



Zixin Group Holdings

Food security helps to double profit

SINGAPORE | CONSUMER | INITIATE

29 September 2024

- We expect earnings to at least double to RMB 30.9mn. The government aims to reduce reliance on imported soybeans and shift more to alternatives such as sweet potatoes. The promotion of food security, along with improved new facilities like cold storage and new high-tech manufacturing, will double volume. Gross margin is anticipated to increase by 2 ppt YoY to 34% in FY25e, as Zixin expands its processed sweet potato product offerings and benefits from higher margins products.
- The government is providing further policy support to the industry, including allocating land and subsidising facilities. Zixin is partnering with CITIC Construction to replicate the entire sweet potato value chain in Hainan Province. Zixin is also expanding its revenue stream by converting agricultural waste into animal feed, which we anticipate will be a revenue catalyst, with the first batch expected to generate c.RMB 1mn in 4Q FY25e.
- We initiate coverage on Zixin with a BUY recommendation and a DCF-TP of S\$0.050. Zixin is well-positioned to capitalize on new facilities and government support to double production capacity by FY25e. We expect PATMI to at least double, reaching RMB 30.9mn in FY25e, driven by higher fresh sweet potato sales volume, the new manufacturing facility for higher-margin functional food, and animal feed.

BUY (Initiation)

LAST CLOSE PRICE	SGD 0.023
FORECAST DIV	SGD 0.000
TARGET PRICE	SGD 0.050
TOTAL RETURN	115.8%

COMPANY DATA

BLOOMBERG CODE:	ZXGH SP Equity
O/S SHARES (MN):	1,445
MARKET CAP (USD mn / SGD mn):	24 / 30
52 - WK HI/LO (SGD):	0.03 / 0.01
3M Average Daily T/O (mn):	2.85

MAJOR SHAREHOLDERS

Liang Chengwang	15.3%
PTS Capital Pte. Ltd.	10.1%
Yu Lei	10.1%

PRICE PERFORMANCE (%)

	1MTH	3MTH	YTD
COMPANY	10.5	0.0	(7.2)
STTF RETURN	7.5	12.0	17.1

PRICE VS. STTF



Source: Bloomberg, PSR

KEY FINANCIALS

Y/E Mar, (RMB 'mn)	FY23	FY24	FY25e	FY26e
Gross Rev	219.6	318.4	437.6	545.8
Gross profit	59.2	101.9	149.4	189.3
Net profit	(14.2)	13.4	30.9	48.2
EPS (cents)	(0.2)	0.2	0.4	0.6
P/E (x)	(12.8)	13.6	5.9	3.8

Source: Company, PSR

VALUATION METHOD

DCF (WACC: 19.4%; Terminal g: 1%)

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Company Background

Listed via reverse takeover in 2016, Zixin Group is a Chinese sweet potato-focused operator with a presence across the entire value chain, from cultivation to processed food production and R&D (e.g., fermentation solutions). Revenue drivers include fresh sweet potato sales (18% of FY24 revenue) and processed snack products under its house and OEM brands (82%). Total volume was 31,506 tonnes in FY24 (+63.5% YoY), recovering from COVID-related impacts. The production base is located in Liancheng County, Fujian Province, China.

Investment Highlights

- **Growing supply of sweet potatoes.** Zixin primarily serves B2B clients, including national brands like Three Squirrels for processed products and supermarkets for fresh products. Extreme weather in China's major sweet potato-producing provinces disrupted supply in 2024. The government is supporting the industry to boost food security by allocating land and offering rental-free periods, cold storage, etc. As a result, we expect Zixin's fresh sweet potato sales volume to double due to introduction of cold storage and cold chains to reduce spoilage, and higher selling prices to offset supply shortfalls. Production capacity for processed products will double by FY25e, with plans to expand into high-margin functional products. We expect gross margins to improve by c. 2% YoY to 34%.
- **New revenue from bio-products.** Zixin is expanding its revenue stream by converting agricultural waste, like stems and leaves into raw materials for animal feed. As China aims to reduce soymeal content in feed from 14.5% to 13% by 2025, soybean demand dropped by 9.1mt in 2023, with sweet potatoes as a key substitute. Zixin, one of China's larger producers, manufactures this feed at scale with a proprietary probiotic formula that reduces hormone use. With animal feed consumption at 476mt in 2023, we expect c.RMB 0.9mn in revenue from this segment in 4Q FY25e and around RMB 10mn in FY26e.
- **Participation in government rural revitalization projects.** Zixin is expanding its industrial network by participating in government projects in Hainan and Henan provinces. Partnering with CITIC Construction, Zixin will replicate its biotech-focused sweet potato industrial value chain in Lingao County, Hainan Province, as part of the rural revitalization project. We expect production to more than double upon completion.

