

"Role of engagement fund: Does it have a relevance to you?"

Shoichi Oka

SOLARIS
FUND MANAGEMENT





Shoichi Oka, Partner, Solaris Management Co. Ltd. Tokyo, Japan

- Mr. Oka joined Solaris Management in 2020 as a partner of this leading engagement fund in Japan. He is responsible for the engagements with Solaris' invested companies.
- Mr. Oka has been active in both global M&A and business restructuring markets for over 30 years. From 2014 to 2020, he led PwC' global M&A origination team in Hong Kong focused on Asia based large and medium cap deals.
- In 2015 he successfully completed an origination, funding and lead advisory engagement in the formation of multi-billion US \$ JV investment fund between a leading Japanese and a leading global private equity fund leading Japanese bank which focuses on the investment opportunities in Japan.
- He served as a senior advisor on various business merger and restructuring engagements including Mitsubishi Motors, Sharp, Takata, Mitsubishi Paper and Cosmo Oil between 2014 to 2019.
- From 2010 to 2013, Mr. Oka managed as a CEO, the start-up of Japan Industrial Solutions (JIS), a US \$1 billion private equity investment vehicle funded by MUFG, SMBC, Mizuho and DBJ. He led 4 investments in underperforming TSX listed companies, including SUMCO, a globally leading manufacturer of silicon wafer, JEOL, another global leading manufacturer of electron microscope, and ALVAC, a leading vacuum technology engineering firm, for over \$400 million in aggregate and actively led the turnaround of these businesses.
- Prior to 2010, Mr. Oka was the CEO of PwC Advisory in Japan for 8 years. He led the start-up and the growth of the financial advisory business to the leading business restructuring advisory firm in Japan with over 300 professionals during the period.

Executive Summary

Pursuit of Idiosyncratic Catalysts and Engagement Opportunities in Japan

Strategy	<ul style="list-style-type: none"> ▪ Pursue idiosyncratic opportunities in Japan <ul style="list-style-type: none"> - Investment opportunities based on individual catalysts and mis-pricings, including those created by friendly engagement - Seek to take advantage of Japan’s conducive environment for engagement and unique and persistent funding gaps - Predominantly publicly-traded equity, may opportunistically consider public credit, usually long-biased, focused portfolio built on mid- to long-term views - Priority to companies who can contribute to societal transformation and grow their businesses through such contribution - Ability to create long-only product (managed account or separate share class)
Objective	<ul style="list-style-type: none"> ▪ Seek to achieve consistent, superior risk-adjusted returns through the economic cycle and all market conditions ▪ Target 15% annualized returns (over time) with 9-12% annualized volatility ▪ CIO may at times run higher volatility during high-conviction periods
Strong Local Network	<ul style="list-style-type: none"> ▪ Unique advantage enabling us to tap the unparalleled reach throughout Japan possessed by government fund’s former senior management & board members, which was fostered through their several decades of accumulated experience ▪ Leverage opportunistically to generate deep investment and situational insights, and exert meaningful influence on Japanese corporates, government agencies, financial sector firms and impact important market debates. Ability to source co-investment deals
Hiroaki Toya CIO/Founder	<ul style="list-style-type: none"> ▪ Broad range of global/Japan experience and leading roles in government, M&A advisory, private equity, hedge fund and SWF ▪ 14-year, stellar experience of event-driven and engagement investments in the public market, across capital structure ▪ Experience in successful private market investments ▪ Excellent reputation & opinion leadership from serving on government expert panels and industry
Investment Style	<ul style="list-style-type: none"> ▪ Rigorous research-intensive, fundamental bottom-up approach. Appropriate control of net market exposure ▪ Leverage our proprietary network, global mindset with knowledge of local sensitivities, flexibility and strong reputation of principals ▪ Alpha generated from a focused portfolio of up to 15-20 names across capital structure
Team	<ul style="list-style-type: none"> ▪ Partners and Senior advisors (including former government fund (JIC) board members) with top-quality Japan network which can open doors, gather intelligence and help persuade corporates <ul style="list-style-type: none"> ▪ Former top mega-bank official, renowned lawyer, venture capitalist and academics, all present and former advisors to the government ▪ Experienced analysts and associate PM

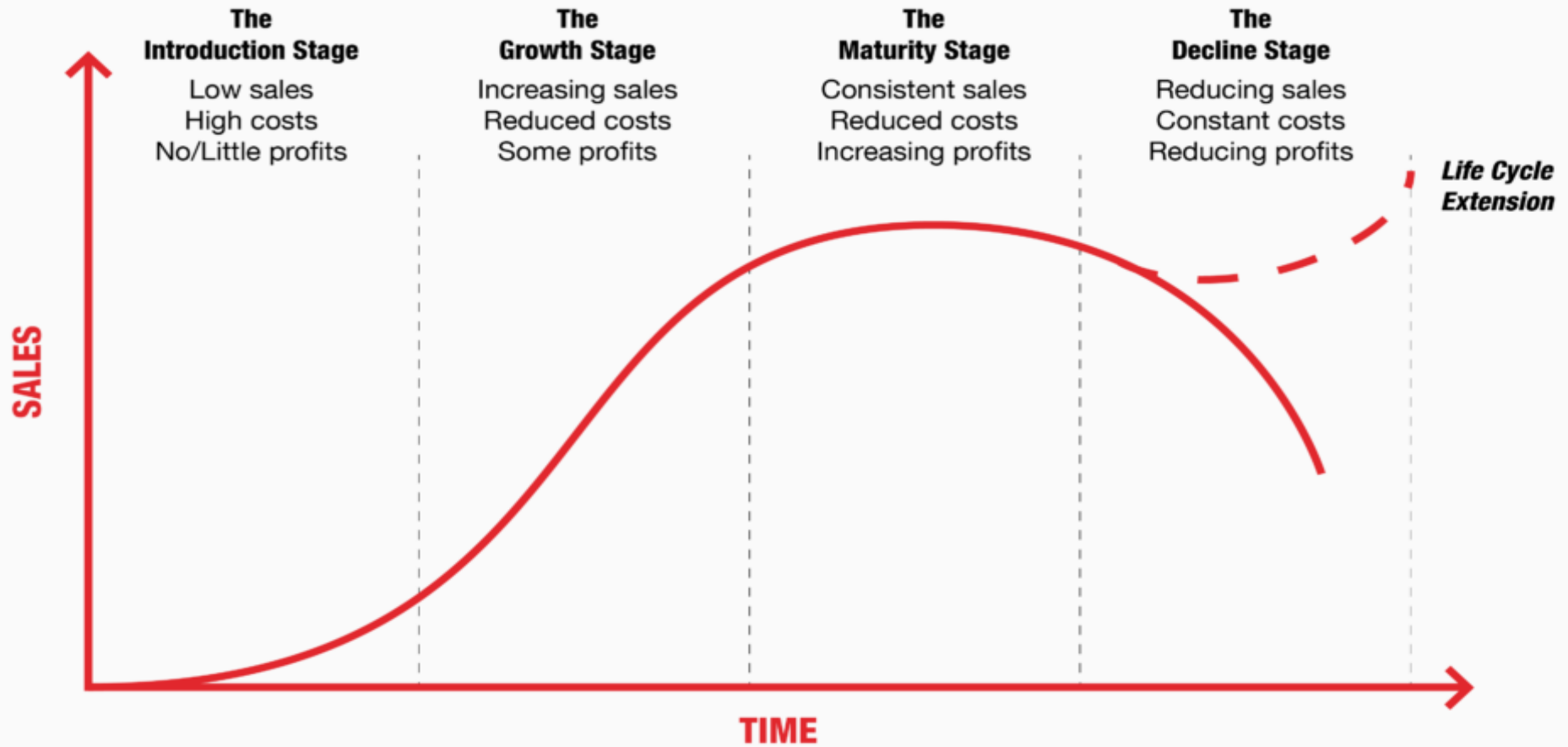
Broad category of investment funds

- Venture Investment Fund: Also known as “Venture Capital Fund” is a type of investment fund that focuses on providing capital to early-stage and high-growth companies with significant growth potential. The primary objective of a venture investment fund is to generate high returns on investment by identifying and investing in companies with polishing business models, innovative technologies, or unique market opportunities.

