TOREX SEMICONDUCTOR | 6616

Sponsored Research March 11, 2024



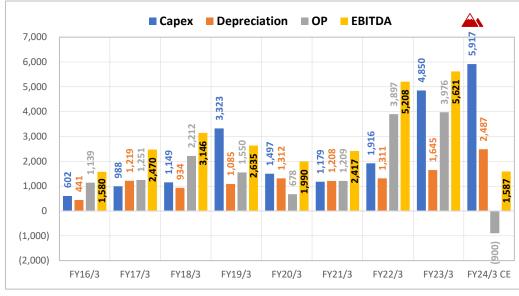
Sessa Investment Research

Major capex has peaked out in FY24/3 Orders are expected to rebound from summer onward

SUMMARY

- The graph below shows the trend of capex, depreciation, OP and EBITDA. According to the Company, major capacity expansion capex has peaked out in FY24/3. While the peak in depreciation expense will come in FY25/3, the key takeaway here is that management has stuck to its guns and executed on its investment initiatives in the extended MTP targets to FY29/3 aiming to boost capacity for sales up 1.5x (see outline of capex plan on P4). Based on our follow-up interview, inventory consolidation at the intermediate distributor level, particularly for consumer electronics in the Greater China region, is still underway in the Jan-Mar quarter, a similar trend observed by global major Texas Instruments. However, TOREX believes it will see an upturn in orders from this summer onward as excess inventories from the boom during COVID are depleted. Japan exports to China have begun to rebound in general machinery and autos, setting the stage for semiconductors to follow in due course.
- >> While the stalling of China's economy pushing out inventory adj. progress is one of the factors behind the FY24/3 downward revision on 1H results, the key factor for lowering profit forecasts into losses is the assumption of recording ¥1.9bn in inventory writedowns. The two reasons for the increase in inventory write-downs include: 1) the Company strategically built up its inventory in 2022 when reviewing its production sites amid the shortage of semiconductors, and inventory that was more than one year old was revalued under the Company's conservative accounting policy, and 2) the review of production sites required the Company to hold several years' worth of inventory for EOL (end-of-life) products for the plant from which production was transferred, and this inventory build-up is now revalued under a conservative scenario. Based on our interview with management, the Company largely expects to be able to sell the inventory going forward, in which case the write-downs would be written back.

TOREX SEMICONDUCTOR Group Capex Peaked in FY24/3 (JPY mn)



3Q Follow-up



Focus Points:

Power management IC specialist with attractive growth profile from new applications driven by 5G/IoT, EV/ADAS and highly energy efficient next-gen power devices.

	Key Indicators	5
Share	e price (3/8)	1,899
YH (2	3/2/10)	2,843
YL (23	3/12/25)	1,643
10YH	(21/11/30)	3,960
10YL	(15/8/25)	830
Shrs o	out. (mn shrs)	11.554
Mkt o	ap (¥ bn)	21.941
EV (¥	bn)	21.987
Equit	y ratio (12/31)	57.5%
24.3	P/E (CE)	—x
24.3	EV/EBITDA (CE)	13.9x
23.3	ROE (act)	9.2%
23.3	P/B (act)	0.89x
24.3	DY (CE)	2.95%

6M daily share price trend



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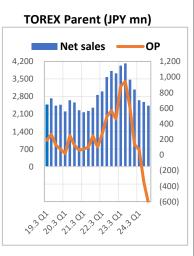
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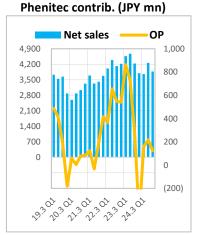
Source: compiled by SIR from IR results briefing materials.











Source: compiled by SIR from IR quarterly results briefing materials.

FY24/3 largely captures the reset cycle SIR key indicators point to a sharp recovery in FY25/3

RESULTS SUMMARY

- ➤ TOREX SEMICONDUCTOR announced 9M FY24/3 consolidated financial results at 15:15 on Wednesday 2/14. In the electronics market, demand stagnated leading to inventory adjustments in a wide range of fields, particularly in consumer electronics and telecommunications equipment, due to the impact of a reactionary drop from COVID special demand and the sluggish Chinese market. TOREX parent OP turned to operating loss due to the sharp decline in sales and recording inventory valuation losses (negative impact approx. ¥1.17bn). Phenitec OP declined sharply YoY due to the decline in sales. Profit ATOP turned to net loss, additionally impacted by a forex loss of approx. ¥475mn.
- There is no change in the full-term revised forecasts announced November 14, 2023. At a Board of Directors meeting held on January 18, 2024, the Company decided to make the following changes in Representative Directors, effective April 1. Takeshi Kimura (58), Director, Senior Managing Executive Officer, GM of the Development Division, will become Representative Director and President. Koji Shibamiya (63), Representative Director and President, will become Representative Director and Chairman.

