CLICK TO REQUEST A COMPANY CALL/MEETING

ASTRIS CORPORATE ADVISORY JAPAN

Rigaku Holdings (268A)

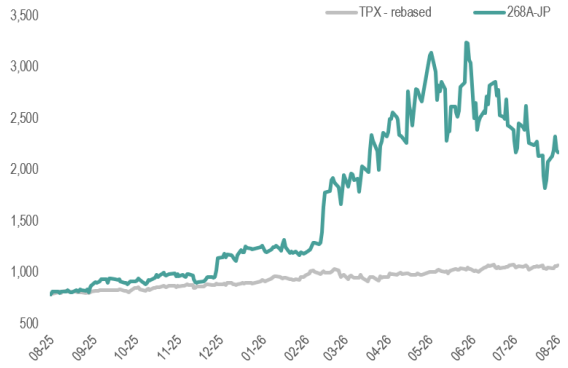
Capitalizing on rising semiconductor complexity

10 August 2026

Initiating coverage

Share price: ¥1,946 Market cap: ¥440.8bn

- **A beneficiary of rising semiconductor complexity –** Rigaku's valuation has re-rated upwards over the past year from a scientific-instrument multiple (low teens PER) to a semi-cap multiple (high 30s to low 40s PER) as investors increasingly recognize the Company's Semiconductor Process Control Instruments business as the primary growth and earnings driver. We believe Rigaku's growth upside remains underappreciated as the Company's FY12/27 medium-term plan (MTP) targets were anchored on a less constructive semiconductor industry environment and outlook. Furthermore, the demand visibility for Rigaku's X-ray metrology equipment has improved as the leading chipmakers and WFE reaffirmed their increasingly complex product roadmaps and announced record multi-year capex plans. Given the constructive industry backdrop and increasingly complex semiconductor manufacturing processes, we believe Rigaku's growth runway is longer than the Company's FY12/27 MTP implies.



Source: Bloomberg

Moved from the Lab to the Fab

- **Rigaku is now effectively a semiconductor capital equipment company** – Rigaku's disciplined execution of the "Lab to Fab" strategy has grown the Semiconductor Process Control Instruments business' share of operating income from 36.4% in FY12/23 to a guided ~49% in FY12/26, meaningfully shifting the earnings base toward the higher-margin, higher-growth semiconductor business. Although the heritage Multipurpose Analytical Instruments business is currently a big part of Rigaku, we believe that, over the medium term, the Semiconductor business will become an increasingly significant contributor to earnings as it scales rapidly, while the Multipurpose Analytical Instruments business continues to provide a stable and important foundation to support Rigaku's growth.
- **ESG** – We score the Company as '**Amber**' under our Astris-Sustainability model scorecard.
- **Valuations** – On our earnings estimates, the shares are trading on an estimated PER FY12/27 of 26.3x, a PBR of 4.2x, which is more in line with semi-cap peers than scientific instrument peers.

Year-end	12/24	12/25	12/26E	12/27E	12/28E
Sales (¥bn)	90.65	94.19	101.23	115.97	132.98
OP (¥bn)	18.37	16.71	19.77	25.37	31.19
NI (¥bn)	13.62	11.40	12.86	16.57	20.52
EPS (¥)	60.44	50.19	56.60	72.94	90.34
DPS (¥)	3.00	18.80	19.00	22.00	27.00
Sales growth YoY (%)	+13.5	+3.9	+7.5	+14.6	+14.7
OP growth YoY (%)	+20.4	-9.0	+18.3	+28.4	+22.9
NI growth YoY (%)	+24.9	-16.3	+12.8	+28.9	+23.9
EPS growth YoY (%)	+24.9	-17.0	+12.8	+28.9	+23.9
PER (x)	31.7	38.2	33.8	26.3	21.2
EV/EBITDA (x)	22.9	24.3	21.1	16.8	13.8
EV/Sales (x)	5.9	5.6	5.2	4.6	4.0
PBR (x)	5.3	4.9	4.6	4.2	3.8
ROE (%)	18.5	13.4	14.1	16.8	18.8
ROCE (%)	12.4	11.0	12.5	15.2	17.5
FCF yield (%)	1.9	0.6	2.3	1.9	3.0
Dividend yield (%)	0.2	1.0	1.0	1.1	1.4

Source: Company, Astris Advisory (estimates)

Price Performance

	YTD	1M	3M	12M
Abs (%)	+76.9	-5.0	-30.3	+176.2
Rel (%)	+57.4	-5.3	-36.4	+139.8

Company sector

Electronic Components and Manufacturing | Hardware
Semiconductor Process Control Equipment (GICS)

Stock data

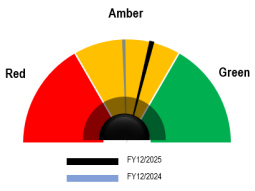
Price (¥)	1,946
Mkt cap (¥bn)	440.8
Mkt cap ($m)	2,799.1
52-week range (¥)	770 – 3,400
Shares O/S (m)	227.2
Average daily value ($m)	54.4
Free float (%)	31.5
Foreign shareholding (%)	52.2
Ticker	268A
Exchange	Tokyo Prime
Net Debt/Equity (x)	0.9
BBG BUY | HOLD | SELL	4 | 1 | 1

Source: Bloomberg

Business Overview

Rigaku Holdings is an X-ray instruments manufacturer founded in 1951, with X-ray metrology equipment for advanced semiconductor manufacturing as the growth driver of its business.

Astris-Sustainability ESG rating



Reference Ratings	
MSCI	-
Sustainalytics	-
Refinitiv	-
S&P Global	-
Bloomberg	-
CDP	-

Next events

Q3 FY12/26 results November 2026

Tel: +81 3 6868 8797
Email: Corporateresearch@astrisadvisory.com

This report has been commissioned and paid for by the company

Contents

Summary

Rigaku Holdings' X-ray technology is seeing growing adoption within the semiconductor industry as leading edge chip designs require increasingly complex manufacturing processes.

Rigaku Holdings is a Tokyo-based X-ray scientific instruments manufacturer founded in 1951 and over time has evolved into a semiconductor capital equipment company leveraging its X-ray expertise and execution of its "Lab to Fab" strategy. Rigaku's Semiconductor Process Control Instruments business is now the primary driver of both growth and earnings, and holds a global leadership position in X-ray semiconductor metrology (simplistically, a part of process control). The Company is also a global leader in X-ray scientific and analytical instruments.

We believe, given Rigaku's strong execution track record, the Company is well positioned to capitalize on the semiconductor industry's ramping capex cycle to meet the AI-driven exponential growth in demand for computing capacity, and deliver accelerated growth.

The following findings from our report underpin the thesis:

- **The semiconductor industry is rapidly shifting towards "3D" designs in the pursuit of more computing performance required by AI.** These chips require an increasingly complex manufacturing process where existing optical-based metrology equipment is not effective, with fabs turning to X-ray-based metrology equipment. Current demand from the semiconductor industry for X-ray metrology equipment remains nascent and is set to grow as manufacturing complexity increases over the next decade based on industry product roadmaps in logic, memory and packaging. A long growth runway is still ahead.
- **Rigaku built its Semiconductor Process Control Instruments business from scratch and took share from incumbents,** through an effective sales strategy, investment in R&D, and focus on co-development with customers. The Company's strong track record of execution also extends to its product offerings, which was developed in partnership with leading chipmakers and WFE.

Astris Advisory estimates Rigaku will drive medium-term growth through:

Rigaku has outlined a ¥100.0bn target for its Semiconductor Process Control Instruments business by FY12/30

- Continued double-digit revenue growth at the Semiconductor Process Control Instruments business, driven by increasing adoption of X-ray metrology in leading-edge manufacturing processes for logic, memory, and advanced packaging.
- Improving profit margins from increasing mix of next-generation semiconductor metrology equipment, which have higher gross margins.

Based on our estimates, the shares are trading on estimated PER FY12/27 of 26.3x, a PBR of 4.2x, which is more in line with semi-cap peers than scientific instrument peers.

Company description

Overview

Rigaku Holdings Corporation was founded in 1951 as Rigaku Denki K.K., a specialist manufacturer of X-ray analytical instruments headquartered in Tokyo. Over the following seven decades, the Company built its business through deep focus and sustained investment in X-ray technology, resulting in an extensive library of intellectual property and expertise spanning generators, optics, detectors, and analytical software, thereby establishing itself as the global leader in X-ray diffractometry with a, by our estimate, 77% domestic market share in Japan and 23% globally as of 2025. The Company sells into over 90 countries, with overseas revenue representing ~73% of total sales.

Rigaku is a global leader in X-ray diffractometry with an estimated 77% domestic market share in Japan and 23% globally for X-ray Diffractometers (XRD), as of 2025.

Although Rigaku remained privately held from its founding until its October 2024 IPO, the Company was acquired by leading U.S. private equity manager The Carlyle Group as part of a private-equity buyout transaction in 2021 in line with a succession strategy of IPO route. This transaction marked an important turning point for the Company as it underwent a significant transformation under new ownership.

Rigaku's expansion into the semiconductor market began well before Carlyle became a shareholder, with the Company launching its "Lab to Fab" strategy in 2015. Leveraging its deep expertise in X-ray technologies developed for late stage research laboratories ("Lab"), Rigaku has steadily expanded into high-volume semiconductor manufacturing fabs ("Fab"), broadening both its customer base and product portfolio over the past decade.

Under the leadership of CEO Mr. Jun Kawakami since 2023, the Company has further accelerated this strategic direction and sharpened its focus on growth opportunities in semiconductor metrology. Today, the semiconductor metrology business has become Rigaku's primary growth and profitability driver, supported by increasing adoption of X-ray-based metrology solutions in advanced semiconductor manufacturing processes, including leading-edge logic devices, HBM memory, NAND, among others.

Major transactions and corporate events

The Company listed on the Tokyo Stock Exchange (TSE) Prime Market in October 2024.

Timeline summary

Rigaku has remained privately held throughout most of its corporate history despite its leadership position in the X-ray instrument sector.

Key Dates	Details
December 1951	Rigaku Denki K.K. established in Tokyo to develop and manufacture domestic X-ray instruments
May 1965	Developed the RU-1500, at the time the world's most powerful X-ray generator
April 1996	Acquired Molecular Structure Corp. based in Texas, US; first major international acquisition
March 2000	Acquired Osmic, Inc., expanding product line up to include advanced multilayer optics, now a key component in EUV mask inspection equipment
April 2004	Merged domestic entities into unified Rigaku Corporation operating company
July 2019	Acquired XwinSys Technology Development Ltd. based in Israel, marking the Company's direct entry into semiconductor process control metrology
January 2021	Carlyle Group announced the agreement to acquire Rigaku Corporation from the Company's founding shareholders
April 2021	Transaction completed; Rigaku Holdings was established, with funds managed by The Carlyle Group owning 80% of the Company. Mr. Jun Kawakami was appointed External Board Member
February 2023	Mr. Jun Kawakami appointed as CEO of Rigaku Holdings
October 2024	Listed on the Prime Market of the Tokyo Stock Exchange
April 2026	Capital and business alliance with Onto Innovation Inc. (NYSE: ONTO) announced, with Onto agreeing to acquire a 27.0% equity stake in Rigaku from affiliates of the Carlyle Group (transaction expected to close in in 2H FY12/26)

Source: Company

Growth and profitability

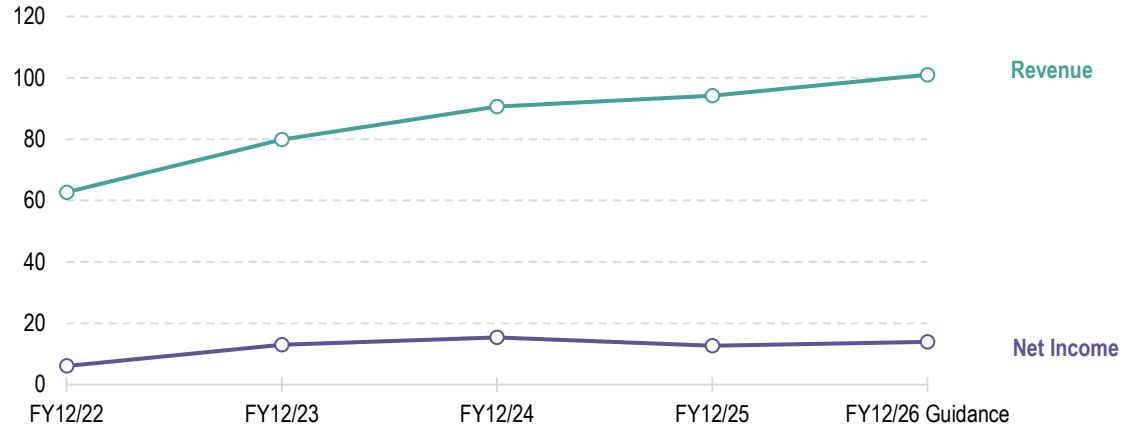
Given Rigaku's recent 2024 IPO, long-term historical financial details are not disclosed. However, we believe the Company's recent financial performance and growth are more relevant than long-term historical performance as **the Company's growth and profitability outlook has fundamentally changed under the Company's "Lab to Fab" strategy, applying its technology and IP towards the rapidly growing semiconductor industry.**

Revenue and earnings growth

Revenue has grown from ¥62.7bn in FY12/22 to ¥94.2bn in FY12/25, representing a +14.5% CAGR, with growth driven by robust global R&D demand at the Multipurpose Analytical Instruments business and continued market penetration at the Semiconductor Process Control Instruments business. Growth has decelerated in recent years due to weakening demand at the Multipurpose Analytical Instruments business. **Importantly, we believe investors should focus on the Semiconductor Process Control Instruments business, as it is well positioned to capitalize on the growth of Next-Generation AI (frontier AI models) and is now the primary growth and earnings driver of the Company.**

Earnings growth in recent years was mixed as weakness at the Multipurpose Analytical Instruments business overshadowed operating income growth at the Semiconductor Process Control Instruments business. **Furthermore, ramping investments in R&D to develop metrology equipment that meets the current and future requirements of the Company's semiconductor manufacturing customers have impacted earnings growth.**

Rigaku saw revenue CAGR of +14.5% between FY12/22 and FY12/25, driven by the rapid growth of the Semiconductor Process Control Instrument business
Annual revenue and adjusted net income (¥bn) since FY12/22



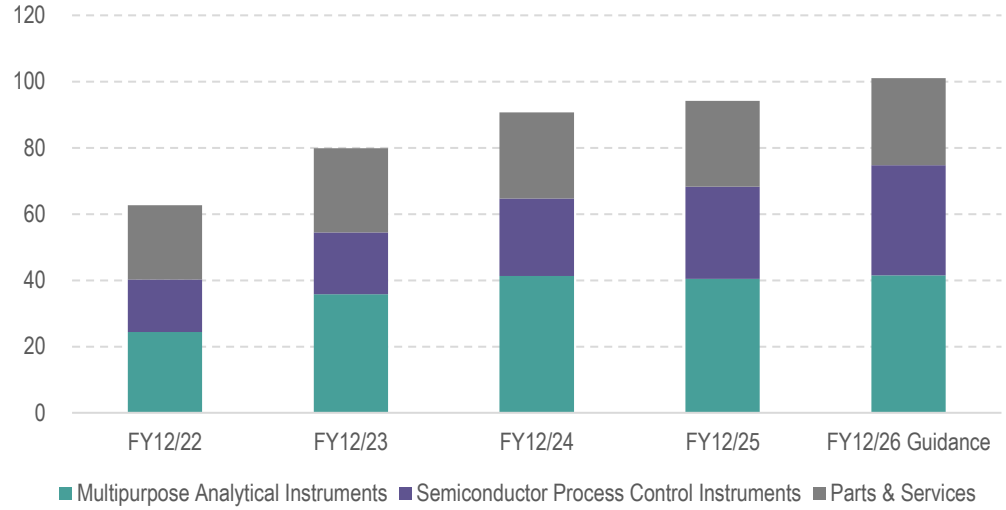
Source: Company

Shifting revenue and earnings mix

Since FY12/22, Rigaku's revenue mix has shifted meaningfully through the consistent double-digit growth of the Semiconductor Process Control Instruments business. The business has grown from ¥15.9bn in revenue in FY12/22 to a guided revenue of ¥33.3bn in FY12/26, with revenue growth ranging from +19% to +25% during the period. Growth in the Company's other business lines has moderated, with FY12/26 guidance indicating low-single-digit growth.

