

Macnica Holdings (3132)

Top semiconductor trading firm aiming higher with expansion of CPS Solutions and Network business

1 August 2024

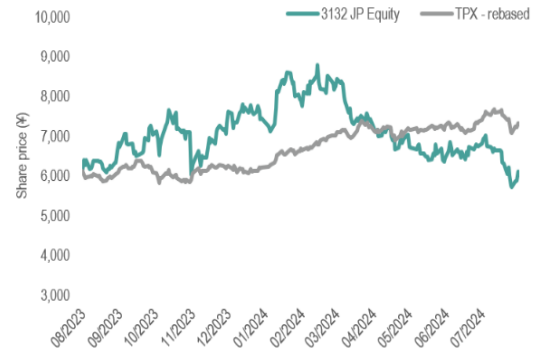
Initiating coverage

- Market leader with demand creation capabilities** – Macnica Holdings is an independent trading company specializing in semiconductors and network-related products in Japan. Its domestic market share expanded from 12.8% in CY2021 to 22.0% in CY2023 due to the acquisition of large trading mandates. ROE already exceeded the medium-term target of 15%, reaching 22.2% in FY3/23 and maintaining 21.6% in FY3/24, reflecting substantial profitability improvement and enhanced total shareholder payout. What sets the company apart is a consultative sales approach and demand creation undertaken by FAE (Field Application Engineers) with extensive expertise, technical skills, and strong negotiation abilities, as well as product-dedicated sales representatives with similar qualifications, which led to higher margins than domestic peers.

Positive sales mix change is key

- Margins to remain high** – OP margin is expected to remain high with resilience in the semiconductor business and a margin recovery for Network. Despite a slowdown in the semiconductor market, we believe Macnica will be able to maintain margins higher than historical levels with improving sales mix. We think Network will see margin expansion with a recovery from a negative impact from acute Yen depreciation and recent one-off investment in the near term. We believe the company's efforts to expand the CPS Solutions business will lead to a positive sales mix change and higher consolidated OP margins in the long term.
- ESG** – we score the company as 'Amber' under our Astris-Sustainability model scorecard, scoring relatively highly in the 'Social' category.
- Valuations** – on our earnings estimates, the shares are trading on FY3/25 PER 8.4, FCF yield of 12.4%, and a total shareholder yield of 3.5%. The PBR of 1.2x is at a premium to domestic peers, which reflects expectations of continuously high profitability and structural growth. We believe there is room for further multiple expansion.

Share price: ¥5,920 Market cap: ¥360.3bn



Source: Bloomberg

Price Performance

	YTD	1M	3M	12M
Abs (%)	-20.4	-13.0	-11.9	-3.4
Rel (%)	-30.3	-9.1	-11.1	-16.5

Company sector

Electronic Parts Distribution
Electronic Equipment, Instruments (GICS)

Stock data

Price (¥)	5,920
Mkt cap (¥bn)	360.3
Mkt cap (\$m)	2,400.4
52-week range (¥)	5,571-8,891
Shares O/S (m)	60.9
Average daily value (\$m)	24.3
Free float (%)	75.2
Foreign shareholding (%)	28.4
Ticker	3132
Exchange	Tokyo Prime
Net Debt/Equity (x)	0.1
FFO leverage (x)	0.7
BBG BUY HOLD SELL	1 0 0

Source: Bloomberg

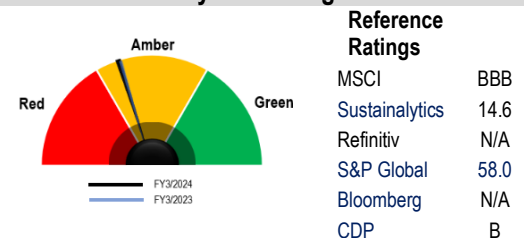
Year-end	9/23	3/24	3/25E	3/26E	3/27E
Sales (¥bn)	1,029.26	1,028.72	1,100.42	1,193.87	1,295.45
OP (¥bn)	61.65	63.73	64.69	71.92	82.86
NI (¥bn)	41.03	48.07	42.89	48.50	55.94
EPS (¥)	664.89	794.63	708.97	818.19	962.86
DPS (¥)	140.00	200.00	210.00	220.00	260.00
Sales growth YoY (%)	+35.1	-0.1	+7.0	+8.5	+8.5
OP growth YoY (%)	+67.9	+3.4	+1.5	+11.2	+15.2
NP growth YoY (%)	+59.0	+17.2	-10.8	+13.1	+15.3
EPS growth YoY (%)	+60.3	+19.5	-10.8	+15.4	+17.7
PER (x)	8.9	7.5	8.4	7.2	6.1
EV/EBITDA (x)	2.5	2.4	2.4	2.1	1.9
EV/Sales (x)	0.2	0.2	0.1	0.1	0.1
PBR (x)	1.8	1.5	1.2	1.1	0.9
ROE (%)	22.2	21.6	16.0	15.3	15.0
ROCE (%)	28.2	24.4	21.0	19.9	19.6
FCF yield (%)	10.2	10.5	12.4	15.0	15.4
Dividend yield (%)	2.4	3.4	3.5	3.7	4.4
Total shareholder yield (%)	4.0	4.8	3.5	4.8	6.1

Source: Company, Astris Advisory (estimates)

Business Overview

Macnica is a trading company specializing in semiconductors and network-related products with over a 50-year successful track record with more than 24,500 customers and 310 suppliers globally.

Astris-Sustainability ESG rating



Next events

Q1 FY3/25 results July 2024

Tel: +81 3 6868 8797

Email: Corporateresearch@astrisadvisory.com

This report has been commissioned and paid for by the company

Contents

Summary..... 3

Company description 5

Business model..... 16

Peer group analysis 20

Balance sheet 25

Capital allocation..... 26

Recent results 28

Astris earnings estimates and key assumptions 31

Company information 32

Astris Quant Sheet..... 36

Astris-Sustainability ESG assessment 39

Areas of discussion 41



Summary

A trading company specializing in semiconductors, electronic devices and network-related products

Competitive strengths in consultative selling and demand creation

Network offers highly value-added products among which cybersecurity is a rapidly growing business

Macnica is a trading company specializing in semiconductors, electronic devices, and network-related products with a global reach of 26 countries and regions. The company procures products primarily in the US, followed by Germany and Japan. Its semiconductor distribution market share in Japan was 22.0% in FY3/24. As the market leader, Macnica covers most of the top-tier global semiconductor manufacturers. As of FY3/24, more than 70% of semiconductor sales were attributed to the automotive and industrial equipment applications. **The company's strength lies in its consulting-based sales approach, handled by engineers who make up one-third of its workforce. Additionally, the company is highly valued by suppliers for its expertise in overseas business, proficiency in technical PR, and ability to create demand.** In the network business, the company provides services such as cybersecurity, applications, and big data both domestically and internationally. It creates high value by introducing advanced solutions to the market, with the core area of cybersecurity experiencing high market growth rates.

The company has a strong balance sheet with limited net debt. Going forward, in addition to the core Semiconductors and Network divisions, the company will invest more in the CPS Solutions business, which has high profit margins and is a growing market, with an ambition to turn it into the third segment after the two core businesses.

The company has embarked on a medium-term strategy (FY3/23- FY3/25) based on the following (all increases are compared to FY3/22):

- **Sales: ¥1,100bn (vs. ¥761.8bn, CAGR c. +13%)**
- **Operating income: ¥64bn (vs. ¥36.7bn, CAGR c. +20%)**
- **ROE: 15% or higher (vs. 16.5%)**

Structural demand for semiconductors will provide long-term structural growth

Astris Advisory estimates that Macnica will drive medium-term growth via the following factors:

- **Expansion of industrial and automotive** – Supported by government subsidies in various countries, the demand for semiconductor manufacturing equipment will expand. Additionally, the semiconductor business will structurally grow due to a combination of factors such as the push towards carbon neutrality, the development of solar power, energy storage, wind power, electric vehicles, and the construction of data centers.
- **Profit growth for Network** – Profit growth and margins will improve through the promotion of high-value-added products.
- **Growth of the high-profit CPS Solutions business** – As the high-margin CPS Solutions grows into the third segment, the overall business mix will improve.

Network and CPS Solutions will be key for profit expansion

The company is preparing the next medium-term plan which is expected to be released in May 2025.

We believe the company will continue to improve growth and profitability beyond the medium term through the following:



- **Organic growth of Network will lead to a positive product mix change and higher margins**
- **Expansion of CPS Solutions**
- **Long-term growth of the semiconductor business, centered on automotive and industrial equipment, driven by structural demand expansion**



Company description

Overview

Extensive partnerships with more than 24,500 customers and 310 suppliers

Macnica is a specialized trading company that distributes semiconductors, electronic devices, and network-related products primarily in Japan and overseas markets including China. Although Macnica was originally established as a distributor of electronic components in 1972, Macnica Fuji Electronics Holdings (remaned to Macnica Holdings in 2022) was formed in 2015 through a merger with Fuji Electronics. Its global reach covers 92 locations and 26 countries and regions with more than 24,500 customers and 310 suppliers (as of June 2024). The majority of suppliers are based in the US, followed by Germany and Japan. **Macnica is a market leader with a 22.0% market share in Japan** and 3.5% globally, placing it as the 5th largest semiconductor distributor in the overseas market (CY2023). Its end markets include industrial and automotive as larger revenue contributors followed by communication, computers, consumer products, and OA peripherals.

Growth of Network business which has higher margins than Semiconductor business will lead to a better sales mix

Although the semiconductor business has been the largest profit contributor, **Macnica aims for further profit expansion by focusing on the growth of the Network business.** Network business entails cybersecurity, application, and big data services offered to various sectors in Japan (66%) and overseas (34%). Although the profit margins of this business have been temporarily impacted by exchange rate fluctuations and extraordinary factors, its profitability remains significantly higher than that of the Semiconductor business. The Network business creates market opportunities in both domestic and expanding international markets by leveraging cutting-edge technologies from countries like the United States and Israel, where market recognition is still developing, and supports customers in utilizing these technologies to provide high added value. In particular, cybersecurity benefits from a high market growth rate due to new threats, advancements in technologies like cloud computing and IoT (Internet of Things), and strengthening regulatory requirements.

The CPS solutions business is characterized by high added value and significant entry barriers, which contributes to its high profit margins

As the third pillar following the Semiconductor and Network businesses, the company is expanding its CPS (Cyber-Physical System) Solutions business. This business focuses on providing platform solutions through consulting, covering a diverse range of sectors. The CPS solutions business leverages the extensive knowledge of Semiconductor and Network-related products accumulated over the years to deliver detailed and value-creating proposals. Unlike many major consulting firms that offer conceptual and surface-level solutions, the company differentiates itself by delving into specifics—determining which products to combine to meet the customer's needs. Additionally, being the market leader in domestic sales provides an advantage, as Macnica handles a large number of products, contributing to its broad expertise and high proposal capability. This scale of economy creates significant barriers to entry, making the CPS Solutions business both highly profitable and a driver for improving the overall business mix, similar to the Network business.



Timeline summary

Key dates	Details
1972	Established Japan MacNics Corporation in Higashihakuraku, Yokohama City, for the purpose of selling electronic components and other products
1977	Opened a Technical Service Center
1979	Entered the microcomputer business
1982	Started selling system products, such as microcomputer development support equipment
1983	Entered the Ethernet market
1992	Changed company name from Japan MacNics Corporation to Macnica Inc.
2000	Listed on the Second Section of the Tokyo Stock Exchange
2001	Designated to the First Section of the Tokyo Stock Exchange
2008	Cytech in Hong Kong joined the group (accelerating overseas expansion through M&A)
2015	Merged with Fuji Electronics Co., Ltd., establishing the joint holding company Macnica Fuji Electronics Holdings, Inc.
2017	Started autonomous vehicle business
2018	Developed the edge computing device "SENSPIDER"
2019	CPS Solutions business launched
2020	Restructured domestic semiconductor business, with Macnica Inc., a wholly owned subsidiary, absorbing Fuji Electronics Co., Ltd. in October
2022	Changed the company name to Macnica Holdings, Inc. in August to unify the group brand

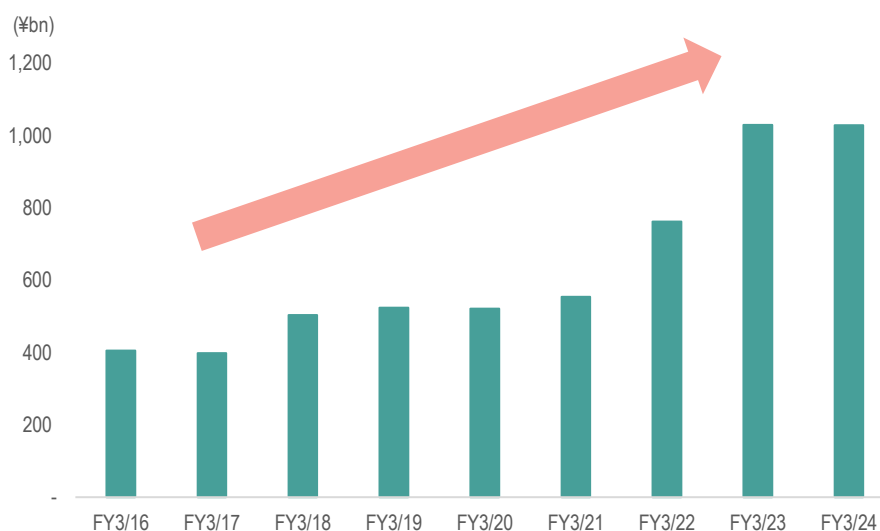
Source: Company

Sales trends

Sales have hit a record high in FY3/23. Recent growth has been driven by market share expansion. Following the acquisition of large-scale trade mandates from semiconductor manufacturers, including Renesas Electronics (6723), Macnica's market share improved from 12.8% in CY2021 to 22.0% in CY2023.

