2,034	3,790	7,019	9,188	12,256	14,992
COW Milk - IMF	1,966	3,761	6,684	8,820	11,817	13,614
GOAT Milk - IMF	0	0	0	0	0	853
Other dairy products	68	29	104	122	145	178
Other products	0	0	231	246	294	347
Admin expenses	(231)	(361)	(580)	(875)	(878)	(1,097)
Selling expenses	(1,370)	(2,139)	(3,661)	(3,679)	(4,864)	(5,748)
Net finance costs	(27)	(21)	(59)	(65)	(58)	(51)
Others	0	0	0	1	1	1
Pretax profit	595	1,651	3,189	5,292	7,275	9,243
Tax	(189)	(491)	(946)	(1,540)	(2,096)	(2,650)
Net profit	406	1,160	2,242	3,751	5,180	6,594
- Shareholders of the Company	417	1,160	2,242	3,751	5,180	6,594
- MI	(11)	0	0	0	0	0
Dividend	0	0	0	0	1,554	1,978
EPS (RMB)						
- Basic	0.05	0.14	0.28	0.42	0.58	0.74
- Diluted	0.05	0.14	0.28	0.41	0.57	0.72
DPS (HK\$)	0.00	0.00	0.00	0.00	0.19	0.25

Note: Other products include nutritional supplement and baby & toddler food products

Source(s): The Group, ABCI Securities estimates

Consolidated balance sheet

FY ends at Dec 31 (RMB mn)	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Bank balances and cash	1,139	2,771	3,641	9,541	12,304	16,481
Trade and bills receivables	93	175	513	422	791	695
Inventory	294	395	660	684	1,002	1,015
Others	1,489	1,082	2,481	4,424	5,868	8,141
Current assets	3,014	4,423	7,295	15,071	19,966	26,333
PP&E	1,086	1,431	2,555	4,795	5,604	6,349
Land use rights	73	119	306	228	165	119
Investment in an associates	143	143	143	143	143	143
Others	379	899	1,559	1,797	1,876	2,015
Non-current assets	1,681	2,591	4,563	6,963	7,788	8,625
Total assets	4,695	7,014	11,857	22,034	27,754	34,958
Trade and bills payable	360	514	833	909	1,300	1,400
ST borrowings	534	903	1,083	966	801	758
Others	1,145	1,672	2,944	3,006	3,127	3,399
Current liabilities	2,039	3,089	4,860	4,881	5,228	5,556
LT Borrowing	0	64	657	586	486	460
Others	279	275	552	562	856	1,164
Non-current liabilities	279	339	1,210	1,148	1,342	1,624
Shareholders' capital	2,377	3,585	5,787	16,004	21,184	27,777
MI	0	0	0	0	0	0
Total equity	2,377	3,585	5,787	16,004	21,184	27,777
Total liabilities and equity	4,695	7,014	11,857	22,034	27,754	34,958

Source(s): The Group, ABCI Securities estimates



Consolidated cash flow statement

FY ends at Dec 31 (RMB mn)	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Profit before tax	595	1,651	3,189	5,292	7,275	9,243
Depreciation and amortization	99	98	162	180	164	145
Change in working capital	(428)	1,174	659	(224)	(264)	342
Others	(137)	(699)	(888)	(572)	(2,340)	(2,850)
Cash flow from operating activities	129	2,224	3,121	4,676	4,836	6,881
PP&E and right-of-use assets	(56)	(406)	(1,083)	(2,164)	(744)	(697)
Structured deposits & time deposits	1,187	(1,145)	(1,857)	(2,400)	(897)	(1,679)
Others	(184)	(128)	(332)	(495)	(206)	(321)
Cash flow from investing activities	947	(1,680)	(3,272)	(5,059)	(1,848)	(2,697)
Change in borrowing	(472)	465	752	(188)	(266)	(69)
Placement of pledged bank deposits	77	(243)	(1,200)	(12)	(84)	(88)
Others	0	0	(61)	6,214	(49)	(45)
Cash flow from financing activities	(395)	222	(509)	6,014	(399)	(201)
Net change in cash	681	766	(660)	5,632	2,589	3,982
Cash and cash equivalent - beg	134	817	1,566	896	6,520	9,098
ForEx Impact	2	1	(9)	(7)	(11)	(33)
Cash and cash equivalent - end	817	1,584	896	6,520	9,098	13,047

