p-ban.com Corp. | 3559

Sponsored Research January 20, 2023



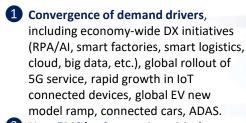
1H OP appears to mark a double-bottom

Signs that component shortages are beginning to ease

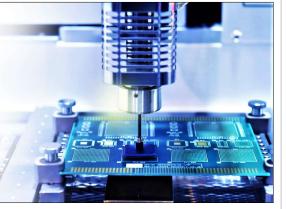
SUMMARY

- ▶ Founded in 2002, the Company operates Japan's largest B2B online platform for printed circuit board design, manufacturing and component assembly services. Net sales of just over ¥2bn still account for less than 0.5% of the target market for smalllot and repeat production of prototypes and industrial electronics equipment. The fabless B2B e-commerce platform generates high profit margins (5-year average GPM 34.0% and OPM 12.1%) through its proprietary in-house developed ordering system that can be operated by a small number of staff, fabless format and diversified supply chain within ASEAN and Japan requiring no capital investment/depreciation, and made-to-order products entailing no inventory risk. The company boasts a 99% on-time delivery track record.
- >> The Company inaugurated its new 3-year 1st Stage MTP from April 2022, incorporating its Long-Term Vision. Key initiatives in the business development strategy include: 1) expansion of PCB business which targets increasing the weight of orders from large and medium-scale enterprises through offering multiple tailored services in cutting-edge substrates and tie-ups with venture firms with promising new technologies, 2) developing EMS business into a second core business through strengthening its engineering platform (development, parts procurement, mass production functions), and 3) identifying a third business.
- >> FY23/3 marks the second consecutive year of global chip and component shortages weighing on earnings growth, making it difficult for EMS to take off and make a full-fledged contribution. SIR believes potential has risen for a slight shortfall on full-term guidance, however, even adjusting for a slight shortfall, the 70% share price decline puts adjusted valuations still on large discounts. The Company has a debt-free B/S with an equity ratio over 80%. 1H OP appears to mark a double-bottom (see bottom of P3), and as supply chain constraints move toward normalization, risks for both earnings and the share price appear to be balanced on the upside.

Sales growth set to accelerate after chip/component shortages ease, driven by:



- New EMS business gains critical mass and makes a full-scale contribution.
- 3 Increased penetration with large and medium-scale enterprise customers.



Source: compiled by SIR.

2Q Follow-up



Focus Points:

Leading B2B e-commerce platform provider of printed circuit board (PCB) and EMS online services, with its own unique supply chain, targeting higher penetration with large enterprise customers.

Key Indicators							
Share price (1/19)							
YH (2	2/2/1)	667					
YL (22	2/3/9)	472					
10YH	(19/12/26)	1,839					
10YL	(22/3/9)	472					
Shrs	4.925						
Mkt c	2.487						
EV (¥	bn)	1.452					
Equit	y ratio (9/30)	82.4%					
23.3	P/E (CE)	16.7x					
23.3	EV/EBITDA (CE)	6.6x					
22.9	P/B (act)	1.85x					
22.3	ROE (act)	11.1%					
23.3	DY (CE)*	_					

6M price chart (weekly)



Source: SPEEDA price data

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This report was prepared by Sessa Partners on behalf of p-ban.com Corp. Please refer to the legal disclaimer at the end for details.