- Growth Capital Fund: Growth Capital Fund is a type of private equity fund that specializes in providing capital to established companies with a proven track record of success and a potential for further expansion. Unlike venture capital, which typically invests in early-stage startups, growth capital funds focus on companies that are beyond the initial startup phase but still need capital to fuel their growth initiatives. These funds invest in businesses that have demonstrated a viable business model and are looking to scale operations, enter new markets, launch new products, or make strategic acquisitions.

- Engagement Fund: Engagement Fund, also known as activist fund or shareholder engagement fund, invest in companies with the intention of actively engaging with management and influencing corporate decision-making. The primary objective of engagement fund is to create long-term value for shareholders by advocating changes that it believes will improve the company's performance, governance, or sustainability practices. It usually takes significant stakes in target companies and use its influence to push for strategic, operational, or governance reforms.

- Special Situation Fund: A special situation fund is a type of private equity fund that focuses on opportunities arising from unique or distressed situations. These funds invest in assets or companies that are undergoing specific events or conditions, such as restructurings, bankruptcies, mergers, acquisitions, or other special circumstances. The goal of a special situation fund is to capitalize on mispricing or inefficiencies resulting from these events. For example, a fund might invest in the debt or equity of a company going through bankruptcy proceedings, anticipating a potential turnaround or reorganization that could lead to increased value. Special situation funds require a deep understanding of financial markets, legal frameworks, and the ability to assess and navigate complex situations.



Engagement example: Chemical Company S

- Global #3 manufacturer of poly-silicon of “ten-nines” (99.99999999%) quality. Poly-silicon is the key raw material for silicon wafer production, therefore, it sits in the very top of semi-conductor supply chain.
- There are only 5 manufactures with “ten-nines” quality exist globally, and all sit in the free & democratic countries. Although China is the largest source of silicon mineral, it is struggling to make ten-nines quality poly-silicon as well as the silicon wafer using it. This is relatively unknown fact and the achilles tendon for China in the “Chips War”.
- Despite its strategic importance of the economic national security perspective and relatively high profitability, S’s enterprise value (EV) is very low.
 - ✓ Operating margin: $\text{Operating profit}/\text{Revenue}=\text{¥}30,000/380,000=7.9\%$
 - ✓ EBITDA (Earnings Before Interest Tax Depreciation & Amortization): $\text{Operating profit} + \text{Depreciation\&Amortization}=\text{¥}30,000+18,000= 48,000$
 - ✓ Enterprise Value (EV): $\text{MarketCapitalization}+\text{NetDebt}=\text{¥}162,000(@\text{¥}2,251/\text{share}) +70,000=232,000$
 - ✓ EV/EBITDA multiple: $232,000/48,000=4.83$
 - ✓ PBR (Price Book-value Ratio): $\text{Net asset per share}/\text{market value per share}=0.70$
 - ✓ Average EV/EBITDA multiple in the US chemical industry=8.31

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- The cause of the low valuation is the extremely high level of CO2 emissions by S, one of the worst 10 in all industrial Japan. This will make the sustainability of S's business questionable for both capital market and its creditors (commercial banks).
 - ✓ S operates the largest in-house coal burning power generation plant of 500MW capacity.
 - ✓ Its 4 coal burning furnaces emits 6,700 thousand tons of CO2 per year.
 - ✓ S plans to reduce the emission by 30% by 2030 and to achieve carbon neutral by 2030.
 - ✓ We formed a hypothesis that S's approach to achieve carbon neutrality is a combination of co-combustion of coal with biomass fuel and development of carbon capture and storage technology, and the biggest challenge would be securing biomass fuel sources.
 - ✓ We have made a small start-up investment in Australian biomass development venture, Sky Renewable. A possible joint venture between S and Sky may provide a solution to S's challenge by providing a large source of biomass fuel in Australia.
 - After we made investment in S, we started our engagement with S's management to discuss the challenges they were facing toward the carbon neutrality goal. Our engagement was facilitated and supported by S's main bank who also needed to support S in dealing with its sustainability issue. We confirmed the accuracy of our hypothesis and facilitated the JV formation between S and Sky. JV's first project in development of biomass pellet production from sugarcane farming waste with annual output of 250,000 metric tons started in earlier this year.

Sustainable supply of high quality biomass
... ANZ is the best (and last) call for Japan

SKYrenewables
PTY LTD

November, 2021

Courtesy of

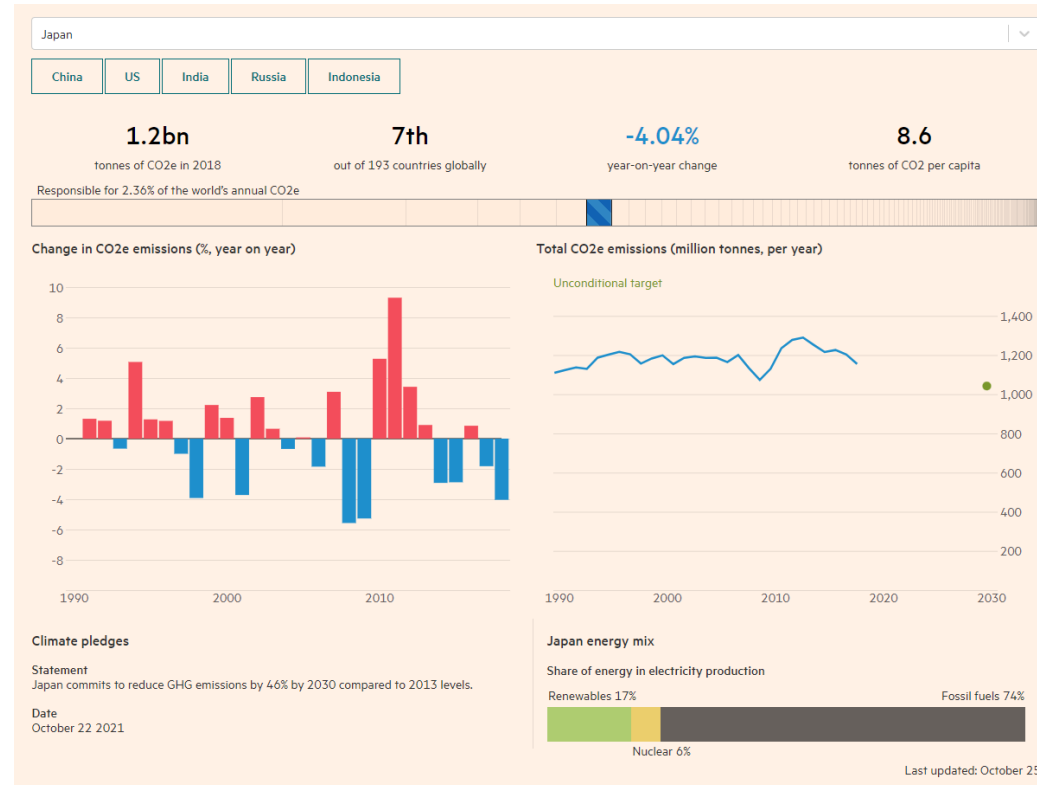


Private & Confidential

Where does Japan stand in global CO₂e emissions

Private & Confidential

	Most CO ₂ e emission	Share of world's coal reserve
1.	China	13.1%
2.	US	22.3%
3.	India	9.5%
4.	Russia	15.5%
5.	Indonesia	2.2%
6.	Brazil	0.6%
7.	Japan	0