While the Multipurpose Analytical Instruments business remains the primary revenue driver, the Semiconductor business has grown rapidly and is on track to becoming the dominant revenue contributor

Annual revenue by business lines (¥bn) since FY12/22

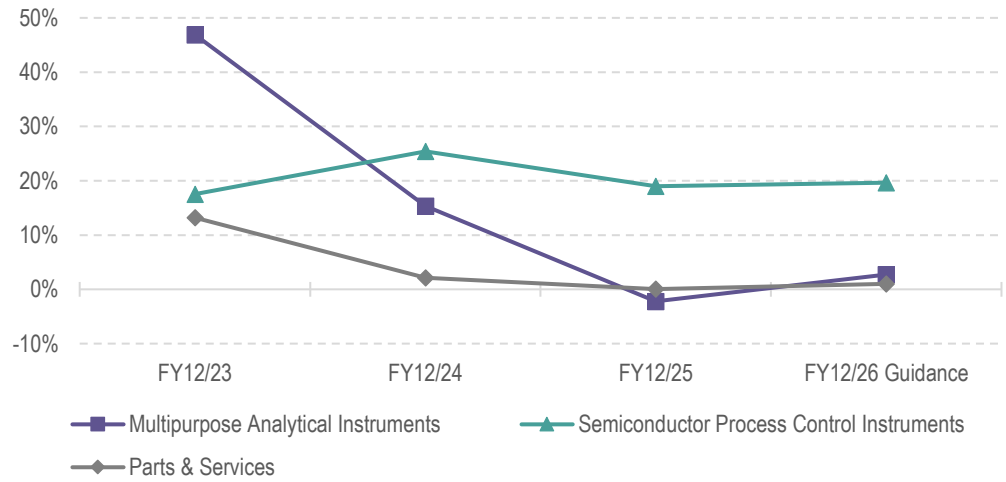


Source: Company

Based on the current growth trajectory, the Semiconductor Process Control Instruments business (guided to ¥33.3bn in FY12/26) is on track to overtake the Multipurpose Analytical Instruments business (guided to ¥41.5bn in FY12/26) in revenue within the next two to three years.

The Semiconductor Process Control Instruments business is the fastest growing business line, with growth to accelerate further from AI-driven demand for next-generation semiconductors

Annual revenue growth by business lines (%) since FY12/23

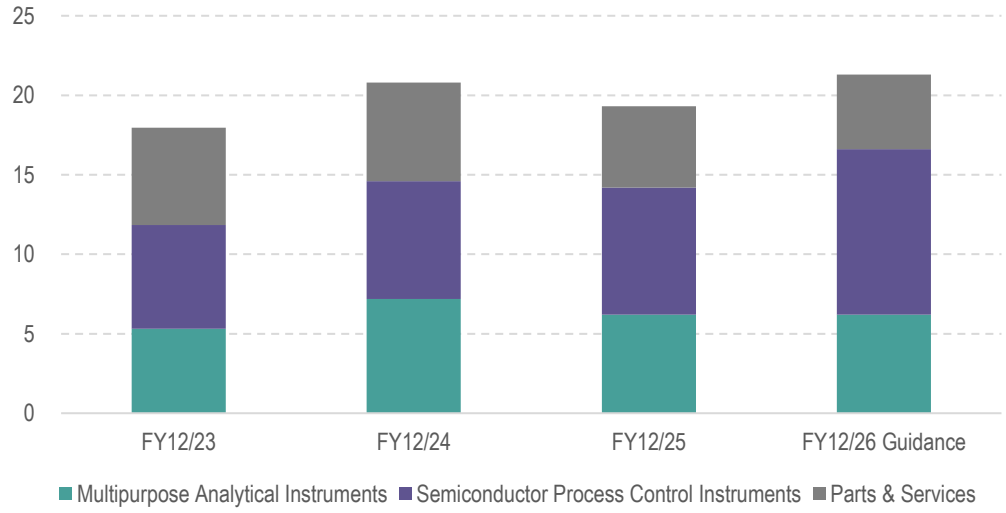


Source: Company

In terms of earnings, **the Semiconductor Process Control Instruments business has been the largest contributor to the Company's operating income since FY12/23 (earliest data disclosed), with the operating income mix growing from 36.4% in FY12/23 to 48.8% in FY12/26** (based on Company guidance). The Company's earnings mix is expected to shift further towards the Semiconductor Process Control Instruments business, which is on track

to become Rigaku's dominant earnings driver as AI-driven semiconductor capex growth accelerates meaningfully in the near to medium term.

The Semiconductor Process Control Instruments business is expected to account for 49% of the Company's operating income in FY12/26, up +12% from FY12/23
Annual operating profit by business lines (¥bn) since FY12/23



Source: Company

Accounting considerations

We want to highlight 2 accounting nuances that contribute to noise in the Company's financial results.

- **Joint Evaluation Program (JEP) balance sheet impact.** Rigaku deploys its most complex (and therefore higher unit price and margin) semiconductor metrology equipment at customer sites for extended evaluation and joint R&D as part of its sales and R&D strategy. During the JEP period, equipment sits on Rigaku's balance sheet as PPE assets; on sale, the asset is reclassified to COGS in a single accounting period. **This means each JEP project inflates Rigaku's balance sheet and ties up working capital, but on the other hand also provides visibility to the Company's sales pipeline.**

  The Company had 14 JEP projects in FY12/25 (vs the historical norm of 2-3 per year), with 5 completed during the year and 12 ongoing into FY12/26. Rigaku expects the number of JEP projects to increase through FY12/26 as the Company launches new equipment (XTRAIA CD-3200G, ONYX 3200, among others) that will be evaluated by key customers.

- **PPA amortization from the 2021 Carlyle transaction.** Rigaku's reported operating income carries a ~¥2.0bn annual amortization charge relating to customer relationship and technology intangible assets recognized at acquisition (¥2.1bn guided in FY12/26). The intangible assets are expected to be fully amortized by FY12/31, at which point reported operating income and EPS would be more aligned with other listed peers.

Segment/category overview

Rigaku reports a single operating segment, "manufacturing and sale of scientific instruments," under IFRS. However, the Company disaggregates that single segment across three product and service categories:

- **Multipurpose Analytical Instruments:** general-purpose X-ray analytical instruments (XRD, XRF, X-ray imaging) for academic, government, and industrial customers.
- **Semiconductor Process Control Instruments:** X-ray metrology tools for in-line semiconductor process control, sold to fabs and to WFE manufacturers.
- **Components and Services:** installed-base service revenue, component products (EUV multilayer mirrors, synchrotron detectors, etc.), and other analytical instruments (thermal analysis, handheld Raman spectrometers, etc.).

Current business lines / category details

Business lines / category	Description	FY12/25 Revenue Contribution (%)
Multipurpose Analytical Instruments	Rigaku's heritage business and the platform for its core X-ray technology. General-purpose X-ray analytical instruments (XRD, XRF, imaging, thermal, elemental analysis) sold to academia and government, semiconductor and electronic components, life sciences, and other.	42.9
Semiconductor Process Control Instruments	The Company's growth driver. X-ray metrology and inspection tools for in-line process control (thin-film, surface contamination, crystallinity, 3D shape, bump and TSV defects). Dual-channel model: direct fab sales for in-line control and WFE-manufacturer sales for R&D and qualification. End-markets: advanced logic and foundry, memory, WFE, power devices, plus parts and services.	29.5
Components and Services	Comprises three revenue streams. Service business (preventive maintenance, parts, customer support) driven by the installed base of Multipupose Analytical Instruments. Sales of component products (EUV multilayer mirrors, synchrotron detectors, etc.). And sales of other analytical instruments (thermal analysis, handheld Raman spectrometers, etc.). Service revenue tied to semiconductor metrology equipment is included within the Semiconductor Process Control Instruments category. Services revenue is recurring and high-margin while component sales is more cyclical.	27.5

Source: Company

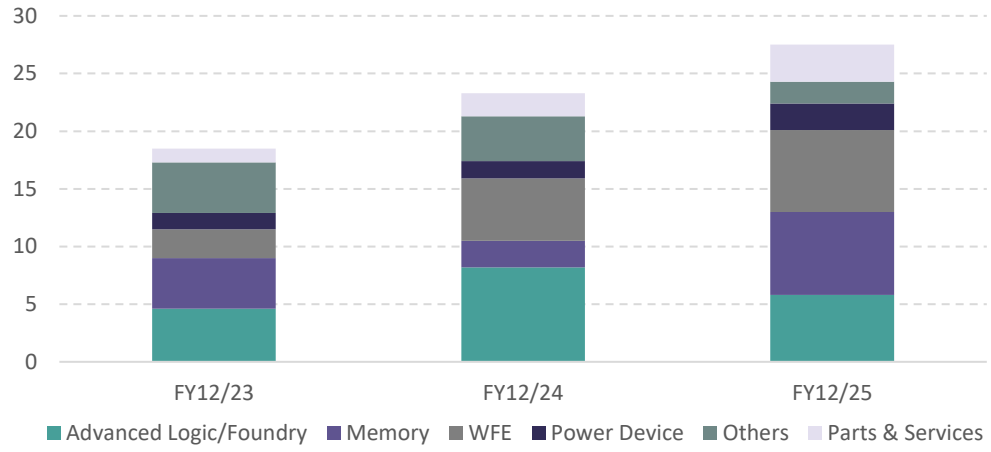
Semiconductor Process Control Instruments

Semiconductor Process Control Instruments is Rigaku's primary growth engine. We estimate, based on industry data, Rigaku holds the No. 1 position in the global semiconductor X-ray metrology market, with an estimated 38% market share. While the business only accounts for 29.5% of the Company's FY12/25 revenue, it is the largest contributor to Rigaku's operating profit, accounting for 41.5% of FY12/25 operating profit. **The Company expects further growth of this business, driven by growing demand from semiconductor customers to produce increasingly complex chips to power AI workloads.**

Given the positive growth outlook, we think it is important for investors to understand what Rigaku's equipment actually does and why there is growing demand from leading logic and memory semiconductor producers, and leading semiconductor capital equipment manufacturers among other semiconductor industry participants.

Memory, Advanced Logic / Foundry and WFE are the core customers of Rigaku

Annual revenue by end-market (¥bn) since FY12/23



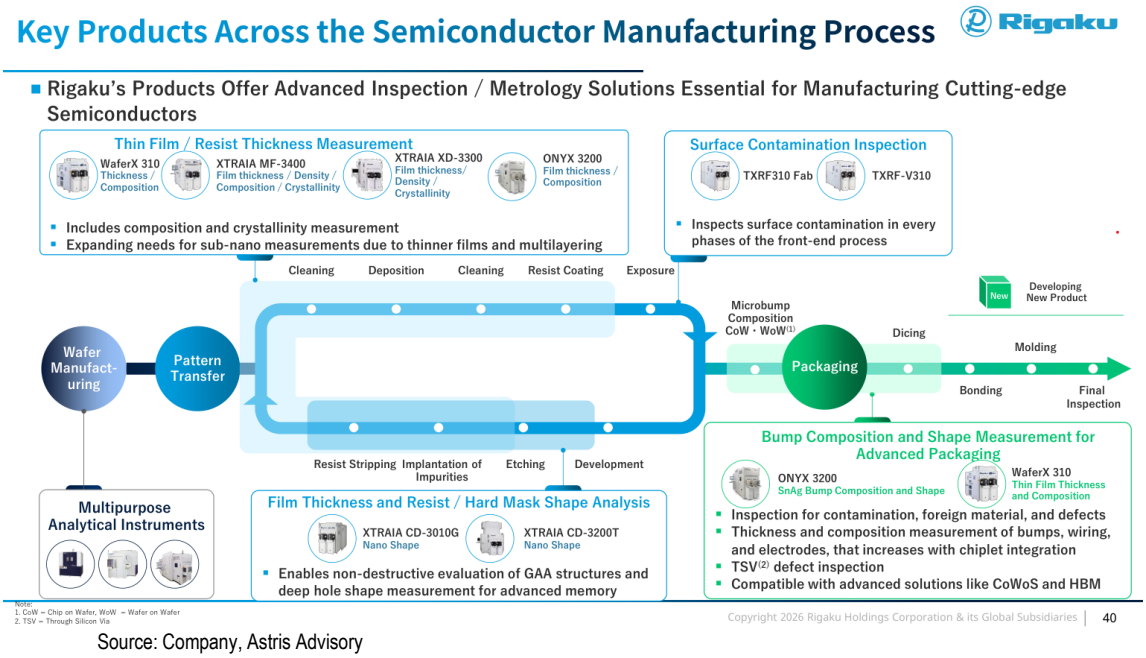
Source: Company

Semiconductor manufacturing is a sequence of tightly controlled process steps. After each step, a chip manufacturer needs to verify whether the step produced the correct physical result, and whether any defects were introduced. Rigaku's products are metrology tools that measure, simplistically, the physical properties of the semiconductor after each manufacturing step and whether the desired specifications were met exactly.

The three most measurement-intensive steps are deposition, etching, and anneal. Deposition adds a thin layer of material onto the wafer surface. Etching removes material to form a circuit pattern. Annealing applies heat to alter atomic structure. In each case, the permitted tolerance is a few nanometres or less. A film that is slightly too thick, a crystal with the wrong strain profile, or a sidewall at the wrong angle can reduce device performance or lower yield. **Because effects compound across hundreds of steps per wafer, measurement after each critical step is not optional.**

Rigaku's equipment is critical in almost every manufacturing step

X-ray metrology steps across the fab process flow



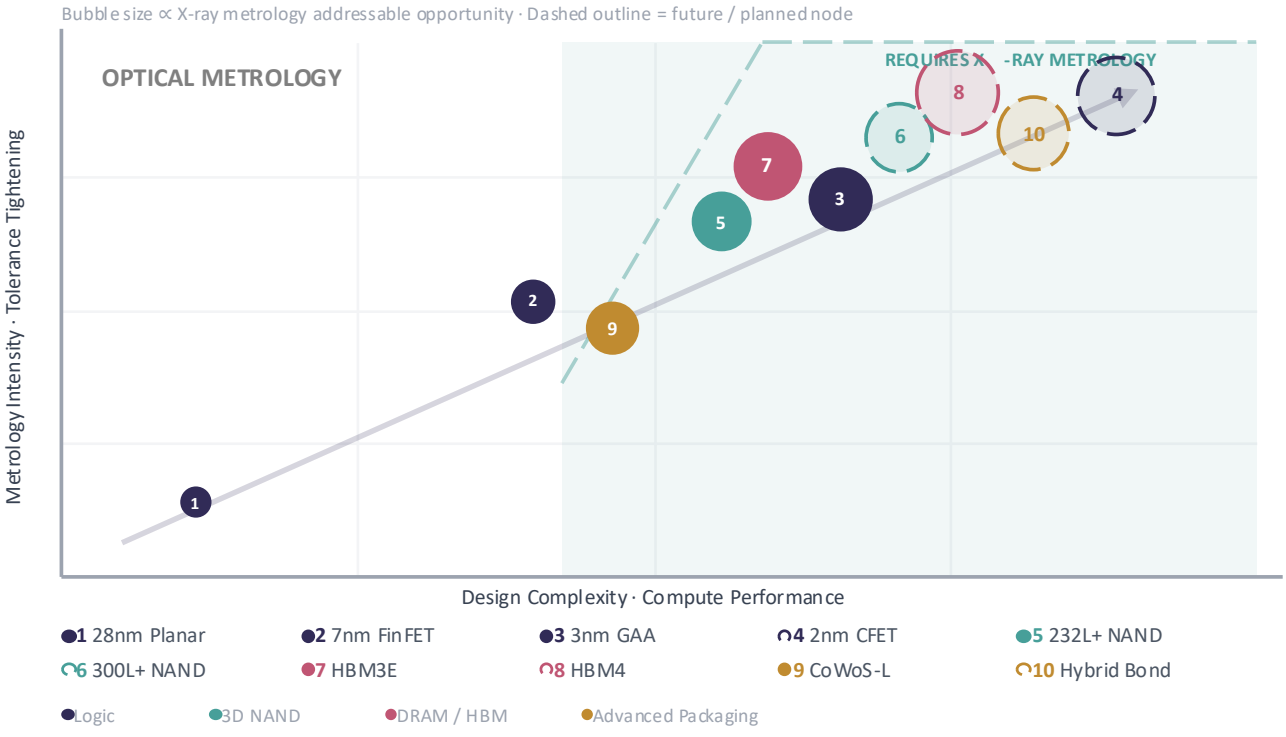
Source: Company, Astris Advisory

Importantly, the key factor driving the increasing demand for Rigaku's metrology equipment is that at leading-edge nodes, tolerances shrink and the number of critical process steps per wafer increases. An error at an early deposition or etch step compounds in subsequent steps. By the time a wafer reaches packaging, a minuscule structural deviation introduced steps earlier can reduce yield across an entire die and greatly impact the economics of the chipmaker.