Sales grew strongly with market share expansion

Annual sales (¥bn)



Source: Company



Segment data

Macnica has two reporting segments as follows:

Segment details

Segment	Description	Core products	Key supplier
Semiconductors & electronic devices	Distributes a wide range of semiconductors used in various sectors including industrial, automotive, communication, and consumer.	PLD (Programmable Logic Device)	- Altera (US) - Lattice (US)
		ASIC (Application-Specific Integrated Circuits)	- Broadcom (US) - Renesas (Japan)
		ASSP (Application Specific Standard Products)	- Broadcom (US) - Analog Devices (US)
		Analog IC (Integrated Circuits)	- Analog Devices (US) - Texas Instruments (US)
		Memories	- Micro (US) - Winbond (Taiwan)
		Other standard logic IC	- Renesas (Japan) - Infineon (Germany)
		Electronic Devices	- Broadcom (US) - NVIDIA (US)
Network	Distributes network-related products in the form of software, hardware, and services.	- Cyber security - Application - Big data	- CROWDSTRIKE (US) - BOX (US)

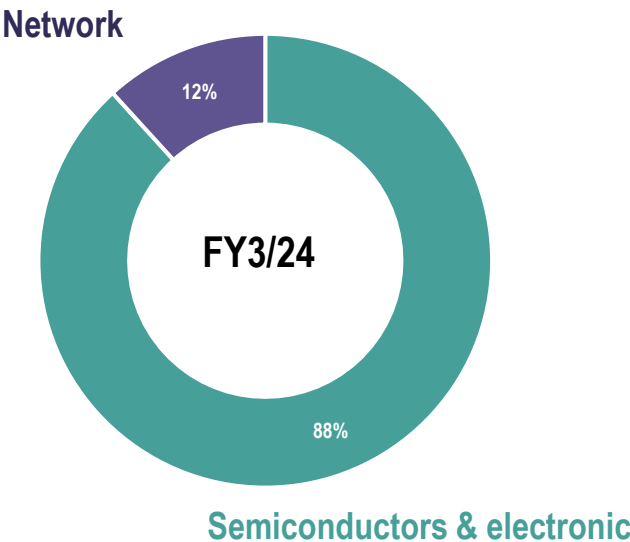
Source: Company

The sales split has changed with the notable growth of Network over the past decade to 12% of total sales in FY3/24 (7% in FY3/16). Although growth of Network has been consistently solid, its sales weight dipped temporarily in FY3/22-FY3/23 due to swings in Semiconductors. However, with the expected expansion of Network, we think the proportion of Semiconductors & Electronic Devices will diminish slightly over the coming years.



About 90% of sales come from semiconductors & electronic devices

Sales split by segment

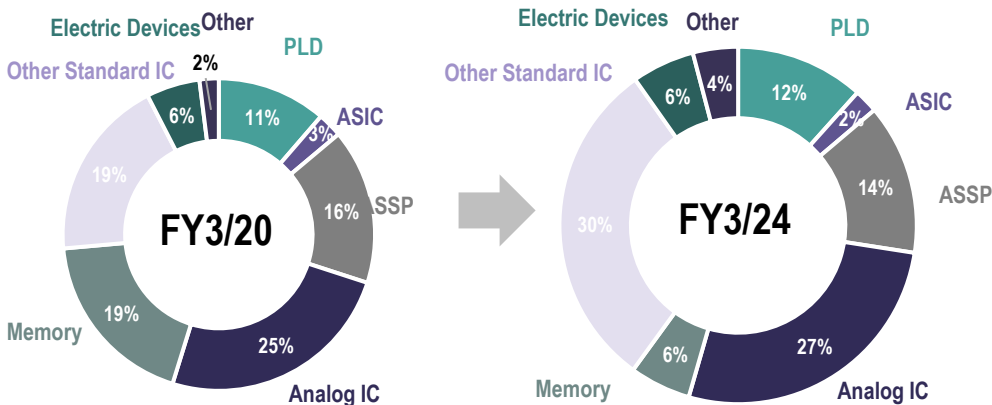


Source: Company

We note the sales mix within the Semiconductors& Electronic Devices segment has shifted with notable growth in Other (other standard logic IC) and Analog IC whilst Memory saw the largest drop.

Analog IC and other standard logic IC sales composition has grown over time

Semiconductors sales mix by Product – FY3/20 vs FY3/24

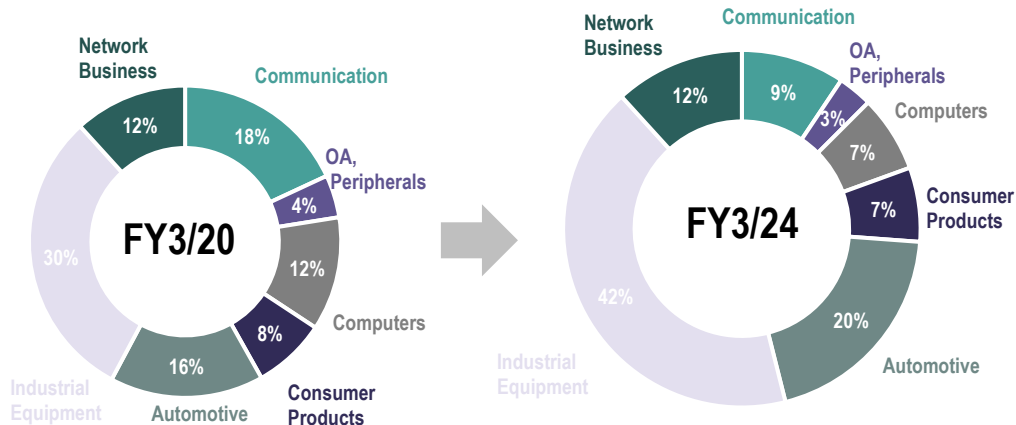


Source: Company



Automotive and Industrial Equipment combined account for more than 60% of sales

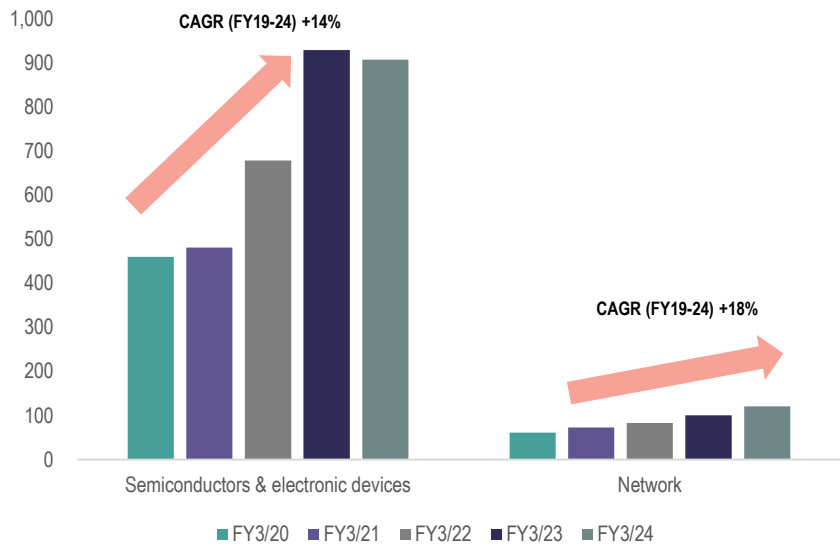
Sales mix by end market – FY3/20 vs FY3/24



Source: Company

Both Semiconductors & Electronic Devices and Network achieved double-digit CAGR

5-year Annual sales by Segment (¥bn)

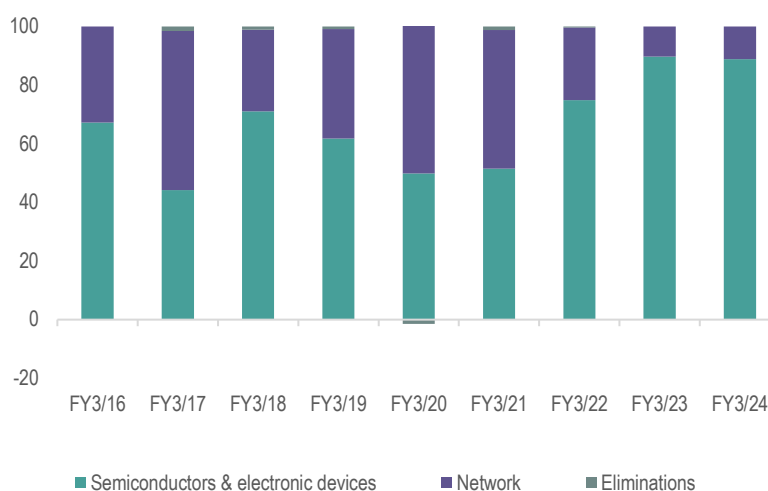


Source: Company



Semiconductors & Electronic Devices have increasingly become a key profit driver

Segment OP (% of total)



Source: Company

Trends in profitability

Overall, profitability improved significantly due to Semiconductor's strong performance. The following are the primary factors for the higher profitability:

- Positive sales mix change** – Sales for automotive and industrial uses are more profitable than others within Semiconductors. As of FY3/24, automotive and industrial combined made up 62% of total sales (vs. 42% in FY3/20), which led to higher OP margins for the Semiconductors & Electronic Devices segment. Among these, the industrial equipment application inherently has a higher profit margin. Generally, when customers are large corporations, suppliers often participate in the commercial flow and provide technical proposals themselves, leaving less room for agents like Macnica to create demand and add value. In contrast, for small and medium-sized enterprise (SME) customers, individual projects are smaller and more numerous, making them more complex. As a result, suppliers are less likely to engage in technical PR, often leaving this to agents. Consequently, agents are expected to provide technical proposals and create demand, resulting in higher profit margins. In Macnica's case, approximately 70% of industrial equipment customers are SMEs (FY3/24), which allows the company to effectively create high added value and achieve higher profit margins
- Yen depreciation** – Weak Japanese Yen is generally a positive factor on the gross profit margin with Semiconductors being the beneficiary which accounts for about 90% of consolidated sales. The ability to pass on the effects of rising market prices and the fact that inventory procured at a time when the yen was stronger (compared to the current level of yen depreciation) was sold during the period of

Yen depreciation are the reasons behind this. Additionally, both the procurement and sales of semiconductor-related products are conducted mainly in U.S. dollars.

Whilst Semiconductor's margin improved in recent years, Network has experienced declining profitability since FY3/17 for the following reasons:

- **Negative product mix change** – Service formatting shifted away from hardware that comes with profitable maintenance services to software. Furthermore, even within software products, demand changed from perpetual licensing which normally requires maintenance services to be purchased separately, to periodic licensing in which maintenance services are bundled.
- **Higher HR costs** – Macnica is expanding its investment in human resources for the Network business, which has significant room for growth. However, the temporary reassignment of personnel from the Semiconductor business to the Network business has led to a temporary decline in profit margins. Nonetheless, as the utilization rate of network business personnel increases and their productivity improves, it is expected that profit margins will recover.
- **Acute Yen depreciation** – There is a time lag between pricing and order intake. As such, unlike the Semiconductor business, the margin was suppressed as acute Yen depreciation magnified the negative impact on profits.