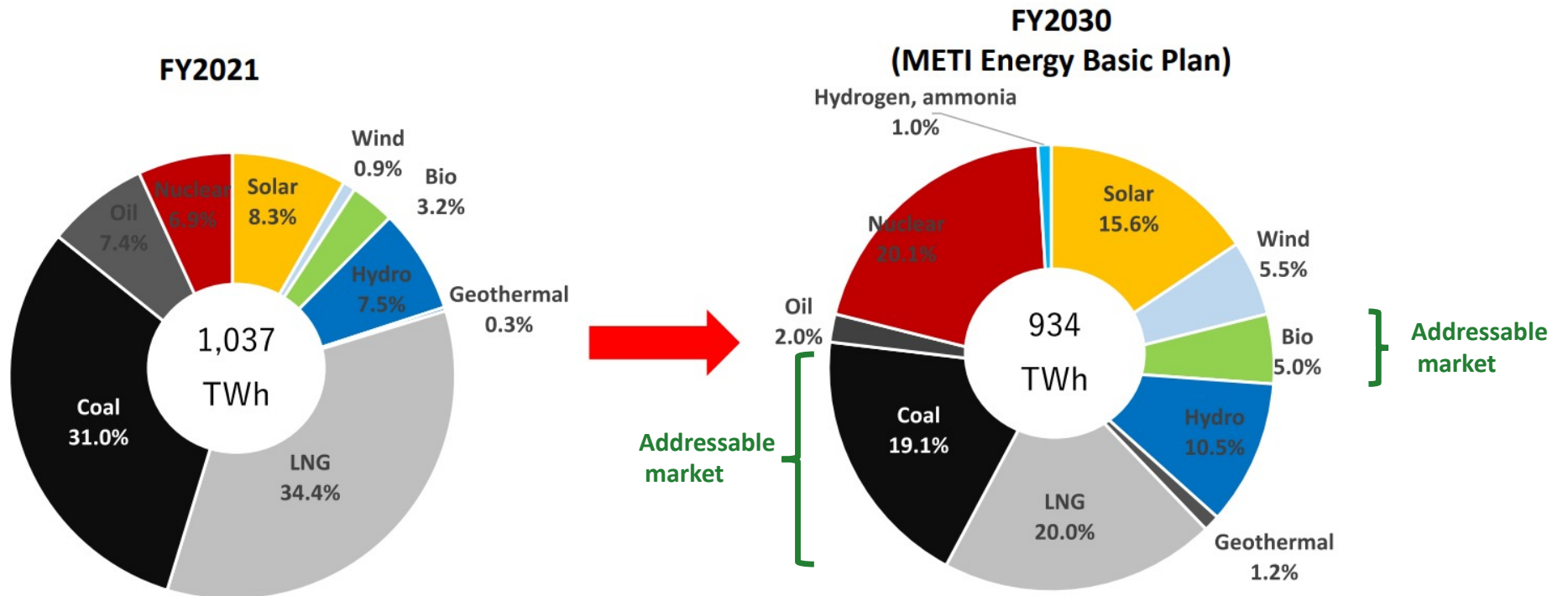


Japan to reduce greenhouse-gas emissions to net zero by 2050



Using biomass ... a no-brainer relative to burning dirty and expensive coal which Japan doesn't even have !!!

Reducing dependency on coal – Japanese Govt’s basic assumptions



Private & Confidential

Low efficiency coal units (<43%) have to cease operations by 2030

- **However**, Japan's regulators have recognized the environmental benefits of co-firing pellet fuel. As a result, the efficiency calculation is allowed to not include the energy from pellet fuel in the total energy input to the power station. **It means the more pellet fuel that is co-fired, the higher the calculated efficiency.**

Case study

- Based on METI's efficiency rule, J-Power would have to retire 3,500MW of its total capacity of ~8,400MW of coal units in 2030.
- However, based on METI's biomass exemption rule, J-Power has the option to co-fire all its units with enough biomass to achieve the required 43% efficiency requirement as energy from pellet fuel is not counted in the total energy input.
- Based on *Futuremetric's* (a leading US consulting firm on biomass) model, J-Power would need to co-fire ~5m tons of pellets per year (15.8% pellets and 84.2% coal by weight) to meet the minimum efficiency requirement and keep all its units operating after 2030.
- At the 15.8% co-firing ratio used in the analysis above, the incremental generation cost over 100% coal is estimated to be less than USD8/MWh (~¥0.9/kWh). The model also shows that the CO2 emissions are about 14% lower than would be the case with 100% coal.
- The cost is very low, but the benefits are high. To get enough biomass, J-Power entered into an MOU with Enviva, the largest wood pelleting producer in the world, to explore ways to come up with 5m t/y of pellets. However, Enviva's current capacity of 5.5m t/y and the extra ~1.6m t/y capacity by 2025 are all committed to European and other Japanese customers. As such, they will have to start massive new greenfield projects. It is highly likely that J-Power would be required to fund the development and equity of those projects.

NIKKEI Asia

Bucking trend, Japan to keep coal power plants under tougher rules

Facilities not meeting 43% efficiency target must be scrapped or upgraded



Coal was responsible for 32% of all power generated in Japan in fiscal 2019, more than any other fuel source except LNG. © Reuters

JUNTARO ARAI, Nikkei staff writer
April 10, 2021 02:45 JST

TOKYO -- Japan will allow coal-fired power plants meeting a stricter efficiency target to continue operating past 2030, defying a growing trend to quit the fossil fuel completely as countries like France and Germany have pledged to.

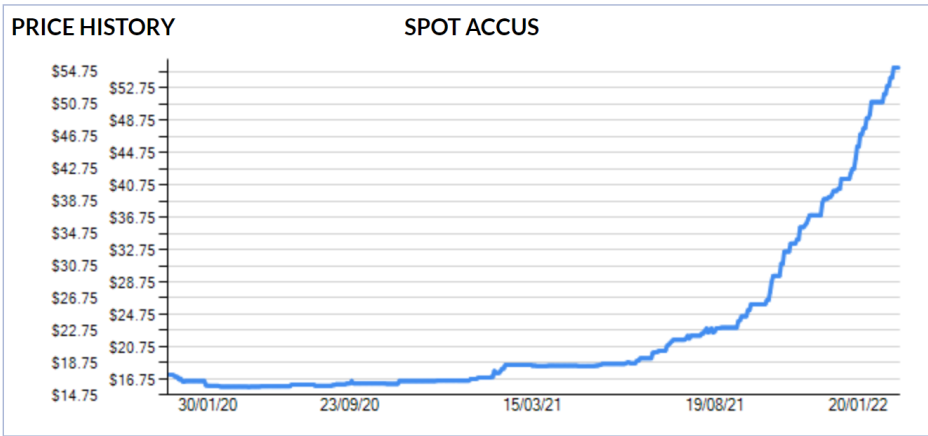
Every power company in Japan will be required to increase the efficiency of their coal power plants to 43%, under guidelines drafted Friday by an advisory body under the Ministry of Economy, Trade and Industry. The ministry will identify and update relevant ordinances.

The Federation of Electric Power Companies of Japan called the 43% guideline "an incredibly high target."

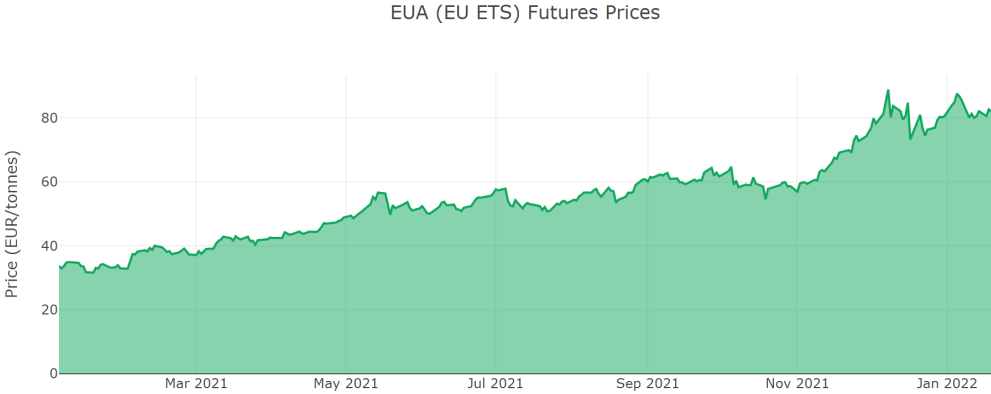
Carbon market

- Under the new framework created by Article 6 of the “Paris Rule Book”, there will be a centralized carbon market open to corporates and governments to trade carbon credits internationally.
- The implication is corporates will be more effectively rewarded or punished through easy access to a common international carbon market in the next few years (instead of being restricted locally) where credits are available under an open accreditation system and process, as well as uniformed pricing.