Each node transition, and each architectural shift towards higher density (3D stacking, GAA, CFET, etc.) increases the need for more measurement points in the manufacturing process. **These trends result in more process steps, tighter tolerances, and deeper, denser structures that existing optical metrology tools cannot effectively measure. This ultimately drives higher X-ray metrology intensity per wafer and provides a very favorable long-term growth outlook for Rigaku.**

Chipmakers are producing increasingly complex chips to drive compute performance, which now require X-ray metrology

Summary of semiconductor product roadmap in the context of metrology intensity



Source: Astris Advisory estimates

We believe it is important to highlight that Rigaku built its Semiconductor business from scratch and won market share from established semi-cap players. A decade ago Rigaku's presence inside production fabs was negligible and had minimal market share. The Company was a pure-play maker of laboratory / scientific X-ray measurement instruments. The Company now counts the top 10 major chipmakers and semi-cap companies as its customers.

There were three sales strategies that drove Rigaku's market share gains and established its leadership position in the market:

- **Joint Evaluation Program (JEP)** – Rather than asking a fab to buy an unproven tool, Rigaku installs the instrument, co-evaluates it against the customer's own process

over months, and the customer buys only once it is qualified, which lowers the adoption barrier that keeps new entrants out of conservative, downtime-averse fabs. **This program has proven to be extremely effective in driving sales and adoption.**

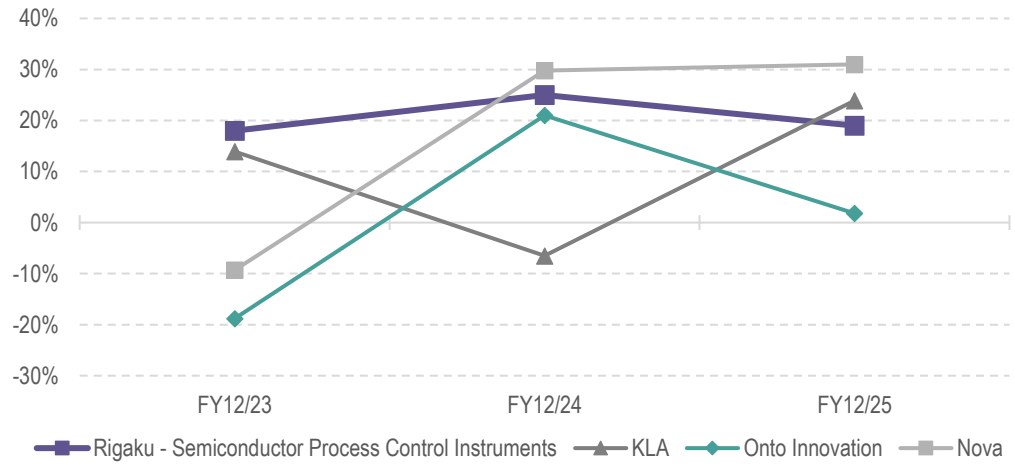
- **Embedded service** – Rigaku places engineers and applications scientists alongside the equipment, sustaining uptime and generating the recurring revenue in Components and Services. Rigaku also produces key X-ray components in-house, which helps customers mitigate fab downtime due to supply chain bottlenecks.
- **Co-development and sustained R&D** – Each new node and design brings new manufacturing challenges, and Rigaku develops its new products in conjunction with key customers and WFE makers to meet the new challenges. The Company's commitment to R&D, with R&D rising toward ~9% of revenue, ensures the Company remains competitive in the rapidly evolving semiconductor industry.

To further reinforce our case that the demand for Rigaku's X-ray metrology equipment is driven by long-tail demand, **we highlight that Rigaku saw sustained growth in the ~20% range during the 2023 – 2024 period,** when semiconductor industry-wide capex declined significantly following a drop-off in enterprise and consumer demand for semiconductors. Memory (DRAM/NAND) chipmakers in particular saw significant profitability challenges and reduced capex plans significantly.

However, despite all industry-wide challenges, chipmakers continued to purchase Rigaku's equipment at an increasing rate. This is even more notable as **metrology and process control peers (such as KLA, Onto Innovation, Nova among others), all saw meaningful negative revenue growth during the 2023 – 2024 period.**

Rigaku saw sustained revenue growth while metrology and process control semi-cap competitors saw negative growth

Annual revenue growth (%), from FY12/23 – FY12/25



Source: Astris Advisory, Factset

Customers

Roughly half of category revenue comes from fabs, the logic foundries and memory makers that deploy the tools for in-line process control, split 21% advanced logic and foundry and 26% memory in FY12/25. We believe the demand drivers for these customers are well understood.

The less intuitively understood channel is the 26% of revenues from wafer-fab-equipment (WFE) manufacturers. Although Rigaku does not disclose its customers, based on our industry analysis, we believe this group includes some of the world's leading WFE suppliers. These firms build the deposition, etch, CMP, and inspection tools, and they buy Rigaku metrology equipment as reference tools to characterize and calibrate their own process tools during development, and to qualify new process modules before shipping them to fabs. **Importantly, WFEs use Rigaku equipment because Rigaku's metrology instruments have been certified by fabs as meeting their specifications, benefiting from network effects.**

In the buildout of a new fab or production line, Rigaku's equipment is effectively purchased twice. We believe Rigaku's equipment is broadly used by WFEs to help produce other semiconductor manufacturing equipment in addition to being procured by fabs for in-line process control. WFE demand therefore can be viewed as a leading indicator for fab demand.

Rigaku is set to benefit from capex ramp announced by leading chipmakers, of which we believe many are Rigaku's customers

Leading chipmakers and WFE suppliers based on Astris Advisory industry analysis

Logic / Foundry	DRAM / NAND	WFE
intel	SAMSUNG	APPLIED MATERIALS
tsmc	micron	Lam RESEARCH
Rapidus	KIOXIA	TEL TOKYO ELECTRON
	SK hynix	

Source: Astris Advisory estimates, Rigaku does not publish its customer list

Astris estimates that Rigaku counts all 10 of the world's top semiconductor capex spenders as customers, and most are raising 2026 capex budgets following Q1 FY12/26 results to meet AI-driven hyperscaler demand. Furthermore, the capex increases are concentrated in the leading-edge logic nodes (2nm, etc.), HBM, and 3D-memory processes where X-ray metrology intensity is the highest.

We believe this development will translate to additional demand for Rigaku's equipment over time across the semiconductor industry from WFE suppliers to Memory chipmakers and advanced Logic foundries.

Leading logic and memory fabs have announced significant capex growth in 2026, with some raising their capex guidance in Q1

Customer capital expenditure in 2025 versus latest 2026 guidance

Customer	2025 capex	2026 capex (as of Q1 FY12/26)	Revision	Key driver
TSMC	~US$40bn	US$52–56bn	Raised (+27–37%)	2nm/A16 logic, CoWoS
Samsung Electronics	~US$33bn	~US$40bn	Raised (~+20%)	Foundry GAA, HBM
SK Hynix	₩30.2tn (~US$22bn)	Rising sharply (>+40% reported)	Raised	HBM capacity
Micron	~US$14bn	~US$20bn (from ~US$18bn)	Raised	HBM, TSV, DRAM
Intel	~US$20bn	Flat to down	Lowered	Capital discipline

Source: TrendForce, Bloomberg, Astris Advisory estimates, Rigaku does not publish its customer list

Beyond the strong growth tailwinds, we want to highlight that Rigaku manufactures the core of each instrument in-house. The X-ray sources, including high-brightness microfocus tubes, the optics (multilayer mirrors and monochromators), the detectors, and the precision goniometers and stages are all made internally. The vertical integration is unique in the industry, with other metrology peers relying on externally sourced X-ray tubes and detectors. **We believe this is a meaningful reason the category sustains a ~29 to 31% operating margin, above peers dependent on external component supply, and it is an underappreciated part of the Company.** This was only made possible due to Rigaku's extensive history, IP and manufacturing expertise in X-ray analytical equipment from the Multipurpose Analytical Instruments business.

The Onto Innovation alliance

Onto Innovation Inc. (NYSE: ONTO), a US-based optical metrology-focused semicap peer agreed to acquire a 27.0% stake in Rigaku from affiliates of The Carlyle Group (transaction expected to close in 2H FY12/26) and simultaneously announced a business and capital alliance with Rigaku. **The transaction further shifts Rigaku's focus towards semiconductor, with the largest shareholder being a semicap firm.**

The partnership pairs hybrid X-ray and optical metrology capabilities that neither company offers on a standalone basis, and is structured in two phases. In the first phase, **Rigaku's X-ray metrology hardware is combined with Onto's model-based analytics and AI-driven software capabilities to enhance throughput and measurement accuracy, which is expected to further enhance the competitiveness of Rigaku's metrology equipment.** In the second phase, the two companies aim to develop a differentiated hybrid metrology solution that integrates Rigaku's X-ray technologies with Onto's optical metrology expertise, creating capabilities that neither company currently offers on a standalone basis.

While the partnership is in its early days, Onto's position as Rigaku's largest shareholder signals a deep level of commitment to the partnership and would likely become a meaningful part of Rigaku's growth over time.

Multipurpose Analytical Instruments

Multipurpose Analytical Instruments supplies the laboratory and industrial X-ray tools that are Rigaku's heritage. The category generated revenue of ¥40.4bn in FY12/25 (-2% YoY), representing 42.9% of Group revenue, but only accounted for 32.1% of Rigaku's adjusted operating profit. **We believe Multipurpose Analytical Instruments is best understood as a**

mature yet steadily growing business that provides a solid earnings foundation for the Company, supported by its diversified product portfolio and broad customer base.

Beyond being a stable earnings foundation, this business serves as the technological foundation for Rigaku's semiconductor metrology operations. **Many of the core X-ray related intellectual properties, proprietary technologies, measurement techniques, and application expertise developed through the Multipurpose Analytical Instruments category have been leveraged and adapted for semiconductor manufacturing applications.** As such, the category plays a key role in driving technology development and innovation leadership across the broader Group.

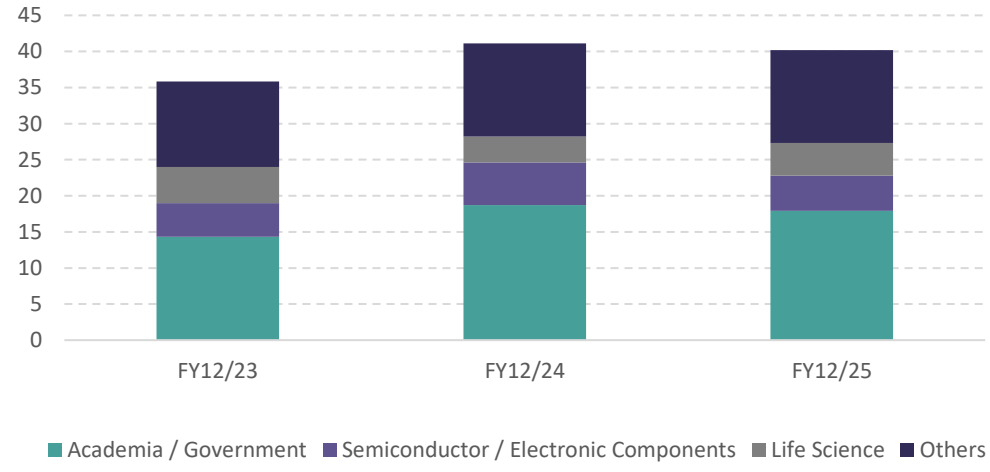
The product range spans XRD systems for crystal structure and phase analysis, XRF for elemental composition measurement, X-ray CT and imaging for non-destructive inspection, single-crystal diffraction for drug discovery, and thermal analysis tools. These are mature instruments with long replacement cycles. The largest share of revenue comes from universities and government research institutes, with industrial R&D laboratories and life-sciences users making up the balance.

While Rigaku maintains a strong position in several product categories, the Company believes there remains meaningful growth potential in industrial applications in international markets. The potential for growth upside is particularly strong in the XRF product category, where Rigaku entered the market later than more established competitors but has since gained market share with strong growth momentum.

Beyond XRF, the Company identifies power semiconductors and electronic components as the additional growth drivers in industrial markets. In power semiconductors, XRD is a critical metrology tool for compound-material development, and end-market demand is rising with EV adoption and the complex power supply requirements from AI data centers. In electronic components, X-ray CT and Micro EDX support non-destructive inspection as component materials and designs grow more complex. We view these applications, together with XRF, as the key drivers for the future growth of the category.

We view Multipurpose Analytical Instruments as a stable earnings generator, with the Pillar 3 industrial extension in the Company's MTP representing the most credible opportunity to drive growth above mid-single digits.

Revenue by end-market, FY12/23–FY12/25 (¥bn)



Source: Company, Astris Advisory

Importantly, the primary customer base's capex spend is low growth. Academic and government research institutes, which represent the largest revenue share within the Category, track government R&D budget cycles that grow at approximately mid-single digits in nominal terms and below that in real terms. Industrial QC laboratories and life-sciences accounts are stable rather than high-growth. The FY12/23 revenue spike included a one-time China supplementary budget R&D spend and post-COVID supply chain normalisation, so the growth seen in FY12/24 – FY12/25 is a better reflection of longer-term trends. Furthermore, Rigaku already holds significant market share against an equally established competitor, so incremental market share gain is challenging.