JPY mn, %	FY24.3	Pct	FY24.3	Pct	FY24.3	Pct	FY24.3	Pct
[J-GAAP]	9M act	YoY	3Q act	YoY	4Q CE	YoY	FY rev CE	YoY
Net sales	19,557	(22.0)	6,304	(18.1)	6,943	1.0	26,500	(17.1)
 Torex parent 	7,662	(34.0)	2,433	(29.9)				
Industrial equipt.	2,966	(34.4)	888	(30.7)			/	
Automotive equipt.	1,002	(36.0)	339	(26.6)				
Other	3,327	(32.1)	1,084	(29.3)				
Japan	3,012	(30.4)	887	(37.2)				
Asia	2,584	(35.3)	937	(14.4)				
Europe	1,530	(23.5)	425	(30.9)				
N America	536	(58.6)	184	(47.0)	/			
Phenitec contribution*	11,895	(11.7)	3,872	(8.5)				
Industrial equipt.	3,468	17.9	989	(16.5)			/	/
Automotive equipt.	3,531	(3.2)	1,196	3.1				
Other	5,414	(35.9)	1,885	(19.7)			/	
Japan	4,874	(16.9)	1,683	(9.1)				
Asia	1,769	(55.1)	617	(31.7)				
Europe	1,158	17.2	371	10.7				
N America	4,942	12.1	1,485	(11.7)				
Gross profit	3,831	(56.1)	907	(62.2)				
SG&A expenses	4,243	(4.4)	1,409	(7.3)				
EBITDA	1,182	(78.3)	168	(87.0)	405	127.9	1,587	(71.8)
Operating profit	(412)	—	(502)	—	(488)	-	(900)	_
 Torex parent 	(909)	_	(624)	—				
Phenitec contribution	497	(73.2)	123	(53.6)				
Ordinary profit	(903)	_	(636)	_	(297)	_	(1,200)	
Profit ATOP	(812)		(613)		(28)		(840)	
Depreciation	1,594	38.1	670	61.1	893	81.9	2,487	51.2
Сарех	2,645	(24.3)	268	(89.6)	3,272	141.3	5,917	22.0
USD/JPY	¥142.7			· · · · · · · · · · · · · · · · · · ·			¥142.7	

TOREX SEMICONDUCTOR 3Q FY24.3 Consolidated Financial Results Summary

Source: compiled by SIR from TANSHIN financial results summaries and IR results briefing materials.

*Note: Phenitec sales breakdowns by application and regions (ref. figures) include intracompany transactions with Torex. D-in Torex sales breakdown by regions based on regions where products incorporating Torex products have been planned and designed and orders have been substantially won.







Extending the dedicated production line for TOREX at Phenitec's Kagoshima Fab

>> The Group is investing ¥4.4bn (¥3.0bn in FY24/3) in Phenitec's Kagoshima Fab to expand dedicated capacity for TOREX analog power management ICs, positioning it as one of the main fabs for TOREX. It is also expanding clean room floor space to expand capacity including for TOREX products. Installation of new production equipment began in 4Q FY23/3. A completion ceremony for the clean room expansion was held on February 9, 2024, and new equipment is being introduced in turn, with capacity expansion to a stable production system progressing steadily.

Clean room expansion on 3F of Phenitec's Kagoshima Fab Bldg. No. 5



Source: excerpt from PHENITEC SEMICONDUCTOR corporate website.

Integration of the Okayama No.1 and No.2 Fabs completed

>> The integration plan for Phenitec's Okayama production facilities was resumed in the 3Q of FY23/3, and consolidation of products from the No.2 Fab to the No.1 Fab was completed in the 3Q of FY24/3 (November). There was a decrease in orders from the 2H of FY23/3 due to inventory adjustment in the market. Orders are expected to recover from 2H FY25/3.

Phenitec's fully integrated Okayama Fab No. 1



Source: excerpt from PHENITEC SEMICONDUCTOR corporate website.

Major capex for extended MTP targets to FY29/3 has

peaked in FY24/3 (see outline on next page). Depreciation is set to peak in FY25/3.







Extended MTP targets to FY29/3

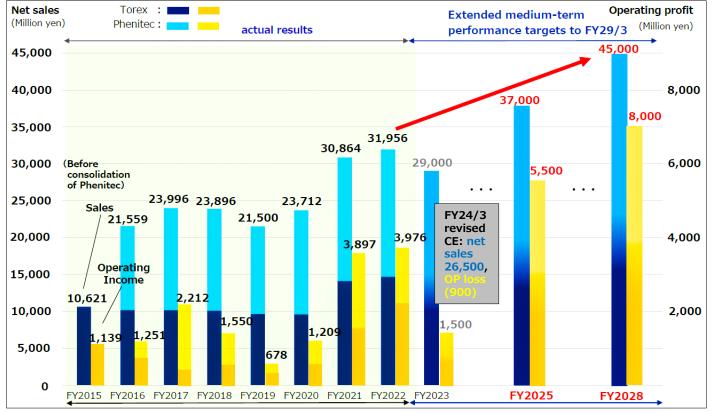
This line is scheduled to start mass production in Mar-2025.

Total capex of ¥12.6bn to boost capacity for sales up 1.5x

CAPEX SUMMARY

- Signed a long-term production contract agreement with an overseas foundry Fabless TOREX will invest ¥1.8bn in the contractor's fab to secure dedicated 8-inch production capacity necessary for the development of new high-performance products, including medium- to high-breakdown voltage power device products.
- Extending the production line for TOREX at Phenitec's Kagoshima Fab Investing ¥4.4bn in an existing line to expand dedicated capacity for TOREX. Expanding clean room floor space to expand capacity including for TOREX products.
- Other capex to boost capacity at the Okayama Fab No. 1 and Kagoshima Fab Investing ¥2.0bn to meet demand in a brisk semiconductor market. Additionally deploying ¥4.4bn capex for plant maintenance, etc. Total capex of ¥12.6bn to boost capacity for sales to increase 1.5x.
- Just based on new MTP targets for FY26/3, OP is set to grow from the depressed loss in FY24/3 to ¥5,500 (up ¥6,400mn). While admittedly the implied OPM of 14.9% is a challenging level, SIR believes current valuations are extremely compelling. Considering the semiconductor market is likely at the trough of the current reset cycle now, and share prices tend to discount roughly 1 year in advance, SIR believes TOREX Semiconductor is attractive at the current level.