Mainstay PCB mfg. service posted gains

EMS service continues to be pressured by parts shortages

1H RESULTS SUMMARY

- ➤ The Company announced FY23/3 1H results at 16:00 of 11/11, and it held a ZOOM webinar results briefing hosted by CEO Tasaka at 17:00 on 11/24. Relative to full-term guidance for net sales growth of +10.3%, 1H results were only +1.5%, due to the ongoing impact of component shortages negatively affecting EMS service contract size, although the number of orders continued to grow. Mainstay PCB mfg. service continued to grow.
- ▶ Operating profit declined -23.8% due to GPM pressured by component shortages, as well as increased SG&A expenses targeting Google SEO ads, in addition to strategic hiring aimed at increasing share with large and medium-scale customers as spelled out in the MTP. However, 2Q Jul-Sep results improved sequentially, in part due to the market environment beginning to improve for industrial electronic equipment production (see left-hand table) as supply chain constraints gradually begin to ease.
- ▶ The bottom table below shows 1H progress ratios relative to 5-year averages. Both net sales and operating profit at 44.5% and 37.0% are well below the 5-year averages. Another way to look at the high hurdle in the 2H in order to achieve initial full-term guidance is in the table above that, which shows 2H implied company estimates after subtracting weak 1H results. 2H net sales +18.4% and OP +27.4% are extremely challenging levels.



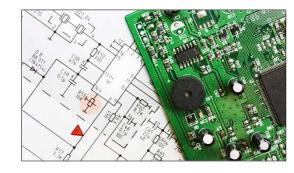
Industrial Electronic Equipment Production Trend

(YoY)	month	YTD
22.01	(2.6)	(2.6)
22.02	(10.1)	(6.6)
22.03	(9.3)	(7.8)
22.04	(13.4)	(9.0)
22.05	(17.6)	(10.4)
22.06	(7.8)	(10.0)
22.07	(7.2)	(9.2)
22.08	3.2	(7.9)
22.09	0.4	(7.0)
22.10	9.5	(5.5)

Source: JEITA

2Q results improved sequentially

% YoY	23.3 Q1	23.3 Q2	23.3 H1
	act	act	act
Net sales	(4.1)	7.0	1.5
Gross profit	(6.1)	2.3	(1.8)
SG&A expenses	6.4	9.1	7.8
Operating profit	(34.6)	(13.2)	(23.8)
Net profit	(38.5)	(17.3)	(27.8)



FY23/3 1H Results Summary and 2H / Full-term Company Estimates

JPY mn, %	22.3 H1	22.3 H2	22.3 FY	23.3 H1	YoY	23.3 H2	YoY	23.3 FY	YoY
[J-GAAP]	act	act	act	act	%	CE	%	CE	%
Net sales	933	1,000	1,933	947	1.5	1,184	18.4	2,131	10.3
Gross profit	322	339	660	316	(1.8)	414	22.3	730	10.5
SG&A expenses	224	239	463	241	7.8	287	20.1	528	14.1
Operating profit	98	100	198	75	(23.8)	127	27.4	202	2.1
Net profit	68	69	137	49	(27.8)	93	34.4	142	3.4

Source: compiled by SIR from TANSHIN financial statements. Figures rounded to nearest million yen.

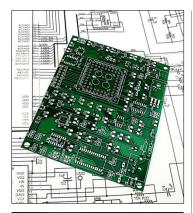
FY23/3 1H and 2H Progress Ratios and Margins

•	U			U				
ratios to full-term,	1H Progress Ratios		2H Progress Ratios		1H Ma	argins	2H M:	argins
ratios to net sales	5Y AVG	22.9 act	5Y AVG	23.3 CE	5Y AVG	22.9 act	5Y AVG	23.3 CE
Net sales	46.7%	44.5%	53.3%	55.5%	100.0%	100.0%	100.0%	100.0%
Gross profit	47.0%	43.3%	53.0%	56.7%	34.2%	33.4%	33.9%	35.0%
SG&A expenses	47.8%	45.7%	52.2%	54.3%	22.4%	25.5%	21.4%	24.2%
Operating profit	45.4%	37.0%	54.6%	63.0%	11.8%	7.9%	12.5%	10.8%
Net profit	48.9%	34.8%	51.1%	65.2%	8.7%	5.2%	8.0%	7.8%

Source: compiled by SIR from TANSHIN financial statements.