Revenue and Business Model

Zixin generates revenue through the sales of fresh sweet potatoes and sweet potato processed products. Riding on China’s gradual economic recovery and a better harvest in 2H24, Zixin Group’s revenue grew by RMB 96.4mn, or 92.0% YoY, to RMB 201.3mn in 2H FY2024. Stronger sales from both processed sweet potato products and fresh sweet potatoes drove full-year revenue up by 45% YoY to RMB 318.4mn in FY2024.

Zixin adopts an asset-light approach by outsourcing various parts of the supply chain to third parties, paying either variable or fixed fees, such as sweet potato cultivation on contracted farmland to sweet potato farmers. The company is shifting its focus to biotech-oriented services, such as R&D of sweet potato seedlings and soil improvement to improve quality and crop yield, as well as nutrition-related functional products with higher margins.

Major customers of Zixin are B2B customers for both fresh sweet potatoes and processed sweet potato products as Zixin focus on delivering consistent quality and quantity at the upstream cultivation and food production segments of the value chain.

Fresh sweet potatoes business model: Zixin leased 200,001m² of land for cultivation of its own sweet potato seedlings, and provides the seedlings to the agricultural producers' cooperatives for planting and sale. The company entrusts 5,512,427m² of contracted farmland to the cooperatives for sweet potato planting, providing seedlings and cultivation techniques free of charge to the farmers, in return, the farmers sell the sweet potato crop to Zixin at the agreed price (relatively lower as compared to the market) as part of its strategy to have a stable supply of quality sweet potatoes. Local government in Liancheng County also support Zixin by providing standard buildings for cold storage warehouses and fermentation plant with a rent-free period to the third party operators. Zixin collaborates with these third parties who invest and operate those facilities to support the supply chain. These outsourced services include washing and sorting, cold storage and packing, and logistics and distribution, to achieve cost efficiency. Fresh sweet potato varieties that are best consumed with minimal processing, will be primarily supplied to supermarkets, with some e-commerce sales to individual customers. These quality sweet potato varieties will be sold as fresh produce at premium prices. With the introduction of cold storage, prices remain resilient even amid intensified competition, as the company can store sweet potatoes for longer periods to meet off-season demand. In FY24, revenue from fresh sweet potato sales accounted for 18% of total revenue.

Processed sweet potatoes: Zixin uses different variety of fresh sweet potatoes as raw material for processed snack products and outsources lower-margin processed products to third parties. Zixin currently offers c.200 SKUs of sweet potato-related snack products. These products mainly follow an OEM model, where they are produced by Zixin but rebranded and sold by other companies, including leading Chinese brands such as Three Squirrels and Oriental Selection. Zixin is ramping up R&D programmes focused on developing higher-margin products. This includes using its proprietary extraction technology to recover nutritional content from purple sweet potato peels to produce functional products such as the purple sweet potato powder. In FY24, revenue from processed sweet potatoes accounted for 82% of total revenue, with approximately 14,537 tonnes sold, which is 56% of the amount sold for fresh sweet potatoes.

Animal feed: expected to generate revenue by the end of FY25e. Zixin’s agricultural waste treatment R&D focuses on utilising its unique probiotic fermentation formulation as a medium to ferment agricultural waste, such as spoiled sweet potatoes, peels, stems, and leaves, which will then be processed into raw ingredients that can potentially be used in poultry and animal feed.