Medium-term net sales and OP performance targets extended to FY29/3

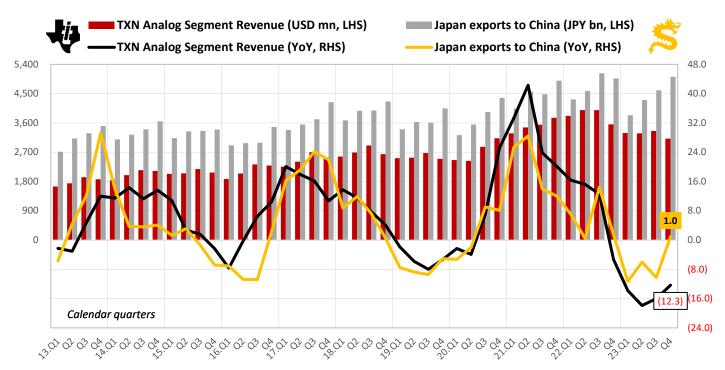


Source: excerpt from FY23/3 IR results briefing materials.





★ Key indicators tracked by SIR for the TOREX Group business environment point to a 2024 recovery



Source: Customs and Tariff Bureau, Ministry of Finance, Texas Instruments (NASDAQ: TXN) historical financial statements, quarterly segment revenue.

Insights from Texas Instruments SEC filings and MOF Trade Statistics of Japan

According to the transcript from TI's 4Q earnings conference on January 23, 2024, TI said it saw mid-teens declines in the industrial market as inventory consolidation is still underway, mid single-digit declines in the automotive market after 3½ years of strong growth, guiding for 1Q total revenue of -12%, after 4Q act -12.7%. The table below is based on a similar concept as TOREX's D-in based sales. The key takeaway is that the biggest YoY declines were in China as stagnation delayed inventory adj.

USD mn, %	FY22/12	FY22/12	FY22/12	FY22/12	FY23/12	FY23/12	FY23/12	FY23/12	FY2023	4Q 2023
	1Q act	2Q act	3Q act	4Q act	1Q act	2Q act	3Q act	4Q act	YoY	ΥοΥ
Total revenue	4,905	5,212	5,241	4,670	4,379	4,531	4,532	4,077	(12.5)	(12.7)
United States	1,570	1,706	1,782	1,551	1,357	1,493	1,541	1,423	(12.0)	(8.3)
China	1,275	1,340	1,143	1,049	876	872	813	732	(31.5)	(30.2)
Rest of Asia	540	569	534	360	394	435	434	458	(14.1)	27.2
Europe**/ME/Africa	1,079	1,120	1,281	1,327	1,270	1,194	1,193	985	(3.4)	(25.8)
Japan	392	414	446	350	438	480	455	409	11.2	16.9
Rest of world	49	63	55	33	44	57	96	70	33.5	112.1
Total revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%
United States	32.0%	32.7%	34.0%	33.2%	31.0%	33.0%	34.0%	34.9%	0.2%	1.7%
China	26.0%	25.7%	21.8%	22.5%	20.0%	19.2%	17.9%	18.0%	-5.2%	-4.5%
Rest of Asia	11.0%	10.9%	10.2%	7.7%	9.0%	9.6%	9.6%	11.2%	-0.2%	3.5%
Europe**/ME/Africa	22.0%	21.5%	24.4%	28.4%	29.0%	26.4%	26.3%	24.2%	2.5%	-4.3%
Japan	8.0%	7.9%	8.5%	7.5%	10.0%	10.6%	10.0%	10.0%	2.2%	2.5%
Rest of world	1.0%	1.2%	1.0%	0.7%	1.0%	1.3%	2.1%	1.7%	0.5%	1.0%

Texas Instruments additional geographic information based on end-customer HQ estimate*

Source: compiled by SIR from TXN quarterly and annual SEC filings (Form 10-Q and Form 10-K are similar in nature and length to Japan's quarterly and annual YUHO securities reports)

*Note 1: additional geographic information includes TI's estimate for revenue based on the location of the end customers' HQ,

providing a better representation of the geographic profile for where critical decisions are made.

**Note 2: Revenue from end customers headquartered in Germany was 9%, 11% and 13% of total revenue in 2021, 2022 and 2023, respectively.



Japan exports to China have

begun to rebound in general

machinery and autos, setting the stage for semiconductors

to follow in due course.



Texas Instruments revenue breakdown by end market (application category)

% total	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Industrial	31%	31%	33%	35%	36%	36%	37%	41%	40%	40%
Automotive	13%	15%	18%	19%	20%	21%	20%	21%	25%	34%
Personal electronics	29%	30%	26%	25%	23%	23%	27%	24%	20%	15%
Communications equipt.	17%	13%	13%	12%	11%	11%	8%	6%	7%	5%
Enterprise systems	6%	6%	6%	6%	7%	6%	6%	6%	6%	4%
Other	4%	5%	4%	3%	3%	3%	2%	2%	2%	2%

Source: TXN spreadsheet '2023 End Market Revenue Mix' from the IR website.