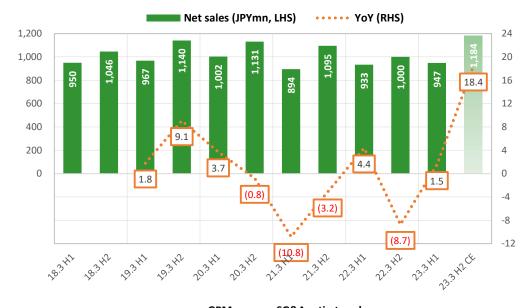




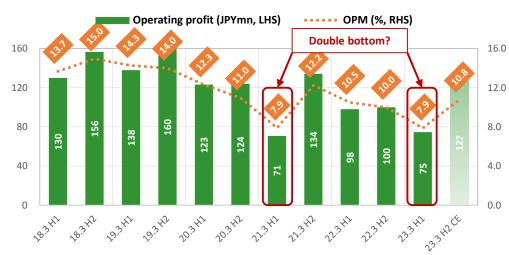




>> SIR believes potential has risen for a slight shortfall on full-term guidance. However, even adjusting for a slight shortfall, adjusted valuations are still trading at large discounts to historical averages (see graphs and comments on P11). The OP graph below appears to indicate a double-bottom for the 1H. FY24/3 will be the third year since these unprecedented chip and components shortages arose, and as supply chain constraints move toward normalization, SIR believes both earnings and share price risks are balanced toward the upside.







 $Source: compiled \ by \ SIR \ from \ TANSHIN \ financial \ statements \ and \ IR \ results \ briefing \ supplementary \ materials.$







JPCA Electronic Circuit Board Production Trends in Japan (from METI Machinery Statistics)

Production volume	CY2018	3	CY2019)	CY2020)	CY2021		CY2022 (Jan	-Oct)
	thou. m²	YoY	thou. m²	YoY	thou. m²	YoY	thou. m²	YoY	thou. m²	YoY
Electronic circuit boards	14,487	(1.0)	12,436	(14.2)	10,790	(13.2)	12,109	12.2	9,537	(5.2)
Rigid printed wiring boards	10,412	2.2	9,437	(9.4)	8,597	(8.9)	9,725	13.1	7,670	(4.7)
Single-sided PWB	1,733	(1.1)	1,538	(11.2)	1,356	(11.8)	1,574	16.1	1,240	(4.6)
Double-sided PWB	4,578	1.7	4,073	(11.0)	3,670	(9.9)	4,045	10.2	3,156	(6.1)
Multilayer PWB (4 layers)	2,189	7.0	2,073	(5.3)	1,845	(11.0)	2,125	15.2	1,747	(0.4)
Multilayer PWB (6 to 8 layers)	909	4.1	908	(0.1)	840	(7.5)	957	13.8	740	(5.9)
Multilayer PWB (10 layers or more)	118	3.6	108	(8.8)	103	(4.9)	120	16.5	104	5.0
Build-up Multilayer PWBs	885	(2.3)	738	(16.6)	782	6.1	904	15.5	684	(8.3)
Flexible printed circuit boards	3,204	(11.1)	2,150	(32.9)	1,513	(29.6)	1,610	6.4	1,267	(7.9)
Single-sided FPCs	939	(9.9)	744	(20.8)	647	(13.1)	679	4.9	467	(21.6)
Double-sided / multi-layered FPCs	2,265	(11.6)	1,406	(37.9)	866	(38.4)	931	7.5	801	2.6
Module boards	872	4.3	848	(2.7)	680	(19.9)	773	13.8	599	(6.4)
Rigid module substrates	478	(3.9)	411	(14.1)	400	(2.8)	444	11.2	365	(0.2)
Other module substrates	394	16.3	437	11.1	280	(36.0)	329	17.5	234	(14.6)
Electronic circuit boards assembly	6,632,237	8.0	7,616,758	14.8	14,283,579	87.5	14,852,877	4.0	12,701,113	2.2
PWB assembly	6,104,384	1.3	6,434,177	5.4	10,800,823	67.9	11,084,450	2.6	9,200,473	(8.0)
Module boards assembly	527,853	348.6	1,182,581	124.0	3,482,756	194.5	3,768,427	8.2	3,500,640	11.3