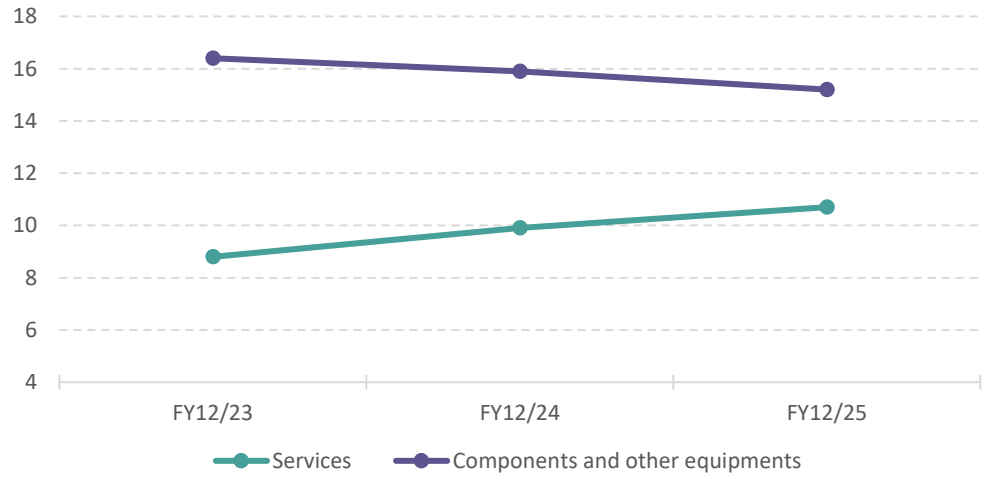
As such we believe mid-single-digit growth in the medium to long term is reasonable, with margins remaining below the semiconductor category due to a more fragmented customer base, with irregular purchasing patterns.

Components and Services (three sub businesses – services, components and other analytical instruments)

Components and Services generated ¥25.9bn in FY12/25 (flat YoY, +4% excluding EUV multilayer mirrors), representing 27.5% of Group revenue. **The category can be viewed as two distinct sub-businesses: a recurring service business covering maintenance contracts, spare parts, and software upgrades; and a component business centred on EUV multilayer mirrors and synchrotron detectors.** The flat headline revenue growth for the Category reflects weakness in the component side due to EUV mirror cyclicality. Service revenue grew 12.5% YoY in FY12/24, +8.0% YoY in FY12/25 and accelerated to +13.2% YoY in Q1 FY12/26.

Services revenue has grown steadily since FY12/23, reflecting growing installed base of Rigaku equipment, whereas Components revenue saw continued weakness

Revenue by sub-categories, FY12/23–FY12/25 (¥bn)



Source: Company, Astris Advisory

We believe the Services business is another under-appreciated part of Rigaku. It primarily comprises maintenance, parts replacement, and customer support services associated with the Multipurpose Analytical Instruments installed base. **Importantly, this business provides a stable, high-margin, recurring revenue stream that helps support earnings resilience throughout industry cycles.**

We note that **service revenue related to Rigaku's growing installed base of semiconductor metrology equipment is reported within the Semiconductor Process Control Instruments category, which is also seeing strong sustained growth in the +60% range** in recent years from a smaller base.

Further, maintenance-contract uptake varies significantly by region. As of FY12/25, 68% of customers in North America are under maintenance service contracts, 42% in EMEA, and 13% in Japan and APAC. The vast majority of customers in Japan and APAC request service on an ad-hoc basis. **This provides an additional growth lever, with Rigaku driving maintenance contract penetration toward North American levels in EMEA and Japan and APAC.**

Group companies

Rigaku Holdings has 18 consolidated subsidiaries spanning scientific instruments, semiconductor metrology, and regional sales/service operations. No equity-method affiliates are disclosed.

Disclosed group companies as of FY12/25

	Group company status	Stake (%)	Business description
Operating subsidiaries			
Consolidated subsidiaries			
Rigaku Corporation	Consolidated	100.0	Development, manufacturing, sales and service of scientific and analytical instruments
Rigaku Logistics Co., Ltd.	Consolidated	100.0	Packaging and precision instrument transportation
Nippon Instruments Corporation	Consolidated	100.0	Development, manufacturing, sales and service of mercury analyzers
Rigaku Americas Holding, Inc.	Consolidated	100.0	Development, manufacturing, sales and service of scientific instruments and component technologies (Americas)
Rigaku do Brasil Ltda.	Consolidated	100.0	Sales and service of scientific instruments in Latin America
Rigaku Innovative Technologies Europe s.r.o.	Consolidated	100.0	Advanced technology development and manufacturing of scientific instruments (Czech Republic)
Rigaku Asia Pacific PTE Ltd.	Consolidated	100.0	Asia-Pacific regional management and X-ray analytical instrument sales and service (Singapore)
Rigaku Dianqi Yiqi (Beijing) Co., Ltd.	Consolidated	100.0	Sales and service of scientific instruments in China
Rigaku Dianqi (Shanghai) Yiqi Co., Ltd.	Consolidated	100.0	Sales and service of scientific instruments in China
Rigaku Portable Devices Asia Limited	Consolidated	100.0	Sales and service in Asia-Pacific (Hong Kong)
Rigaku India Private Ltd.	Consolidated	100.0	Sales and service of scientific instruments in India
Rigaku Europe SE	Consolidated	100.0	Sales and service of scientific instruments in Europe
Rigaku UK, Ltd.	Consolidated	100.0	X-ray analytical instrument sales and service in UK
Rigaku France S.A.R.L	Consolidated	100.0	X-ray analytical instrument sales and service in France
Rigaku Polska Sp. z o.o.	Consolidated	100.0	Manufacturing and sales of single-crystal X-ray diffraction instruments in Poland
Rigaku Semiconductor Instruments Ltd.	Consolidated	100.0	Development and manufacturing of X-ray instruments for semiconductors and related fields in Israel
MILabs B.V.	Consolidated	100.0	Development, manufacturing and sales of biomedical analytical instruments in the Netherlands
Rigaku Co., Ltd. (Rigaku Taiwan)	Consolidated	100.0	X-ray analytical instrument sales and service in Taiwan

Source: Company

Corporate philosophy

Corporate mission, motto (values) and commitment

Rigaku's management philosophy is anchored in a Corporate Mission, Corporate Motto, and the Rigaku Commitment, the last of which was established in 2022 following its change in ownership and ahead of the Company's 2024 IPO to formalise the principles guiding its next stage of growth.

- **Mission:** "To contribute to the enhancement of humanity through scientific and technological development." This frames Rigaku's role in advancing science and industry through X-ray technology and contributing to the greater good of humanity rather than simply operating as a manufacturer of scientific instruments.
- **Motto (Value):** "Value our customers, value our people, value our technology." This sets the priority order for capital deployment and management decisions, prioritizing customers, employees and technological capabilities ahead of short-term financial gains.
- **Commitment:** Rigaku's commitments span across four stakeholder groups: customers, employees, society, and shareholders, promising to operate in a way that would generate significant value to all four stakeholder groups in the longer term.

Core values

Rigaku's management philosophy stems from its 75-year X-ray heritage and a conviction that owning the core technology, sources, optics, and detectors built in-house, is what lets the Company solve measurement problems others cannot. Rigaku believes it is more than just an X-ray scientific instrument maker and should be a technology partner of its customers to help advance science and industry. This is reflected in the Company's mission, motto and commitment.

This belief shapes how the Company operates. The "Lab to Fab" strategy holds that techniques proven in research should be carried into industrial production, so Rigaku invests to embed its technology in customers' development cycles rather than simply selling tools at arm's length. This is exemplified by the creation of its Joint Evaluation Program (JEP), where equipment and engineering staff are embedded within customer fabs, as well as its collaboration with Onto Innovation to advance next-generation metrology solutions.

Importantly, the Onto partnership is not focused on the joint development of hardware. It combines Rigaku's X-ray metrology with Onto's optical metrology through a hybrid engine that integrates and processes data from each company's instruments, giving customers a more comprehensive platform that draws on both measurement technologies. **Rigaku has a track record of acquiring capability it lacks in-house, from core component and R&D operations in the US to a research base in the Czech Republic, and the Onto partnership is another example of Rigaku acquiring external expertise to improve its products.**

Rigaku is explicit that it prioritizes long-term value creation over short-term earnings, accepting near-term margin drag from co-development and capacity investment as the cost of staying ahead of where the technology is heading.

Business model

Key concepts and workflow

Rigaku's business model is relatively simple in that Rigaku manufactures X-ray scientific and industrial equipment and sells the machines to customers. However, the demand drivers for each product category are more nuanced and distinct.

Key concepts: Multipurpose Analytical Instruments

- **Revenue:** Equipment sales of XRD, XRF and elemental analysis instruments to academic, government, and industrial customers, spanning new system sales, upgrades, and replacements across the product lifecycle. Sales to academia and government account for the largest share of revenue. Lead time from order to revenue ranges from three months to considerably longer depending on product.
- **Costs:** A significant amount of the equipment's parts (X-ray sources, detectors, optics, etc.) are produced in-house, which contribute to higher gross margins. The machines are assembled at the Company's facilities in Japan, while R&D and SG&A costs are spread globally. **Vertical integration in core components reduces exposure to third-party supply chain disruptions and pricing adjustments.**
- **Key drivers:** Academic and government R&D budgets, industrial capex cycles in materials and energy, and the pace at which lab-grade techniques migrate into industrial QC.

Key concepts: Semiconductor Process Control Instruments

- **Revenue:** Sales of X-ray metrology equipment, together with associated parts and services, to semiconductor customers. Rigaku does not currently provide semiconductor inspection products, although the Company has indicated future plans to enter this market. Importantly, the Company has highlighted significant pricing uplift by its next-generation X-ray metrology systems, which should benefit revenue growth over the near to medium term.

  Equipment transferred to customers following completion of a Joint Evaluation Program (JEP) is typically sold below standard pricing, as the systems have already been depreciated during the project period. However, the lower pricing is offset by higher volume of equipment ordered following the successful completion of a JEP.
- **Costs:** Each piece of equipment carries significant manufacturing costs, but **in-house production of core components (precision X-ray sources, detectors, motion stages, control software) contributes to better margins and, importantly, reduces supply chain risks.** R&D expenses, required to keep pace with customer requirements and maintain product competitiveness, are another key cost driver.
- **Key drivers**: Further integration of 3D architecture (GAA, CFET, HBM, CoWoS, 3D DRAM, 3D NAND) in the design of leading-edge semiconductor chips, WFE manufacturer R&D investment cycles, and the JEP-to-mass-production conversion cadence. Demand is linked to AI compute capex and to the declining applicability of optical methods at advanced semiconductor manufacturing nodes.

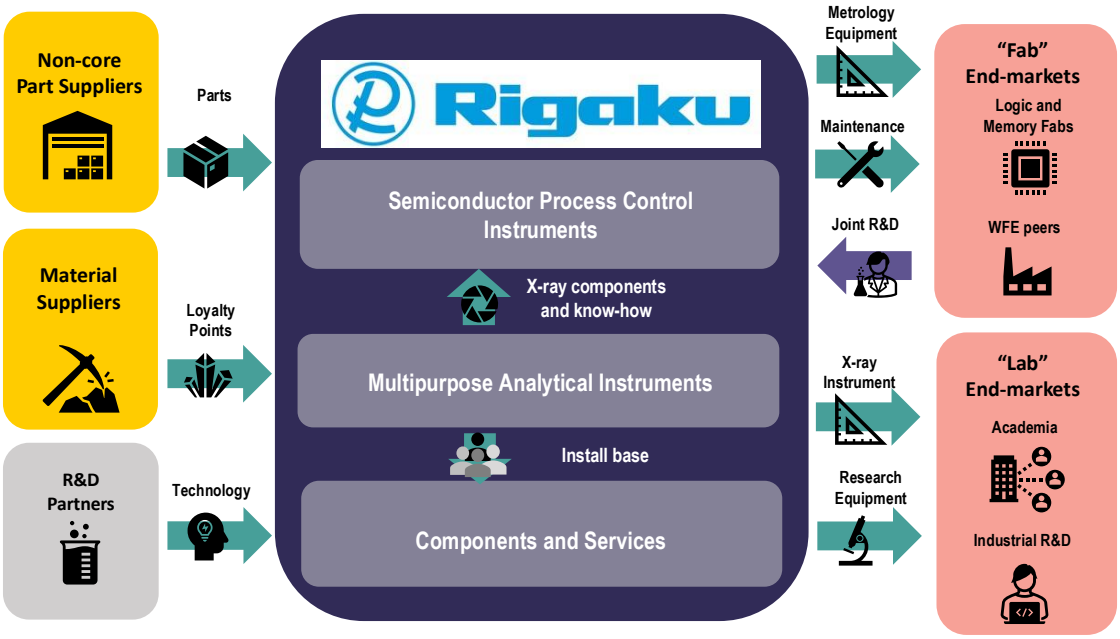
- **Customer base:** Demand splits across two customer types. Fabs (logic foundries and memory makers) deploy tools for in-line process control, with advanced logic and foundry accounting for 21% of FY12/25 category revenue and memory at 26%. **We think there is significant demand upside from memory customers as all major memory makers across both NAND and DRAM have announced significant capex growth.** WFE manufacturers (e.g., Applied Materials, Lam Research, Tokyo Electron, among others) were a further 26%, buying for R&D and tool qualification; however, these customer names are based on our estimates and industry analysis rather than Company disclosure. **Importantly, Rigaku counts all 10 of the world's top semiconductor firms (by capex spending) as customers.**

Key concepts: Components and Services

- **Revenue:** Recurring after-sales service revenue (preventive maintenance, spot repair, consumables, software upgrades), equipment sales relating to non X-ray products and component products. Recurring maintenance contract penetration is 68% in North America, 42% in EMEA, and 13% in Japan and APAC.
- **Costs:** Field service personnel and engineers (~200 in Japan, 170+ overseas), parts and consumables inventory, and regional service infrastructure. The model is labor-intensive but capital-light.
- **Key drivers**: Installed base growth, maintenance contract attachment rates, and uptake of value-added service offerings. These drivers primarily relate to Rigaku's Multipurpose Analytical Instruments business, where recurring service revenue is generated from the installed base of instruments.

The Semiconductor Process Control Instruments business is the center of Rigaku, with the Company's R&D focused on meeting the needs of semiconductor customers

High-level workflow overview



Source: Astris Advisory

Semiconductor industry outlook and implications for Rigaku

With AI and the semiconductor industry at the top of mind for many investors and a key thematic driver of the market, we believe many investors are aware of the major trends in the semiconductor industry. However, we think it is helpful to dive deeper on the trends driving the semiconductor industry and the implications for Rigaku. **Rigaku does not disclose customer names and details on tool adoption at specific nodes. Rather, we view these transitions as raising the metrology intensity of the industry as a whole, which we estimate expands the demand pool available to Rigaku.**

We believe in the context of longer-term industry trends, Rigaku's growth outlook is more positive than the current MTP and near-term guidance indicates.

AI changed the semiconductor industry

AI compute demand, initially training and now shifting towards inferencing, has driven the largest sustained increase in semiconductor capital spending in history. TSMC has guided 2026 capex to a record US$52–56bn (+27–37% YoY); the three leading DRAM/memory makers are announcing record levels of capex to build fabs to scale HBM4 and DRAM production; all of which feeds into further capex by the broader WFE industry.

The part that is less appreciated, and more relevant to Rigaku, is not just the size of the industry capex spend but the change in the underlying technology. **Fabs are shifting at a rapid pace toward manufacturing processes and designs that existing optical equipment cannot effectively measure.**

Semiconductor demand is being reshaped by chip designs tailored to AI-specific compute. Rigaku does not disclose customers, and we make no claim that its tools sit in the supply chains of any specific chip designer. We use Nvidia here purely as an illustration of where leading-edge metrology requirements are heading.

Nvidia's Rubin GPU, widely recognized as the most powerful and technologically advanced chip to reach mass production, co-packages each GPU die with 288GB of HBM4. HBM is built by stacking memory dies on top of one another, and Vera Rubin carries eight of these vertical stacks per GPU, each 12 layers deep. Every copper bump and through-silicon via connecting those stacks to the compute die must meet specifications at tolerances that define the leading edge of what current metrology tools can achieve.