In future, we believe the consolidated OP margin will remain steady based on the following assumptions:

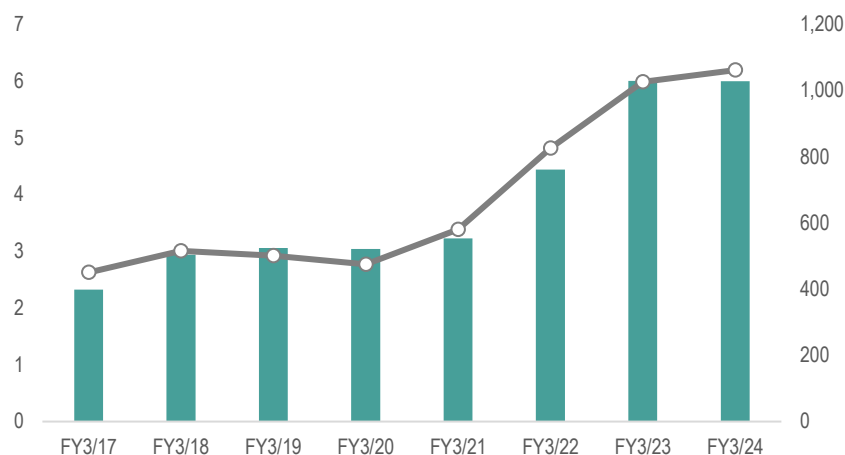
- The OP margin for Semiconductors & Electronic Devices will be normalized from the current level.
- The OP margin for Network will recover to historical levels, improving the overall sales mix.

Network margin is higher than Semiconductors & Electronic Devices. Therefore, we think these opposite trends will offset each other and maintain the current level of margins instead of bringing them back to historical levels.



Product mix change led to higher OP

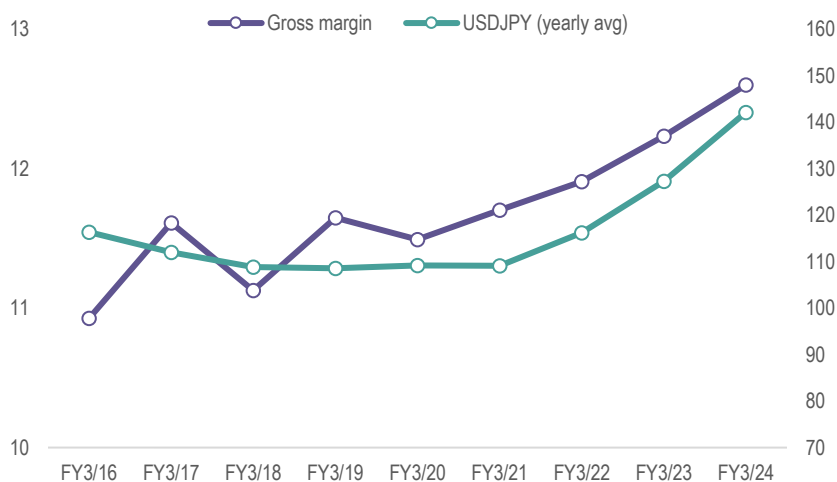
Annual OPM (% , LHS) and sales (¥bn, RHS)



Source: Company

Yen depreciation benefitted gross margins

Gross profit margin (% , LHS) and USDJPY (¥, RHS)

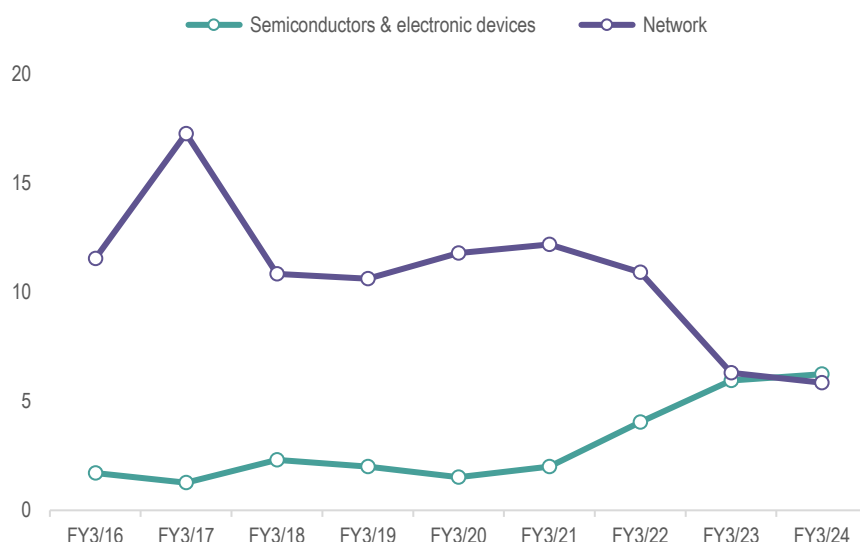


Source: Company



Semiconductors & electronics devices margins continued to improve but Network's profitability declined

Segment operating margins (%)



Source: Company

Overseas business

Revenue in China declined in FY3/24 because of weak economic activity. Combined with a ban on the distribution of Micron's products intended for use in the Chinese market reflecting a trade war between the US and China, the downturn led to a sharp revenue decline in Memory in FY3/24. As a result, Macnica's primary businesses are industrial and automotive with lower exposure to computers and communication infrastructures than in previous years when Memory used to have higher sales contribution. In response to those headwinds in China, Macnica is considering expansion in ASEAN and India to mitigate concentration risk.

Gross margins are lower overseas than in Japan due to the relatively high sales ratio of Memory, which has lower profit margins. To improve the gross profit margin of its overseas business, we believe it is necessary to increase the sales ratio of other non-memory products.

Despite the weakness in China, overseas revenue from other countries more than doubled since FY3/20 and now accounts for 25% of total revenue (vs. 21%). We believe ex-China revenue will remain on a positive trajectory, reflecting the company's strategic focus in Asia.

Whilst domestic semiconductor trading companies primarily generate overseas sales from Japanese firms based locally, Macnica has a relatively higher proportion of sales from local overseas companies. As of FY3/24, 21% of Semiconductors sales came from local overseas companies. This reflects the high international competitiveness of the products handled by the company in overseas markets.

Competitive landscape in China

Some of the key characteristics of the Chinese market are intensifying competition and increasingly large orders. As a recent phenomenon, local semiconductor manufacturers started expanding sales to Chinese manufacturers, setting a higher hurdle for global distributors such as Macnica. Electronics Manufacturing Service (EMS) involves large orders and leads to a higher trading amount. In terms of market share, large distributors such as WPG and WTMicro tend to have high market share. (However, it should be noted that some of the overseas customers' parent companies may be Japanese firms).

Key customers in overseas

Having a focus on Asia, key customers overseas are based in China and Taiwan.

Top 10 clients in China include:

- New H3C Information Technologies
- Contemporary Amperex Technology
- Hitachi Astemo Automotive Systems (Suzhou)
- Hitachi Astemo Automotive Powertrain Technologies (Dongguan)
- Faurecia Clarion Electronics (Donguan)
- UMC Electronics Hong Kong
- Yanfeng Visteon Automotive Electronics
- Canon Engineering Hong Kong
- Sumitronics (Hong Kong)

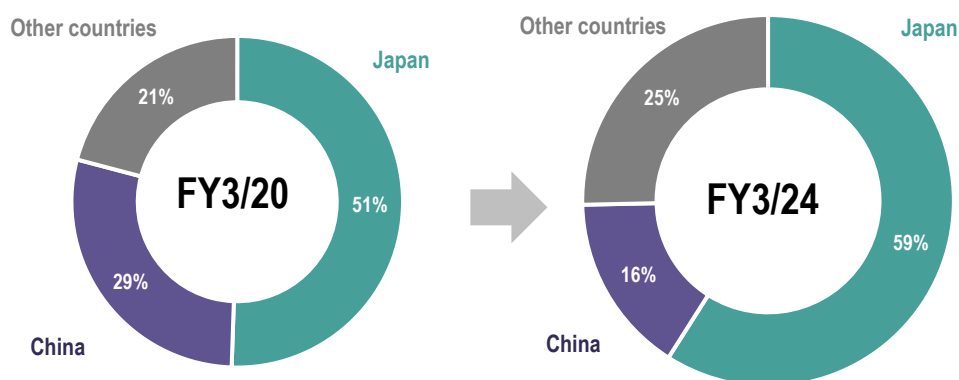
Top 5 clients in Taiwan include:

- Hong Fu Jin Precision Electrons (Yantai)
- Quanta Computer
- Tung Thin Electronic (Xiamen)
- Canon Inc Taiwan
- Accton Technology Corp



Revenues in Japan and Other countries expanded but China experienced a sharp revenue decline in FY3/24

Regional sales split (%)



Source: Company

Group companies

The core disclosed consolidated subsidiaries are below, highlighting the company's global network in Asia.

Consolidated group companies

Subsidiary	Country of domicile	Stake (%)	Business
MACNICA CYTECH LIMITED	Hongkong, China	100.0	Semiconductors& electronic devices, Network, Others
MACNICA CYTECH PTE. LTD.	Singapore	100.0	Semiconductors& electronic devices, Network, Others
MACNICA GALAXY INC.	Taiwan	67.6	Semiconductors& electronic devices, Network, Others
ANSWER TECHNOLOGY CO., LTD.	Taiwan	51.0	Semiconductors& electronic devices, Network, Others
MACNICA CHUNGJU CO., LTD.	Taiwan	100.0	Semiconductors& electronic devices, Network, Others
MACNICA CYTECH (THAILAND) CO., LTD.	Thailand	100.0	Semiconductors& electronic devices, Network, Others
NETPOLEON SOLUTIONS PTE LTD	Singapore	100.0	Network

Source: Company

Business model

Key concepts and unique selling points

Typically, trading firms drive revenue and earnings by the following means:

- Identify products (primarily basic materials) to import from overseas to Japan, aiming to scale and establish a high market share, investing in companies and infrastructure where necessary.
- Conduct portfolio management by divesting assets for capital gain.

Macnica's model has a different focus:

- **Comprehensive product lineup** – handles numerous products based on partnerships with almost all top-tier semiconductor manufacturers
- **Consultative approach** – instead of simply relying on pull-type demand, take a push-type approach and engage in demand creation by themselves
- **Overseas expansion** – distribute products in the overseas market by leveraging product competitiveness

Independence leads to higher profitability

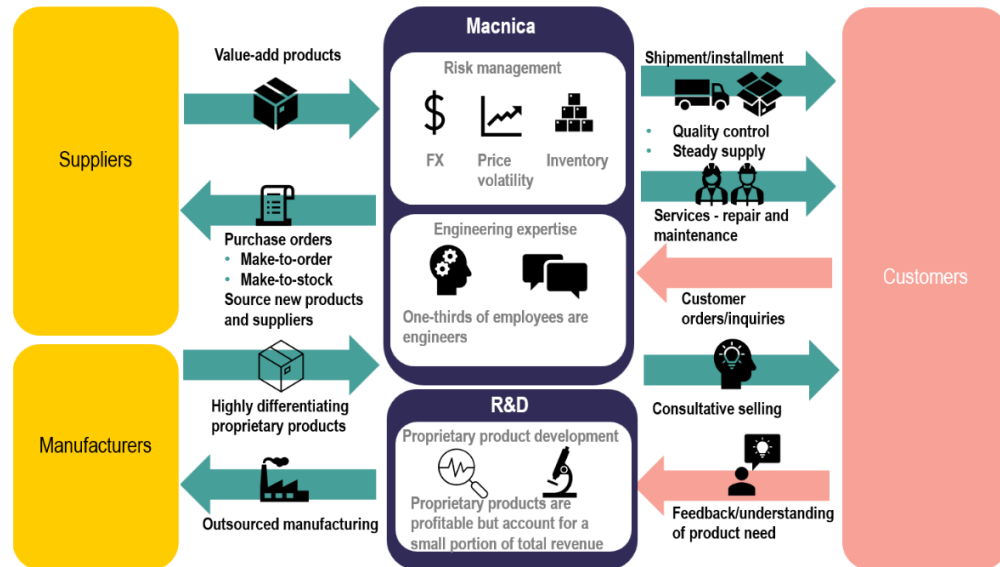
Among trading companies, there are independent and affiliated companies. Many affiliated semiconductor trading companies are related to Renesas Electronics because of the consolidations it underwent with the semiconductor arms of Hitachi, Mitsubishi, and NEC. When the semiconductor businesses went through consolidation, their affiliated trading companies became primary distributors for Renesas Electronics. As such, they have limited room for demand creation and provision of technical support, leading to lower margins. Similarly, Hagiwara (7467) has a close relationship with the Toyota group and Restar (3156) with the Sony group. On the other hand, **Macnica, being an independent trading company, has successfully shifted its customer base from large corporations to small and medium-sized enterprises. This shift allows the company to more effectively leverage its negotiation power and create high-added value through technical proposals and demand creation.** This led to higher profitability than peer companies.

Workflow

Macnica sources semiconductors from major manufacturers worldwide and sells them directly to customers. For network-related products, the company procures advanced products from overseas manufacturers, including emerging companies, and sells them to secondary distributors, primarily system integrators (SIs). Unlike the Semiconductor business, direct sales in the network business are limited; however, Macnica engages in direct or indirect sales activities with end customers. The company's unique value proposition lies in its consulting-based sales approach, which is supported by FAE (Field Application Engineers) with extensive expertise, technical skills, and strong negotiation abilities, as well as product-dedicated sales representatives. The company manages foreign currency and inventory risks, making it an ideal partner for both suppliers and customers. Additionally, Macnica offers highly differentiated proprietary products that are developed

internally as well as through partnerships with other companies. Despite high profitability, the proprietary products account for only a small portion of total sales.