Production value	CY2018		CY2019	9	CY2020		CY2021		CY2022 (Jan-Oct)	
	JPY mn	YoY	JPY mn	YoY	JPY mn	YoY	JPY mn	YoY	JPY mn	YoY
Electronic circuit boards	477,130	2.3	443,827	(7.0)	486,867	9.7	648,280	33.2	583,185	10.6
Rigid printed wiring boards	319,107	5.8	298,351	(6.5)	333,442	11.8	412,895	23.8	364,283	8.9
Single-sided PWB	9,203	1.8	8,383	(8.9)	7,258	(13.4)	9,086	25.2	7,643	2.5
Double-sided PWB	77,875	12.5	66,028	(15.2)	62,986	(4.6)	72,180	14.6	65,074	9.9
Multilayer PWB (4 layers)	56,082	8.8	51,997	(7.3)	53,357	2.6	63,561	19.1	60,253	16.7
Multilayer PWB (6 to 8 layers)	63,904	4.8	61,394	(3.9)	60,370	(1.7)	70,398	16.6	64,717	13.9
Multilayer PWB (10 layers or more)	22,272	10.8	20,268	(9.0)	23,556	16.2	26,667	13.2	24,650	11.1
Build-up Multilayer PWBs	89,771	(0.9)	90,281	0.6	125,915	39.5	171,003	35.8	141,946	3.5
Flexible printed circuit boards	50,639	(13.6)	37,042	(26.9)	27,374	(26.1)	31,462	14.9	25,088	(1.4)
Single-sided FPCs	10,658	(8.1)	9,381	(12.0)	7,274	(22.5)	8,029	10.4	5,247	(24.0)
Double-sided / multi-layered FPCs	39,981	(15.0)	27,661	(30.8)	20,100	(27.3)	23,433	16.6	19,841	7.0
Module boards	107,384	0.9	108,434	1.0	126,051	16.2	203,923	61.8	193,814	15.7
Rigid module substrates	100,064	0.8	99,270	(0.8)	120,187	21.1	198,342	65.0	189,078	16.1
Other module substrates	7,320	2.5	9,164	25.2	5,864	(36.0)	5,581	(4.8)	4,736	3.1
Electronic circuit boards assembly	137,157	3.4	141,239	3.0	273,543	93.7	271,120	(0.9)	217,869	(2.5)
PWB assembly	103,187	(5.2)	101,537	(1.6)	144,237	42.1	149,732	3.8	128,137	4.4
Module boards assembly	33,970	42.2	39,702	16.9	129,306	225.7	121,388	(6.1)	89,732	(10.9)

Source: compiled by SIR from JPCA Electronic Circuit Board Production Trends (compiled by JPCA from METI Monthly Report of Machinery Statistics) JPCA (Japan Electronics Packaging and Circuits Association).

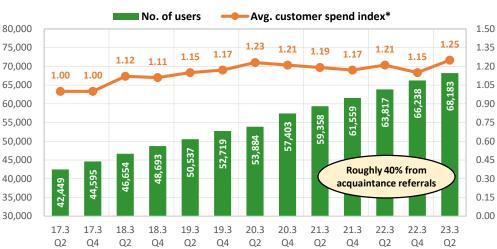
尸枝。CUM

22.1 27.2 large enterprises 19.8 22.5 medium-scale 50.3 individuals/

FY2015 FY2020

Weight of large and medium

p-ban.com Trend of Number of Users and Average Customer Spend Index



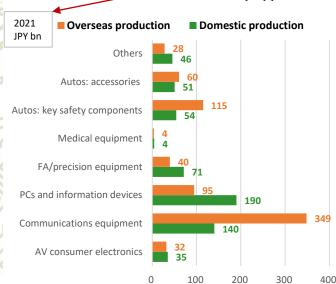




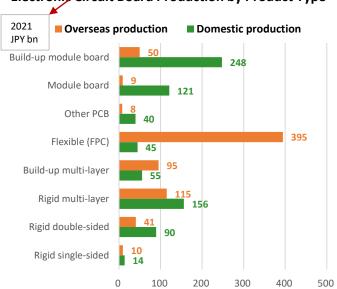
Domestic and Overseas PCB Production by Japanese Makers (JPY bn)