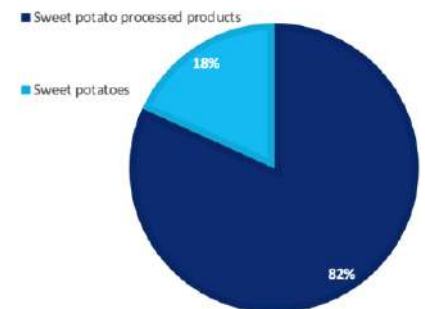
We expect a compound annual growth rate (CAGR) for revenue growth to be 25% for the next 2 years, primarily driven by increased sales volumes of both fresh and processed sweet potatoes. Fresh sweet potato sales are projected to double due to the introduction of cold storage technology, which will reduce spoilage and address supply shortages caused by extreme weather events, such as flooding in China. However, with the expected increase in sales volume, the average selling price may decrease by c.21% YoY to attract customers. Overall, we forecast a sales uplift of around 70% YoY in FY25e.

Figure 1: Zixin asset light value chain



Source: Company, PSR

Figure 2: Revenue breakdown in FY24



Source: Company, PSR

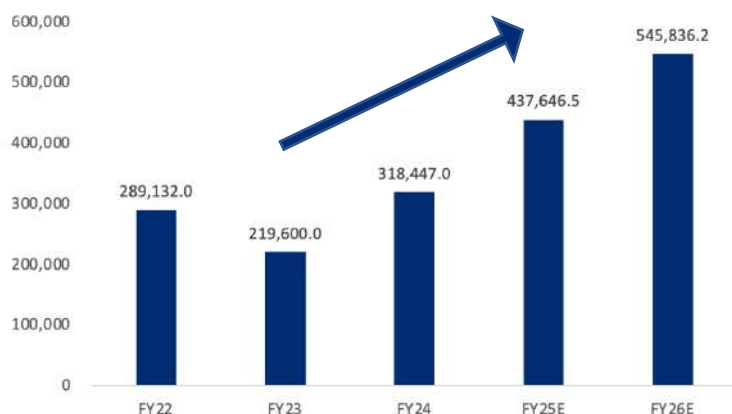
Near term Growth drivers:

⇒ **Fresh sweet potatoes:** Sales volume is expected to double in FY25e, with the average selling price declining marginally to encourage sales.

For processed sweet potatoes, we expect sales to follow suit, as Zixin is likely to secure contracts with downstream companies and installed production capacity is set to double from FY25e onwards. Additionally, the introduction of higher-value products, such as vacuum-packed steamed sweet potatoes, is expected to drive an increase in the average selling price. We project processed sweet potato sales to grow by c. 30% YoY in FY25e.

Furthermore, the animal feed segment will begin contributing revenue from 4Q FY25, with an estimated RMB 0.9mn in FY25e and c. RMB 10mn in FY26e. Overall, we forecast revenue to grow by 37% YoY to reach RMB 437.6mn in FY25e.

Figure 3: Revenue continue to be on the upward trajectory



Source: Company, PSR

Expense

Operating costs consist of the cost of sales, marketing and distribution expenses, and other expenses, but exclude employee wages and benefits. Cost of sales refers to the cost of purchasing sweet potato from farmers which is below the market price. Upfront payments are made every five years and are used to offset purchases during that period. If the payments are fully utilised within the five years, further purchases are paid as per the contract terms.

In FY24, marketing and distribution costs decreased by 3.2% YoY to 10.8% of total sales. However, we expect marketing expenses to increase from FY25e onwards to c.12% as customers still need education on the healthy snacking field, and Zixin will require greater product awareness to capture market share and differentiate itself in the intensifying competition.

With Zixin looking to partner with a third-party smart logistics network operator, future reductions in delivery costs will offset increases in marketing costs. This smart logistics network company will handle all deliveries for Zixin, which currently lacks an exclusive third-party logistics provider, thereby ensuring timely and quality deliveries to customers.

Gross margins

We view fresh sweet potatoes as a commodity, where prices typically decline with increased supply during harvest season. However, with the implementation of cold storage technology and smart warehousing, Zixin can extend the shelf life of fresh sweet potatoes, allowing them to sell during the off-season at higher prices. As a result, we expect fresh sweet potato margins to improve by c.2 percentage points (ppt) YoY in FY25e, reaching 34%.

Although margins for both processed and fresh sweet potatoes remain low at around 25%, the sale of seedlings, which has the highest margin at c.40%, is categorized under other revenue and supports the overall group margin.