End market descriptions

Industrial includes factory automation & control; grid infrastructure; medical; aerospace & defense; test & measurement; building automation; motor drives; power delivery; appliances; pro audio, video & signage; industrial transport; retail automation & payment; and lighting. No single sector is more than upper-single digit percentage of TI revenue in 2023.

Automotive includes infotainment & cluster; hybrid, electric & powertrain systems; advanced driver assistance systems (ADAS); body electronics & lighting; and passive safety. No single sector is more than upper-single digit percentage of TI revenue in 2023.

Personal electronics includes mobile phones; PC & notebooks; portable electronics; TV; connected peripherals & printers; tablets; home theater & entertainment; gaming; wearables (non-medical); and data storage. No single sector is more than mid-single digit percentage of TI revenue in 2023.

Communications equipment includes wireless infrastructure; wired networking; broadband fixed line access; and datacom module. No single sector is more than low-single digit percentage of TI revenue in 2023.

Enterprise systems includes data center & enterprise computing; enterprise projectors; and enterprise machine. No single sector is more than low-single digit percentage of TI revenue in 2023.

Other includes calculators, royalties and other.

- Another key takeaway related to China is that by end market (application category), TI's personal electronics market saw the biggest decline in contribution, dropping from the jump to 27% in 2020 (COVID-related demand boom) to 15% in 2023, dropping below 20% for the first time (weight nearly halving in just 3 years).
- Sales breakdowns by regions and application categories for TOREX parent are shown on the top of the next page. The largest component of Asia is China, where delays in inventory adjustment resulted in a -35.3% decline in the cumulative 3Q. The largest component of Others is consumer electronics, with the category recording a -32.1% decline in the cumulative 3Q.

Monthly Trend of Japan Exports to China for Selected Categories

JPY bn, %	Exports to PRC (total)	ΥοΥ	General Machinery	YoY	Electrical / Electronics	ΥοΥ	Semicon / Components	YoY	Of which ICs	ΥοΥ	Autos	
2022.07	1,783	12.8	373	8.7	410	15.6	137	21.2	100	28.6	126	18.2
2022.08	1,612	13.4	332	8.7	340	7.9	90	(13.8)	59	(20.6)	92	55.2
2022.09	1,731	17.0	370	14.8	405	16.5	137	20.1	103	26.8	112	336.8
2022.10	1,720	7.7	357	(3.0)	396	9.6	133	8.5	98	13.3	82	71.8
2022.11	1,632	3.5	350	(3.2)	355	2.7	118	2.2	85	2.2	93	11.3
2022.12	1,618	(6.2)	351	(7.7)	376	(2.4)	132	3.9	99	10.9	57	(50.2)
2023.01	968	(17.1)	208	(16.2)	241	(16.0)	100	(2.5)	80	7.9	29	(52.1)
2023.02	1,316	(10.9)	301	(11.8)	279	(12.1)	100	1.6	75	9.5	51	(34.2)
2023.03	1,552	(7.7)	387	2.0	335	(11.3)	120	14.9	89	33.3	32	(62.7)
2023.04	1,446	(2.9)	323	9.4	302	(10.8)	94	2.5	63	12.5	64	(27.3)
2023.05	1,341	(3.4)	285	(3.0)	291	(3.2)	109	14.3	83	28.4	66	50.5
2023.06	1,519	(10.9)	372	1.2	339	(11.7)	119	(12.8)	87	(10.9)	74	(7.6)
2023.07	1,543	(13.4)	362	(2.8)	325	(20.6)	114	(16.8)	80	(19.4)	97	(23.5)
2023.08	1,435	(11.0)	304	(8.6)	322	(5.1)	113	25.5	82	39.4	90	(2.3)
2023.09	1,624	(6.2)	375	1.4	344	(15.1)	106	(22.9)	75	(27.2)	121	7.6
2023.10	1,651	(4.0)	373	4.4	343	(13.5)	102	(23.3)	71	(27.8)	109	31.8
2023.11	1,596	(2.2)	371	6.1	320	(9.8)	99	(15.9)	67	(21.9)	110	18.2
2023.12	1,771	9.5	470	33.8	349	(7.1)	103	(22.0)	70	(29.2)	101	78.7
2024.01p	1,250	29.2	279	34.1	264	9.7	93	(6.7)	66	(17.2)	62	11.4

Source: compiled by SIR from monthly Trade Statistics of Japan, Customs and Tariff Bureau, Ministry of Finance. *p = provisional.





(1) TOREX SEMICONDUCTOR parent sales breakdown by application category

JPY mn, %	FY16/3	FY17/3	FY18/3	FY19/3	FY20/3	FY21/3	FY22/3	FY23/3	9M 23.3	9M 24.3	YoY
Total sales	10,621	10,181	10,168	10,104	9,663	9,605	14,124	14,694	11,616	7,662	(34.0)
Industrial	2,917	3,444	3,728	3,927	3,463	3,504	4,885	5,770	4,523	2,966	(34.4)
Automotive	1,428	1,608	1,708	1,535	1,749	1,240	1,753	1,908	1,565	1,002	(36.0)
Medical	96	106	108	125	118	226	222	336	282	190	(32.6)
Wearable	120	197	233	238	220	362	411	431	346	177	(48.8)
Others	6,054	4,824	4,391	4,279	4,113	4,273	6,853	6,245	4,900	3,327	(32.1)
Total sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%
Industrial	27.5%	33.8%	36.7%	38.9%	35.8%	36.5%	34.6%	39.3%	38.9%	38.7%	-0.2%
Automotive	13.4%	15.8%	16.8%	15.2%	18.1%	12.9%	12.4%	13.0%	13.5%	13.1%	-0.4%
Medical	0.9%	1.0%	1.1%	1.2%	1.2%	2.4%	1.6%	2.3%	2.4%	2.5%	0.1%
Wearable	1.1%	1.9%	2.3%	2.4%	2.3%	3.8%	2.9%	2.9%	3.0%	2.3%	-0.7%
Others	57.0%	47.4%	43.2%	42.3%	42.6%	44.5%	48.5%	42.5%	42.2%	43.4%	1.2%

Source: compiled by SIR from IR results briefing materials. Note: application categories are subject to change.