High-level workflow overview



Source: Company

Automotive in Semiconductors business

Sales from Automotive have expanded in recent years but were driven by demand for sensors used for ADAS (advanced driver assistance systems) and AD (autonomous driving), and infotainment for ICE (internal Combustion Engine), EV and hybrid automobiles. Revenue contribution from EV makes up a small part. End users of its products are Japanese OEMs (sales to the Toyota group are proportionally small). Thus, the performance of Automotive correlates largely with trends of Japanese OEMs.

Network business

Network business accounted for about 11% of operating profit in FY3/24 but used to be about 28%-50% between FY3/16 and FY3/21. Network entails cyber security, big data, and application businesses. Most of revenue is generated through cybersecurity services. The top selling product is an endpoint security solution produced by CrowdStrike, where Macnica served as the exclusive distributor in Japan for a long time, and even with the involvement of other distributors in the commercial flow, it still retains a significant share of sales. The network business at Macnica originated when the company was introduced to Silicon Valley firms by semiconductor manufacturers. This expansion led to the handling of not just semiconductors but also network boards, and naturally extended into information and communication technology as well as cybersecurity. In the network business, Macnica's direct customers are primarily 'resellers', with most being system integrators (SIs). While Macnica does not sell network-related products directly to end customers, which include government agencies, large corporations, and mid-sized and small businesses, the company provides high-value information and advice on cutting-edge technologies, facilitating demand creation.

The cyber security market achieved 7-8% CAGR in Japan and over 10% globally over the past decade, which was higher than 3-5% for the semiconductor market. In terms of Macnica, its cyber security business achieved about 20% CAGR over the past decade, reflecting its competitive advantages.

CPS Solutions

CPS (Cyber Physical System) Solutions is the business that Macnica is growing as a third pillar after Semiconductors & Electronic Devices and Network. CPS generated ¥7.4bn in revenue, just shy of 1% of consolidated revenue, and an OP loss of ¥1.6bn in FY3/24 but the company aims to improve profitability in future. As of FY3/24, CPS revenue does not have a separate reporting segment and is included in both the Semiconductor & Electronic Devices and Network segments. CPS Solutions involves consulting on which products to use to collect specific data and how to leverage these products effectively. Ultimately, this supports the development of platforms that meet the customer's needs. Unlike large general consulting firms, CPS Solutions is characterized by its ability to provide detailed proposals, including specific products required.

CPS Solutions are applicable across various purposes including the following:

- Smart Manufacturing
- CPS Security (social security)
- Smart City& Smart Mobility
- Circular Economy
- Food& Agricultural Technologies
- Healthcare

CPS Solutions at Macnica has emerged from the company's extensive experience in the semiconductor and network businesses, leveraging synergies between these areas. For example, Macnica is developing platforms that promote smart manufacturing, including providing production forecasting and business management intelligence. Decisions on which data to apply, how to analyze it, and which products are necessary are based on insights gained from over 50 years of experience in semiconductors and networking. Unlike large consulting firms, Macnica HD possesses practical experience and an understanding of how to collect and utilize data in manufacturing. In fact, the CPS Solutions team is staffed by engineers with backgrounds in the semiconductor business, which **we believe provides a significant competitive advantage in CPS Solutions.**

Competitive advantages

We believe Macnica has the following competitive advantages:

- **Consultative selling** – With one third of its employees being engineers, Macnica is not only capable of selling highly complex and specialized products but also able to accurately identify latent demand.
- **Demand Creation** – In the commercial flow with small and medium-sized enterprises, where there are numerous small-scale projects, Macnica is often entrusted with technical PR by manufacturers. Through such technical proposals,

the company generates high added value and achieves profit margins that surpass those of its competitors. The broad range of products handled by Macnica also motivates manufacturers to entrust their commercial flow to the company. Moreover, being given the responsibility for the entire commercial flow allows Macnica to gain a comprehensive understanding of customer situations and needs, leading to a virtuous cycle of high-quality proposals. This suggests that economies of scale act as a barrier to entry, making it an area where Macnica, with top domestic market share, can fully leverage its competitive advantage.

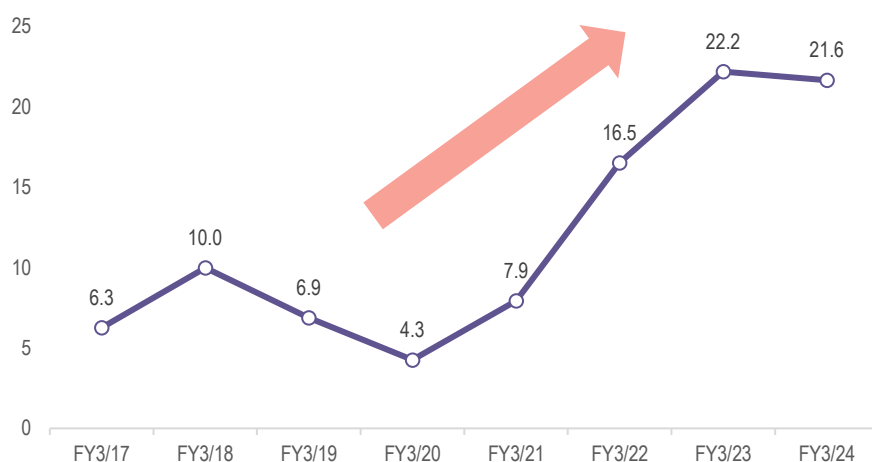
- **Comprehensive product coverage** – Macnica has extensive partnerships with almost all top-tier global semiconductor manufacturers, leading to broad product coverage and a high market share in Japan.
- **Ability to discover cutting-edge products** – The high-profit margins in Macnica's Network business stem from its ability to provide cutting-edge products that are not yet widely adopted in the market, thereby creating high added value. These products are often produced by emerging companies, and staying ahead of technological advancements requires a strong capability to identify such companies or products before others. Macnica's extensive experience in Silicon Valley enhances its expertise in product evaluation and information gathering, giving it a significant advantage in discovering innovative technologies early.

ROE

The company significantly improved ROE on the back of positive performance and efforts to improve a total shareholder return. It set a medium-term target of 15% or higher which was already achieved in FY3/22. Although we believe ROE is likely to revert back to more sustainable levels in future from the elevated levels seen recently, management showed a willingness to maintain the 15% target as a bare minimum. Our ROE forecast is conservative. However, we believe **ROE can further expand if the company utilizes cash to improve growth and becomes more aggressive on share buybacks.**

Significant improvement in ROE with better shareholder returns and strong profit growth

ROE (%)



Source: Company



Peer group analysis

We have selected the following peers to assess Macnica's returns and valuations:

- **Domestic companies** – both independent and affiliated trading companies in the semiconductor and electronic component businesses.
- **Overseas companies** – primarily Taiwanese semiconductor distributors, as well as electronic component distributors.

Domestic companies

Company	Description
Restar Corp	Develops and offers semiconductor components, electronic components, and other related solutions.
Satori Electric	Trading company specializing in semiconductors and electronic components. Expansion of in-house products for in-vehicle use and those related to IoT.
Shinko Shoji Co	Semiconductor trading company for primarily Renesas Electronics (6723) products. Strong for industrial use and amusement machines.
Tokyo Electron Tomen Devices Co	Semiconductor trading company of electronic components mainly for US products. Toyota Tsusho (8015) affiliated semiconductor trading company, specializing in Samsung Electronics.
Kaga Electronics	Independent electronics trading company with a focus on the EMS business. Failed merger attempt with UKC Electronics (now Restar) in 2015.

Source: Companies, Bloomberg

Overseas companies

Company	Description
WPG	Distributes electronic components such as central processing units, memory integrated chips (ICs), application-specific standard product (ASSP) ICs, logic and linear ICs, and discrete ICs. Had the third-largest global market share of 10.1% in 2023.
Avnet Inc	Distributes computer products and semiconductors, as well as interconnect, passive, and electromechanical components. Had the second-largest global market share of 10.4% in 2023.
WT	Develops and markets integrated circuits (IC) products. Acts as an agent for Texas Instruments, Fairchild, ST Microelectronics, Marvell, Wolfson, and Bowoon.
RS Group Plc	Distributes industrial and electronic products. Serves customers worldwide.
Insight Enterprise	Offers information technology hardware, software, and services to large enterprises, small to medium-sized businesses, and public sector institutions.
Elan	Designs, manufactures, and markets integrated circuits (ICs).
Synnex Tech Intl	Markets personal computers, computer peripherals, multi-media products, network products, computer application software, electronic parts, and telecommunication products.
Arrow Electronic	Distributes electronic components and computer products to industrial and commercial customers. Had the largest global market share of 11.4% in 2023.

Source: Companies, Bloomberg

We believe there are three core findings:

- **Profitability** – overall, domestic trading businesses generate lower profitability with a 10-year historical average operating margin of 2.3% than global trading firms with 5.8%. Compared to domestic peers, Macnica has a strong track record with its 10-year historical average of 3.7%. In terms of operating margin over the

Macnica achieved notable improvements in EBIT growth and ROE



past 12 months, Macnica achieved 6.2% in line with the global peer (vs. 3.7% for domestic peers)

- ROE is improving in domestic trading companies at 10.8% partly through better capital allocation. Macnica showed a notable improvement of ROE to 21.6%, which significantly exceeded not only domestic peers but also global peers with 14.4%.

Macnica at a notable discount to domestic peers on EV/EBITDA multiple and PER

- **Valuations** – our key finding is that Macnica is trading at a material discount to domestic peers on EV-based multiples and PER:
 - EV/EBITDA multiple of 2.4 versus domestic peers on 7.0x – this highlights Macnica’s strong balance sheet, with its higher profitability.
 - PER of 8.4x versus domestic peers on 9.6x – this indicates room for multiple expansion.
 - However, PBR is at a slight premium at 1.2x to domestic peers at 1.1x.
- **Sustainability of earnings (5-year track record)** – the sector has seen a similar level of sales growth across domestic and overseas trading companies. However, domestic peers experienced more than 20% CAGR EPS growth compared to about 11% CAGR of global peers. For Macnica, we highlight:
 - The 5-year CAGR for EBIT was much higher at 32.9% than the peer average of 30.7% for domestic peers and 11.4% for global peers. This reflects Macnica’s market share expansion.
 - The 5-year CAGR for EPS was 41.1%, substantially exceeding both domestic and overseas peers.
- **SOTP (Sum of the parts)** – We performed SOTP (sum of the product) analysis across Macnica’s Semiconductors and Network businesses by working out the market 12-month forward EV/EBITDA. We selected LAC (3857), ID Holdings (4709), NEC Networks & System Integration (1973), and Techmatrix (3762) as comparable peers to Network business. Our implied equity value of ¥563.5bn is at an approximate 60% premium to the current market value denoting a major discount (As of July 2024).

Sum of the parts (SOTP)

(¥bn)	EBITDA	EV/EBITDA multiple	Enterprise Value
<i>Segment-level data</i>			
Semi & Elect Dev	54.85	8.8	479.95
Network	14.08	7.6	109.70
Total enterprise value			584.33
(-) Net debt			26.14
Total equity value			563.51
Net income			43.49
Implied PER			12.96

Domestic and overseas trading companies

Ticker	Company	EV/EBITDA 12M Fwd (x)
<i>Domestic</i>		
3156 JP	Restar Corporation	7.7
7420 JP	Satori Electric Co., Ltd.	9.6
8141 JP	Shinko Shoji Co., Ltd.	7.5
2760 JP	Tokyo Electron Device	10.0
2737 JP	Tomen Devices Corp.	5.1
8154 JP	Kaga Electronics Co., Ltd.	3.5
<i>Overseas</i>		
3702 TT	WPG Holding Co Ltd	8.3
AVT US	Avnet, Inc.	7.0
3036 TT	WT Microelectronics Co.	11.1
RS1 LN	RS Group PLC	11.7
NSIT US	Insight Enterprises, Inc.	11.8
2458 TT	ELAN Microelectronics	11.0
2347 TT	Synnex Technology International Corp.	13.6
ARW US	Arrow Electronics, Inc.	7.8
Average		8.8

Source: Bloomberg, Astris Advisory

IT Consulting & Other Services

Ticker	Company	EV/EBITDA 12M Fwd (x)
<i>Domestic</i>		
3857 JP	LAC Co Ltd	6.6
4709 JP	ID Holdings Corp	6.6
1973 JP	NEC Networks & System Integration	8.8
3762 JP	Techmatrix Corp	9.2
Average		7.8

Source: Bloomberg, Astris Advisory

We conclude Macnica's continuously high profitability and structural growth are not fully reflected in the current share price. EV/EBITDA and PER on a 12-month forward basis appear attractive.