Source(s): The Group, ABCI Securities estimates

Key operating and financial ratios

FY ends at Dec 31	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Growth (YoY %)						
Revenue	N/A	58.1	76.5	29.0	29.4	21.8
Cow - IMF	N/A	70.3	69.8	31.4	30.8	14.2
Other dairy products	N/A	(13.4)	16.9	18.2	16.8	12.2
Other products	N/A	N/A	N/A	3.5	15.0	17.0
Gross profit	N/A	86.4	85.2	30.9	33.4	22.3
Pretax profit	N/A	177.5	93.1	66.0	37.5	27.0
Net profit (to shareholders of the Company)	N/A	178.2	93.3	67.3	38.1	27.3
Profitability ratios (%)						
GPM	54.6	64.4	67.5	68.5	70.7	71.0
Cow - IMF	61.8	69.4	72.7	73.0	74.7	75.4
Goat - IMF	N/A	N/A	N/A	N/A	N/A	64.8
Other dairy products	12.5	6.2	18.9	18.8	19.0	20.8
Other products	N/A	N/A	35.9	37.0	38.5	38.8
Pretax margin	16.0	28.0	30.7	39.5	42.0	43.8
NPM (to shareholders of the Company)	11.2	19.7	21.6	28.0	29.9	31.2
Return ratios (%)						
ROAA	N/A	19.8	23.8	22.1	20.8	21.0
ROAE	N/A	38.9	47.8	34.4	27.9	26.9
Liquidity ratio (x)						
Current ratio	1.5	1.4	1.5	3.1	3.8	4.7
Quick ratio	1.3	1.3	1.4	2.9	3.6	4.6
Cash ratio	0.6	0.9	0.9	2.1	2.6	3.3
Working capital turnover (days)						
Receivable turnover	6.5	8.3	12.1	12.7	12.8	12.8
Inventory turnover	71.9	59.9	57.1	58.2	60.5	60.1
Payable turnover	68.6	76.1	72.9	75.4	79.3	80.4
Cash conversion cycle	9.8	(7.9)	(3.8)	(4.5)	(6.0)	(7.5)
Leverage ratios (%)						
Total debt to Equity	22.5	27.0	30.1	9.7	6.1	4.4
Total debt to Total assets	11.4	13.8	14.7	7.0	4.6	3.5
Net debt to Equity	(35.2)	(68.1)	(65.4)	(68.4)	(70.9)	(77.8)
Net debt to Total assets	(17.8)	(34.8)	(31.9)	(49.6)	(54.1)	(61.9)

Note: 1) ROAA = Total net profit / average total assets of previous and current fiscal year; 2) ROAE = Total net profit attributable to shareholders / average equity attributable to shareholders of previous and current fiscal year; 3) Other products include nutritional supplement and baby & toddler food products