(2) TOREX SEMICONDUCTOR parent sales breakdown by design-in (D-in)* based region

JPY mn, %	FY16/3	FY17/3	FY18/3	FY19/3	FY20/3	FY21/3	FY22/3	FY23/3	9M 23.3	9M 24.3	ΥοΥ
Total sales	10,621	10,181	10,168	10,104	9,663	9,605	14,124	14,694	11,616	7,662	(34.0)
Japan	4,429	4,489	4,296	4,401	4,187	3,878	5,566	5,474	4,329	3,012	(30.4)
Asia	3,797	3,198	3,329	3,312	3,405	3,611	5,307	4,944	3,991	2,584	(35.3)
Europe	1,575	1,471	1,491	1,430	1,212	1,189	1,798	2,657	2,000	1,530	(23.5)
N America	818	1,022	1,052	961	859	927	1,453	1,617	1,296	536	(58.6)
USD/JPY	¥120.1	¥108.9	¥110.8	¥110.7	¥109.1	¥106.2	¥112.9	¥134.9	¥135.4	¥142.7	¥7.3
Total sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%
Japan	41.7%	44.1%	42.3%	43.6%	43.3%	40.4%	39.4%	37.3%	37.3%	39.3%	2.0%
Asia	35.7%	31.4%	32.7%	32.8%	35.2%	37.6%	37.6%	33.6%	34.4%	33.7%	-0.6%
Europe	14.8%	14.4%	14.7%	14.2%	12.5%	12.4%	12.7%	18.1%	17.2%	20.0%	2.8%
N America	7.7%	10.0%	10.3%	9.5%	8.9%	9.7%	10.3%	11.0%	11.2%	7.0%	-4.2%

Source: compiled by SIR from IR results briefing materials.

*Note: D-in Torex sales breakdown by regions based on regions where products incorporating Torex products were planned and designed and orders have been substantially won (used internally as a key management indicator).

(3) PHENITEC SEMICONDUCTOR sales breakdown by application category (reference values)*

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JPY mn, %	FY17/3	FY18/3	FY19/3	FY20/3	FY21/3	FY22/3	FY23/3	9M 23.3	9M 24.3	YoY
Total sales	12,850	15,364	15,452	13,297	15,494	19,082	19,448	15,198	12,743	(16.2)
Industrial	2,510	3,394	3,262	2,009	2,782	2,982	4,026	2,942	3,468	17.9
Automotive	3,190	3,088	3,560	3,604	3,387	4,488	4,757	3,646	3,531	(3.2)
Medical	330	357	390	288	165	170	252	159	330	107.5
Others	6,820	8,525	8,240	7,396	9,160	11,442	10,413	8,451	5,414	(35.9)
Total sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%
Industrial	19.5%	22.1%	21.1%	15.1%	18.0%	15.6%	20.7%	19.4%	27.2%	7.9%
Automotive	24.8%	20.1%	23.0%	27.1%	21.9%	23.5%	24.5%	24.0%	27.7%	3.7%
Medical	2.6%	2.3%	2.5%	2.2%	1.1%	0.9%	1.3%	1.0%	2.6%	1.5%
Others	53.1%	55.5%	53.3%	55.6%	59.1%	60.0%	53.5%	55.6%	42.5%	-13.1%

Source: compiled by SIR from IR results briefing materials. Note 1: application categories are subject to change.

*Note 2: reference values include internal transactions with TOREX SEMICONDUCTOR.

(4) PHENITEC SEMICONDUCTOR sales breakdown by region (reference values)*											
JPY mn, %	FY17/3	FY18/3	FY19/3	FY20/3	FY21/3	FY22/3	FY23/3	9M 23.3	9M 24.3	YoY	
Total sales	12,850	15,364	15,452	13,297	15,494	19,082	19,448	15,198	12,743	(16.2)	
Japan	4,690	5,010	5,529	5,586	5,518	8,348	7,609	5,862	4,874	(16.9)	
Asia	3,140	3,709	3,306	2,764	4,064	4,746	4,620	3,940	1,769	(55.1)	
Europe	630	765	789	920	889	940	1,295	988	1,158	17.2	
N America	4,390	5 <i>,</i> 880	5,828	4,027	5,023	5,048	5,924	4,408	4,942	12.1	
USD/JPY	¥108.9	¥110.8	¥110.7	¥109.1	¥106.2	¥112.9	¥134.9	¥135.4	¥142.7	¥7.3	
Total sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	
Japan	36.5%	32.6%	35.8%	42.0%	35.6%	43.7%	39.1%	38.6%	38.2%	-0.3%	
Asia	24.4%	24.1%	21.4%	20.8%	26.2%	24.9%	23.8%	25.9%	13.9%	-12.0%	
Europe	4.9%	5.0%	5.1%	6.9%	5.7%	4.9%	6.7%	6.5%	9.1%	2.6%	
N America	34.2%	38.3%	37.7%	30.3%	32.4%	26.5%	30.5%	29.0%	38.8%	9.8%	

Source: compiled by SIR from IR results briefing materials. Note 1: classifications are based on customer location. *Note 2: reference values include internal transactions with TOREX SEMICONDUCTOR.