ROE remains high above 10% for specialized trading companies

Peer analysis of key profitability and valuation metrics

Ticker	Company	Mkt Cap US\$ (m)	Profitability				Valuation					
			OPM LTM	OPM 10-yr average	ROE LTM	ROIC 10-yr average	EV/EBITDA 12M Fwd (x)	EV/Sales 12M Fwd (x)	Div yield 12M Fwd (%)	FCF yield 12M Fwd (%)	PER 12M Fwd (x)	PBR (x)
3132 JP	MACNICA HOLDINGS	2,516	6.2	3.7	21.6	9.1	2.4	0.1	3.5	12.4	8.4	1.2
<i>Domestic</i>												
3156 JP	Restar Corporation	577	3.1	1.4	8.5	3.6	7.7	0.3	4.4	10.0	9.2	1.0
7420 JP	Satori Electric Co., Ltd.	185	2.8	1.0	6.5	2.9	9.6	0.3	4.0	-10.0	12.0	0.8
8141 JP	Shinko Shoji Co., Ltd.	197	2.8	2.4	6.0	5.4	7.5	0.2	5.8	8.0	9.0	0.5
2760 JP	Tokyo Electron Device	839	6.4	3.2	24.1	9.6	10.0	0.7	2.7	0.0	11.8	2.5
2737 JP	Tomen Devices Corp.	315	2.6	1.7	4.7	10.7	5.1	0.2	0.2	8.0	9.1	0.9
8154 JP	Kaga Electronics Co., Ltd.	945	4.8	3.4	14.5	11.0	3.5	0.2	4.0	13.0	6.4	0.9
Average			3.7	2.2	10.7	7.2	7.2	0.3	3.5	4.8	9.6	1.1
<i>Overseas</i>												
3702 TT	WPG Holding Co Ltd	4,456	1.7	1.7	10.7	7.1	8.3	0.4	4.7	-5.0	17.5	1.8
AVT US	Avnet, Inc.	4,831	4.1	3.1	11.9	10.9	7.0	0.1	2.4	4.0	12.0	1.0
3036 TT	WT Microelectronics Co.	3,943	1.3	1.9	6.5	9.2	11.1	1.4	5.0	20.0	13.7	1.5
RS1 LN	RS Group PLC	4,266	9.6	10.3	13.2	19.1	11.7	0.7	3.2	6.4	18.0	2.6
NSIT US	Insight Enterprises, Inc.	6,392	4.9	3.3	17.9	18.4	11.8	3.2	0.0	5.3	19.1	3.8
2458 TT	ELAN Microelectronics	1,387	22.5	20.3	31.0	24.9	11.0	2.9	5.2	5.0	15.8	5.0
2347 TT	Synnex Technology International Corp.	4,303	2.2	1.8	11.3	5.5	13.6	0.4	4.6	8.0	13.4	1.7
ARW US	Arrow Electronics, Inc.	7,052	4.4	4.1	12.7	15.2	7.8	0.4	0.0	8.0	11.3	1.1
Average			6.3	5.8	14.4	13.8	10.3	1.2	3.1	6.5	15.1	2.3

Source: FactSet, Bloomberg, Astris Advisory

Note: LTM is the last 12 months



The sector has seen strong EBIT growth among domestic trading companies in particular

Peer analysis of track record – growth (5-year CAGR) and change (2019-2024)

Stock	Name	Growth 5-year CAGR (%)						Change over the last 5 years (%)			
		Sales	EBIT	Net Income	EPS	BPS	Total assets growth	Chg. in GPM	Chg. in FCF margin	Chg. in ROE	Chg. in ROA
3132 JP	MACNICA HOLDINGS	14.43	32.98	40.17	41.11	13.99	13.04	0.95	9.81	14.76	5.85
<i>Domestic</i>											
3156 JP	Restar Corporation	20.02	28.72	26.14	10.77	2.77	24.57	1.05	-2.23	1.28	-0.02
7420 JP	Satori Electric Co., Ltd.	4.87	56.95	59.32	59.55	1.93	5.87	0.79	-2.52	6.13	2.53
8141 JP	Shinko Shoji Co., Ltd.	8.60	14.84	16.96	21.71	4.92	5.80	-0.69	-3.14	3.28	1.36
2760 JP	Tokyo Electron Device	11.49	34.35	33.65	34.11	12.17	15.55	1.33	-8.59	14.67	3.69
2737 JP	Tomen Devices Corp.	11.24	21.86	1.95	1.96	9.35	10.28	0.82	1.45	-2.66	-1.08
8154 JP	Kaga Electronics Co., Ltd.	13.14	27.84	20.48	21.54	15.52	6.05	0.84	5.98	2.56	1.91
Average		11.56	30.76	26.42	24.94	7.78	11.35	0.69	-1.51	4.21	1.40
<i>Overseas</i>											
3702 TT	WPG Holding Co Ltd	4.27	-0.35	1.68	1.68	8.48	9.90	-0.57	2.64	-4.50	-1.41
AVT US	Avnet, Inc.	6.87	41.50	43.83	50.92	5.12	5.48	-1.28	-3.94	20.41	8.36
3036 TT	WT Microelectronics Co.	16.81	9.31	6.14	-3.00	15.36	23.10	-0.89	7.00	-7.16	-1.56
RS1 LN	RS Group PLC	9.32	6.86	4.40	3.02	17.88	15.68	-0.42	2.08	-12.79	-4.25
NSIT US	Insight Enterprises, Inc.	5.32	12.45	11.44	10.69	13.87	17.76	4.69	2.43	-1.21	-1.06
2458 TT	ELAN Microelectronics Synnex Technology	6.86	7.07	6.57	7.08	6.39	7.42	-2.10	12.06	1.90	0.04
2347 TT	International Corp.	0.66	9.79	1.98	1.98	8.59	7.75	0.66	4.08	-4.15	-1.27
ARW US	Arrow Electronics, Inc.	2.21	5.09	4.76	14.36	11.53	4.09	0.17	1.42	1.98	-0.03
Average		6.54	11.47	10.10	10.84	10.90	11.40	0.03	3.47	-0.69	-0.15

Source: FactSet, Bloomberg, Astris Advisory

Note: figures are non-adjusted



Balance sheet

The trading sector shows relatively similar balance sheet characteristics in both domestic and overseas markets. These specialized trading companies present healthier balance sheets with a lower net debt-to-equity ratio. Liquidity is generally high.

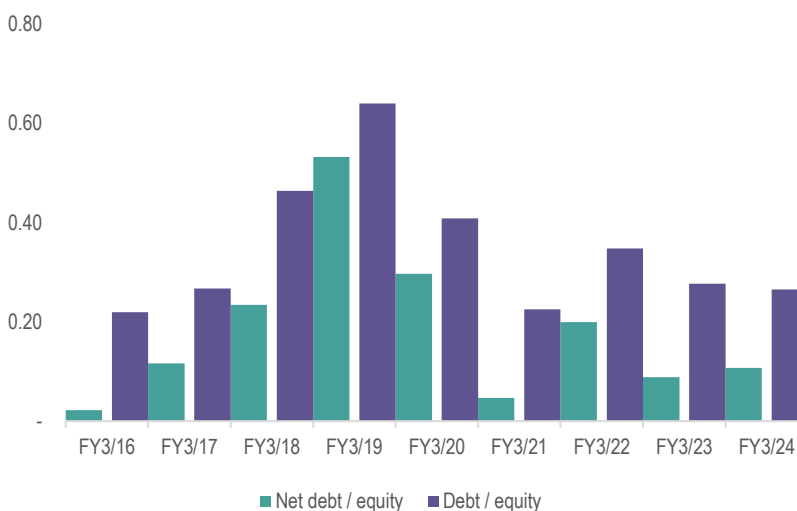
Regarding Macnica, we make the following observations:

- **Leverage** – current ratio is in line with peers. There is a limited level of leverage compared to both domestic and overseas peers. Macnica lowered its net debt balance over the past years.
- **Efficiency** – asset turnover is in line with the peer group but inventory days are higher and have room for improvement. The cash conversion cycle is also higher than the peer group but management indicated efforts to improve the cash conversion cycle through various initiatives.

We conclude that the company has a conservatively managed balance sheet, and has scope to perform capital optimization.

Sound balance sheet with 0.1x net debt-to-equity ratio

Net debt to equity ratio (x)



Source: Company

Balance sheet management is conservative, providing scope to enhance its financial structure

Liquidity, leverage, and capital efficiency

Company	Liquidity		Leverage					Efficiency			
	Current ratio (x)	Quick ratio (x)	Net debt to equity (x)	Net debt to EBITDA (x)	Interest cover (x)	Total debt to capital (%)	Equity ratio (%)	Asset turnover (x)	Inventory turnover (x)	Inventory days	Cash cycle (days)
MACNICA HOLDINGS	1.8	1.0	0.1	0.4	35.6	21.0	44.2	1.9	4.0	91.9	97.2
<i>Domestic</i>											
Restar Corporation	1.3	0.9	0.9	3.9	5.0	58.4	28.9	1.8	6.4	56.9	82.5
Satori Electric Co., Ltd.	1.8	1.3	0.3	2.0	9.3	36.7	41.4	1.9	6.4	56.6	89.6
Shinko Shoji Co., Ltd.	2.8	1.8	0.1	0.8	30.8	24.0	55.4	1.8	5.1	71.5	130.9
Tokyo Electron Device	1.7	1.1	1.0	2.8	71.0	53.6	27.7	1.6	4.1	88.3	145.7
Tomen Devices Corp.	1.5	1.0	0.5	2.2	6.3	39.5	34.9	3.1	9.1	40.2	55.0
Kaga Electronics Co.	2.3	1.8	-0.2	-1.2	33.9	17.1	52.6	1.9	8.5	42.9	65.6
Average	1.9	1.3	0.4	1.7	26.0	38.2	40.2	2.0	6.6	59.4	94.9
<i>Overseas</i>											
WPG Holding Co Ltd	1.3	0.8	1.3	8.9	1.9	59.0	26.7	2.1	6.0	60.8	89.9
Avnet, Inc.	2.3	1.1	0.6	2.6	4.0	39.0	40.5	2.3	4.8	75.9	87.7
WT Microelectronics Co.	1.5	0.9	-0.1	-0.9	2.6	35.9	29.0	2.6	6.2	58.9	50.7
RS Group PLC	2.0	1.2	0.3	1.1	10.3	32.1	49.4	1.1	2.6	138.3	139.6
Insight Enterprises, Inc.	1.3	1.2	0.4	1.4	12.1	38.7	26.7	1.6	33.4	10.9	50.1
ELAN Microelectronics	2.1	1.7	-0.4	-1.2	245.9	12.2	58.7	0.9	2.4	154.1	141.6
Synnex Technology International Corp.	1.6	1.2	0.4	2.7	5.0	52.3	33.3	1.8	6.9	53.3	100.7
Arrow Electronics, Inc.	1.5	1.1	0.6	2.2	4.4	38.6	28.1	1.5	5.5	65.8	72.0
Average	1.7	1.1	0.4	2.1	35.8	38.5	36.6	1.7	8.5	77.2	91.5

Source: FactSet, Bloomberg, Astris Advisory

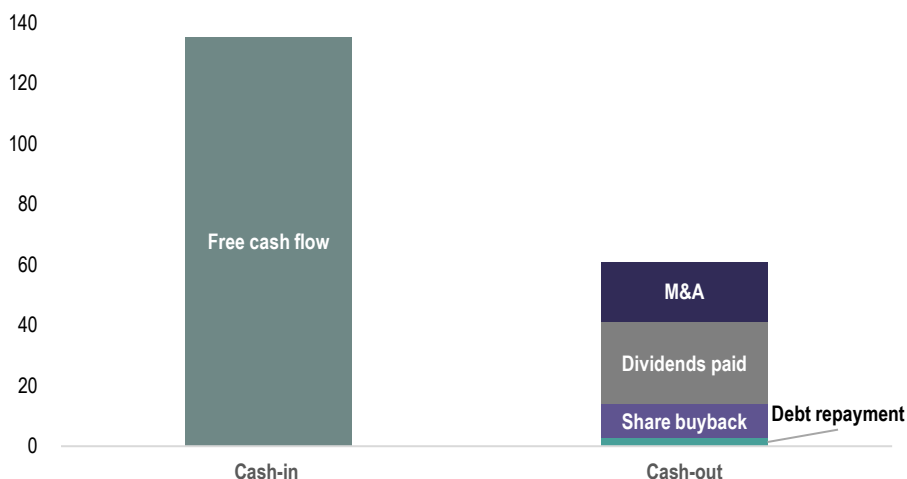
Capital allocation

Free cash flow accumulated due to positive performance

Macnica's free cash flow expanded due to strong growth experienced in the semiconductor business. More than half of cash outflows were associated with shareholder returns, which we view positively. M&A accounted for about 30% of cashflow. We believe that in future M&A-related expenditures aimed at expanding not only the Semiconductor business but also the Network and CPS Solutions businesses will increase. We expect that half of the generated cash will be allocated to shareholder returns, whilst the remaining half will be invested in growth opportunities.