Source(s): The Group, ABCI Securities estimates



Appendix I: IMF Product/Brand portfolio

Product Series	Product Positioning	MSRP (RMB/kg)		Product Description
		Stage	Price	
Super-premium Astrobaby 星飛帆	Focused on closely resembling the composition of breast milk of Chinese mothers.	1	525.7	▪ Contains OPO structured fat to promote easier digestion, soften stools for babies
		2	440.0	▪ Contains hydrolyzed whey protein to promote better nutrient absorption
		3	440.0	▪ Contains alpha-lactalbumin, a major protein found in breast milk and with high levels of amino acids that induce sleep, boost moods.
Super-premium Organic Zhenzhi 臻稚有機	Focused on providing organic, fresh and nutritious IMF using organic raw materials	1	582.9	▪ Made with organic fresh milk sourced from certified-organic dairy farms
		2	540.0	▪ Contains organic lactose and demineralized whey powder
		3	511.4	▪ Contains DHA, an omega-3 fatty acid and ARA essential for brain development in infants
Premium Zhenai BeiHu 臻愛倍護	Focused on benefiting infant immune system development.	1	375.6	▪ Contains lactoferrin to protect against infections and inflammations and develop gastrointestinal and immune system in infants
		2	364.4	▪ Contains hydrolyzed whey protein to promote better nutrient absorption
		3	331.1	▪ Contains alpha-lactalbumin, a major protein found in breast milk and with high levels of amino acids that induce sleep, boost moods
Premium Zhenai Feifan 臻愛飛帆	Developed for the maternity specialty store sales channel and focused on benefiting infant immune system development	1	422.5	▪ Contains probiotics that promote healthy gastrointestinal bacteria growth and better digestion and nutrient absorption
		2	410.0	▪ Contains lutein to protect infants' eyes from blue light and oxidation
		3	372.5	▪ Contains nucleotide to improve immune system in infants
Premium Jingcui Yijia 精粹益加	Developed for the maternity specialty store sales channel and focused on benefiting infant immune system development.	1	422.5	▪ Contains lactoferrin to protect against infections and inflammations and develop gastrointestinal and immune system in infants
		2	410.0	▪ Contains probiotics that promote healthy gastrointestinal bacteria growth and better digestion and nutrient absorption
		3	372.5	▪ Contains lutein that protect infants' eyes from blue light and oxidation
Xingjie Youhu 星階優護	Focused on providing nutrients based on needs during different developmental stages	1	422.5	▪ Contains nucleotide to improve immune system in infants
		2	342.2	▪ Contains dietary fiber to creates healthy and comfortable intestinal environment in infants
		3	308.9	▪ Contains OPO structured fat to promote easier digestion, soften stools for babies
Feifan 飛帆	Focused on providing nutrients that benefit infant physical and brain development	1	264.4	▪ Contains probiotics that promote healthy gastrointestinal bacteria growth and better digestion and nutrient absorption
		2	253.3	▪ Contains OPO structured fat to promote easier digestion, soften stools for babies
		3	220.0	▪ Contains a nucleotide mix that benefits infant immune system development
BabyRich 貝迪奇	Developed for the maternity specialty store sales channel and focused on providing nutrients that benefit infant physical and brain development	1	422.5	▪ Contains DHA, an omega-3 fatty acid, ARA, natural walnut oil and lutein essential for brain and vision development in infants
		2	410.0	▪ Contains DHA, an omega-3 fatty acid, ARA, natural walnut oil and lutein essential for brain and vision development in infants;
		3	372.5	▪ Contains alpha-lactalbumin, a major protein found in breast milk and with high levels of amino acids that can induce sleep, boost moods