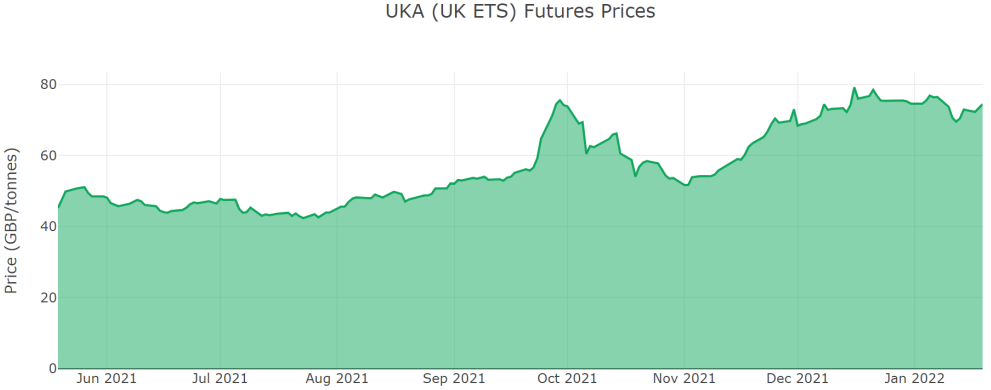
Australia Carbon Credit Unit price playing a very rapid catch-up since 2021



EU carbon credit pricing has reached €82.67 (USD93.8) per ton on Jan 18, 2022



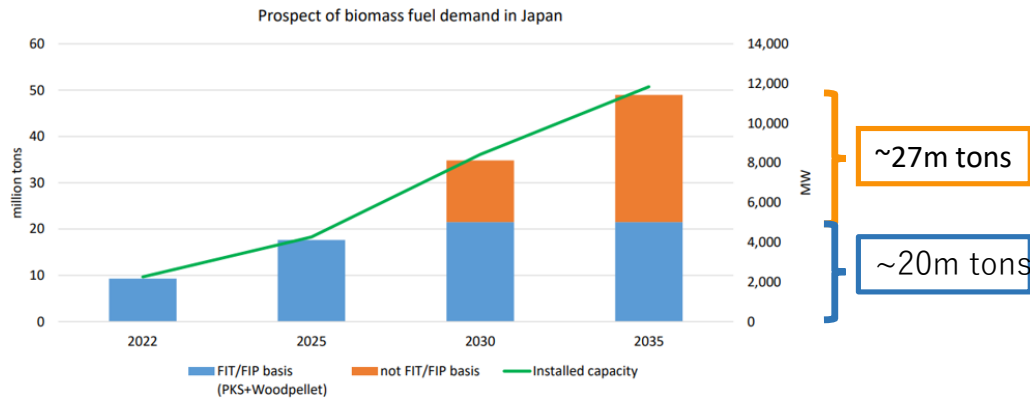
On the same day, it was traded at £74.5 (USD101.4) per ton in the UK



Demand for biomass pellets

Projected pellet demand – blue is under FIT, orange is for co-firing

- FIT/FIP based fuel demand grows toward 2025. Additionally, coal conversion will accelerate toward 2035?



Source: BPA forecast combining REI's scenario for 2035

- One could argue that the co-firing demand is way above the 27m ton/year; more like 47m ton/year under the 43% efficiency requirement.
- Total global wood pellet export at ~21m tons in 2022, total PKS supply to Japan of ~5.7m tons in 2022; against a long-term demand of ~67m tons in Japan.
- There is going to be a persistent and substantial supply gap.

Co-firing for captive units in hard-to-abate sectors <Coal reduction target by sector>

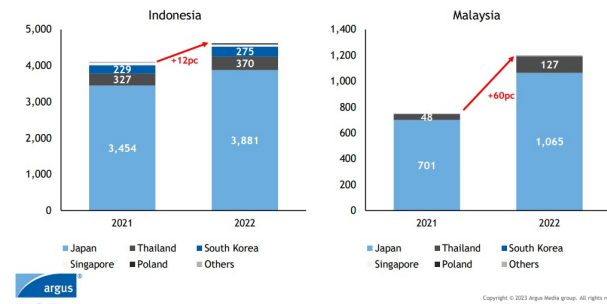
	Steel	Chemical	Pulp & Paper	Cement	Total
Coal consumption (Million tonnes)	53.2	16.6	5.2	9.5	84.5
Suggested reduction target by 2030	2%	30%	30%	28%	-
Reduction amount (Million tonnes)	1.1	5.0	1.6	2.7	10.4

Source) Created by REI, based on METI's data

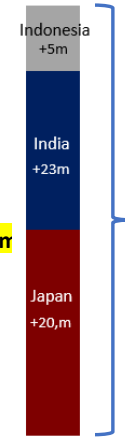
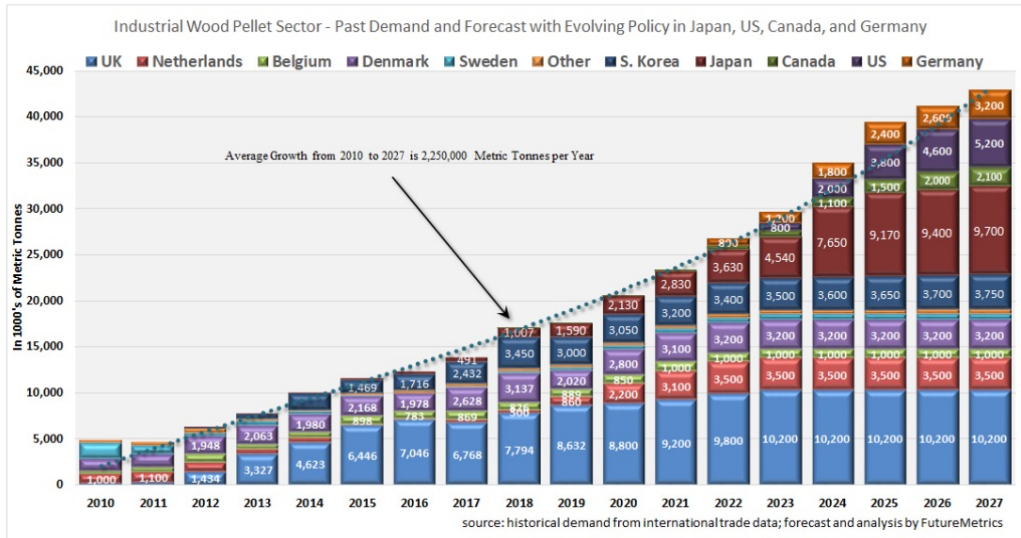
What if all existing coal-fired generation to the grid must use 10% biomass for co-firing – a simple calculation below

Total installed capacity in Japan	Coal-fired ~28%	80% capacity factor/operating hours per annum	Total MWh generation	0.4 ton/year coal per MWh	10% coal to be replaced by biomass pellets	1.3 ton of biomass pellet to replace per ton of coal (lower calorific value)
360,000MW	100,800MW	7,008 hrs.	706,406,400	282,562,560	28,256,256	36,733,132.8

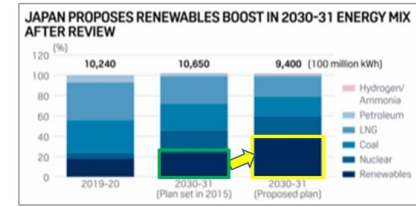
PKS suppliers in Asia ('000 t)



Global biomass demand/supply – Japan will face shortage of >20m tons/year by 2030



Biomass offers Indonesia a way out of its net-zero emissions dilemma
Carbon neutral fuel can help offset set overreliance on coal
Tim Fourieau and Winifred Lu
October 14, 2021 17:00 JST



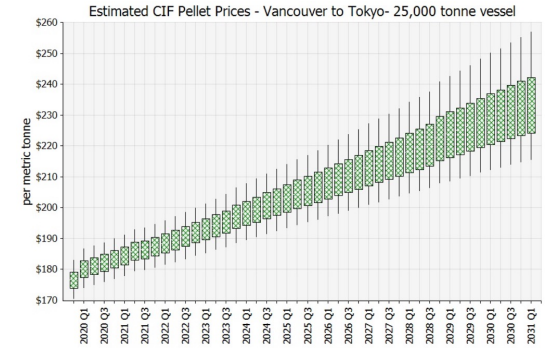
Potential of another 48m t/y demand by 2030