1 TOREX major customers largely consist of set makers for electronics products.

2 Phenitec major customers largely consist of semiconductor makers.









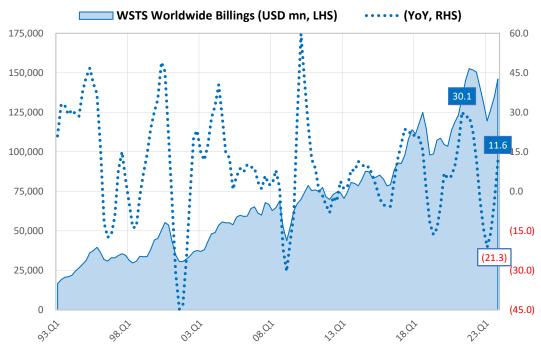
Over three decades of billings statistics from the WSTS Blue Book are available for free download in MS Excel format and provide monthly data, as well as 3M moving averages. **Based on actual quarterly** data shown on the right, worldwide billings bottomed in CY23 Q1. For reference, monthly data based on 3MMA show the peak was in May-2022 at \$51.7bn, and the subsequent bottom was in Feb-2023 at \$39.7bn, and Apr-2023 in terms of YoY at -21.4%. YoY comps will get easier going forward, turning positive YoY in 4Q 2023.

Source: https://www.wsts.org/67/Historica I-Billings-Report

WSTS announces first upward revision based on better-than-expected Q2 and Q3

On November 28, WSTS announced its Fall forecast, revising up both 2023 to a single-digit decline, and revising up 2024 growth to +13.1% (see table below). The graph below shows the YoY percentage decline marked the bottom in Jan-Mar, turning positive to +11.6% in the Oct-Dec quarter. While both Texas Instruments analog segment and TOREX Group net sales appear to have bottomed in Apr-Jun, China inventory consolidation is still underway. **TOREX believes it will see an upturn in orders for analog power management ICs from summer 2024 onward as excess inventories from the boom during COVID are depleted.**

Quarterly Trend of WSTS WW Billings → bottom in 2023 Q1, turned positive in Q4

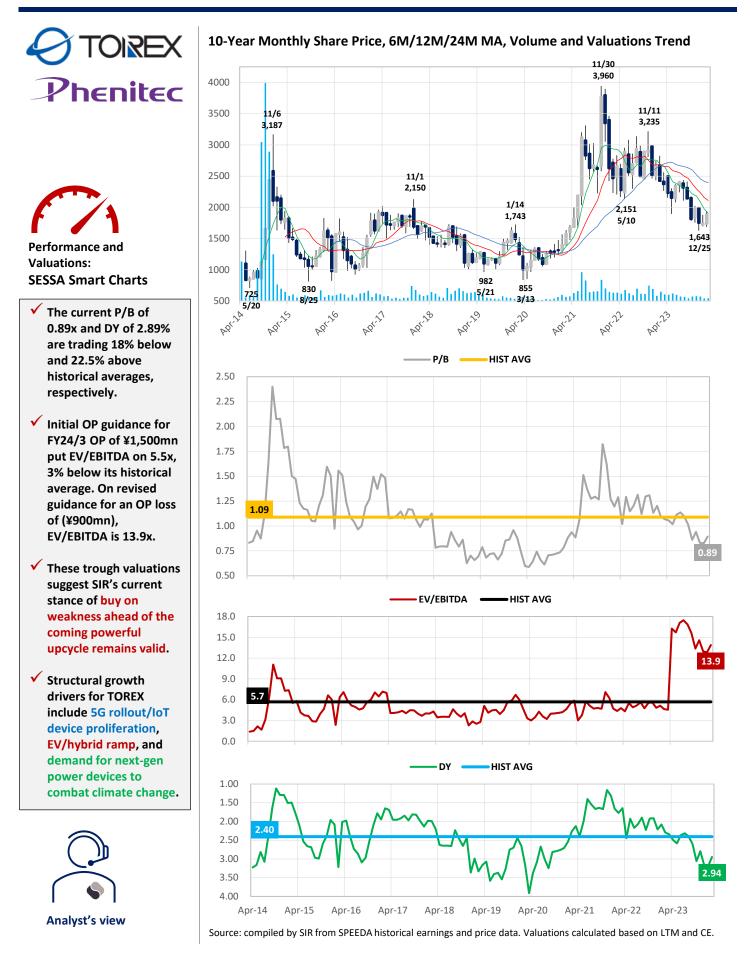


Source: compiled by SIR from WSTS Worldwide Semiconductor Quarterly Historical Billings Report.