Importantly, we believe the Rubin production ramp has already exposed the yield fragility of its advanced architecture. As of June 2026, TrendForce, a leading industry data provider, reported that failure modes center on thermal-expansion mismatch across the package, which warps the substrate and stresses the microbumps connecting the layers. These are precisely the buried, three-dimensional defects that optical inspection cannot reach and X-ray metrology can.

We believe the reported yield struggles of Nvidia's Rubin GPU strengthen the demand case for X-ray metrology tools. When a single packaging defect scraps a device worth tens of thousands of dollars, the economics favor shifting from sample-based inspection toward inspecting every unit.

Process complexity is rising faster than wafer volume

Given the nature and purpose of metrology and process control, the driver of metrology demand is not how many wafers move through a fab but how complex each wafer is. With that said, complexity of wafers is increasing rapidly across the three core areas of the industry.

In logic, the industry has moved from planar to FinFET to gate-all-around, and is heading toward CFET. Based on industry reports and company disclosures, GAA is now in volume production at all three leading-edge makers simultaneously (TSMC, Samsung, Intel), backside power delivery is nearing production, and CFET is expected to follow. Each architectural transition adds more critical buried layers (stacked nanosheets, ultrathin high-k and work-function films, and dipole layers, among others) to the device stack, each of which must be measured in-process before the next layer is added.

In memory, HBM is scaling from 12-layer toward 16-layer stacks and moving from microbump toward hybrid bonding. 3D NAND is progressing from sub-200 layers toward 400-plus layers. In addition, 3D DRAM, which Samsung and Tokyo Electron aim to bring to production in the late 2020s, represents one of the largest step-ups in manufacturing complexity in the memory sub-sector.

In packaging, heterogeneous integration and chiplets, advanced 2.5D/3D platforms (TSMC CoWoS, Intel EMIB and Foveros, among others), hybrid bonding, and larger assemblies add bump and TSV inspection requirements that did not exist at the same scale a few years ago.

Every one of these technological developments adds layers, reduces manufacturing tolerances and multiplies the number of measurement steps per wafer.

By 2030, we believe all leading-edge semiconductors will require integration of X-ray metrology in their manufacturing process

Simplified product roadmap of key semiconductor industry areas

Source: TSMC, Intel, KIOXIA, SAMSUNG, Astris Advisory estimates

Rigaku's growth runway is long

Rigaku's product lineup maps directly onto the metrology requirements generated by each of these transitions. For logic, the XTRAIA XD and CD-3200G address GAA and CFET structures, and the ONYX 3200 targets the aluminium-oxide dipole layer critical to GAA performance. For memory, the CD-3200T addresses high-aspect-ratio NAND and DRAM deep-trench metrology, with the CD-3300T under development specifically for 3D DRAM. For advanced packaging, the AXI platform covers bump and TSV inspection. Rigaku is positioned where device complexity, and therefore measurement intensity, is rising fastest.

Industry participants have acknowledged that the number of X-ray metrology equipment required per leading-edge fab steps up with each architecture transition. Therefore, growth is driven by both increasing metrology intensity per fab, and higher ASP per equipment driven by product innovation and customer-specific requirements.

Therefore, we believe Rigaku's growth runway is meaningfully longer than its FY12/27 Medium-term Business Plan implies, which was set against an industry backdrop that has since shifted significantly in its favor. The MTP was formulated in September 2023 when AI-related workload and enterprise adoption of AI were still nascent and the memory industry faced significant challenges from oversupply. The current semiconductor demand environment, fab capex outlook, and semiconductor product roadmaps have also not factored in improvements in AI capabilities and broader enterprise adoptions in more workstreams.

Although not explicitly highlighted, **Rigaku's 2030 target of ¥100bn revenue from the Semiconductor Process Control Instruments business, which implies a +31.6% CAGR from FY12/26 guidance and a significant growth acceleration, likely reflects the positive industry development noted above and confidence in capturing additional market share.**

Peer group analysis

We have selected the following peers to assess Rigaku's returns and valuations across its two core business areas: Multipurpose Analytical Instruments and Semiconductor Process Control Instruments.

Given Rigaku's core growth and earnings driver is the Semiconductor Process Control Instruments business line, we think investors should focus on semiconductor capital equipment peers.

- **Domestic companies** – We have selected companies of similar size and scale in both the scientific instrument sector and the semiconductor equipment sector.
- **Overseas companies** – Selected as the closest listed international analogues across the same business lines.

Domestic companies

Company	Description
Shimadzu Corporation (7701 JP)	A diversified analytical and measuring instruments maker spanning chromatography, mass spectrometry, and medical imaging. A scientific instruments peer of Rigaku, but with far smaller semiconductor exposure as a share of the group.
Horiba, Ltd. (6856 JP)	A measurement and analysis company across automotive testing, environmental monitoring, medical, and semiconductors. Its semiconductor business, built around gas flow control for fabs, is now the group's largest profit driver, making it both a scientific instruments peer and a semiconductor-levered name.
Tokyo Seimitsu Co., Ltd. (7729 JP)	A precision equipment maker split between semiconductor production tools, including wafer probers, dicing saws, and polishing systems, and precision measuring instruments. Holds leading global positions in probers and dicing.
SCREEN Holdings Co., Ltd. (7735 JP)	A semiconductor equipment maker whose core business is wafer cleaning systems, where it holds the leading global share. A front-end process tool supplier exposed to similar thematic trends in the semiconductor industry as Rigaku.
Lasertec Corp. (6920 JP)	A chip inspection company holding a near-monopoly in inspecting the photomasks used at the leading edge, with adjacent positions in mask and silicon carbide inspection. Leverage to leading-edge process complexity, similar to Rigaku but in a different niche.
Kokusai Electric Corporation (6525 JP)	A front-end deposition equipment maker specializing in batch thermal processing, with leading global marketshare in specific niches (batch ALD and CVD). Spun out of the Hitachi group under KKR ownership and relisted in 2023. The Company benefits from layer-count growth in memory and logic.
Towa Corporation (6315 JP)	The global leader in resin encapsulation systems that protect finished chips, with a dominant position in the compression molding used for memory and advanced packaging. Levered to the same packaging complexity trends that drive Rigaku's growth.

Source: Companies, Bloomberg

Overseas companies

Company	Description
Bruker Corporation (BRKR US)	A US-listed scientific instruments company spanning X-ray, magnetic resonance, and microscopy. Rigaku's most direct global peer, forming an effective duopoly with Rigaku in X-ray diffraction at ~30% market share respectively.
Nova Ltd. (NVMI US)	An Israel-based process control company providing optical and X-ray metrology, including OCD, thin-film, and materials metrology for front-end fabs. The Company saw significant valuation rerating as optical metrology adoption rose throughout the semiconductor industry.
Onto Innovation, Inc. (ONTO US)	A US process control company formed from a 2019 merger, supplying measurement and inspection tools for chip fabs and advanced packaging. A direct peer and a Rigaku collaborator, pairing its software with Rigaku's X-ray measurement platform.
Camtek Ltd. (CAMT US)	An Israel-based supplier of inspection and measurement systems focused on advanced packaging, serving HBM and leading edge semiconductor producers. A peer levered to the packaging complexity that drives Rigaku's opportunity.
KLA Corporation (KLAC US)	A US-listed process control leader spanning defect inspection, metrology, and specialty semiconductor equipment. The sector leader by scale, competing with Rigaku in select metrology niches while operating across a much broader end-market footprint.
Axcelis Technologies, Inc. (ACLS US)	A US maker of ion implantation tools used in chip fabrication, with particular strength in advanced semiconductors for electric vehicles and other high voltage applications. A broader semiconductor capital equipment peer.
Veeco Instruments Inc. (VECO US)	A US chip-equipment maker spanning several front-end and advanced packaging process steps. A broader semiconductor equipment peer with exposure across the production chain.
MKS Inc. (MKSI US)	A US provider of instruments, subsystems, process control solutions, and specialty chemicals across semiconductor, electronics and packaging, and industrial markets, organized into Vacuum, Photonics, and Materials segments. Renamed from MKS Instruments in May 2025, reflecting a shift in focus beyond producing scientific instruments.
Kulicke & Soffa Industries, Inc. (KLIC US)	A Singapore-headquartered, US-listed leader in semiconductor assembly equipment, principally wire and ball bonders, expanding into advanced packaging interconnect including thermo-compression and hybrid bonding. K&S is a back-end and advanced packaging WFE name exposed to the same interconnect complexity trends relevant to Rigaku.

Source: Companies, Bloomberg

Core findings

Growth and profitability

We believe revenue growth and EPS growth are the most appropriate metrics for assessing performance. Rigaku's 5-year revenue CAGR of +14.5% is above the domestic peer median of +12.2% and the overseas median of +12.1%, placing it in the upper half of both groups. Its 5-year EPS CAGR of +131.5% is well ahead of domestic and overseas peer median as well, reflecting the successful execution of its "Lab to Fab" strategy and margin expansion as it shifts its earnings base from lower margin scientific instruments to higher margin semiconductor capital equipment.

Notably, Rigaku's 15.3% LTM operating margin includes PPA amortisation that depresses reported profitability, and yet the Company's operating margins are comparable to semiconductor capital equipment peers. We believe this is partly driven by the Company's ability to produce key components of its metrology equipment in-house due to its manufacturing capabilities and IP accrued over decades of specializing in X-ray technology.

Valuations

On a forward PER basis, Rigaku trades at 30.9x, a premium to the domestic peer median of 20.2x and in line with the overseas median of 29.2x. The premium appears stretched against the scientific instrument peers Rigaku has historically been grouped with. Shimadzu, Horiba and Bruker have historically traded at mid-to-high-teens PERs, consistent with GDP-plus growth, while the metrology and inspection peers that share Rigaku's semiconductor end-market, Nova at 31.5x, Camtek at 37.7x, and Onto at 31.3x, are valued at higher multiples due to investors' recognition of the growth runway of these companies from rising metrology intensity in advanced semiconductors used in AI-related applications.

Given the Company's significant valuation re-rating over the past year, we believe investors have largely shifted to view Rigaku as a semiconductor equipment company, rather than a scientific instrument maker. We believe this is fair given Rigaku's Semiconductor Process Control Instruments business line has become the primary growth and earnings driver, with significant growth runway remaining.

Key takeaway

Rigaku trades at a premium to domestic peers and in line with overseas peers on a PER basis, reflecting a superior reported operating margin despite the impact of PPA amortization, a 5-year revenue CAGR of +14.5% and much higher EPS growth due to the successful execution of its "Lab to Fab" growth strategy.

Given Rigaku is currently trading at 30.9x forward PER, we believe the Company's valuation has largely completed its rerating from the scientific instrument peer group to the semiconductor equipment peer group. Share price movements would likely be driven by the operating performance of the Semiconductor Process Control Instruments business and broader industry drivers, such as rising metrology intensity in advanced semiconductor nodes and further adoption and advancements in Artificial Intelligence.

Rigaku trades at a premium relative to domestic and overseas semiconductor capital equipment peers, which we think reflects the Company's growth runway and position to capitalize on the semiconductor industry's shift towards 3D architecture

Peer analysis of key profitability and valuation metrics

Ticker	Company	Mkt Cap US$ (mm)	Profitability OPM LTM (%)	OPM 10-yr average (%)	ROE LTM (%)	ROIC 10-yr average (%)	Valuation EV/EBITDA 12M Fwd (x)	EV/Sales 12M Fwd (x)	Div yield 12M Fwd (%)	PER 12M Fwd (x)	PBR (x)
268A JP	**Rigaku Holdings Corporation**	**2,799**	**15.3**	**19.0**	**10.7**	**7.6**	**18.4**	**4.8**	**1.0**	**30.9**	**5.6**
Domestic peers											
Scientific Instrument											
7701 JP	Shimadzu Corporation	7,461	13.2	12.7	12.3	11.3	9.9	1.7	1.8	19.9	2.0
6856 JP	Horiba, Ltd.	6,830	16.9	13.8	12.7	9.1	10.4	2.4	1.9	19.6	3.1
7729 JP	Tokyo Seimitsu Co., Ltd	4,465	20.3	19.1	14.4	11.8	12.5	3.3	1.9	21.3	3.7
Semiconductor Capital Equipment											
7735 JP	SCREEN Holdings Co., Ltd	15,670	19.0	13.6	18.9	14.5	11.9	2.9	1.6	19.4	5.0
6920 JP	Lasertec Corp.	21,259	45.7	36.5	33.9	31.3	22.1	10.8	1.0	32.0	13.6
6525 JP	Kokusai Electric Corporation	12,032	18.6	21.7	16.5	11.5	18.5	5.4	0.8	31.7	8.4
6315 JP	Towa Corporation	1,203	15.5	13.2	10.0	8.6	11.2	2.6	1.0	20.2	2.5
Median			**18.6**	**13.8**	**14.4**	**11.5**	**11.9**	**2.9**	**1.6**	**20.2**	**3.7**
Overseas peers											
Scientific Instrument											
BRKR US	Bruker Corporation	8,137	8.6	14.2	-0.6	10.3	13.9	2.7	0.4	23.3	3.4
Semiconductor Capital Equipment											
NVMI US	Nova Ltd.	12,491	29.0	22.1	21.1	14.8	26.0	9.8	0.0	31.5	8.5
ONTO US	Onto Innovation, Inc.	15,130	19.8	17.0	6.8	10.5	24.8	8.9	0.0	31.3	7.2
CAMT US	Camtek Ltd	7,248	24.6	18.8	7.3	12.8	34.4	10.9	0.0	37.7	10.5
KLAC US	KLA Corporation	258,841	41.4	37.3	87.5	31.8	28.9	14.1	0.5	35.4	47.5
ACLS US	Axcelis Technologies, Inc.	4,332	10.3	15.2	8.9	18.5	24.1	4.2	0.0	29.2	4.1
VECO US	Veeco Instruments Inc.	3,227	4.3	1.9	2.6	-1.8	16.6	3.2	0.0	20.9	3.6
MKSI US	MKS Inc.	20,623	16.7	17.8	15.9	7.5	14.7	4.3	0.3	19.4	7.3
KLIC US	Kulicke & Soffa Industries, Inc.	4,778	13.1	11.5	13.2	9.9	10.1	3.0	-	16.9	5.6
Median			**16.7**	**17.0**	**8.9**	**10.5**	**24.1**	**4.3**	**0.0**	**29.2**	**7.2**

Source: FactSet, Bloomberg, Astris Advisory
Note: LTM is the last 12 months

Rigaku has delivered EPS growth well ahead of domestic and overseas peers due to the successful execution of the Company's "Lab to Fab" strategy

Peer analysis of track record – growth (5-year CAGR) and change (2020-2025)

		Growth 5-year CAGR (%)						Change over the last 5 years			
Stock	Name	Sales	EBIT	Net Income	EPS	BPS	Total assets growth	Chg. in GPM	Chg. in FCF margin	Chg. in ROE	Chg. in ROA
268A JP	**Rigaku Holdings Corporation**	**14.53**	**38.77**	**132.17**	**131.52**	**18.41**	**7.64**	**-**	**-**	**-**	**-**
Domestic peers											
Scientific Instrument											
7701 JP	Shimadzu Corporation	7.34	10.33	10.88	11.31	11.43	8.21	4.9	-5.7	0.1	0.9
6856 JP	Horiba, Ltd.	12.23	21.74	22.98	23.10	14.41	9.44	2.4	-0.8	3.2	3.1
7729 JP	Tokyo Seimitsu Co., Ltd	11.43	15.54	15.23	15.73	10.68	9.12	3.3	-8.3	2.7	2.2
Semiconductor Capital Equipment											
7735 JP	SCREEN Holdings Co., Ltd	13.59	43.05	43.42	43.03	18.13	13.55	11.0	-5.1	12.4	9.1
6920 JP	Lasertec Corp.	42.65	51.20	50.89	50.88	39.89	32.15	9.5	26.4	0.7	9.5
6525 JP	Kokusai Electric Corporation	-1.07	-12.08	-12.50	-12.77	15.98	0.22	-	-	-	-
6315 JP	Towa Corporation	12.85	13.14	11.52	11.52	17.76	15.46	1.0	-8.7	-2.2	-0.8
Median		**12.23**	**15.54**	**15.23**	**15.73**	**15.98**	**9.44**	**4.1**	**-5.4**	**1.7**	**2.6**
Overseas peers											
Scientific Instrument											
BRKR US	Bruker Corporation	11.57	-19.28	-	-	20.62	15.41	-2.0	-12.9	-22.2	-7.0
Semiconductor Capital Equipment											
NVMI US	Nova Ltd.	26.73	39.69	40.17	36.08	25.76	29.20	1.4	-3.3	7.3	3.8
ONTO US	Onto Innovation, Inc.	12.55	43.40	34.54	34.65	10.26	10.03	5.9	-1.0	0.5	0.6
CAMT US	Camtek Ltd	26.06	18.20	18.42	13.57	20.72	34.20	1.5	12.8	-9.4	-8.9
KLAC US	KLA Corporation	15.93	27.37	27.26	31.57	15.70	11.60	1.36	0.37	26.50	9.37
ACLS US	Axcelis Technologies, Inc.	12.07	18.64	19.19	20.99	18.66	16.64	0.2	2.8	-2.3	-1.8
VECO US	Veeco Instruments Inc.	7.90	24.42	8.26	5.01	12.29	8.10	-0.8	-3.6	4.1	2.4
MKSI US	MKS Inc.	11.03	3.46	-3.37	-7.20	-1.10	17.64	-2.8	-9.3	-5.1	-7.0
KLIC US	Kulicke & Soffa Industries, Inc.	0.97	-20.78	-66.74	-65.56	5.14	0.93	3.0	-12.8	-11.6	-7.4
Median		**12.07**	**18.64**	**18.81**	**17.28**	**15.70**	**15.41**	**1.4**	**-3.3**	**-2.3**	**-1.8**

Source: FactSet, Bloomberg
Note: figures are non-adjusted

Balance sheet

Rigaku carries more leverage than its peer group, with net debt to equity of 0.4x and net debt to EBITDA of 1.9x, against a domestic peer set that is almost uniformly net cash. This reflects the debt raised to fund the 2021 buyout by the Carlyle Group rather than an operationally stretched balance sheet.