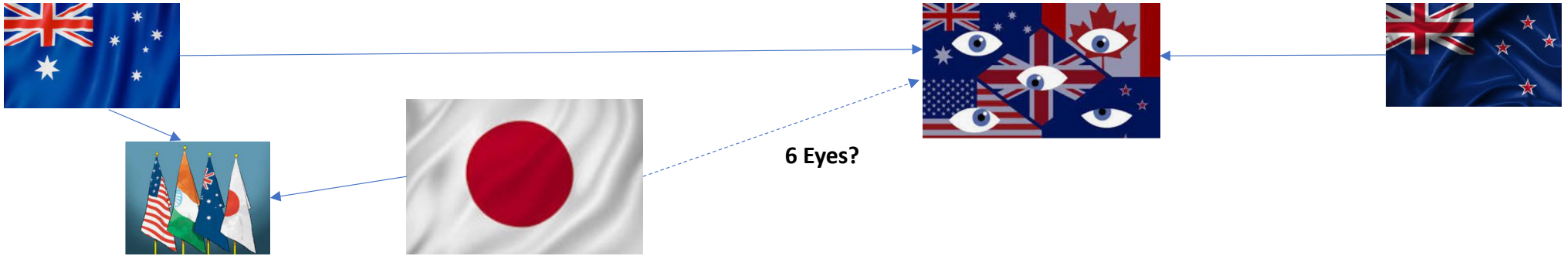
A new Strategic Energy Plan released by METI increased the proportion of renewables in total power generation target to 40% (5% biomass) by 2030; ~30m ton/year of pellets will be required.

- Global pellet demand will reach at least 43m tons/year in 2027; it may escalate to over 90m tons/year by 2030. Total global export in 2020 was <22m tons.
- In the COP26 climate summit, more than 100 world leaders committed to ending deforestation by 2030. As such, there is very low possibility for any of the current pellet exporters to ramp up production significantly except maybe for Russia. The US may likely require more pellets to co-firing domestic coal units (i.e. less for export).

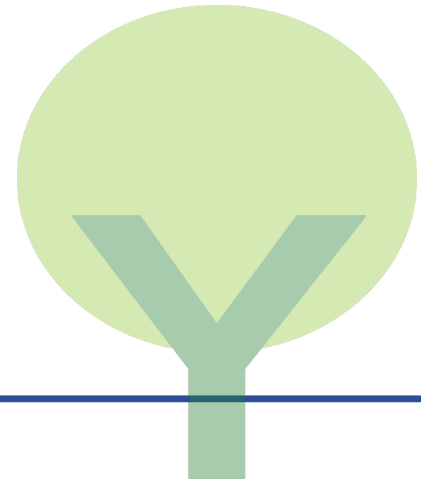
	2012	2013	2014	2015	2016	2017	2018	2019	2020	CAGR
United States	1,898,126	2,882,521	4,055,732	4,575,473	4,709,746	5,197,589	6,039,432	6,858,419	7,256,858	16.1%
Russia, Belarus, Ukraine			132,279	150,108	1,369,778	1,912,071	2,171,271	2,778,774	3,321,437	43.1%
Vietnam	33,829	160,123	744,773	1,050,249	1,317,396	1,648,861	2,560,183	2,828,444	3,121,143	65.3%
Canada	1,369,143	1,640,175	1,637,347	1,627,784	2,299,906	2,039,490	2,565,776	2,576,579	2,843,408	8.5%
Baltic States	1,597,382	2,000,585	2,215,645	2,728,558	2,910,392	3,242,741	3,158,615	3,672,837	3,782,184	10.1%
Other SE Asia, Oceania, and S. America	27,008	55,992	194,458	286,726	438,970	970,768	1,566,868	1,267,235	1,391,926	55.0%
Total ==>	4,925,488	6,739,396	8,980,234	10,418,897	13,046,189	15,011,519	18,062,145	19,982,288	21,716,957	17.9%

source: Argus, November 2021; Analysis by FutureMetrics



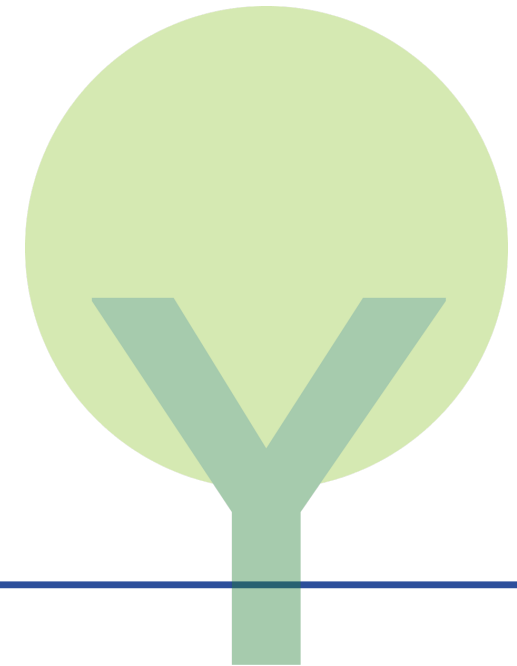


Australia and New Zealand are the only viable new sources for Japan
... Time to invest aggressively is NOW



Project Flame

*Phased development of 1m t/y capacity
pelleting plants utilizing sugar cane tops-and-
trash in The Burdekin*



Sugarcane waste – an attractive and completely untapped source of biomass

- Sugarcane is a very stable crop harvested annually, making it an even more sustainable source (trees have a 30-years growth cycle).
- 95% of Australia’s sugarcane is grown in Northern Queensland with highly concentrated ownerships.
- Excellent in-field and export infrastructure by rail and bulk terminals off the Queensland coast.
- In 2020, 31m tons of sugarcane were crushed with potentials of 2.5m t/y of pellets from ‘tops-and-trash’.
- Our Project Flame in The Burdekin alone can yield 1m t/y of pellets.

Tops-and-trash

Total trash

Total trash is calculated using a relationship with cane yield published by Mitchell and Larsen in 2000 (Equation 2).

Equation 2:
Total trash (t/ha DM) = 0.18 * yc – 2.5

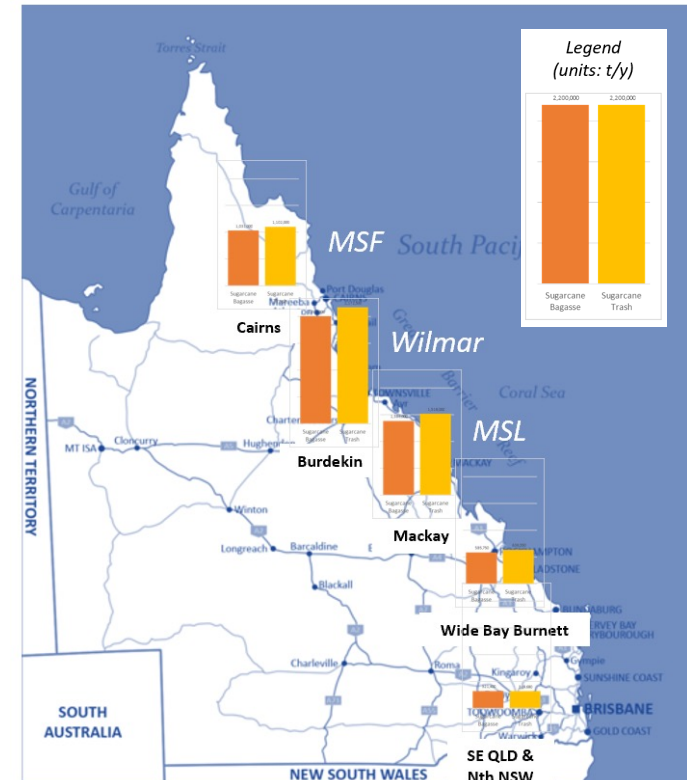
Where: yc = the freshweight yield of cane (t/ha)

- Based on the formula above, for every hectare, there’s 15.5 t/y of trash ... x 70,000 = **~1m t/y**



Project Flame

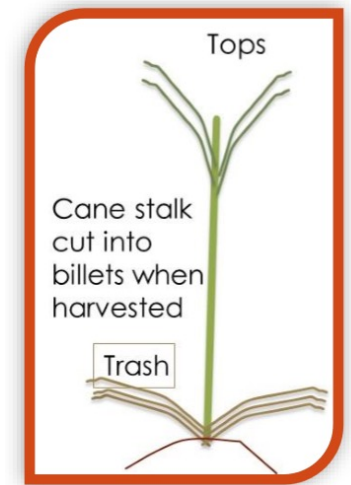
- Total area harvested in the Burdekin ~71,000 hectares
- Total cane harvested in 2020 was **~7m tons**
- Average cane yield in the Burdekin over the last 8 years was 100 t/ha



Pellets from sugar cane tops-and-trash a much-needed game-changer

Traditional cane burning before harvesting

- All the cane fields in the Burdekin are irrigated; hence the high yield per hectare and stable production.
- In the Burdekin, the sugar cane fields are burned before harvesting to rid the crop of tops-and-trash; in order to avoid them clogging the furrows.
- The burning causes severe environmental issues, resulting in extremely high levels of black ash – known as “Burdekin Snow”; and it’s affecting the Great Barrier Reef nearby.
- The tops-and-trash is the largest unexploited biomass resource in Queensland.