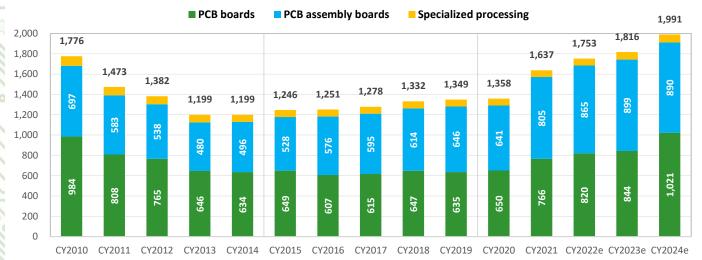
Electronic Circuit Board Production by Application



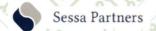
Electronic Circuit Board Production by Product Type



Total Domestic Electronic Circuit Production (JPY bn)



Source: compiled by SIR from Japanese Electronics Circuits Industry 2022 (JPCA Japan Electronics Packaging and Circuits Association). Estimates by JPCA.





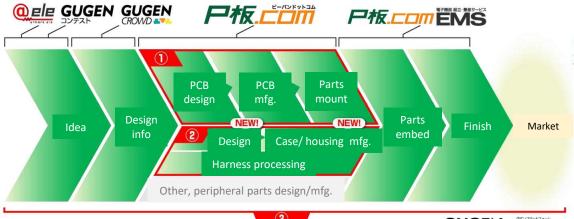


B2B one-stop solutions platform for design, manufacture and assembly of PCB

April 2022 marked the company's 20th anniversary since founding, and April 2023 will mark the 20th anniversary of full-fledged start-up and operation of the p-ban.com e-commerce website, a pioneer in printed circuit board (PCB) online solutions. B2B platforms are the quintessential vehicle for 'smart logistics,' whose value proposition consists of 1) same high-quality products/services at a substantial discount (achieved through relentless pursuit of cutting distribution costs), and 2) enhancing customer satisfaction by providing unique value-added, helpful free services, building a loyal customer base and unique supply chain, thereby becoming the de facto standard by virtue of being the first mover.

REFERENCE
Business Overview

The company's stated mission is to 'innovate the development environment,' and its targeted vision is to 'build a GUGEN platform and achieve services that can easily support products becoming a reality for anyone who has an idea.' In Japanese, the word *GUGENKA* means to realize or make something become a reality. Business of the p-ban.com B2B platform is encircled with a bold red line below, and main services explained in the lower graphic.



1 Printed circuit board business

(One-stop solutions on E-commerce)

2 PCB peripheral business

(Mfg and processing PCB components)

(3) EMS business (bulk contract services for electronic devices)

Source: IR results briefing supplementary materials.

GUGEN PLATFORM

Printed circuit board design service (including free CAD tools and resources) Designs PCB layout data from electronic circuit schematic diagrams

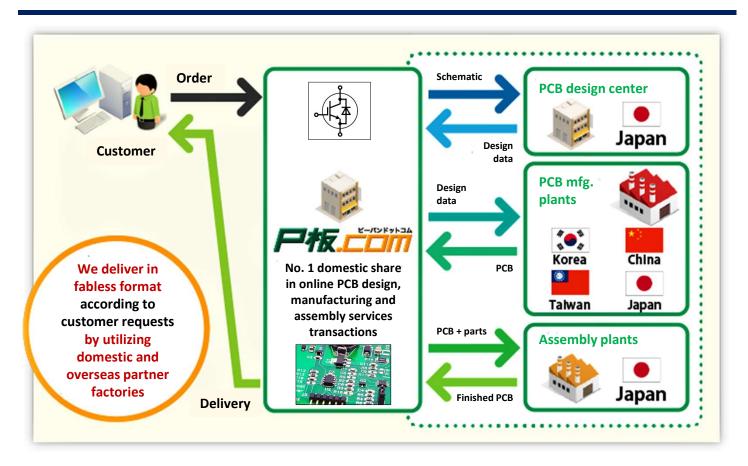
Schematic data is made into PCB mfg. data.