Regarding Rigaku, we make the following observations:

- Liquidity – The Company's current ratio of 2.3x and quick ratio of 1.5x are below the domestic peer median of 2.9x and 1.7x respectively, and well below the overseas median of 4.2x and 2.9x. We do not view this as a concern. Both ratios sit comfortably above 1.0x, and the overseas median is inflated by the cash-rich balance sheets of Onto, Camtek, and Kulicke & Soffa, which carry current ratios above 4x. Rigaku's working capital profile is consistent with an instrument manufacturer carrying meaningful inventory, with inventory days of 169.3 broadly in line with the domestic median of 188.1.
- Leverage – Rigaku is the only company carrying net debt among the domestic peers, with net debt to EBITDA of 1.9x against a domestic median of -1.0x and an overseas median of -1.9x. Total debt to capital of 42.4% is well above the domestic median of 7.2% and at the top of the overseas range. The equity ratio of 47.9% is below the domestic median of 67.4% but remains adequate, and we expect it to build as the Company deleverages from operating cash flow.

We view Rigaku's balance sheet as sound but more leveraged than the peer set, a direct consequence of its change in ownership rather than operational weakness. Net debt to EBITDA of 1.9x is comfortably serviceable given the margin profile, and we expect leverage to decline as growth accelerates under the “Lab to Fab” strategy.

Rigaku carries more leverage on its balance sheet relative to domestic and overseas peers due to its 2021 buyout by Carlyle

Liquidity, leverage, and capital efficiency

Company	Liquidity Current ratio (x)	Quick ratio (x)	Leverage Net debt to equity (x)	Net debt to EBITDA (x)	Interest cover (x)	Total debt to capital (%)	Equity ratio (%)	Efficiency Asset turnover (x)	Inventory turnover (x)	Inventory days
Rigaku Holdings Corporation	**2.2**	**1.5**	**0.4**	**2.0**	**14.8**	**42.9**	**47.5**	**0.5**	**2.2**	**169.3**
Domestic peers										
Scientific Instrument	3.6	2.4	-0.2	-1.5	342.2	1.8	78.7	0.8	2.1	173.6
Shimadzu Corporation	2.9	2.1	-0.3	-1.4	83.8	14.7	67.2	0.7	1.9	188.1
Horiba, Ltd.	3.4	2.0	-0.2	-1.2	178.6	6.3	75.9	0.7	1.4	256.2
Tokyo Seimitsu Co., Ltd										
Semiconductor Capital Equipment	2.1	1.3	-0.4	-1.6	1595.8	1.2	64.6	0.9	2.3	160.3
SCREEN Holdings Co., Ltd	3.4	1.5	-	-	9161.2	0.1	73.3	0.7	0.6	653.9
Lasertec Corp.	2.0	1.1	0.0	-0.1	47.0	18.3	60.6	0.7	1.7	215.2
Kokusai Electric Corporation	2.3	1.6	-0.1	-0.7	61.6	21.4	64.9	0.6	2.0	180.7
Towa Corporation	2.9	1.6	-0.2	-1.3	178.6	6.3	67.2	0.7	1.9	188.1
Median	**2.2**	**1.5**	**0.4**	**2.0**	**14.8**	**42.9**	**47.5**	**0.5**	**2.2**	**169.3**
Overseas peers										
Scientific Instrument										
Bruker Corporation	1.8	0.9	0.7	3.4	7.7	43.4	38.8	0.6	1.7	219.4
Semiconductor Capital Equipment										
Nova Ltd.	1.6	1.4	-0.1	-0.7	127.6	35.4	58.9	0.5	2.2	165.4
Onto Innovation, Inc.	9.7	8.3	-0.2	-1.3	-	43.4	52.0	0.4	1.7	213.6
Camtek Ltd	8.4	7.5	-0.3	-1.3	84.5	41.7	52.6	0.5	2.2	165.9
KLA Corporation	2.8	2.0	0.2	0.2	20.9	49.2	35.4	0.8	1.5	236.3
Axcelis Technologies, Inc.	4.9	3.2	-0.3	-3.1	20.6	6.1	76.9	0.6	1.5	241.3
Veeco Instruments Inc.	3.9	2.6	-0.2	-3.4	5.7	22.4	63.8	0.5	1.5	249.9
MKS Inc.	1.1	0.7	1.2	3.3	5.7	58.3	33.4	0.5	2.6	141.2
Kulicke & Soffa Industries, Inc.	3.4	2.7	-0.5	-3.4	933.6	4.0	69.1	0.6	2.2	162.7
Median	**3.4**	**2.6**	**-0.2**	**-1.3**	**20.8**	**41.7**	**52.6**	**0.5**	**1.7**	**213.6**

Source: FactSet, Bloomberg

Capital allocation

Rigaku's capital allocation history as a listed company is short. The Company listed on the TSE Prime Market on 25 October 2024 through a secondary offering by Carlyle, which meant FY12/24 and FY12/25 are the only periods in which Rigaku has set capital policy under public-market discipline, which we think is a better reflection of Rigaku's capital allocation priorities moving forward.

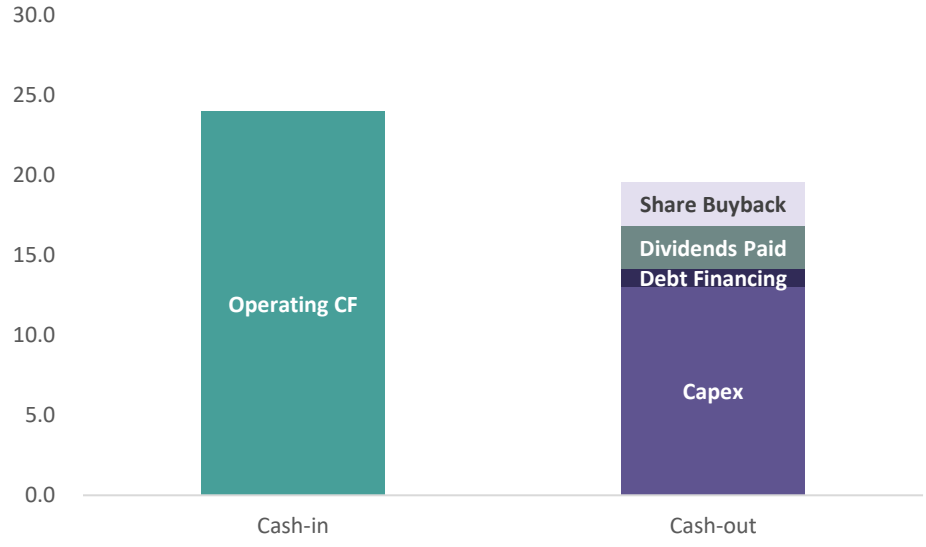
Rigaku generated operating cash inflow of ¥14.6bn in FY12/24 and ¥9.4bn in FY12/25, with the YoY decline driven by an ¥8.0bn increase in trade receivables. During the period, the Company also refinanced a portion of its existing debt with longer-term debt, but did not raise additional debt financing.

In terms of capital deployment, the Company has prioritized capital investments followed by shareholder returns. Capex totalled ¥6.4bn in FY12/24 and ¥6.7bn in FY12/25, driven by the investments to **expand the Company's Yamanashi Plant ahead of the growing demand for its X-ray metrology equipment from semiconductor customers.** We note that the Yamanashi Plant expansion is among Rigaku's largest capital investments and is expected to nearly double the plant's production capacity by 2027.

Shareholder returns began in FY12/25, with the Company paying a dividend of ¥18.8 per share (¥9.4 interim and ¥9.4 year-end) for a total of ¥4.3bn. **Furthermore, Rigaku also launched a share buyback program in FY12/25, repurchasing 4,284,500 shares for ¥4.0bn at an average price of ¥933 per share.**

Capex, shareholder returns and debt repayment are fully funded by operating cash flows

2-year cumulative capital generation and allocation (¥bn, FY12/24 – FY12/25)



Source: Company, Astris Advisory

Rigaku ended FY12/25 with cash and cash equivalents of ¥24.3bn, down YoY from ¥28.0bn at FY12/24, reflecting the Company's capex program, the inaugural dividend, and the inaugural share buyback.

Outlook for capital allocation

We expect capital allocation to remain focused on organic growth capex, shareholder returns, and debt reduction. Rigaku expects capex to decline from current levels (~7% of revenue) down to ~5% of revenue over the medium term following the completion of the Yamanashi Plant expansion, reflecting the low capital intensity nature of the business.

The Company has a dividend payout ratio target of 30%, which provides flexibility for opportunistic capital deployment, including additional shareholder returns through share buybacks. We note that Rigaku executed its FY12/25 share buyback program opportunistically based on its view on the fundamentals of the business, valuation of its shares and, importantly, dialogues with investors and other capital market participants.

Debt reduction and M&A are also potential areas of capital deployment, although at a lower priority than organic growth capex and shareholder returns.

M&A approach

Rigaku's M&A approach has been to acquire specific capabilities it lacks in-house, through small tuck-ins and partnerships rather than large-scale deals. The 2000 acquisition of Osmic (now Rigaku Innovative Technologies) brought multilayer optics, and Newton Scientific in 2010 added compact X-ray sources. One of the more important acquisitions under this approach was the 2019 acquisition of XwinSys, an Israel-based firm, which seeded key semiconductor metrology capabilities that contributed to the growth of the Company's Semiconductor Process Control Instruments business.

Rigaku has noted it will source newer capabilities such as automation, robotics, and AI through external partnerships. We view the Onto Innovation partnership as a direct result of that approach and another example of adding external expertise and capabilities consistent with Rigaku's M&A playbook.

FY12/24 – FY12/27 Medium-term plan

Rigaku's Medium-term Business Plan, set in September 2023 and disclosed in February 2025 following its October 2024 IPO, targets FY12/27 revenue of ¥115.0–120.0bn (~+10% CAGR from ¥79.8bn) and Adjusted operating profit of ¥26.5–27.5bn (from ¥18.3bn). The plan is centered around the three-pillar "Lab to Fab" strategy, with the Semiconductor Process Control Instruments being the Company's growth engine under the plan.

Given the Company's and the broader semiconductor industry's development since the plan was conceived, we think investors should view the FY12/27 MTP as a directional anchor rather than a firm strategic roadmap. Notably, the plan did not factor in the significant impact of Artificial Intelligence on semiconductor demand and the significant increase in hyperscaler capex.

Rigaku's MTP envisioned a gradual shift to the Semiconductor business as the core revenue and earnings driver

FY12/24 – FY12/27 medium-term strategic plan targets

(¥bn)	FY12/23 Base	FY12/24 Actual	FY12/25 Actual	FY12/26 Guidance	FY12/27 MTP Target
Multipurpose Analytical Instruments	35.8	41.3	40.4	41.5	46.5 – 48.5
Semiconductor Process Control Instruments	**18.7**	**23.4**	**27.8**	**33.3**	**35.0 – 36.5**
Components and Services	25.4	25.9	25.9	26.2	33.5 – 35.0
Group revenue	**79.8**	**90.6**	**94.1**	**101.0**	**115.0-120.0**
Adj. EBITDA	20.2	23.4	21.7	25.3	31.5-32.5
Adj. EBITDA margin (%)	25.3%	25.9%	23.0%	25.1%	~27%
Adj. Operating Profit	**18.3**	**20.9**	**18.6**	**21.5**	**26.5-27.5**
Adj. Operating Profit margin (%)	22.9%	23.1%	19.8%	21.3%	~23%

Source: Company, Astris Advisory

The "Lab to Fab" strategy remains core to Rigaku's MTP, while the execution of the MTP is framed around three pillars:

- **Pillar 1 — Multipurpose Analytical Instruments.** The heritage franchise. +7% revenue CAGR target driven by continued leadership in X-ray analytical equipment and deeper overseas market penetration, with over 70% of sales already overseas.
- **Pillar 2 — Semiconductor Process Control Instruments.** The growth engine. +18% revenue CAGR target driven by semiconductor industry adoption of X-ray metrology, further expansion into Memory and Logic semiconductor process control workflow, and entry into the advanced packaging inspection market.
- **Pillar 3 — New market creation.** Novel applications of X-ray technology in adjacent industrial markets across both the Multipurpose Analytical Instruments and the Semiconductor Process Control Instruments categories, supported by rising investments in R&D (~9% of revenue by FY12/27).

Despite the Company's positive outlook and growth momentum, performance against the FY12/27 MTP is mixed, with unforeseen weakness in the Multipurpose Analytical Instruments business and slower-than-expected growth at the Components and Services

business. However, the Company's MTP targets for the Semiconductor business appear conservative based on order pipeline and commentaries from key chipmakers/customers.

FY12/26 forecasts

For FY12/26, the Company guides revenue to ¥101.0bn (+7.2% YoY, +9% constant-currency) and adjusted operating profit to ¥21.5bn (+15.6% YoY), with Rigaku forecasting margin improvements YoY that more than offset higher R&D investments and SG&A expenses. The margin improvement is expected to be driven by an increasing mix of revenue from the Semiconductor Process Control Instruments category, particularly from the sales of next-generation metrology equipment that carries higher pricing and better gross margins.

Revenue and earnings for FY12/26 are also expected to be impacted by seasonality with Q1 being the weakest quarter of the year and improving steadily throughout the year with Q4 being the strongest quarter of the year.