Green harvesting

- Rather than burning out all the tops and trash, the whole sugarcane crop can be harvested using newly designed machineries.
- They will then be transported to the sugar mills by ‘cane trains’; the cane billets will be sent to the sugar mills, the tops and trash to the proposed facility nearby to be processed into pellets which is a high value biomass fuel.
- SKY Renewables is working with the Burdekin Canegrowers, Sugar Research Institute and Queensland University of Technology to conduct a “trash-centric” study on the optimal separation technology and logistics that can be applied in this region.



Cane trash properties relative to wood (raw biomass)

	Coal	Wood	Crops Residues				
	Bituminous Coal (Indonesia)	Wood (pine)	Wheat Straw	Sorghum Straw	Barley Straw	Gin Trash	Cane Top and Trash
Proximate Analysis							
Moisture Content	6.74	6.5	9.45	8.04	11.53	10.6	8.5
Volatile Matter	43.55	76.61	65.55	69.11	67.33	67.3	51.86
Ash Content	2.02	0.38	7.55	6.47	5.5	17.6	19.5
Fixed Carbon	47.68	17.01	17.45	17.46	15.94	15.1	17.97
Ultimate Analysis							
Carbon	71.99	47.47	40.12	43.32	40.87	39.59	42.62
Hydrogen	4.99	5.73	4.83	5.42	5.04	5.26	5.29
Nitrogen	0.99	0.19	0.38	0.37	0.53	2.09	1.44
Sulphur	0.16	0.03	0.1	0.08	0.07	0.54	0.07
Oxygen	20.1	40.19	39.65	38.2	36.75	36.38	38.15
Calorific Values							
NCV (MJ/kg) ar	25.09	17.62	16.02	16.24	16.351	15.861	16.05
NCV (kCal/kg) ar	5993	4208	3826	3879	3905	3788	3833

Chemical Company O: Growth Trajectory

- O has #1 global share of solder resist, a key chemical for the production of printed circuit boards
- O has long seen a steady growth trajectory, boosted up by Medical & Pharma business (M&P) from 3/2019
- M&P business focuses on a niche market, i.e. off-patent long-listed drugs (neither new drugs nor generics)
- CEO has an aspiration to further grow O from a specialty chemical company to a chemical conglomerate through diversifying its business portfolio

Business segments

Electronics*1

Develops, manufactures, purchases and sells chemicals for printed circuit boards (PCBs) and other electronic components



*1 As of FY2023/3 1Q, the name of the "Electronic Materials Business" has been changed to "Electronics Business." This change only applies to the segment name. There is no change in the subsidiaries that make up the segment.

Medical and Pharmaceutical

Manufactures and markets pharmaceuticals, and provides contract development and manufacturing organization (CDMO) services



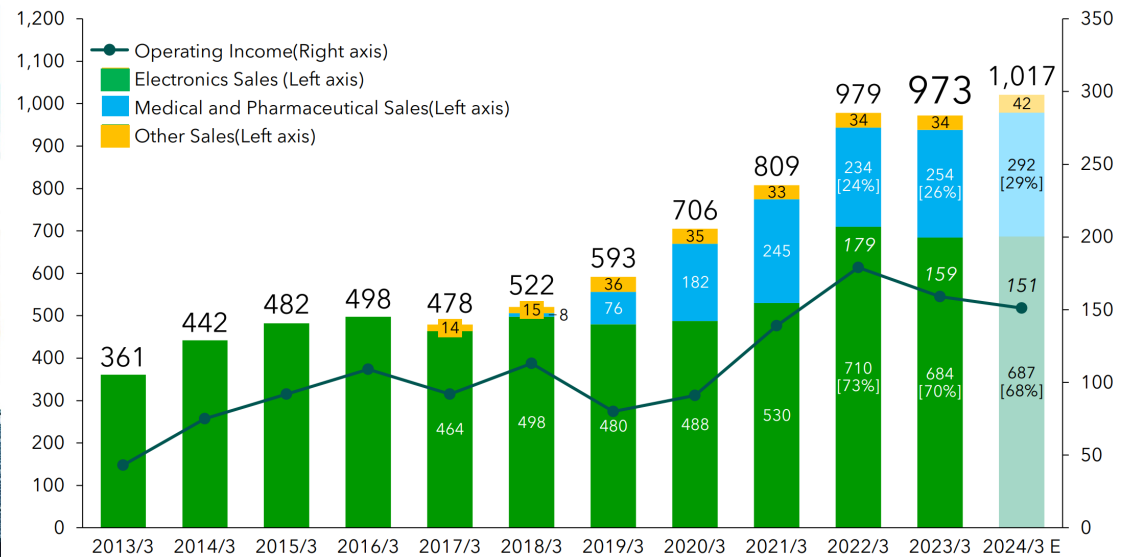
Others

Energy business using natural energy, food business, fine chemicals business including dyes, pigments and other chemicals, and ICT business, etc.



Source: Corporate IR deck for 3/2023

Net Sales & OP Income (JPY100mn)

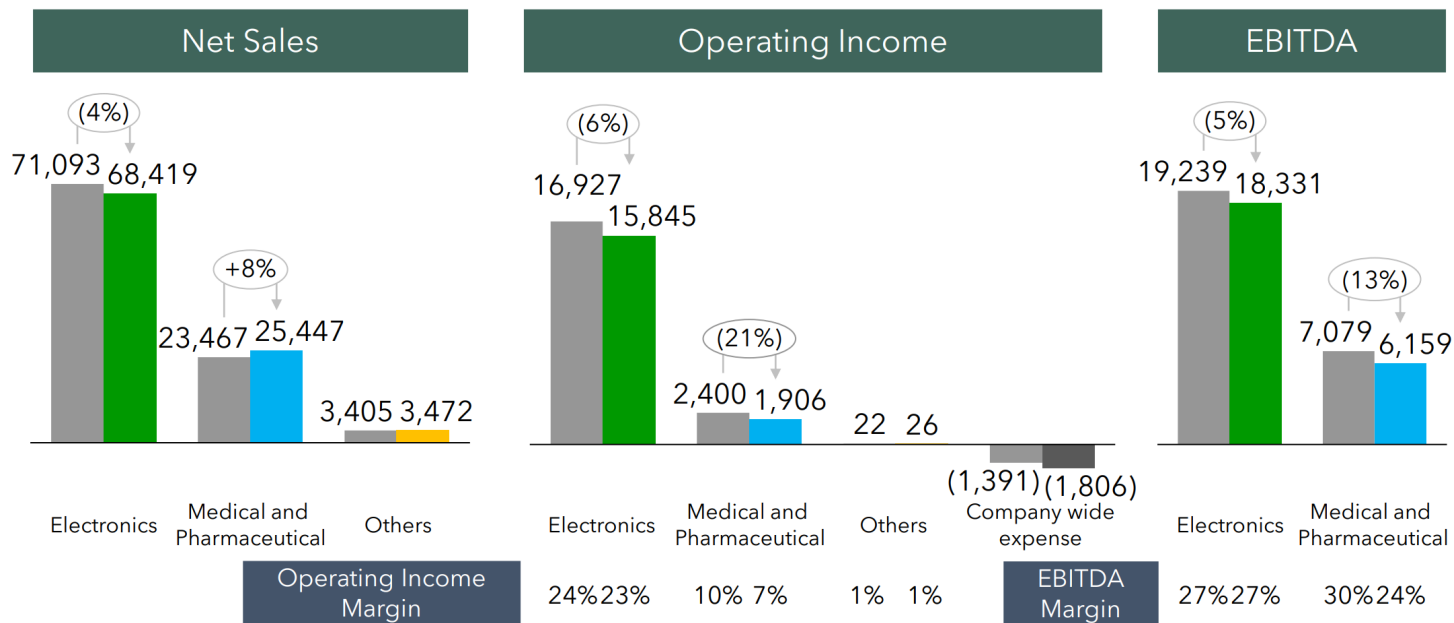


Source: Corporate IR deck for 3/2023

Chemical Company O: Business Segment Data

- O has #1 share of Solder Resist globally which is segmented in Electronics business
- O heavily relies on Electronics business, which yields most of its consolidated OP income
- M&P segment recorded a lower margin but exceeds Electronics a bit in EBITDA margin
- The largest customer is Daiichi Sankyo Pharma; it accounts for 40% of net sales of M&P business, worth JPY10bn