Removes unnecessary copper from the substrate and manufactures according to design data Manufactured based on PCB mfg. data.

















No. 1 domestic share in online PCB design, mfg. and assembly services

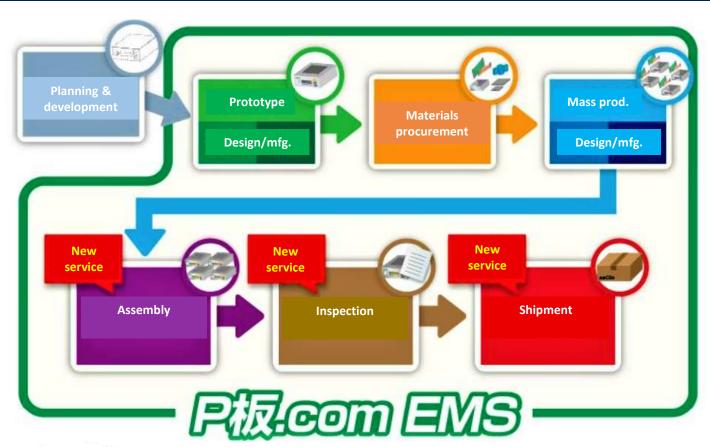
According to the company, one of the largest bottlenecks for startup developers of electronic devices is the high initial cost to manufacture printed circuit boards. Pban.com offers 'completely free initial cost' made possible by use of an efficient heterogeneous imprinting method which does not require storing film or silk plates. Another important advantage is introduction of the industry's first '1-click quote system' which provides instant response to estimated cost and delivery time after the user clicks on his or her requirements. Partner PCB factories in Japan and overseas are selected to meet customer requirements, such as custom specifications and UL certification, and the company has a quality control system that complies with ISO9001 and conducts regular audits to improve quality. In addition, the company publishes its own standards based on JPCA and IPC international standards on its website. Before manufacturing, the company carefully double checks design data by specialized staff at the Head Office in Japan and each factory to prevent issues arising later, which receives high praise in customer feedback. Finally, it can handle mass production and advanced specifications, a factor important for the growing list of large enterprises, gov't. agencies and prestigious universities.

p-ban.com Strengths

- 1 Niche Top: Overwhelming share in venture business prototype printed circuit boards
- 2 Convenience: Orders can be placed 24/7, 365 days a year
- Reliability: Maintains a 99% on-time delivery rate
- 4 High quality: High-quality products and services backed by ISO9001*1 certification
- **5** Multiple offerings: Handles rigid substrates, flexible substrates, metal heat dissipation substrates, harnesses, and housings that can support next-generation 5G/IoT/EV etc.
- 6 Fabless: Maintains high returns on capital through fabless management
- Customer base: Transaction experience with 26,300 companies
 *1 obtained by p-ban.com



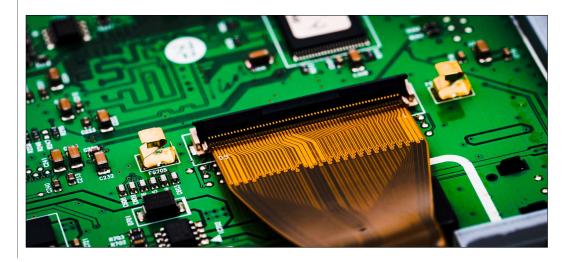






Launched EMS (electronic equipment contract manufacturing service) in Dec-2019

EMS is a key growth initiative for the company, leveraging its unique proprietary supply chain for its main business in PCB services, as well as its proprietary user database of 26,300 companies. This business provides services specialized for IoT-related devices. The growth opportunity from the convergence of demand drivers includes economywide DX initiatives (RPA/AI, smart factories, smart logistics, cloud, big data, etc.), global rollout of 5G service, rapid growth in IoT connected devices, global EV new model ramp, connected cars, ADAS, among others. Headwinds from the global chip and key components shortages have persisted, weighing heavily again on earnings for this term. As the supply chain heads toward normalization, the new phase of high demand growth will provide an important backdrop for EMS to take off and provide a new source of earnings growth.