Cash generative business with high free cash flow

5-year cumulative capital generation and allocation (FY4/20 – FY4/24) (¥bn)



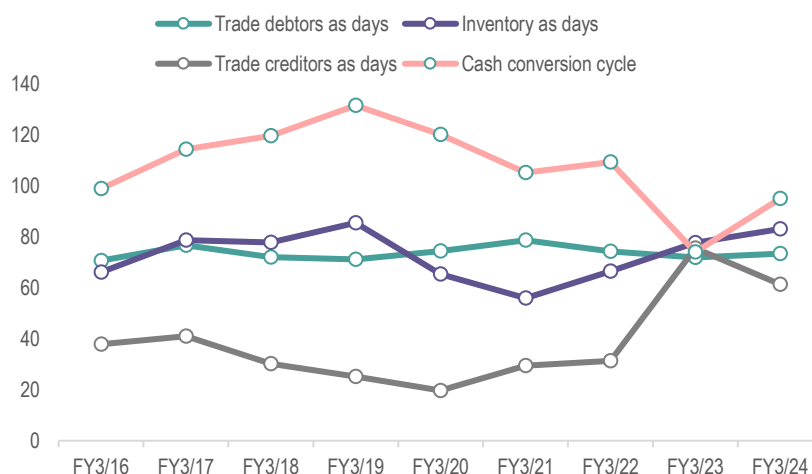
Source: Company

Improving cashflow quality

Historically, Macnica used to have a more imbalanced cash flow structure because receivable days tended to be longer in Japan whilst payable days were relatively shorter abroad. However, the company improved the cash flow conversion cycle through various initiatives. As a result, we believe the cash flow conversion cycle will stabilize in the future.

Higher payable days led to a shorter cash conversion cycle

Cash conversion cycle (days)



Source: Company



Recent results

Q4 FY3/24 results

FY3/25 company guidance indicates flat OP growth but OP margin is expected to improve

Key financials

(¥bn)	Q4 FY3/23	Q4 FY3/24	YoY (%)	FY3/24 Guidance	YoY (%)
Sales	261.26	228.42	-12.6	1,100.00	+6.9
COGS	227.37	200.15	-12.0	-	-
Gross profit/(loss)	33.89	28.27	-16.6	143.00	+0.1
SG&A costs	17.53	15.84	-9.6	79.00	+0.2
Operating profit/(loss)	16.35	12.42	-24.0	64.00	+0.4
Operating margins (%)	6.26	5.44		5.82	
Profit before tax	15.97	16.09	+0.7	-	-
Net income attributable to the parent	11.74	12.91	+10.0	42.00	-12.6

Source: Company

Signs of recovery in Network but consolidated margins weakened

Per business segment

(¥bn)	Q4 FY3/23	Q4 FY3/24	YoY (%)
Sales			
Semiconductors & electronic devices	231.70	194.17	-16.2
Network	29.56	34.24	+15.8
Segmental profit/(loss)			
Semiconductors & electronic devices	14.55	10.53	-27.6
Network	1.80	1.89	+4.9
Segmental profit margins (%)			
Semiconductors & electronic devices	6.3	5.4	
Network	6.1	5.5	

Source: Company

Key highlights

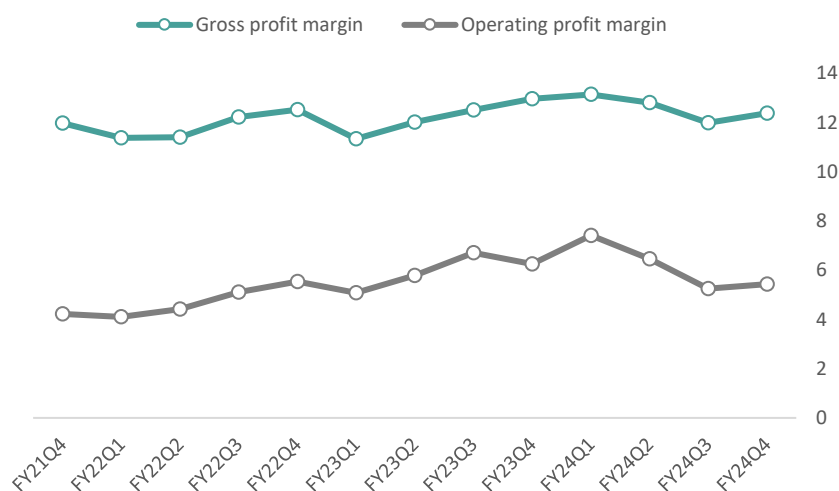
Q4 FY3/24 results showed weakness in topline and margins, reflecting a slowdown in the semiconductor market. The main causes of the weakness were Analog IC (-30.8% YoY), PLD (-43.7%), and ASSP (-23.9% YoY) by product. On the other hand, Memories showed some moderation in weakness (-8.1% YoY). Other (other standard logic IC) was the only semiconductor product that grew (+12.4% YoY) albeit a sign of slowdown. Network showed a sign of recovery (+15.8% YoY), which was driven by growth in software products including endpoint security-related products.

From a viewpoint of end markets, the largest detractor against sales was Industrial (-27.3% YoY), followed by Communication (-31.6% YoY). The weakness in Industrial reflects a stagnant economic environment in China. Automotive was the largest contributor to sales (+19.1% YoY), followed by Network (+15.8% YoY), which offset some of the revenue declines across other products.

Although Q4 FY3/24 indicated a slowdown on a YoY basis overall, OP margins continue to be above historical levels, which should be viewed positively.

Operating profit margin experienced a blip in recent quarters

Quarterly trend of consolidated margins (%)



Source: Company, Astris Advisory

Shareholder returns

The current dividend policy is set to be DOE (Dividend on Equity) of 4% or a total shareholder payout ratio of 30-50%. Since FY3/21, DPS has increased as substantially as 4x against the backdrop of positive operating performance.

M&A

Macnica's strategic priorities for M&A activity are as follows:

- For Network, focus on expanding sales regions and vertical integration, for Semiconductors, emphasis on acquiring distributors and for CPS Solutions, prioritizing the acquisition of capabilities.
- Scale expansion in ASEAN and India.
- A large deal is not ruled out.

For Semiconductors, the primary target market for M&A will be overseas but for Network and CPS Solutions, Japan will be considered as well. Key characteristics Macnia seeks in target companies are distribution channels in areas with a high concentration of manufacturers for Semiconductors and capability in software and service development for Network and CPS Solutions.



Astris earnings estimates and key assumptions

Astris' key earnings forecasts are as follows:

Astris Advisory earnings estimates

Year-end	FY3/25 Guidance	FY3/25E	FY3/26E	FY3/27E
Sales				
Semiconductors & electronic devices	-	964.99	1,042.19	1,125.57
YoY (%)	-	+6.3	+8.0	+8.0
Network	-	135.42	151.67	169.88
YoY (%)	-	+12.0	+12.0	+12.0
Total sales (¥bn)	1,100.00	1,100.42	1,193.87	1,295.45
YoY (%)	+6.9	+7.0	+8.5	+8.5
OP (¥bn)				
	64.00	64.69	71.92	82.86
YoY (%)	+0.2	+1.5	+11.2	+15.2
OPM (%)	5.8	5.9	6.0	6.4
EBITDA (¥bn)				
	-	69.09	76.70	88.05
YoY (%)	-	+2.6	+11.0	+14.8
EBITDA margin (%)	-	6.3	6.4	6.8
FCF (¥bn)				
	-	44.83	54.07	55.66
FCF margin (%)	-	4.1	4.5	4.3
FCF conversion (%)	-	73.0	77.9	69.6
FCF yield (%)				
	-	12.44	15.01	15.45
DPS (¥)				
	210.0	210.0	220.0	260.0
Dividend yield (%)	-	3.5	3.7	4.4
Payout ratio (%)	-	29.6	26.9	27.0

Source: Astris Advisory

Note: FCF conversion is FCF/Pre-tax Profit

The core assumptions of our estimates are as follows:

- **Sales growth** – sales growth for semiconductors & Electronic Devices will be primarily driven by an acquisition of Glosel (acquired for ¥23bn in May 2024) with limited organic growth due to a sluggish market environment in FY3/25. However, combined with the robust growth of Network, a gradual recovery in the semiconductor market and the acquisition of large trade flows, Macnica will achieve high single-digit growth on a consolidated basis in FY3/26 and FY3/27.
- **Profitability** – consolidated OP margins will remain steady due to a positive product mix with higher profit contribution from Network despite normalizing margins for Semiconductors.
- **Free cash flow generation** – we estimate the company will improve free cash flow generation with margin expansion in FY3/25-FY9/27.

Company information

Management (12 members, 25% female ratio, 50% outside members)

Chairman of the Board	Kiyoshi Nakashima
Number of shares held	102,455
Career history	
April 1981	Joined Macnica, Inc.
May 1991	Director of the Components Division 1 at Macnica, Inc.
April 1999	Director of the Network Business Division at Macnica, Inc..
June 2003	Managing Director of Macnica, Inc.
March 2004:	President and CEO of Macnica Networks, Inc.
April 2005	Executive Vice President of Macnica, Inc.
	President and CEO of Altima Corporation (now Macnica Altima Company)
June 2008	President and CEO of Macnica, Inc.
April 2015	President and CEO of Macnica, Inc.
June 2019	Chairman of the Board of Macnica, Inc. (current)
June 2021	Chairman of the Board of Macnica, Inc. (current)
March 2024	Outside Director of MonotaRO Co., Ltd. (current)

President and CEO	Kazumasa Hara
Number of shares held	67,951
Career history	
September 1995	Joined Macnica, Inc.
April 2007	General Manager of Texter Company's 1st Sales Division
April 2011	President of Texter Company
April 2018	General Manager of the Innovation Strategy Division of Texter Company
June 2018	Director of Texter Company
June 2019	Appointed as President and CEO of Macnica, Inc. (current)

Co-CEO	Akinobu Miyoshi
Number of shares held	37,947
Career history	
July 1995	Joined Macnica, Inc.
April 2007	General Manager of Product Sales Division, Altima Corporation (now Macnica Altima Company)
	Director of Altima Corporation (now Macnica Altima Company)
June 2009	Executive Vice President of Altima Corporation (now Macnica Altima Company)
June 2010	President and CEO of Altima Corporation (now Macnica Altima Company)
June 2011	General Manager of Asia-Pacific Business Division, Macnica, Inc.
October 2011	President of MACNICA ASIA PACIFIC PTE LTD
	President of MACNICA HONG KONG, LIMITED
April 2015	General Manager of Global Business Development Office, Macnica, Inc.
	CEO of MACNICA AMERICAS, INC.
June 2018	Director of Macnica, Inc.
June 2019	Executive Vice President of Macnica, Inc. (current)

Board Director	Ei-ichi Nishizawa
Number of shares held	17,677
Career history	
April 1982	Joined Toho Mutual Life Insurance Company (now Gibraltar Life Insurance Co., Ltd.)
December 1999	Joined Fuji Electronics Co., Ltd. (now Macnica, Inc.)
May 2001	General Manager of Corporate Planning Office
May 2006	Executive Officer, General Manager of Corporate Planning Office, and General Affairs Department Manager
May 2010	Senior Executive Officer, General Manager of Corporate Planning Department
May 2011	Director, General Manager of Accounting Department
May 2014	Managing Director
April 2015	Director of Macnica, Inc. (current)
June 2017	Executive Vice President of Fuji Electronics Co., Ltd. (now Macnica, Inc.)
June 2019	Director and Executive Vice President of Fuji Electronics Co., Ltd. (now Macnica, Inc.)