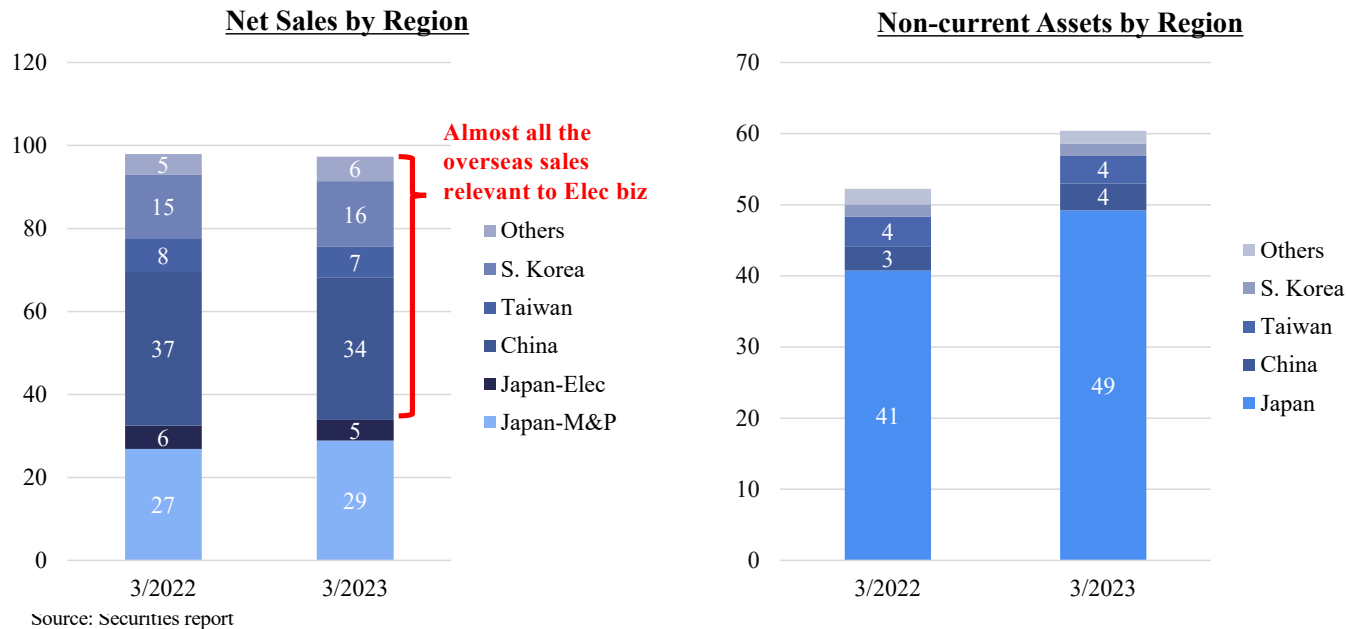
Results by Business segments: 3/2022 (left) vs 3/2023 (right)



Source: Corporate IR deck for 3/2023

Chemical Company O: Regional Segment Data

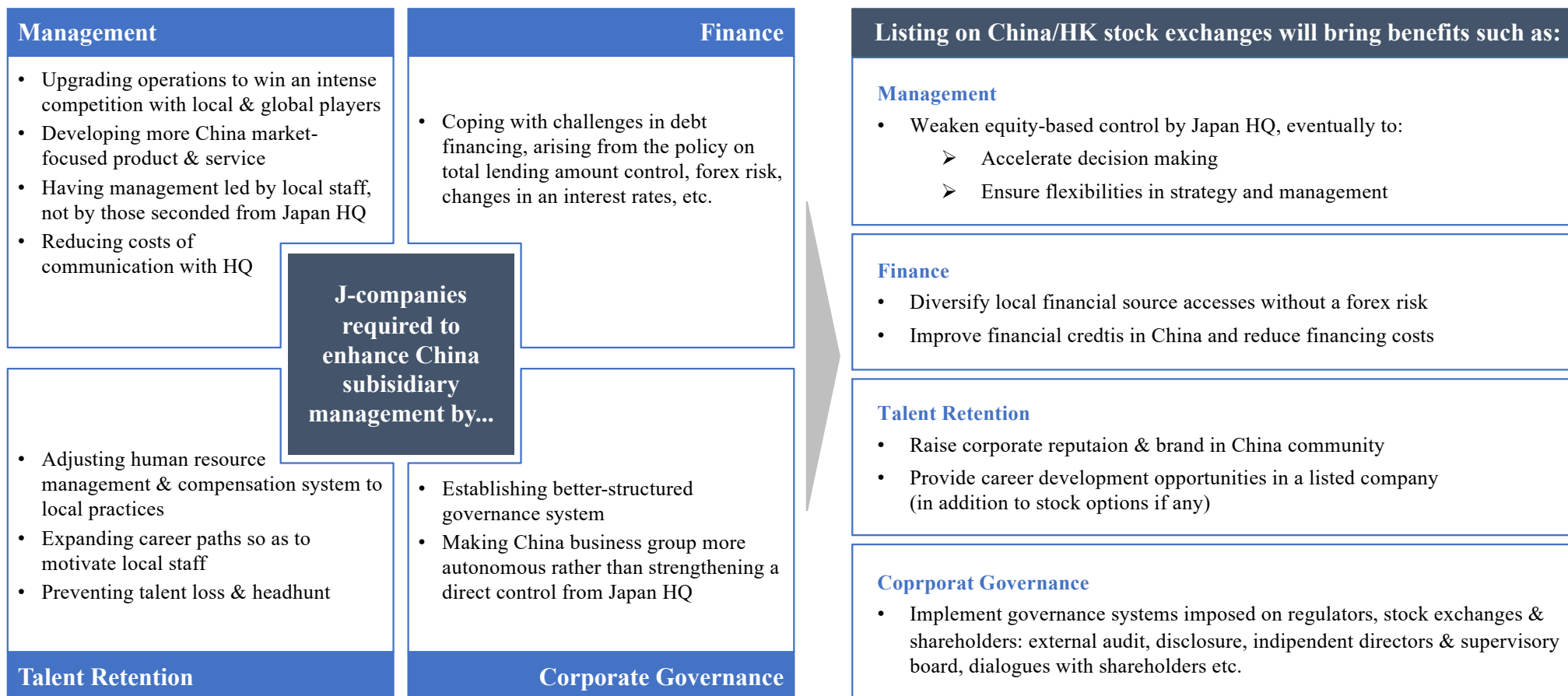
- Electronics business mainly targets the markets outside Japan; 90% of sales of Electronics business comes from overseas, especially China (50%), S. Korea (22%) & Taiwan (11%)
- In contrast, Medical & Pharma business is dedicated to the domestic market
- Japan holds 80% of non-current assets value on a consolidated basis because of heavy fixed assets for M&P business, while the company has been localizing production processes of Electronic business