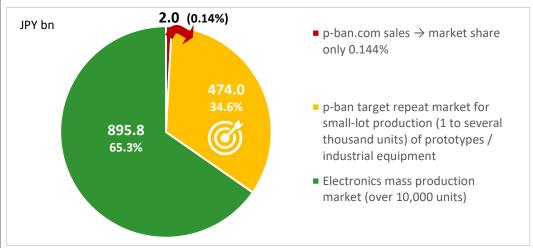


Fabless B2B e-commerce platform generates high profit margins



Currently only 0.42% share of p-ban.com Target Market (yellow portion)

⇒ Small-lot, Repeat Production for Prototypes and Industrial Equipment



Source: compiled by SIR from IR results briefing supplementary materials. Production of PCB boards, PCB assembly boards 2020 (JPY bn).

MTP Stage 1: expanding and strengthening existing business toward the next level Expansion of PCB business

- Break away from the image of a prototype board EC trading company for SMEs
 - 1) Increase orders from medium and large enterprises in the field of competitive prototype substrates (see examples on the top of the next page)
 - 2) Raise spend per customer through use of multiple tailored services
- Boost appeal to target customers and expand share
- Maximize use of big data through AI analysis

Takeoff of EMS Business

- Make this the second business segment after PCB business
- Strengthen the engineering network (development, components procurement, mass production functions)
- Construct a mutual growth model with hardware startups
 Explore and lay the groundwork for a third business
- Business that supports operations with a high workload such as data management and parts inventory management through a system solution





Release of next-generation substrates/board manufacturing services



In collaboration with promising start-up companies that possess special technologies, launch of new cutting-edge services



For AGVs (automated guided vehicles), transport robots and other industrial equipment.

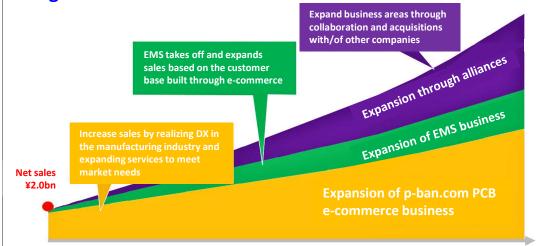
Wireless charging installation service



Measures shape changes in three dimensions and digitizes the sensation of touch.

Tactile sensor installation service

Long-Term Growth Vision



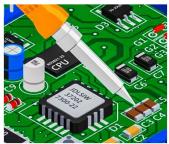
Present Future



Masaki Tasaka (Founder and President)











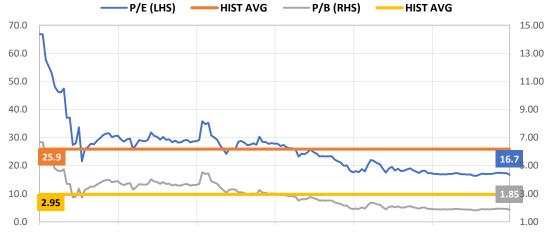
Performance and Valuations: SESSA Smart Charts