WSTS Fall 2023 World										
USD mn (upper tier)	2018	2019	2020	2021	2022	2023	2023	2024	2023	2024
YoY (lower tier)	act	act	act	act	act	Nov-22	May-23	May-23	Nov-23	Nov-23
Discrete Semiconductors	24,102	23,881	23,804	30,337	33,993	35,060	35,904	38,192	35,951	37,459
Optoelectronics	38,032	41,561	40,397	43,404	43,908	45,381	45,949	45,881	42,583	43,324
Sensors	13,356	13,511	14,962	19,149	21,782	23,086	20,410	21,575	19,417	20,127
Integrated Circuits	393,288	333,354	361,226	463,002	474,402	453,041	412,832	470,349	422,174	487,454
Analog	58,785	53,939	55,658	74,105	88,983	90,952	83,907	88,902	81,051	84,056
● Micro	67,233	66,440	69,678	80,221	79,073	75,273	71,470	75,855	76,579	81,937
● Logic	109,303	106,535	118,408	154,837	176,578	175,191	173,413	185,266	174,944	191,693
Memory	157,967	106,440	117,482	153,838	129,767	111,624	84,041	120,326	89,601	129,768
Total Products	468,778	412,307	440,389	555,893	574,084	556,568	515,095	575,997	520,126	588,364
Discrete Semiconductors	11.3	(0.9)	(0.3)	27.4	12.0	2.8	5.6	6.4	5.8	4.2
Optoelectronics	9.2	9.3	(2.8)	7.4	1.2	3.7	4.6	(0.1)	(3.0)	1.7
Sensors	6.2	1.2	10.7	28.0	13.7	3.7	(6.3)	5.7	(10.9)	3.7
Integrated Circuits	14.6	(15.2)	8.4	28.2	2.5	(5.6)	(13.0)	13.9	(11.0)	15.5
Analog	10.8	(8.2)	3.2	33.1	20.1	1.6	(5.7)	6.0	(8.9)	3.7
● Micro	5.2	(1.2)	4.9	15.1	(1.4)	(4.5)	(9.6)	6.1	(3.2)	7.0
● Logic	6.9	(2.5)	11.1	30.8	14.0	(1.2)	(1.8)	6.8	(0.9)	9.6
 Memory 	27.4	(32.6)	10.4	30.9	(15.6)	(17.0)	(35.2)	43.2	(31.0)	44.8
Total Products	13.7	(12.0)	6.8	26.2	3.3	(4.1)	(10.3)	11.8	(9.4)	13.1

Source: compiled by SIR from World Semiconductor Trade Statistics (WSTS) press releases.







TOREX Semiconductor Consolidated Financial Summary

[J-GAAP]	FY13/3	FY14/3	FY15/3	FY16/3	FY17/3	FY18/3	FY19/3	FY20/3	FY21/3	FY22/3	FY23/3	FY24/3
JPY mn, %	act	act	rev CE									
Net sales	8,600	9,391	9,972	10,621	21,560	23,997	23,897	21,501	23,713	30,864	31,957	26,500
YoY	(6.1)	9.2	6.2	6.5	103.0	11.3	(0.4)	(10.0)	10.3	30.2	3.5	(17.1)
• TOREX (parent)	_	_	_	_	10,181	10,168	10,104	9,663	9,605	14,124	14,694	
Phenitec contribution	—	_	—	—	11,378	13,828	13,792	11,837	14,107	16,740	17,262	
Gross profit	3,218	4,337	4,822	5,063	5,900	7,177	6,494	5,452	5,959	9,474	10,021	
SG&A expenses	2,651	2,922	3,472	3,923	4,649	4,964	4,943	4,774	4,750	5,577	6,045	
Depreciation, GW amort.	432	468	410	442	1,219	934	1,085	1,312	1,208	1,311	1,646	2,487
EBITDA	999	1,882	1,760	1,582	2,470	3,146	2,636	1,990	2,417	5,209	5,622	1,587
Operating profit	567	1,414	1,350	1,140	1,251	2,212	1,551	678	1,209	3,898	3,976	(900)
YoY	1,282.9	149.4	(4.5)	(15.6)	9.7	76.8	(29.9)	(56.3)	78.3	222.4	2.0	TR
OPM %	6.6%	15.1%	13.5%	10.7%	5.8%	9.2%	6.5%	3.2%	5.1%	12.6%	12.4%	
TOREX (parent)	—	—	_	_	680	633	646	453	516	1,789	2,567	
• TOREX (parent) OPM %	-	—	—	—	6.7%	6.2%	6.4%	4.7%	5.4%	12.7%	17.5%	
Phenitec contribution	_	—	—	—	571	1,579	904	225	693	2,108	1,409	
• Phenitec contrib. OPM %	_	_	_	_	5.0%	11.4%	6.6%	1.9%	4.9%	12.6%	8.2%	
Ordinary profit	445	1,339	1,679	971	906	1,998	1,820	676	1,206	4,125	3,981	(1,200)
Extraordinary Gain	—	—	—	190	2,561	34	8	32	27	396	—	
Extraordinary Loss	227	15	—	137	31	62	23	117	62	107	993	
Profit before income taxes	217	1,324	1,679	1,024	3,435	1,971	1,805	592	1,171	4,414	2,988	
Total income taxes	25	(35)	428	442	331	561	484	174	238	1,257	809	
Profit ATOP	192	1,357	1,248	580	2,931	902	1,049	418	934	3,157	2,180	(850)
Attributed to minority int.	1	1	3	1	174	507	272	0	—	—	—	
Profit	193	1,359	1,251	581	3,105	1,410	1,321	417	934	3,157	2,180	(850)
Total assets	10,567	10,801	13,171	12,973	25,210	27,995	28,386	27,847	31,512	34,770	37,049	
 Current assets 	9,057	9,410	10,753	10,818	19,166	21,669	19,907	18,846	22,422	24,880	24,715	
Non-current assets	1,510	1,390	2,418	2,155	6,043	6,326	8,479	9,001	9,091	9,890	12,334	
Net IBD (net cash)	(3,059)	(4,385)	(6,576)	(6,904)	(3,846)	(7,376)	(6,266)	(4,532)	(4,350)	(4,382)	(690)	
 Cash/deposits, ST inv. 	5,508	5,647	6,702	6,917	10,069	12,435	10,982	9,281	11,737	10,220	8,573	
 Int. bearing debt 	2,449	1,262	126	13	6,223	5,059	4,716	4,749	7,387	5,838	7,883	
Total liabilities	4,160	2,896	2,282	2,044	9,612	8,910	8,748	9,175	11,722	12,041	12,455	
Current liabilities	3,581	2,413	1,887	1,622	6,306	6,857	6,211	6,943	7,679	8,977	7,382	
Non-current liabilities	579	483	395	421	3,306	2,053	2,537	2,232	4,043	3,064	5,073	
Total net assets	6,406	7,905	10,889	10,929	15,598	19,085	19,638	18,672	19,790	22,729	24,594	
 Total shareholders' eqty 	6,375	7,869	10,844	10,886	11,433	14,503	19,594	18,672	19,790	22,729	24,594	
Non-controlling interest	31	36	45	43	4,165	4,582	44	_	_	_	—	
ROE (%)	3.1	19.1	13.3	5.3	26.3	7.0	6.2	2.2	4.9	14.8	9.2	
ROIC (%)	6.3	16.1	9.1	6.4	5.6	7.2	4.4	2.1	3.8	9.5	10.4	
FY-end employees	309	329	342	343	981	982	1,017	1,016	1,016	1,034	1,063	
Capital expenditures	276	266	586	602	988	1,149	3,323	1,497	1,179	1,916	4,850	5,917
Forex rate	¥82.3	¥99.7	¥109.8	¥120.1	¥108.9	¥110.8	¥110.7	¥109.1	¥106.2	¥112.9	¥134.9	¥138.0