FY12/26 adjusted operating profit growth of +15.6% is led entirely by Semiconductor Process Control Instruments, where next-generation equipment revenue is guided to rise 2.2x YoY

Key financial guidance for FY12/26

(¥bn)	FY12/25	FY12/26 Guidance	YoY (%)
Revenue	**94.1**	**101.0**	**+7.2**
Adj. EBITDA	21.8	25.3	+16.1
Adj. EBITDA margin (%)	*23.0*	*25.1*	*+210 bp*
Adj. operating profit	**18.6**	**21.5**	**+15.6**
Adj. operating margin (%)	*19.8*	*21.3*	*+150 bp*
R&D Ratio (% of Revenue)	**7.8**	**8.5**	**+70 bp**
Capex Ratio (% of Revenue)	7.1	7.7	+60 bp
DPS (¥)	18.8	19.0	+1.1

Source: Company

While the Semiconductor business is expected to see strong growth in FY12/26 on the back of strong customer demand, the Multipurpose Analytical Instruments segment is expected to see incremental growth driven by demand from industrial customers but offset by weakness in Academia end-markets.

Semiconductor Process Control Instruments is expected to be the growth driver while other categories are largely flat

FY12/26 guidance by business category

(¥bn)	FY12/25	FY12/26 Guidance	YoY (%)
Revenue			
Multipurpose Analytical Instruments	40.4	41.5	+2.7
Semiconductor Process Control Instruments	27.8	33.3	+19.8
Components and Services	25.9	26.2	+1.2
Operating Profit			
Multipurpose Analytical Instruments	6.2	6.2	-
Semiconductor Process Control Instruments	8.0	10.4	+30.0
Components and Services	5.1	4.7	-7.8

Source: Company

Recent results

Q1 FY12/26 results

For Q1 FY12/26, Rigaku reported revenue of ¥17.9bn, down -13.0% YoY and operating profit of ¥0.6bn was down -77.8% YoY and basic EPS was ¥1.46 vs. ¥8.52 a year earlier. The YoY decline reflects an unusually strong Q1 in FY12/25, with a concentration of customer orders being delivered, a variance driven by accounting rules rather than a deterioration in the business.

Furthermore, **Rigaku highlighted that both revenue and operating profit came in ahead of its internal plan for the quarter.** The Company forecasts FY12/26 revenue will be weighted towards H2 and expects to see YoY revenue growth from Q3.

Q1 FY12/26 revenue declined -13.0% YoY to ¥17.9bn and operating profit fell -77.8% YoY to ¥0.6bn against a strong quarter YoY, but were ahead of Rigaku's internal plan

Key financials

(¥bn)	FY12/25 Q1	FY12/26 Q1	YoY (%)
Revenue	**20.6**	**17.9**	**-13.0**
Gross profit	11.6	9.8	-15.8
Operating profit	**2.8**	**0.6**	**-77.8**
Operating margin (%)	*13.8*	*3.5*	*-1030 bp*
Net income	1.9	0.3	-82.8
Net margin (%)	*9.3*	*1.8*	*-750 bp*
Basic EPS (¥)	**8.52**	**1.46**	**n/m**

Source: Company

Key highlights

- **Rigaku's order pipeline was up +11% YoY as of Q1, and momentum looks to have improved since.** Leading logic and memory semiconductor producers raised their capex outlooks following strong Q1 results and growing demand from hyperscalers to service AI workloads. We believe this should feed through to Rigaku's order pipeline from semiconductor customers over the coming quarters.

- **Rigaku announced a capital and business alliance with Onto Innovation Inc. (NYSE: ONTO), a leading U.S.-based process control solutions provider for the semiconductor industry, an important strategic development.** Onto has acquired 27.0% of Rigaku (61.1mn shares) from affiliates of The Carlyle Group, for approximately US$710mn, with the transaction expected to close in H2 2026. The partnership is structured in two phases, with the first phase focused on joint software development to further improve Rigaku's metrology equipment and the second phase being the development of hybrid optical and X-ray metrology equipment. Through these initiatives, Rigaku targets approximately US$300mn of total SAM by FY12/30 from opportunities driven by the Onto partnership.

  Importantly, the transaction removes an overhang from Carlyle's expected monetization of its stake in Rigaku, transferring 27.0% to a long-term strategic partner rather than into the market.

Q1 performance by category

Rigaku's earnings mix continued to shift toward semiconductors as the Semiconductor Process Control Instruments category reported positive operating profit while the Multipurpose Analytical Instruments category recorded an operating loss.

Q1 YoY decline was concentrated in Multipurpose Analytical Instruments, while the Semiconductor category saw a more modest decline and Components and Services grew YoY

Sales and Operating Profit per business category

(¥bn)	FY12/25 Q1	FY12/26 Q1	YoY (%)
Revenue			
Multipurpose Analytical Instruments	9.2	6.6	-27.7
Semiconductor Process Control Instruments	6.1	5.3	-13.1
Components and Services	5.1	5.8	+13.2
Operating Profit			
Multipurpose Analytical Instruments	1.2	-0.2	n/m
Semiconductor Process Control Instruments	1.6	0.5	-64.0
Components and Services	0.5	1.0	+76.2

Source: Company

Multipurpose Analytical Instruments was the primary driver in the YoY weakness in Q1 results. Revenue fell -27.7% YoY to ¥6.6bn and the category swung to a small operating loss of -¥0.2bn, from a ¥1.2bn profit a year earlier. Rigaku attributes the weakness to softer US academic and government demand on budget compression, partly offset by an improved product mix that held gross margin broadly flat.

Semiconductor Process Control Instruments revenue declined -13.1% YoY to ¥5.3bn, with category operating profit down -64.0% to ¥0.5bn. The result came in ahead of Rigaku's internal plan, with demand from memory and logic customers remaining strong year on year. **Growth is expected to accelerate in H2 as Rigaku's next-generation metrology equipment, some of which are currently being tested by customers under Rigaku's JEP program, are delivered to Logic and Memory chipmaker customers.**

Components and Services revenue rose +13.2% YoY to ¥5.8bn and category operating profit increased +76.2% to ¥1.0bn, reflecting a 17.4% margin. Growth was driven by service price increases and non-EUV product demand, against continued weakness in EUV multilayer mirrors.

Astris earnings estimates and key assumptions

Our core earnings estimates reflect the following key factors:

- Successful execution of the Company's FY12/26 guidance, particularly on the execution of growth initiatives at the Semiconductor business.
- Longer-term growth reflects successful conversion of the Company's order pipeline and key semiconductor customers executing on their capex plans.
- We have not factored in shifts in the trajectory of the macro and the subsequent impact on semiconductor demand and government R&D funding.
- We have not factored in any M&A activity.

Astris Advisory earnings estimates

Year-end	FY12/26E	FY12/27E	FY12/28E
Multipurpose Analytical Instruments	41.51	43.03	44.71
Semiconductor Process Control Instruments	33.51	45.19	58.86
Parts & Services	26.21	27.75	29.41
Sales(¥bn)	**101.23**	**115.97**	**132.98**
Growth YoY (%)	+7.5	+14.6	+14.7
Adj. operating income (¥bn)	**21.77**	**27.37**	**33.19**
Adj. operating income margin (%)	21.5	23.6	25.0
ROE (%)	14.1	16.8	18.8
ROA (%)	6.8	8.3	9.7
DPS (¥)	**19.00**	**22.00**	**27.00**
Dividend yield (%)	0.8	0.9	1.1

Source: Astris Advisory

The core assumptions of our estimates are as follows:

- **Sales growth** – We believe the Company's sales growth will be driven by continued double-digit revenue growth at the Semiconductor Process Control Instruments business, driven by increasing adoption of X-ray metrology in leading-edge manufacturing processes for logic, memory, and advanced packaging.
- **Profitability** – We forecast improving profit margins from increasing mix of next-generation semiconductor metrology equipment, which have higher gross margins.

Management and Board of Directors

7 members, 28.6% female ratio, 71.4% outside directors

Senior management profiles

Jun Kawakami – President and Representative Director, CEO

Mr. Kawakami began his career at Booz Allen & Hamilton Japan in April 1987 and subsequently held senior management roles at GE across multiple divisions in Japan and Asia, culminating in President and CEO of GE HealthCare Japan (2011–2017). He then served as President and CEO of ARTERIA Networks Corporation before joining Carlyle Japan LLC as Senior Advisor in April 2020. He was appointed Outside Director of Rigaku Holdings and Rigaku Corporation in March 2021 and assumed his current role as President and CEO of both entities in February 2023. He holds 72,400 shares in the Company.

Kiyoshi Ogata – Director and Senior Executive Vice President; Leader, Global Product Unit

Mr. Ogata joined Hitachi, Ltd. in April 1986 before moving to Rigaku in January 2009, where he rose through successive executive roles to Executive Vice President (April 2019). He was appointed Director of the Company in March 2021 and, following a series of promotions, assumed his current roles as Senior Executive Vice President of both Rigaku Holdings and Rigaku Corporation and Leader of the Global Product Unit in 2023. He holds no concurrent board positions at other listed companies. He holds 409,200 shares in the Company.

Director profiles

Takaomi Tomioka – Outside Director

Mr. Tomioka began his career at the Long-Term Credit Bank of Japan in April 1985 before joining Carlyle Japan LLC in December 2003, where he has held progressively senior roles and currently serves as Managing Director and Co-Head. He was appointed Outside Director of the Company in March 2021. He holds concurrent directorships at ORION BREWERIES, LTD. (TYO: 409A), IWASAKI ELECTRIC CO., LTD. (TYO: 6924), and Kentucky Fried Chicken Japan, Ltd. (TYO: 9873).

Mr. Tomioka is classified as Outside but not Independent, given his Carlyle affiliation and its connection to major shareholder Atom Investment, L.P. He holds no shares in the Company.

Andrea Knoblich – Outside Director (Independent)

Ms. Knoblich has over two decades of experience across international financial institutions, including Mitsubishi Trust and Banking, Morgan Stanley, Deutsche Securities, Shinsei Bank, and the Bank of New York Mellon, where she served as Director and Market APAC COO/CAO from April 2019. She was appointed Outside Director of the Company in June 2021, a position she currently holds. In addition, she concurrently serves as an Independent

Outside Director of Wacom (TYO: 6727) as of the end of June 2026. She holds no shares in the Company.

Tomoaki Taguchi – Outside Director (Independent)

Mr. Taguchi spent over three decades at Texas Instruments Japan, serving as Representative Director and Head of Sales Division from April 2013, before joining Vayyar Imaging Japan as Representative for Japan in April 2022. He was appointed Outside Director of the Company in September 2023. Mr. Taguchi holds no concurrent board positions at other listed companies. He holds no shares in the Company.

Takako Ebata – Outside Director (Independent)

Ms. Ebata has held senior roles across the private and public sectors, including McKinsey & Company, Amgen, and Johnson & Johnson Japan, and served as a Member of the House of Representatives from 2009. She currently serves as Outside Director (Audit and Supervisory Committee Member) of M3, Inc. (TYO: 2413) and was appointed Outside Director of the Company in September 2023. She holds no shares in the Company.

Ichiro Sasaki – Outside Director (Independent)

Mr. Sasaki spent his career at Brother Industries, Ltd., rising to Representative Director and President from June 2018 to June 2024, with responsibility spanning development, production, quality control, and information systems. He transitioned to an Advisor role with Brother Industries in June 2025 and currently serves as Outside Director of Mitsubishi Materials Corporation (TYO: 5711). He was appointed Outside Director of the Company at the March 2026 AGM. He holds no shares in the Company.

Other Corporate Information

Contact details

Address
〒196-8666 3-9-12, Matsubara-cho Akishima-shi, Tokyo IR Dept.: ir@rigaku.co.jp

Source: Company

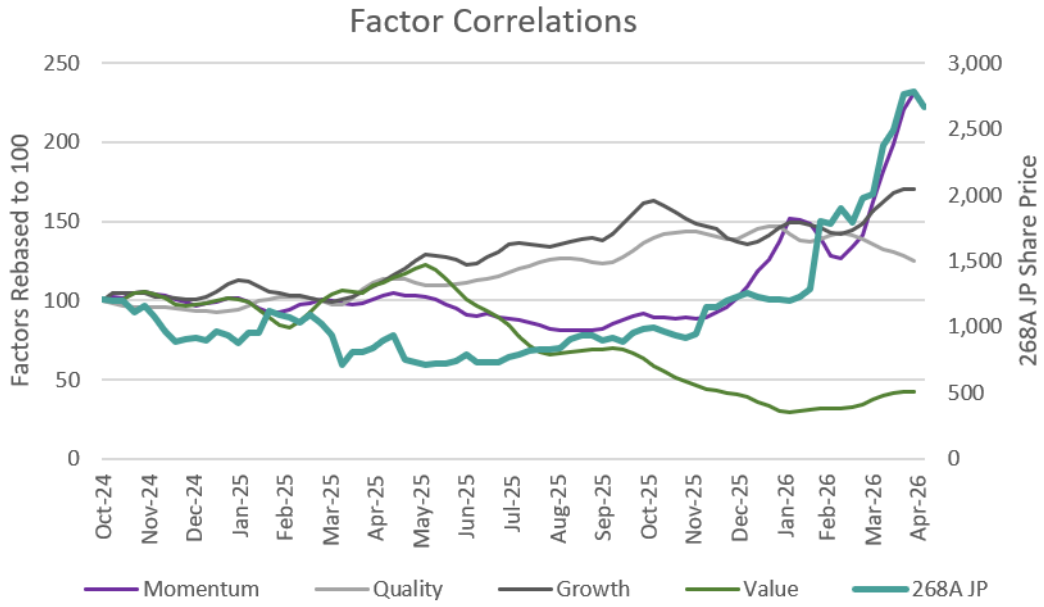
Shareholder details (as of June 30, 2026)

Major shareholders	Stake (%)
Onto Innovation, Inc.	26.99
Hikaru Shimura (former CEO of Rigaku Holdings)	12.15
Columbia Management Investment Advisers	9.37
Indus Capital Partners	3.03
Nomura Asset Management	1.90
Vanguard Capital Management	1.81
Capital Research & Management (World Investors)	1.20
GIC Pte Ltd	1.13
Jupiter Asset Management	1.13
Mitsubishi UFJ Asset Management	0.96

Note: Onto Innovation's ownership stake is pro-forma the announced acquisition from affiliates of the Carlyle Group, which is expected to close in 2H FY12/26 subject to regulatory approval(s). Ownership stake of other institutional shareholders are based on latest disclosure from Factset
Source: Factset, Astris Advisory estimate

Astris Quant Sheet

Share price chart and factor analysis (from October 2024)



Source: FactSet, Astris Advisory

Factors	1 Year Corr	Since IPO
Momentum: 12 Month - 1 Month Performance	-0.01	0.01
Quality: Free Cash Flow Yield	-0.03	0.09
Growth: Operating Profit Growth	-0.09	-0.05
Value: Book to Market	0.19	0.02

Source: FactSet, Astris Advisory

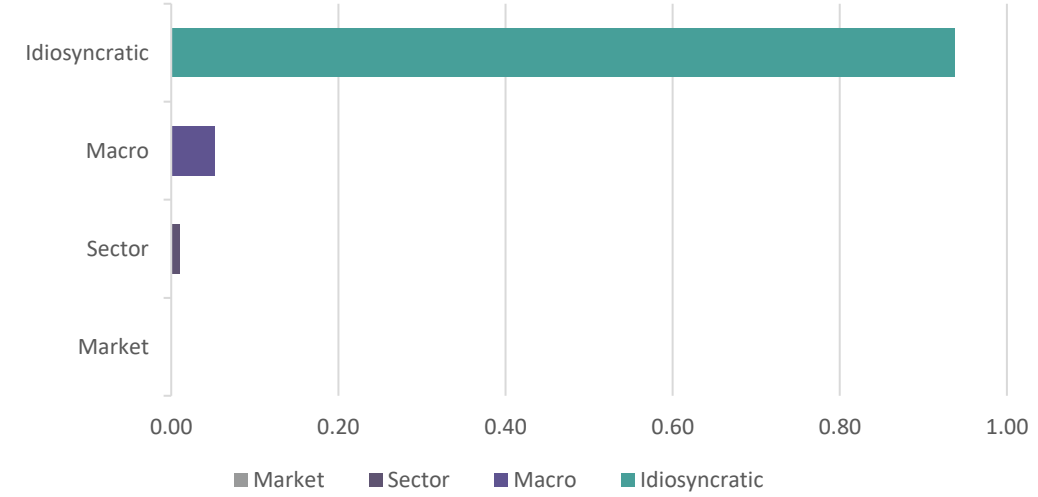
Rigaku Holdings correlates most strongly with the Value Factor over 1 year at 0.19, fading to a negligible amount since IPO. All other factor correlations are quite low. However, in recent months, the Company's stock price movement has correlated strongly with momentum factors.