Board Director	Makoto Okawara
Number of shares held	2,282



Career history	
April 1987	Joined Mitsubishi Corporation
June 2006	Seconded to Mitsubishi Corporation Finance Plc as Managing Director
April 2010	General Manager of IR Department, Mitsubishi Corporation
July 2011	Senior Vice President of New Industrial Finance Business Group, Mitsubishi Corporation (Americas)
June 2017	General Manager of Finance Department, Mitsubishi Corporation
April 2020	Executive Officer and General Manager of the Finance Department, Mitsubishi Corporation
April 2023	General Manager of Financial Division, Macnica, Inc. (current)
June 2023	Senior Executive Officer of the company (current)
June 2024	Director of the company (current)

External Director	Tsunesaburo Sugaya
Number of shares held	-
Career history	
April 1988	Joined Motorola Japan Ltd.
June 1999	Joined JAFECO Co., Ltd. (now JAFECO Group Co., Ltd.)
January 2003	President & CEO of JAFECO America Ventures Inc. (now Icon Ventures)
March 2008	Executive Officer in charge of the U.S.
June 2015	Outside Director of Plathome Co., Ltd. (current)
July 2015	Outside Director of I Peace Inc. (current)
December 2015	President & CEO of Miyako Capital Co., Ltd. (current)
August 2017	Outside Director of AerNos Inc. (current)
June 2019	Director of Macnica, Inc. (current)
October 2022	Outside Auditor of Artiza Networks, Inc. (current)

External Director	Makiko Noda
Number of shares held	-
Career history	
April 1993	Joined Venture Link Co., Ltd.
April 2010	Director of Venture Link Co., Ltd.
December 2010	President & CEO of Human Delight Co., Ltd. (current)
March 2011	President & CEO of Inkglow Co., Ltd.
February 2015	Chairman of the Board of Inkglow Co., Ltd.
June 2017	Outside Director of Toyama Bank Co., Ltd. (current)
June 2019	Director of Macnica Inc. (current position)
June 2019	Outside Director of Keyware Solutions Inc. (current)
March 2020	Outside Director of Arte Salon Holdings, Inc. (current)

External Director	Shinichiro Omori
Number of shares held	-
Career history	
April 1978	Joined Hitachi, Ltd.
April 2016	Executive Vice President of Hitachi, Ltd. (retired in March 2019)
June 2017	Outside Director of Hitachi Capital Corporation (now Mitsubishi HC Capital Inc.)
June 2017	Director of Hitachi Chemical Co., Ltd. (now Resonac Corporation)
June 2019	Chairman of the Board of Hitachi Metals, Ltd. (now Proterial Ltd.)
April 2020	Chairman of the Board of Hitachi Metals, Ltd. (retired in June 2020)
July 2020	Chairman of the Board of Hitachi High-Tech Corporation (retired in March 2021)
March 2022	Outside Director of Kokuyo Co., Ltd. (current)
June 2022	Director of Macnica, Inc. (current)

External Director	Shigenori Mori
Number of shares held	-
Career history	
November 1984	Joined Advanced Micro Devices, Inc.
April 1997	Marketing Manager, Tokyo Branch, AMD Japan Ltd.
August 1998	Director of Sales and Marketing, AMD Japan Ltd.
November 2000	President and Representative Director, Infineon Technologies Japan Ltd. (Retired February 2018)
October 2018	Vice President, Sight Machine Inc. (Retired October 2019)
	Advisor, Wibu-Systems A.G (current)
	Advisor, Wibu-Systems K.K. (current)
October 2019	Corporate Supervisor, AvioCast Inc. (current)
March 2020	Advisor, Osaro Inc. (current)
November 2022	Advisor, RGO Robotics Inc. (current)



June 2024 Director of Macnica, Inc. (current)

Non-Executive Director	Shinichi Onodera
Number of shares held	10,214
Career history	
April 1978	Joined Wacoal Corporation
December 1983	Joined Crown Leasing Co., Ltd.
December 1987	Joined Fuji Bank, Ltd. (now Mizuho Bank, Ltd.)
April 2010	Joined Fuji Electronics Co., Ltd. (now Macnica, Inc.), General Manager of General Affairs Department
May 2010	Executive Officer, General Manager of General Affairs Department
May 2011	Executive Officer, Deputy Head of Sales Promotion Department
May 2012	Director, Deputy General Manager of Sales Division
May 2014	Managing Director
April 2015	Director of Macnica, Inc.
June 2017	President and CEO of Fuji Electronics Co., Ltd. (now Macnica, Inc.)
June 2020	Full-time Auditor of Macnica, Inc. (current)
	Auditor of Macnica, Inc. (current)
	Auditor of Macnica Solutions Co., Ltd. (current)
External Director	Kei Miwa
Number of shares held	-
Career history	
February 1992	Lawyer at China Haidian Law Office
April 1998	Legal Department at NEC Corporation
April 2004	Manager in the Legal Department at Nissan Motor Co., Ltd.
December 2011	Senior Manager in the Legal Department at Nissan Motor Co., Ltd.
April 2014	Department Manager of Project Planning in the Corporate Strategy Division at Nissan Motor Co., Ltd.
April 2019	Department Manager in the Corporate Management Office at Nissan Motor Co., Ltd.
October 2020	Chief Senior Manager in the Corporate Strategy Division at Hitachi Construction Machinery Co., Ltd.
June 2022	Outside Director of Meiho Sangyo Co., Ltd. (current)
June 2023	Auditor of Macnica, Inc. (current)
External Director	Yukie Sugita
Number of shares held	-
Career history	
October 2001	Joined Shin Nihon Audit Corporation (now EY ShinNihon LLC)
April 2005	Registered as a Certified Public Accountant
October 2018	Founded Sugita Certified Public Accountant Office and became its representative (current)
November 2019	President and CEO of Miogi Advisory Co., Ltd. (current)
March 2020	Outside Auditor of Nakano Refrigeration Co., Ltd. (current)
August 2021	Outside Director (Audit and Supervisory Committee Member) of NEXT EDUCATION Co., Ltd.
June 2022	Auditor of Saitama Housing Inspection Center (current)
June 2023	Auditor of Macnica, Inc. (current)

Source: Company

Contact details

Address

1-6-3 Shin-Yokohama, Kohoku-ku, Yokohama 222-8561, Japan

IR Dept.:

Tel: +81-(0)45-470-8980

Source: Company

Shareholder details (as of March 2024)

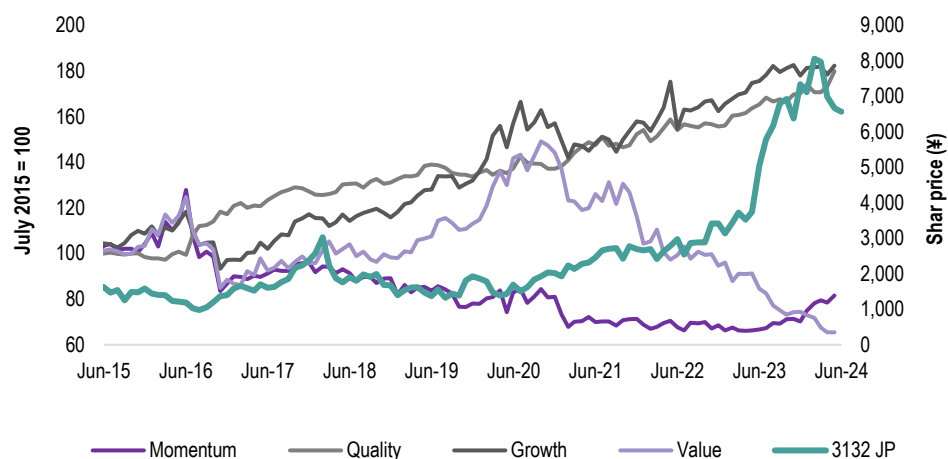
Major shareholders	Stake (%)
Japan Master Trust Bank, Ltd. (Trust Account)	11.51
Kamiyama Foundation	10.00
Harutaka Kamiyama	5.83
Seeds Technology Co., Ltd.	5.83
JP Morgan Chase Bank 380055 (Standing Proxy: Mizuho Bank, Ltd.)	4.62
Custody Bank of Japan, Ltd. (Trust Account)	4.42
Central Tanshi Co., Ltd.	1.97
Yuko Kamiyama	1.67
SMBC Trust Bank Ltd. (Sumitomo Mitsui Banking Corporation Retirement Benefit Trust Account)	1.18
JP Morgan Chase Bank 385781 (Standing Proxy: Mizuho Bank, Ltd.)	1.05

Source: Company



Astris Quant Sheet

Share price chart and factor analysis (from July 2015)



Source: FactSet

Factors	2 Year Corr	5 Year Corr	10 Year Corr
Momentum: 12 Month - 1 Month Performance	0.04	0.06	0.10
Quality: Free Cash Flow Yield	-0.26	-0.11	-0.14
Growth: Operating Profit Growth	-0.20	-0.16	-0.04
Value: Book to Market	-0.40	-0.24	-0.11

Source: FactSet

Macnica Holdings exhibits little long-term correlation with any of the factors. However, it does show some negative correlation with the Value factor over the short term, with a 2-year correlation of -0.40.

Calculation method and definition of factors in the time series

Universe

TOPIX500

Factor return calculation

Quartile Range Analysis: Calculate the element return by subtracting the average performance of the lower quartile from the average performance of the upper quartile for each element forecasted for one month. This analysis is repeated monthly without considering transaction costs.

Factor

Momentum

1-month return

12-month return

Subtracting the most recent 1 month

Quality

FCF yield (estimate)

Growth

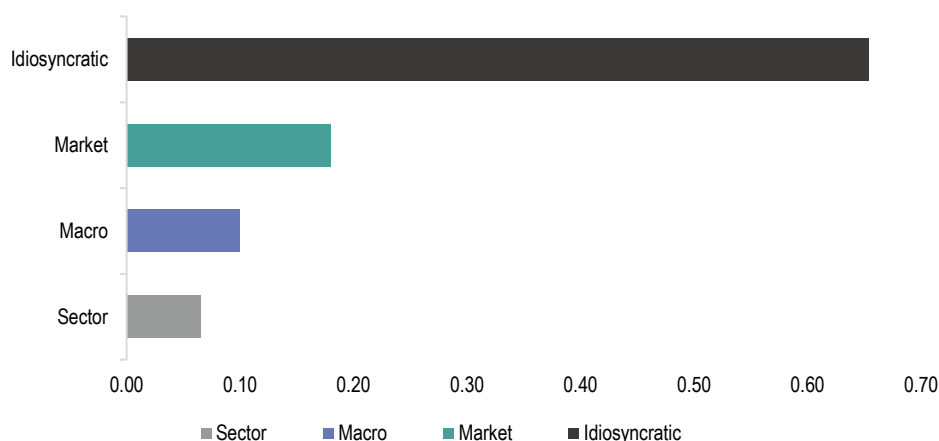
Operating profit growth (estimate)

Value

Book-to-Market ratio (actual)

Source: FactSet

Drivers of stock price performance and multiple regression analysis (since July 2015)



Source: FactSet

Macnica Holdings' share price is primarily driven by the broad market, explaining 18% of price movements. Macro factors account for around 10%, the majority of which stems from the Eco Watchers Outlook. The sector has a relatively small impact at 7%.

Calculation method for multiple regression analysis

Multiple regression analysis

Perform regression analysis including all drivers, and conduct individual regression analysis by excluding one driver at a time. To quantify the specific impact of each driver, calculate the partial coefficient of determination (partial R-squared value) using the formula: (Residual Sum of Squares from regression analysis including all drivers - Residual Sum of Squares from regression analysis excluding one driver) / Residual Sum of Squares from regression analysis excluding one driver.

Source: FactSet

Multiple regression analysis results

Factors	2Y Corr	5Y Corr	10Y Corr
Market			
Topix 1st Section	0.57	0.59	0.63
MSCI Japan	0.58	0.59	0.63
Sector			
Topix Wholesale Trade Index	0.46	0.51	0.56
MSCI Japan Information Technology	0.68	0.59	0.63
MSCI Japan Technology Hardware & Equipment	0.61	0.56	0.62
Macro			
10Y JGB	-0.34	-0.35	-0.17
CPI Nationwide	-0.24	0.06	0.04
JPYUSD	-0.03	-0.03	-0.21
JPYCN	0.05	-0.07	-0.31
Industrial Production	-0.22	-0.09	-0.07
JP Core Machine Tool Orders	0.14	0.01	-0.13
Eco Watchers Outlook	0.08	0.27	0.24

Source: FactSet

Macnica Holdings exhibits a strong correlation with virtually all equity indices over the short, medium, and long term. The MSCI Japan Information Technology index has a 2-year correlation of 0.68. Of the macro factors, EcoWatchers has a reasonable 10-year correlation of 0.24, while the renminbi has a negative correlation of -0.31, reflecting significant China sales exposure.



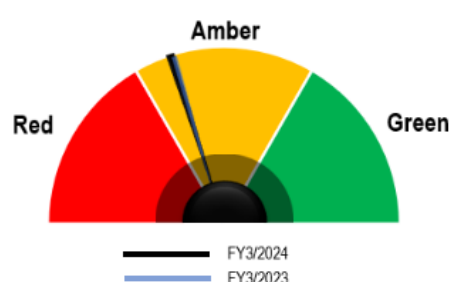
Astris-Sustainability ESG assessment

Ratings and scorecard

Our in-house Astris-Sustainability ESG model rates the company with a combined score of 39.4%, placing it in the 'Amber' rating of our assessment in FY3/24.

Our in-house methodology* takes what we have selected as core measurable ESG factors, ranking its performance versus its domestic GICS Technology Hardware & Equipment with a market capitalization between ¥100bn to ¥1tn (a total of 34 companies).