Note: MSRP = Manufacturer's suggested retail price

Source(s): The Group, ABCI Securities



Appendix II: History and milestones of the Group

Year	Event
1962	Hongguang Dairy (later expanded as Zhaoguang Dairy), the predecessor of Feihe HLJ, was established
1984	The Group registered “Feihe” trademark in the PRC
1996	Feihe HLJ, the first member of the Group with business operation, was established
1998	Feihe HLJ acquired the assets of Zhaoguang Dairy
2003	Flying Crane U.S., whose shares were quoted on OTCBB, became the holding company of the Group
2005	Flying Crane U.S. became listed on the NYSE Archipelago Exchange and ceased to be traded on the OTCBB
2009	Flying Crane U.S. transferred the listing of its shares from the NYSE Archipelago Exchange to the NYSE
2010	The Group launched our super-premium Astrobaby (星飛帆) product series
2011	The Group adjusted its business strategy to exclude the production of fresh milk and to focus on the development, production and sales of IMF products
2013	Flying Crane U.S. was privatized and its shares were delisted from the NYSE NHPEA became a shareholder of DIF Holding
2014	The Group established the Feihe Nutrition Laboratory at the Beth Israel Deaconess Medical Center of Harvard Medical School to engage in nutrition research and teaching activities
2016	The Group established Canada Kingston Dairy and Canada Royal Milk for the planned operations of the goat milk and cow milk infant formula production facilities at the Kingston Plant to be constructed in Kingston, Ontario, Canada
2018	The Group completed the acquisition of the retail health care business of Vitamin World

Source(s): The Group, ABCI Securities



Appendix III: Management profile

Name	Age	Position	Responsibilities	Relationship with other Director(s) and the senior management
Mr. LENG Youbin (冷友斌)	50	Executive Director, Chairman, Chief Executive Officer	Responsible for the overall development strategies and business plans of the Group	None
Mr. LIU Hua (劉華)	46	Executive Director, Vice Chairman, Chief Financial Officer	Responsible for the audit, accounting and financial management of the Group	None
Mr. CAI Fangliang (蔡方良)	50	Executive Director, President	Responsible for the overall management and business development of the Group	None
Mr. LIU Shenghui (劉聖慧)	49	Executive Director, Vice President of Finance	Responsible for the internal audit and financial management of the Group	None
Ms. Judy Fong-Yee TU (涂芳而)	43	Executive Director, Vice President, Joint Company Secretary	Responsible for the international business development, capital market matters and legal affairs of the Group	None
Mr. CHEUNG Kwok Wah (張國華)	54	Executive Director, Chairman of Vitamin World International Co., Ltd.	Responsible for overseas sales and promotion of IMF products, and overseas Development strategies of Vitamin World	None
Mr. GAO Yu (高煜)	45	Non-executive Director	Responsible for providing strategic advice on the business development of the Group	None
Mr. Kingsley Kwok King CHAN (陳國勁)	42	Non-executive Director	Responsible for providing strategic advice on the business development of the Group	None
Ms. LIU Jinping (劉晉萍)	47	Independent Non-executive Director	Responsible for overseeing and providing independent judgment to the Board	None
Mr. SONG Jianwu (宋建武)	56	Independent Non-executive Director	Responsible for overseeing and providing independent judgment to the Board	None
Mr. FAN Yonghong (范勇宏)	52	Independent Non-executive Director	Responsible for overseeing and providing independent judgment to the Board	None
Mr. Jacques Maurice LAFORGE	64	Independent Non-executive Director	Responsible for overseeing and providing independent judgment to the Board	None

Source(s): The Group, ABCI Securities

Disclosures

Analyst Certification

I, PAN Hongxing, Paul, being the person primarily responsible for the content of this research report, in whole or in part, hereby certify that all of the views expressed in this report accurately reflect my personal view about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report. I and/or my associates have no financial interests in relation to the listed company (ies) covered in this report, and I and/or my associates do not serve as officer(s) of the listed company (ies) covered in this report.

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Definition of equity rating

Rating	Definition
Buy	Stock return rate \geq Market return rate (10%)
Hold	- Market return rate (-10%) \leq Stock return rate < Market return rate (+10%)
Sell	Stock return < - Market return (-10%)

Notes: Stock return rate: expected percentage change of share price plus gross dividend yield over the next 12 months
Market return rate: average market return rate since 2005 (HSI total return index 2005-17 CAGR at 10%)

Time horizon of share price target: 12-month

Stock rating, however, may vary from the stated framework due to factors including but not limited to: corporate governance, market capitalization, historical price volatility relative to corresponding benchmark index, average daily turnover of the stock relative to market capitalization of the stock, competitive advantages in corresponding industry, etc.

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