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 October 2024)



Source: FactSet, Astris Advisory

Macro is the largest systematic driver explaining 5% of share price variation. The Market and sector contribute negligible amounts.

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	1Y Corr	Since IPO
Market		
Topix 1st Section	0.17	0.27
Topix Precision Instruments	0.05	0.14
Topix Small Cap Index	0.18	0.27
MSCI Japan	0.16	0.27
MSCI Japan Tech Hardware & Equipment	0.48	0.44
Macro		
10Y JGB Yield	-0.20	0.06
CPI Nationwide	0.37	0.12
Industrial Production	-0.31	-0.16
Eco Watchers Survey Expectations	0.13	0.03

Source: FactSet

Rigaku Holdings exhibits the strongest correlation with the MSCI Japan Tech Hardware & Equipment index at 0.48 over one year and 0.44 since IPO. Correlations with the broader Topix and MSCI Japan indices are more modest at 0.16-0.18 over one year, while correlation with the Topix Precision Instruments index is surprisingly low at just 0.05.

For macroeconomic factors, the stock shows a notable negative correlation with Industrial Production at -0.31. CPI shows a positive correlation of 0.37 over one year, while the Economy Watchers Survey and other macro indicators are negligible.

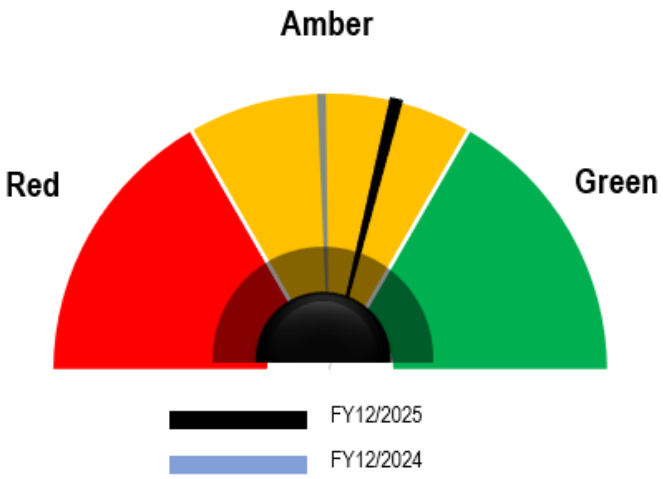
Astris-Sustainability ESG assessment

Ratings and scorecard

Our in-house Astris-Sustainability ESG model rates the Company with a combined score of 56.8%, placing it towards the middle of the 'Amber' rating of our assessment using data disclosures from FY12/25.

Our in-house methodology* takes what we have selected as core measurable ESG factors, ranking its performance versus its domestic GICS Technology Hardware & Equipment peers with a market capitalization between ¥25bn to ¥200bn (a total of 30 companies).

Astris-Sustainability ESG model rating for Rigaku Holdings



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

ESG scorecards

	FY12/24	FY12/25
Environmental (16 factors from a selected peer group)		
Astris Environmental score	**27.2**	**26.7**
Social (15 factors from a selected peer group)		
Astris Social score	**59.6**	**78.5**
Governance (37 factors from a selected peer group)		
Astris Governance score	**53.5**	**61.1**
TOTAL SCORE (Out of a total of 68 factors)	**48.6**	**56.8**

Source: Company, FactSet, Astris Corporate Advisory

Our methodology has highlighted the following key topics:

Environmental

Rigaku recognizes the environmental footprint of its business and is committed to reducing its environmental impact. Rigaku operates a Sustainability Promotion Committee, chaired by the President and meeting on a quarterly basis, which reports to the Board of Directors at least twice a year.

On targets, Rigaku has committed to a 50% reduction in Scope 1 and 2 emissions by FY12/30 compared to the FY12/21 baseline. FY12/24 Scope 1 and 2 emissions were down -

4.2% YoY, with emissions intensity of 114 t-CO2 per ¥1bn of revenue, a -15.6% YoY improvement. The Company has aligned disclosure with the TCFD framework and switched part of its operations to carbon-free renewable electricity in July 2024.

Social

Rigaku's social framework centers on human capital, supply chain responsibility, and product reliability. The Company formulated a Group Human Rights Policy in November 2023 under the UN Guiding Principles, established CSR Procurement Guidelines and Green Procurement Guidelines (RoHS, REACH) in 2023, and raised its supplier CSR survey coverage to 88% of applicable suppliers in FY12/24 from 48% in FY12/23.

Diversity metrics are also improving. As of FY12/24, the female director ratio rose to 25% from 20% YoY, the ratio of female managers increased to 2.3% from 1.5% YoY, and full-time female employees also increased to 14.6% from 13.1% YoY, all of which demonstrate Rigaku's efforts to improve workplace diversity.

Governance

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

- **Board of Directors** – currently comprised of 7 board members led by President and Representative Director Mr. Jun Kawakami, comprising 2 internal directors, 1 outside director and 4 independent outside directors (57.1%). The female ratio on the board is 28.6% (2 of 7 members).
- **Board of Corporate Auditors** – comprising 4 external auditors, all of whom are independent outside members. The Board of Corporate Auditors meets regularly, audits the execution of directors' duties, and coordinates with the Internal Audit Office and accounting auditor. Importantly, it operates independently of the Board of Directors.
- **Nomination, Evaluation, and Compensation Committee** – chaired by an independent external director with a majority of independent external directors. It advises the Board of Directors on director nomination, appointment and dismissal, compensation policy, and individual director compensation, which is delegated to the committee by the Board.

Controversies

We note we have been unable to find major recent 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:

Semiconductor Process Control Instruments

- The disclosed 2030 target of ¥100bn implies a +31.6% CAGR from FY12/26 guidance, well above the +18% CAGR in the current MTP. What is driving the growth acceleration and is that driven by visibility on order pipeline?
- What are the leading indicators that would signal the volume ramp? Can recent growth trajectory be characterized as volume ramp by fabs?
- The Onto Innovation alliance targets US$300mn of incremental sales by FY12/30. How much of that is from the hybrid X-ray–optical product in development?
- On customer concentration, with all ten of the largest semiconductor capex spenders as customers, how exposed is the order book to a pause or push-out at any one leading-edge logic or memory maker?

Multipurpose Analytical Instruments

- The segment swung to an operating loss in Q1 FY12/26 on softer US academic and government demand. What visibility does the Company have on a recovery in the academic and government end-market?
- Beyond a cyclical recovery, what are the credible growth catalysts for the business? Incremental market share gains and further overseas market penetration appear challenging given its existing footprint.

Capital allocation

- What is the priority and strategic rationale for inorganic growth? Is there a specific area of focus for M&A?
- How does Rigaku prioritise deleveraging against shareholder returns as free cash flow builds? Is the 30% payout a floor, and should investors expect buybacks to remain opportunistic or become a more regular feature?
- Given the expansion at the Yamanashi Plant, what other capex projects are being considered and what is the return hurdle on these projects?

IFRS Financial Summary

Income statement (¥bn)	FY 12/24	FY 12/25E	FY 12/26E	FY 12/27E	FY 12/28E
Sales	**90.65**	**94.19**	**101.23**	**115.97**	**132.98**
COGS	(35.36)	(41.31)	(42.52)	(46.39)	(50.53)
Gross profit	**55.30**	**52.88**	**58.71**	**69.58**	**82.45**
Gross profit margin (%)	61.0	56.1	58.0	60.0	62.0
Operating profit	**18.37**	**16.71**	**19.77**	**25.37**	**31.19**
OP margin (%)	20.3	17.7	19.5	21.9	23.5
Non-operating income	0.37	0.41	0.39	0.40	0.39
Non-operating expenses	-	-	-	-	-
Ordinary profit	**17.98**	**15.97**	**18.91**	**24.37**	**30.18**
Extraordinary gains	**-**	**-**	**-**	**-**	**-**
Extraordinary losses	**-**	**-**	**-**	**-**	**-**
Pre-tax profit	**17.98**	**15.97**	**18.91**	**24.37**	**30.18**
Tax	(4.36)	(4.57)	(6.05)	(7.80)	(9.66)
Effective tax rate (%)	24.3	28.6	32.0	32.0	32.0
Net income	**13.62**	**11.40**	**12.86**	**16.57**	**20.52**
Non-controlling NI	-	-	-	-	-
Parent attributable NI	**13.62**	**11.40**	**12.86**	**16.57**	**20.52**
Sales growth YoY (%)	+13.5	+3.9	+7.5	+14.6	+14.7
OP growth YoY (%)	+20.4	-9.0	+18.3	+28.4	+22.9
Pre-tax profit YoY (%)	+21.3	-11.2	+18.4	+28.9	+23.9
NI growth YoY (%)	+24.9	-16.3	+12.8	+28.9	+23.9

Balance sheet (¥bn)	FY 12/24	FY 12/25E	FY 12/26E	FY 12/27E	FY 12/28E
Cash & equivalents	27.99	24.28	29.59	31.99	38.18
Inventory	21.12	20.88	22.44	25.70	29.47
Accounts receivables	20.28	28.44	30.56	35.02	40.15
Other	1.84	2.69	2.90	3.32	3.80
Current assets	**71.23**	**76.29**	**85.49**	**96.03**	**111.61**
Tangible assets	25.40	29.06	31.39	33.24	34.70
Intangible assets	79.12	78.42	76.42	74.42	72.42
Investment in affiliates	-	-	-	-	-
Other	1.80	1.45	1.45	1.45	1.45
Fixed assets	**106.32**	**108.92**	**109.25**	**109.11**	**108.57**
Total assets	**177.55**	**185.21**	**194.74**	**205.14**	**220.18**
Short-term borrowing	5.01	8.20	8.20	8.20	8.20
Trade creditors	7.10	8.14	8.76	9.56	10.41
Other	17.82	17.25	20.09	20.89	23.31
Current liabilities	**29.93**	**33.58**	**37.04**	**38.64**	**41.92**
Long-term borrowing	56.59	53.97	53.97	53.97	53.97
Other LT liabilities	9.25	9.26	9.26	9.26	9.26
Long-term liabilities	**65.84**	**63.23**	**63.23**	**63.23**	**63.23**
Shareholder's equity	**81.77**	**88.40**	**94.47**	**103.27**	**115.04**
Share acquisitions rights	-	-	-	-	-
Non-controlling interests	-	-	-	-	-
Total net assets	**81.77**	**88.40**	**94.47**	**103.27**	**115.04**
Total liabilities & net assets	**177.55**	**185.21**	**194.74**	**205.14**	**220.18**

Cash flow statement (¥bn)	FY 12/24	FY 12/25E	FY 12/26E	FY 12/27E	FY 12/28E
Profit before tax	**17.98**	**15.97**	**18.91**	**24.37**	**30.18**
Depreciation/amortization	4.87	5.13	5.47	6.26	7.18
Changes in working capital	(2.79)	(7.50)	(0.43)	(6.54)	(6.11)
Other non-cash items	0.22	0.43	-	-	-
Tax paid	(5.67)	(4.65)	(6.05)	(7.80)	(9.66)
Cash from Operating Activities	**14.60**	**9.39**	**17.90**	**16.29**	**21.59**
Capex	(6.36)	(6.65)	(7.79)	(8.12)	(8.64)
Acquisitions/increase stakes	0.02	0.08	-	-	-
Other investing cash flow	0.29	(0.06)	-	-	-
Cash from Investing Activities	**(6.05)**	**(6.63)**	**(7.79)**	**(8.12)**	**(8.64)**
Total cash dividends paid	-	(2.83)	(4.32)	(5.00)	(6.13)
Debt issuance/(retirement)	(1.28)	0.17	-	-	-
Equity financing/(buybacks)	(0.00)	(2.73)	-	-	-
Other	(1.16)	(1.21)	(1.21)	(1.21)	(1.21)
Cash from Financing Activities	**(2.44)**	**(6.60)**	**(5.52)**	**(6.21)**	**(7.34)**
FX impact	1.36	0.12	0.74	0.43	0.59
Net cash flow	**7.47**	**(3.72)**	**5.32**	**2.40**	**6.19**
Free cash flow	8.24	2.73	10.10	8.17	12.95
EBITDA	23.24	21.84	25.23	31.63	38.37
EBITDA margins (%)	25.6	23.2	24.9	27.3	28.9
Free cash flow margin (%)	9.1	2.9	10.0	7.0	9.7
Free cash flow conversion (%)	45.8	17.1	53.4	33.5	42.9
Capex/sales (%)	7.0	7.1	7.7	7.0	6.5
Capex/depreciation (%)	130.7	129.8	142.6	129.6	120.4
CFO margin (%)	16.1	10.0	17.7	14.0	16.2

Key metrics	FY 12/24	FY 12/25E	FY 12/26E	FY 12/27E	FY 12/28E
Profitability					
Gross margin (%)	61.0	56.1	58.0	60.0	62.0
Operating margin (%)	20.3	17.7	19.5	21.9	23.5
Net margin (%)	15.0	12.1	12.7	14.3	15.4
ROA (%)	8.0	6.3	6.8	8.3	9.7
ROE (%)	**18.5**	**13.4**	**14.1**	**16.8**	**18.8**
ROCE (%)	12.4	11.0	12.5	15.2	17.5
ROIC (%)	10.3	8.1	8.8	10.7	12.4
Liquidity					
Current ratio (x)	2.4	2.3	2.3	2.5	2.7
Quick ratio (x)	1.7	1.6	1.7	1.8	2.0
Leverage					
Debt/Equity ratio (x)	0.8	0.7	0.7	0.6	0.5
Net Debt/Equity ratio (x)	0.4	0.4	0.3	0.3	0.2
Equity ratio (x)	0.46	0.5	0.5	0.5	0.5
Interest cover (x)	24.3	14.6	15.9	18.1	22.3
Net Debt/EBITDA (x)	1.4	1.7	1.3	1.0	0.6
Valuation					
EPS reported (¥)	60.4	50.2	56.6	72.9	90.3
PER (x)	**31.7**	**38.2**	**33.8**	**26.3**	**21.2**
Diluted PER (x)	**31.7**	**38.2**	**33.8**	**26.3**	**21.2**
DPS (¥)	3.0	18.8	19.0	22.0	27.0
Dividend payout ratio (%)	5.0	37.5	33.6	30.2	29.9
Dividend yield (%)	**0.2**	**1.0**	**1.0**	**1.1**	**1.4**
Total shareholder return (%)	**0.2**	**1.6**	**1.0**	**1.1**	**1.4**
Free cash flow yield (%)	1.9	0.6	2.3	1.9	3.0
Diluted free cash flow yield (%)	1.9	0.6	2.3	1.9	3.0
PBR (x)	**5.3**	**4.9**	**4.6**	**4.2**	**3.8**
EV/sales (x)	5.9	5.6	5.2	4.6	4.0
EV/EBITDA (x)	22.9	24.3	21.1	16.8	13.8
EV/EBIT (x)	28.9	31.8	26.9	20.9	17.0

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.