Astris-Sustainability ESG model rating for Macnica



Source: Astris Advisory (*Note – for details of our in-house rating system please contact Astris Corporate Advisory)

ESG scorecards

	FY3/23	FY3/24
Environmental (11 factors from a selected peer group)		
Astris Environmental score	20.88	20.88
Social (9 factors from a selected peer group)		
Astris Social score	50.25	50.25
Governance (37 factors from a selected peer group)		
Astris Governance score	42.70	40.86
TOTAL SCORE (Out of a total of 57 factors)	40.5	39.4

Source: Company, FactSet, Astris Corporate Advisory

Our methodology has highlighted the following key topics:

Environmental

The company has a high reporting scope, disclosing most of the commonly reported metrics relative to peers in the Environmental category. The company has disclosed CO2 emissions and reduction targets for scopes 1,2 and 3. CO2 is expected to be reduced by 42% (vs. 2022) for scope 1 with the aim to achieve a net zero by 2050 for scope 1&2. It is worth noting that Macnica has thoroughly assessed and disclosed both transition and physical risks.

Social

The company has outlined policies in the following key areas:

- **Compliance policy** — covers human rights protection, child labor, discrimination, occupational health, and safety among others, and conflict of interests.
- **Efforts on employee diversity** — female staff, manager, and director ratios are disclosed and have improved over the past 3 years.
- **External whistle-blower policy** — sets a fair and anonymous external hotline, enabling whistleblowers to directly contact a lawyer.

Governance

The corporate governance system at Macnica is organized in the following manner:

- **Board of directors** – currently comprised of 12 board members led by Chairman of the Board Kiyoshi Nakashima (six of them are external).
- **Audit and Supervisory Committee** – composed of three members. As of the shareholders' meeting in June 2024, the company transitioned to an Audit and Supervisory Committee structure.
- **Nomination and Remuneration Committee** – an advisory body to the Board Meeting, comprising six Members of the Board (including five outside members and one non-executive director). It advises on the election and dismissal of the President and Representative Members, as well as draft nominations of candidates for Members of the Board and Statutory Corporate Auditor positions, and remuneration and bonuses for Members of the Board.

The company improved a female director ratio improved to 25% (vs. 21.4% in FY3/23) and an external director ratio to 50% (vs. 42.8% in FY3/23).

Controversies

We note we have been unable to find major controversies that may have significant financial or reputational repercussions for the company and its shareholders.

Areas of discussion

Highlighting key topics for investors

We believe the following will be key areas for discussion with investors:

1. Semiconductor business
 - a. What are the main growth strategies in the next 3-5 years?
 - b. How are you addressing intensifying competition in China?
 - c. How much headroom do you see for incremental market share growth in the long term?
 - d. What are the products likely to become key growth drivers identified to date?
 - e. How are you going to improve the gross margin for overseas business?
2. Network business
 - a. When do you expect operating margins to recover historical highs?
 - b. What percentage of revenue will be generated from Network out of total revenue in five years?
3. CPS Solutions business
 - a. What is the anticipated proportion of operating profit from CPS solutions business in five years?
 - b. Who are the current competitors in this field?
 - c. Is it expected that other semiconductor trading companies will also expand into businesses similar to CPS solutions in future?
4. Shareholder returns
 - a. How will shareholder returns develop going forward?
 - b. What is the thinking behind the split between dividends and buybacks?
5. M&A
 - a. How strategically important is M&A?
 - b. Will the long-term plan incorporate any M&A activity?



JGAAP Financial Summary

Income statement (¥bn)	FY 3/23	FY 3/24	FY 3/25E	FY 3/26E	FY 3/27E
Sales	1,029.26	1,028.72	1,100.42	1,193.87	1,295.45
COGS	903.36	899.10	968.37	1,050.60	1,139.99
Gross profit	125.90	129.62	132.05	143.26	155.45
Gross profit margin (%)	12.2	12.6	12.0	12.0	12.0
Total OP	61.65	63.73	64.69	71.92	82.86
OP margin (%)	6.0	6.2	5.9	6.0	6.4
Non-operating income	1.12	1.57	1.35	1.46	1.40
Non-operating expenses	(5.93)	(3.34)	(4.64)	(3.99)	(4.31)
Recurring profit	56.83	61.97	61.40	69.39	79.95
Extraordinary gains	2.17	5.62	-	-	-
Extraordinary losses	(0.85)	(1.32)	-	-	-
Pre-tax profit	58.15	66.26	61.40	69.39	79.95
Tax	(15.34)	(17.53)	(17.81)	(20.12)	(23.19)
Effective tax rate (%)	27.0	28.3	29.0	29.0	29.0
Net income	42.81	48.73	43.59	49.27	56.77
Non-controlling NI	1.78	0.66	0.70	0.76	0.83
Parent attributable NI	41.03	48.07	42.89	48.50	55.94
Sales growth YoY (%)	+35.1	-0.1	+7.0	+8.5	+8.5
OP growth YoY (%)	+67.9	+3.4	+1.5	+11.2	+15.2
Pre-tax profit YoY (%)	+56.8	+14.0	-7.3	+13.0	+15.2
NI growth YoY (%)	+59.0	+17.2	-10.8	+13.1	+15.3

Balance sheet (¥bn)	FY 3/23	FY 3/24	FY 3/25E	FY 3/26E	FY 3/27E
Cash & equivalents	37.57	38.71	68.43	102.07	135.32
Inventory	218.91	234.00	250.31	271.57	294.67
Accounts receivables	202.70	206.73	221.14	239.92	260.33
Other	31.91	39.31	42.05	45.62	49.50
Current assets	491.08	518.75	581.93	659.18	739.82
Tangible assets	8.03	9.03	9.36	9.72	10.12
Goodwill	1.58	1.05	1.05	1.05	1.05
Intangible assets	6.41	6.00	6.33	6.69	7.08
Long term investments	3.91	8.22	8.22	8.22	8.22
Other	6.62	9.20	9.20	9.20	9.20
Fixed assets	26.54	33.49	34.16	34.89	35.67
Total assets	517.62	552.24	616.09	694.06	775.49
Short term borrowing	46.56	61.20	61.20	61.20	61.20
Trade creditors	186.84	151.13	166.88	181.06	196.46
Other	65.36	78.74	79.39	90.23	95.69
Current liabilities	298.76	291.06	307.47	332.48	353.34
Long term borrowing	8.76	3.66	3.66	3.66	3.66
Other LT liabilities	2.34	1.11	1.11	1.11	1.11
Long term liabilities	11.09	4.77	4.77	4.77	4.77
Shareholder's equity	199.79	244.31	290.90	342.76	402.14
Share acquisitions rights	-	-	-	-	-
Non-controlling interests	7.97	12.11	12.95	14.05	15.24
Total net assets	207.76	256.42	303.85	356.81	417.39
Total liabilities & net assets	517.62	552.24	616.09	694.06	775.49

Cash flow statement (¥bn)	FY 3/23	FY 3/24	FY 3/25E	FY 3/26E	FY 3/27E
Profit before tax	58.15	66.26	61.40	69.39	79.95
Depreciation/amortization	3.47	3.62	4.40	4.78	5.18
Other non-cash items	9.83	(9.68)	(0.73)	2.66	(3.44)
Changes in working capital	(20.01)	1.96	-	-	-
Tax paid	(12.54)	(22.22)	(17.81)	(20.12)	(23.19)
Cash from Operating Activities	38.90	39.95	47.26	56.71	58.51
Capex	(2.15)	(2.27)	(2.43)	(2.63)	(2.86)
Acquisitions/increase stakes	-	(14.63)	-	-	-
Other investing cash flow	1.28	(1.56)	(0.14)	(0.85)	(0.50)
Cash from Investing Activities	(0.87)	(18.46)	(2.57)	(3.49)	(3.36)
Total cash dividends paid	(7.78)	(9.39)	(12.10)	(12.70)	(13.04)
Debt issuance/(retirement)	(6.91)	(5.78)	-	-	-
Equity financing/(buybacks)	(5.97)	(4.97)	-	(4.00)	(6.00)
Other	(6.44)	(2.87)	(2.87)	(2.87)	(2.87)
Cash from Financing Activities	(27.10)	(23.02)	(14.97)	(19.58)	(21.91)
FX impact	1.47	2.65	-	-	-
Net cash flow	12.39	1.13	29.72	33.64	33.24
Free cash flow	36.75	37.68	44.83	54.07	55.66
EBITDA	65.11	67.35	69.09	76.70	88.05
EBITDA margins (%)	6.3	6.5	6.3	6.4	6.8
Free cash flow margin (%)	3.6	3.7	4.1	4.5	4.3
Free cash flow conversion (%)	63.2	56.9	73.0	77.9	69.6
Capex/sales (%)	0.2	0.2	0.2	0.2	0.2
Capex/depreciation (%)	61.9	62.7	55.2	55.2	55.2
CFO margin (%)	3.8	3.9	4.3	4.7	4.5
Key metrics	FY 3/23	FY 3/24	FY 3/25E	FY 3/26E	FY 3/27E
Profitability					
Gross margin (%)	12.2	12.6	12.0	12.0	12.0
Operating margin (%)	6.0	6.2	5.9	6.0	6.4
Net margin (%)	4.0	4.7	3.9	4.1	4.3
ROA (%)	9.3	9.0	7.3	7.4	7.6
ROE (%)	22.2	21.6	16.0	15.3	15.0
ROCE (%)	28.2	24.4	21.0	19.9	19.6
ROIC (%)	18.6	16.2	13.8	13.4	13.5
Liquidity					
Current ratio (x)	1.6	1.8	1.9	2.0	2.1
Quick ratio (x)	0.9	1.0	1.1	1.2	1.3
Leverage					
Debt/Equity ratio (x)	0.3	0.3	0.2	0.2	0.2
Net Debt/Equity ratio (x)			net	net	net
	0.1	0.1	cash	cash	cash
Equity ratio (x)	0.4	0.4	0.5	0.5	0.5
Interest cover (x)	N/A	N/A	N/A	N/A	N/A
Net Debt/EBITDA (x)	0.3	0.4	N/A	N/A	N/A
Valuation					
EPS reported (¥)	664.9	794.6	709.0	818.2	962.9
PER (x)	7.5	8.4	7.2	6.1	7.5
Diluted PER (x)	7.5	8.4	7.2	6.2	7.5
DPS (¥)	200.0	210.0	220.0	260.0	200.0
Dividend payout ratio (%)	25.2	29.6	26.9	27.0	25.2
Dividend yield (%)	3.4	3.5	3.7	4.4	3.4
Free cash flow yield (%)	10.5	12.4	15.0	15.4	10.5
Diluted FCF yield (%)	10.4	12.4	15.0	15.4	10.4
PBR (x)	1.5	1.2	1.1	0.9	1.5
EV/sales (x)	0.2	0.1	0.1	0.1	0.2
EV/EBITDA (x)	2.4	2.4	2.1	1.9	2.4
EV/EBIT (x)	2.6	2.5	2.3	2.0	2.6
EV/FCF (x)	4.4	3.7	3.0	3.0	4.4

Source: Company, Astris Advisory (estimates)



Disclaimers

This report has been prepared by Astris Advisory Japan K.K. This report is based on information obtained from public sources that Astris Advisory Japan K.K. believes to be reliable but which Astris Advisory Japan K.K. has not independently verified, and Astris Advisory Japan K.K. makes no guarantee, representation, or warranty as to its accuracy or completeness. This report does not and does not attempt to, contain everything material which there is to be said about the Company. Any opinions expressed herein reflect Astris Advisory Japan K.K.'s judgment at the time the report was prepared and are subject to change without notice. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties, and other factors that may cause the actual results, performance, or achievements of their subject matter to be materially different from current expectations.

This report has been prepared as general information, is therefore not intended as a personal recommendation of particular financial instruments or strategies, and does not constitute personal investment advice.

The analyst hereby certifies that (i) the views expressed in this report accurately reflect the research analyst's personal views about the company and the securities that are the subject of this report, and (ii) no part of the research analyst's compensation was, is, or will be, directly or indirectly, related to views expressed by that research analyst in this report.

The report has been prepared by Astris Advisory Japan K.K., a Japanese firm organized under the laws of Japan and supervised by the Japanese Financial Services Agency. Details about the extent of our regulation by local authorities are available from us upon request.

Conflict of interest

This report has been commissioned and paid for by the company and is deemed to constitute an acceptable minor non-monetary benefit as defined in MiFID II.

Readers should assume that Astris Advisory Japan K.K. may currently or may in the coming three months and beyond be providing or seeking to provide IR/corporate advisory or other services to the company.

Investment in securities mentioned: Astris Advisory Japan K.K. has a restrictive policy over personal dealing for its directors, officers, employees, and service providers. Astris Advisory Japan K.K. does not conduct any investment business and does not hold any positions in the securities mentioned in this report.

Limitation of liability

Astris Advisory Japan K.K. assumes no liability as regards any investment, divestment, or retention decision taken by the investor based on this report. In no event will Astris Advisory Japan K.K. be liable for direct, indirect, incidental, special, or consequential damages (regardless of whether being considered foreseeable or not) resulting from the information in this report.

Copyright 2024 Astris Advisory Japan K.K. All rights reserved.