A new revenue stream will commence from 4Q FY25, with initial margins for animal feed expected to align with the market rate (~20%) to support market penetration. We expect margins will gradually improve as economies of scale are realised. Additionally, margins are

⇒ **Processed sweet potatoes:**
Sales are anticipated to increase by 30% with the introduction of cold storage facilities to reduce spoilage and extend shelf life, with potential B2B contracts to be secured.

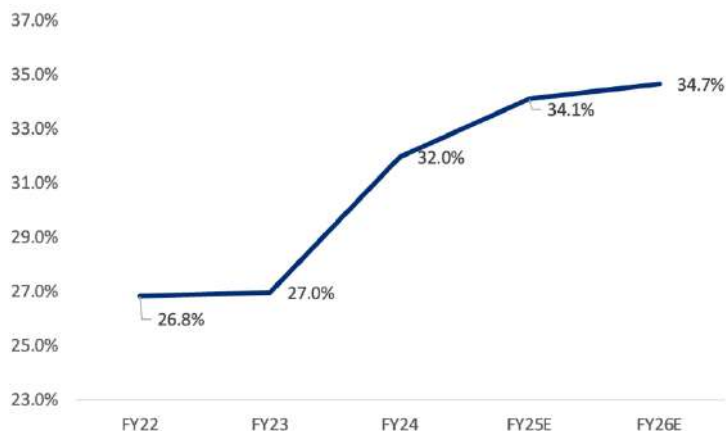
Mid-term Growth drivers:
⇒ Production capacity for processed sweet potato products is expected to double in FY26 with the new high-tech manufacturing facility in place to produce high-margin processed and functional food products from 2H FY25.

Long term growth drivers:
⇒ The Hainan project with CITIC Construction. Zixin is selected as the agriculture partner to establish Hainan's sweet potato industrial value chain. We estimate productivity to increase upon completion.

⇒ Revenue from animal feed will start from 4Q FY25 onwards, but is expected to be small compared to the contribution from processed and fresh sweet potatoes. We expect mass production only after the completion of the Hainan project.

expected to continue improving with the gradual introduction of higher-margin functional products in the processed products category from 2H FY25e onwards.

Figure 4: Gross margins improve due to improved cold storage and economies of scale



Source: Company, PSR

Balance Sheet

Assets: As of Mar 24, the total assets amounted to RMB 612mn, reflecting a 4.4% YoY increment compared to Mar 23, as a result of increasing PP&E and Trade and other receivables. The Group's cash balance on Mar 24 was RMB 156mn which decreased by 24% YoY due to the increasing upfront payment. The Group has made upfront payments to secure right-of-use agreements ranging from 2 to 15 years for its production needs. These ROU assets, related to leasehold buildings, are recorded under property, plant, and equipment and PP&E increased by 24% YoY. The Group entered into long-term contracts with suppliers to secure quality raw sweet potatoes at reasonable prices and the upfront payment is classified under other assets.

Liabilities: As of Mar 24, Zixin's total liabilities amounted to RMB 98.9mn, reflecting a 13% YoY increase. This rise was primarily driven by a 136% YoY increase in non-current other payables to RMB 6.5mn and a 24% YoY increase in bank loans to RMB 58.5mn. Trade and other payables decreased by c.15% YoY to RMB 31.4mn despite improved income.

Equity: As of Mar 24, equity reached RMB 514mn, indicating a 1.3% YoY increase, driven by improving retained earnings, which grew to RMB 48.18mn (+4.4% YoY).

Cash Flow

Zixin's cash position has significantly improved from FY22 to FY24, largely due to other assets serving as upfront payments for sweet potato suppliers. The company has maintained cash discipline in preparation for its expansion strategy. Operating cash flow has remained positive since FY21, except in FY22 when the impact of COVID-19 on sweet potato production resulted in a net cash flow loss from operations. As of Mar 24, Zixin generated positive operating cash flows of RMB 66.3mn, reflecting a 29% YoY improvement. However, the cash position declined by 24% YoY due to a RMB 75mn upfront payment.

Industry

Asia leads the world in sweet potato production, accounting for 86%, with China alone producing 80%. India, Bangladesh, Vietnam, Indonesia, the Philippines, and various Pacific Islands also rely heavily on sweet potatoes. In South Asia, while sweet potatoes are a dietary staple, they are also used for livestock feed and processing.