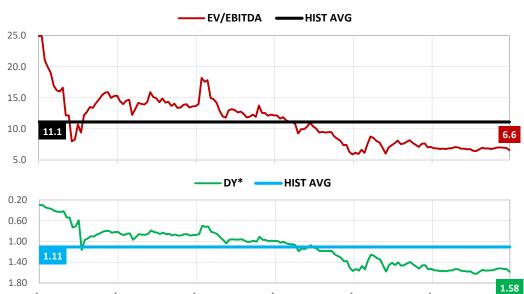
- ✓ Valuations are currently trading at large discounts to their historical averages: P/E 35% discount, P/B 37% discount and EV/EBITDA 40% discount.
- ✓ Even if our analysis is correct on PP2-3 and full-term earnings post a slight shortfall to guidance estimates, adjusted valuations are still on double-digit discounts.
- ✓ The annual dividend for FY23/3 has not been decided yet. The DY* to the right assumes the same dividend of ¥8 per share last term, putting it on a 43% premium to the historical average.



SESSA Smart Charts: 3-Year Weekly Share Price and Valuations Trend







Source: compiled by Sessa Partners from SPEEDA historical earnings and price data. Valuations calculated based on CE.



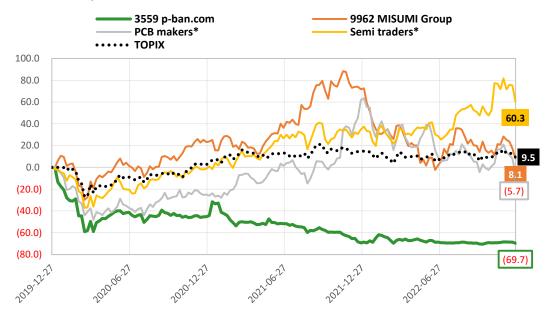




Winners and losers from global shortages of chips and electronic components

- ✓ SIR created two market capitalization weighted indices for comparison: dedicated PCB makers and semiconductor/electronic component traders, as described in the footnote to the graph on the right.
- ✓ Semi trading houses in particular have benefitted from both their well-developed supply chains as well as rising unit prices. Even low-margin PCB makers benefitted from special demand associated with COVID-19 stay-athome related etc.
- Given the nature of p-ban's business geared toward prototypes and small-lot production, it is at a disadvantage in times of parts shortages, weighing heavily on 2021 and 2022 earnings. As tightness begins to ease, earnings are set to recover going into next term.

3-Year Weekly Relative Performance



Source: compiled by SIR from SPEEDA price data. *Mkt cap-weighted indices: PCB makers = 6787 MEIKO, 6958 CMK, 6881 Kyoden, 6658 Shirai Elec and 6837 Kyosha. Semi traders = 3132 Macnica Holdings and 8154 Kaga Electronics.

p-ban.com Shareholder Returns Policy

Stage 1 of the new MTP prioritizes growth investment toward strengthening the base for future growth, however, considering the debt-free B/S and 80%+ equity ratio, both healthy metrics, the company is confident it can generate ample cashflow to cover shareholder rebates.

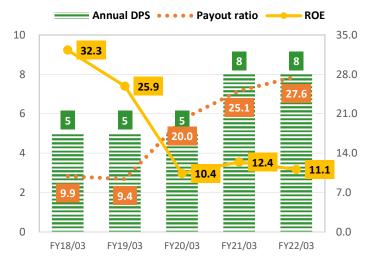
The Company announced a share buyback program in August 2022 up to 5.15% of shares outstanding. Progress to date is shown in the lower left-hand table. Funds used for the dividend payment in FY22/3 was an expenditure of ¥37.6mn. The annual dividend has yet to be decided, however, total shareholder rebates in FY23/3 including the share buyback program could exceed 100% payout (lower right-hand chart).

Progress of Share Buybacks (22.08.15 to 23.03.31)

Month	No. of shares	JPY purchase amount	Avg. price
2022.08	26,700	13,711,700	513.5
2022.09	37,400	19,071,900	509.9
2022.10	48,100	24,294,700	505.1
2022.11	34,000	17,648,400	519.1
YTD	146,200	74,726,700	511.1
2022.12			
2023.01			
2023.02			
2023.03			
max:	250,000	150,000,000	600.0
progress	58.5%	49.8%	

Source: compiled by SIR from monthly press releases.

Trend of Shareholder Returns







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