Source: compiled by SIR from Annual Securities Reports (YUHO financial statements) and IR results briefing materials.



Dividend Policy, DOE and Payout Ratio

JPY mn, %	FY15/3	FY16/3	FY17/3	FY18/3	FY19/3	FY20/3	FY21/3	FY22/3	FY23/3	FY24/3
	act	init CE								
Shareholders' equity	10,527	10,797	11,172	14,429	19,671	19,053	19,634	22,335	24,100	24,500
Total dividends paid	291	340	305	341	425	438	396	485	621	621
DOE	2.7%	3.1%	2.7%	2.6%	2.5%	2.3%	2.0%	2.3%	2.6%	2.5%
Profit ATOP	1,248	580	2,931	902	1,049	418	934	3,157	2,180	1,050
Payout ratio	23.4%	58.6%	10.4%	34.2%	39.6%	105.2%	42.1%	15.2%	28.2%	58.7%

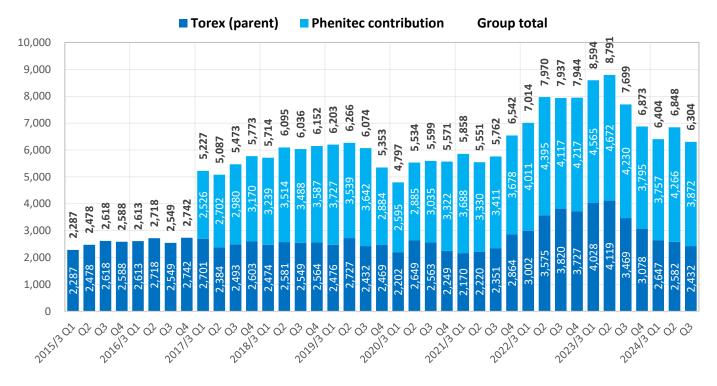
Note: compiled by SIR from Summary of Financial Results (TANSHIN financial statements).

Annual dividend indication unchanged at ¥56.00.

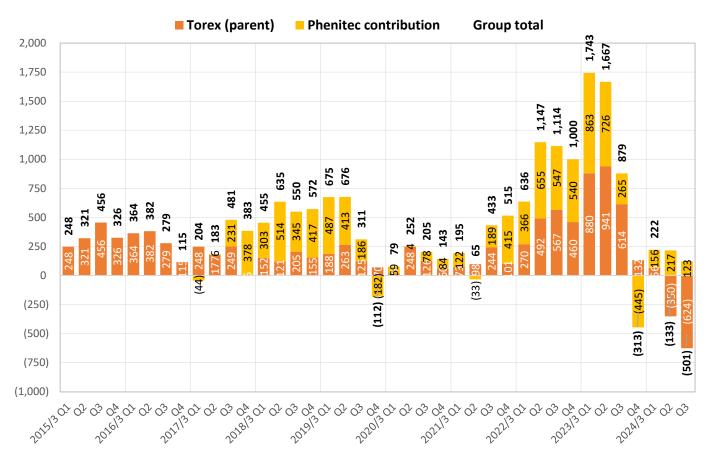




TOREX Group Quarterly Trend of Consolidated Net Sales by Entity (JPY million)



TOREX Group Quarterly Trend of Consolidated Operating Profit/Loss by Entity (JPY million)



Source: compiled by SIR from IR results briefing materials.



Sessa Investment Research



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