China is the largest sweet potato cultivator globally, with c.6.6mn hectares dedicated to its cultivation, representing 70% of the total global sweet potato farming area. The country produces around 100mn metric tons of sweet potatoes, accounting for 84.4% of the world's total output. There are 58 enterprises engaged in the processing and sale of sweet potatoes in Liancheng County, Fujian Province, with dried sweet potato processed products from the county representing more than 80% of China's market share. In the previous year, the total output value of Liancheng's sweet potato industry reached RMB 14.5bn.

The local government established a sweet potato industrial park in 2009 to advance the standardised, large-scale, and branded growth of the sweet potato processing sector. This park offers various services such as e-commerce support, logistics, and sewage treatment. The county has since developed over 160 sweet potato products across 10 categories, including snacks, pet food, beverages, and cosmetics.

Fresh sweet potatoes can replace approximately half of the grain typically fed to cattle. Wet sweet potatoes or dried sweet potato meal can also be included in cattle feed, making up around 20 to 25 % of the diet on a dry matter basis. Additionally, sweet potatoes and their processing byproducts can be ensiled for use as cattle feed. Sweet potato roots are primarily an energy source due to their high moisture content, approximately 80%. On a dry matter basis, they contain 8 % crude protein, 6.5 % acid detergent fiber, and 25 % neutral detergent fiber.

The Asia Pacific animal feed market is projected to grow from US\$174.150bn in 2024 to US\$233.974bn by 2029, reflecting a compound annual growth rate (CAGR) of 6.08%.

China's agriculture ministry has forecasted a reduction in soybean demand for animal feed by 9.1 mn tonnes in 2023, driven by the country's initiatives to reduce and replace soymeal in feed, enhancing feed security. We expect that sweet potatoes will serve as a key substitute for the reduced soymeal usage.

In 2023, China's total animal feed consumption reached 4,761mn tonnes. The proportion of soymeal used in feed is estimated to decrease by 1.5 %age points compared to the previous year. As a result, the demand for soybeans used in animal feed is projected to decline by 9.1mn tonnes. We expect that sweet potato probiotic-infused feed ingredients will serve as a key substitute for the reduced soymeal usage.

FY24 profit jumped 72%YoY

In FY24, the company achieved revenue of RMB 318.4mn and net profit of RMB 13.4mn, representing YoY growth of 45% and 72%, respectively. The growth was primarily driven by 2H24, where production and sales volumes of fresh and processed sweet potato products increased, supported by China's gradual post-Covid economic recovery. Sales volume rose by 64% to 31,506 tonnes in FY24. Meanwhile, margins improved by 5% YoY to 32%, aided by economies of scale and the introduction of cold storage facilities that extended shelf life, further enhancing margins. Marketing and distribution costs increased by 11.7% YoY to RMB 34.4mn, mainly due to higher delivery charges, publicity expenses, and operating costs, partially offset by reduced advertising expenses.

Risks

Income risk: Zixin operates in a volatile business where weather and other external factors have a significant impact on production. Adverse weather conditions, such as droughts or excessive rainfall, can disrupt crop yields, resulting in supply shortages or surpluses. This causes price fluctuations.

Currency conversion risk: The group does not distribute dividends at this time, as it is still in a phase of rapid growth and requires more capital to invest in its operations to enhance financial performance. If a dividend policy is implemented, the dividend will be subject to the currency conversion rate between RMB and SGD, since the group generates profit in RMB and will need to convert it to SGD for distribution.

Political risk: Favorable subsidies and government support, a key catalyst for Zixin, are susceptible to changes in government or shifts in policy direction. This could negatively impact revenue if the government redirects its economic focus or increase production costs in the absence of subsidies.

Geopolitical risk: Zixin is expanding overseas, focusing on entering the Southeast Asian (SEA) market as a strategic pivot point. However, with escalating trade tensions, many countries are imposing tariffs on Chinese exports, which is likely to increase the cost of goods sold.

Valuation

We initiate coverage on Zixin Group with a BUY rating and a TP of S\$0.050. Our valuation is based on a DCF model, applying a weighted average cost of capital (WACC) of 19.4%, given that the group is funded by 77% equity, and assuming a 1% terminal growth rate. We believe the group is well-positioned to leverage improved technology to increase sales volume and enhance margins through the introduction of additional revenue streams. We expect broad-based profit growth across its business segments, with profit projected to surge by 131% YoY to RMB 30.9mn in FY25e.

Figure 5: Valuation table

	RMB('000)	% of total
NPV FY25-29F	195,111.2	58.6%
PV Terminal value	137,970.4	41.4%
	333,081.6	
Cash	156,151.3	
Debt	58,500.0	
Equity value	430,732.9	
No of shares ('000)	1,589,299.9	
DCF value per share	0.27	
Exchange rate	5.46	
DCF value per share in SGD	0.050	

Source: Company, PSR

Appendix 1: Our visit to the farm on 12th Sept 2024

Figure 6: Liancheng County, Sweet potato cultivation farmland



Source: Company, PSR

Figure 7: Sweet potato seedlings greenhouse



Source: Company, PSR

Figure 8: Government built cold storage warehouse



Source: Company, PSR

Figure 9: Inside the fresh sweet potatoes warehouse facility



Source: Company, PSR

Figure 10: New high-tech facility for processed sweet potatoes



Source: Company, PSR

Figure 11: Equipment installed at the high-tech facility



Source: Company, PSR

Figure 12: Sweet potato product R&D



Source: Company, PSR

Figure 13: Sweet potato industry R&D Centre



Source: Company, PSR

Figure 14: Packaging



Source: Company, PSR

Figure 15: Cold storage of fresh sweet potatoes



Source: Company, PSR

Figure 16: Washing of harvested fresh sweet potatoes



Source: Company, PSR

Figure 17: Processed sweet potato products



Source: Company, PSR

Figure 18: Packaging of processed sweet potato products



Source: Company, PSR

Figure 19: Livestreaming studio



Source: Company, PSR

Figure 20: Different types of sweet potato



Source: Company, PSR

Figure 21: Drying for processed sweet potatoes



Source: Company, PSR

Figure 22: High margin functional products: health supplements

Figure 23: High margin functional products: beauty



Source: Company, PSR

Source: Company, PSR

Figure 24: Beverages – new products such as sweet potato bubble tea, sweet potato juice, and sweet potato wine



Source: Company, PSR

Figure 25: Experiential centre



Source: Company, PSR

Financials

Income Statement

Y/E Mar, (RMB'000)	FY22	FY23	FY24	FY25e	FY26e
Revenue	289,132	219,600	318,447	437,646	545,836
Processed sweet potato	235,551	187,477	260,348	337,990	429,751
Fresh sweet potato	53,581	32,123	58,099	98,756	106,083
COGS	(211,521)	(160,381)	(216,576)	(288,265)	(356,546)
Gross profit	77,611	59,219	101,871	149,381	189,291
Other income	459	632	974	1,665	4,039
Finance cost	(1,465)	(1,869)	(2,323)	(2,925)	(3,070)
Profit before income tax	5,911	(9,428)	21,465	39,769	58,434
Income tax expense	(2,259)	(4,762)	(8,111)	(8,830)	(10,186)
Profit for the year, net of tax	3,652	(14,190)	13,354	30,939	48,248

Per unit data

Y/E Mar	FY22	FY23	FY24	FY25e	FY26e
NAV (\$\$)	0.3	0.3	0.3	0.3	0.4
P/B	0.4	0.4	0.4	0.3	0.3
P/E	49.9	-12.8	13.6	5.9	3.8
EPS (cents)	0.0	-0.2	0.2	0.4	0.6

Cash Flow

Y/E Mar, (RMB'000)	FY22	FY23	FY24	FY25e	FY26e
CFO					
Total return before tax	5,911	(9,428)	21,465	39,769	58,434
Depreciation	17,138	15,177	15,518	23,497	21,456
WC changes	25,334	10,174	45,537	69,675	86,296
Tax paid and interest received	0	(924)	(4,340)	(8,830)	(10,186)
Cash generated from ops	(36,961)	51,335	66,272	51,576	67,658

CFI

CAPEX	(20,756)	(33,044)	(49,335)	(10,000)	(5,000)
Cashflow from investments	(19,288)	(52,616)	(124,508)	(10,500)	(5,500)

CFF

Proceeds from borrowing	35,800	64,600	(186)	11,500	0
Repayments of bank loans	(33,300)	(53,300)	(47,100)	(301)	0
Interest Paid	(1,450)	(1,869)	(2,323)	(2,925)	(3,070)
Cashflow from financing	57,368	9,271	8,891	8,274	(3,070)

Net change in cash	1,119	7,990	(49,345)	49,350	59,088
Cash at the start of the period	196,387	197,506	205,496	156,151	205,501
Ending cash	197,506	205,496	156,151	205,501	264,589

Source: Company, Phillip Securities Research (Singapore) Estimates

Balance Sheet

Y/E Mar, (RMB'000)	FY22	FY23	FY24	FY25e	FY26e
ASSETS					
Cash and short term deposit	197,506	205,496	156,151	205,501	264,589
Trade and other receivables	41,177	21,945	53,789	73,923	92,197
Other assets	69,838	56,225	62,871	62,871	62,871
Total current assets	310,960	285,629	275,463	345,825	424,023
PP&E	128,327	142,228	175,744	162,548	146,092
Intangible assets	37,068	75,284	69,442	66,457	63,622
Total non-current assets	257,668	301,647	337,365	321,185	301,893
Total Assets	568,628	587,276	612,828	667,010	725,916
LIABILITIES					
Trade and other payables	18,534	37,071	31,372	43,115	53,773
Lease liability, current	35,800	198	225	225	225
Bank loans	0	47,100	58,500	70,000	70,000
Total current liabilities	54,623	84,369	92,397	115,640	126,298
Lease liability, non-current	0	246	33	33	33
Other payables	0	2,740	6,466	6,466	6,466
Total non-current liabilities	0	2,986	6,499	6,499	6,499
Total Liabilities	54,623	87,355	98,896	122,139	132,797
Total Liabilities & Equity	568,628	587,276	612,828	667,010	725,916
Net assets	514,005	499,921	513,932	544,871	593,119

Margins

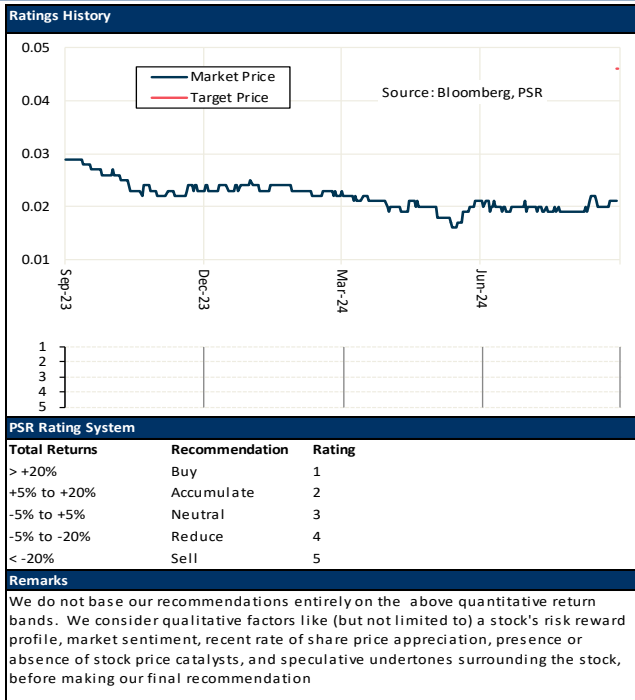
Y/E Mar, (%)	FY22	FY23	FY24	FY25e	FY26e
Gross profit margin	26.8%	27.0%	32.0%	34.1%	34.7%
Net profit margin	1.3%	-6.5%	4.2%	7.1%	8.8%

Growth rate (%)

Revenue		-24.0%	45.0%	37.4%	24.7%
Gross profit		-23.7%	72.0%	46.6%	26.7%
Net profit		-488.5%	194.1%	131.7%	55.9%

Key Ratios

ROA	0.7%	-2.8%	2.5%	5.4%	16.3%
ROE	0.8%	-2.8%	2.6%	5.8%	8.5%



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