Chemical Company O: China Operation

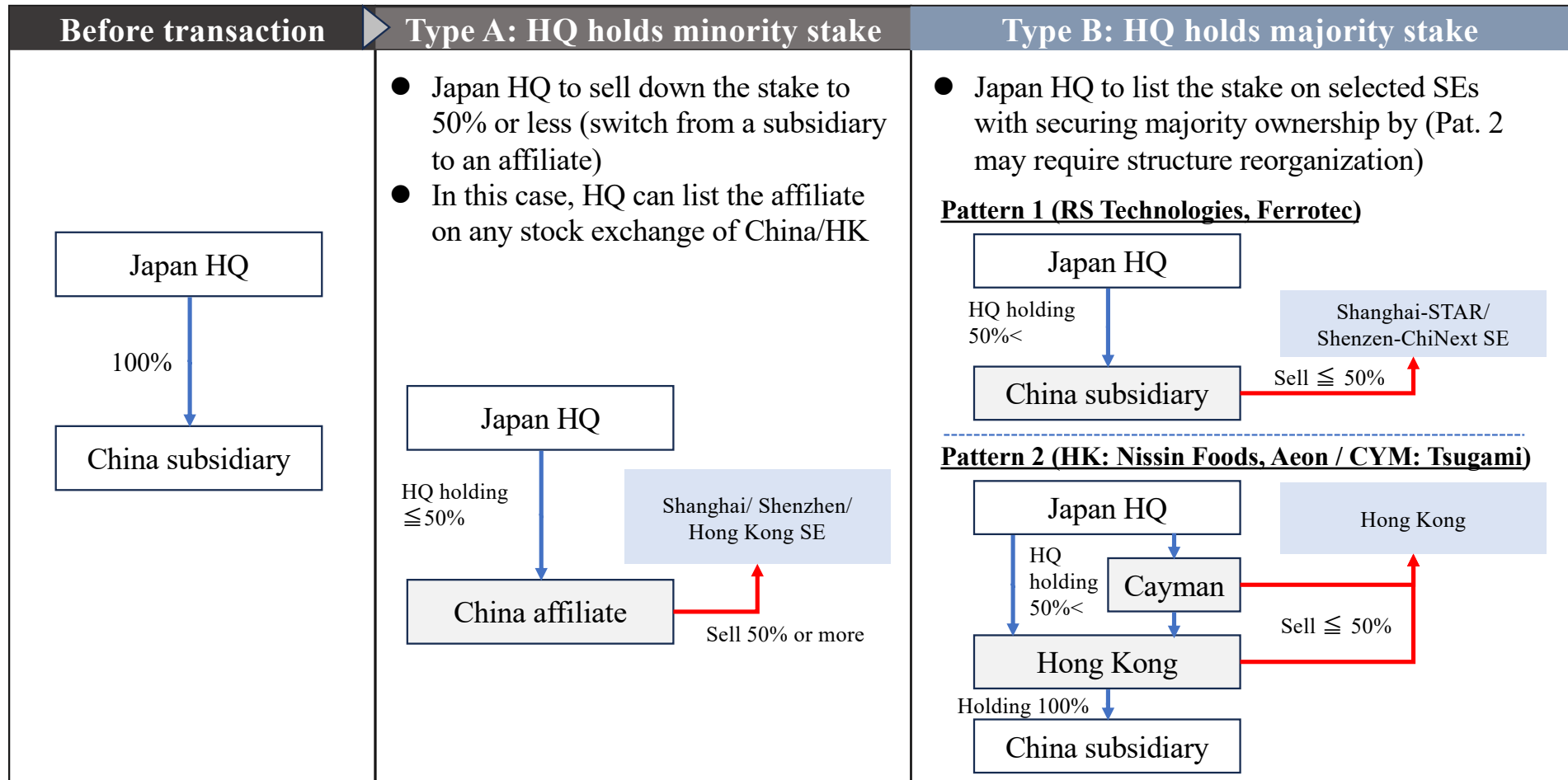
- O entered into China in 2001 under the leadership of Mr. Masao K, 2nd President from the founding family
- The company now runs 5 wholly-owned subsidiaries (WOS) in China & HK
 - In 2010, it acquired Taiwan-based ONS incl. 2 WOS in China from the Taiwanese PCB maker, Uni
 - ONS had a 50% share in the Chinese low-&middle-end SR market at that time
- In 2022, it announced establishment of R&D Center in Suzhou to develop high-end SR for the China market
- O doesn't disclose China business strategy, while it has **Office of China Strategy** at HQ
- The company discusses with market analysts that it is less vulnerable to geopolitical risks due to **making China operation almost standalone**
- China business is very valuable and should command high enterprise value on a stand-alone basis.

Challenges to J-companies in China & Benefits from IPO



Source: Solaris research based on KPMG Japan, "How can Japanese corporate launch IPO of their Chinese subsidiaries on China/HK stock markets," Feb 2023

China Business Spinoff & IPO Models



Source: Solaris research based on KPMG Japan, "How can Japanese corporate launch IPO of their Chinese subsidiaries on China/HK stock markets," Feb 2023

Chemical Company O: Investment Proposition

[Background]

- China operation, likely to specialize in solder resist (SR) for printed wiring boards in Electronics segment, represents a crucial part of O in terms of both the global value chain and a revenue source
- Given the geopolitical uncertainty in the semiconductor sectors of Japan, the USA, and China, there's also a need to manage risks in business continuity in China as the world's leading SR manufacturer
- O has never officially announced how it plans to manage the China market and a geopolitical risk
- Possible solution may be to carve out the China business and list in the local stock market, as Astro Zeneca is reportedly planning. O will retain the majority ownership to keep it as a subsidiary and capture the revenue even after listing

[Proposition]

- China segment recorded JPY34,378mn in net sales for 3/2023. The segment can be evaluated at **JPY68bn** if EBITDA margin of the Electronics business (27%) and EV/EBITDA (x7.3) on a consolidated basis are applied
- The multiple may go beyond x10 if listed on Shanghai or Shenzhen; retaining 51% would secure more than JPY60bn, which can serve as substantial Growth Money for new businesses such as Medical & Pharma business
- WP can advise leading up to the listing, act as the primary underwriter during the listing, and serve as a guardian of governance post-listing. It can also serve as a defense barrier against potential Chinese government intervention
- WP can use the network to help the Chinese subsidiary to expand the sales channels, contributing to increase in its EV

Observation of Okinawa now and future and OIST's role

- Okinawa currently has no appeal for global investor except for the real estate assets in hospitality sector.
- Okinawa may be facing a historic turning point as the world is facing the end of global borderless market and the shift to connectivity between independent domestic markets.
- Advantage of Okinawa's proximity to various Asian markets to "connect". Okinawa should aim to become a hub of connectivities between the various Asian markets.
- What connect the independent domestic markets in Asia are Technology, Human Resource, and Investment Capital. (人・物・金)
- Role of OIST going-forward as a technology hub in Asia, promoting scientific research, facilitate collaboration and driving innovation:
 - Fosters innovation and scientific advancements in various fields by bringing together talented researchers globally to collaborate on cutting-edge projects at its state-of-the-art facilities.
 - Serves as a hub for scientific exchange and collaboration in Asia. OIST hosts conferences, workshops, and seminars that attract leading scientists and researchers around the region and beyond.
 - Plays a crucial role in promoting technology transfer and entrepreneurship. OIST encourages its researchers to translate their scientific discoveries into practical applications and supports them in commercializing their innovations.
 - Contributes to the advancement of technology, fosters economic development, and helps to position Asia as a global leader in science and technology.

- Similar to most of the US technology educational institutions OIST should consider introducing MBA program. Integration of technology and business and development of leadership skills at OIST are some of the key critical success factors for Okinawa to become the connectivity hub in Asia. There are reasons why many technologies graduate level educational institutions in the US offer MBA programs:
 - Business and technology integration: MBA programs provide a foundation in business principles and management practices, enabling technology professionals to understand the broader context in which their work operates. Develop professionals who can bridge the gap between technical expertise and business acumen.
 - Entrepreneurship and innovation: MBA programs emphasize entrepreneurship and innovation, essential skills for technology professionals to start their own ventures or drive innovation within existing organizations. How to develop business plans, secure funding, and marketing new technologies.

- Leadership and management skills: MBA programs offer courses in leadership, strategic management, finance, and other areas that help technology professionals develop the skills necessary to effectively lead and manage in a technology-driven business environment.
 - Networking opportunities: MBA programs attract a diverse group of students from various industries and technologies. This provides technology professionals with valuable networking opportunities, allowing them to connect with like-minded individuals, potential mentors, and industry leaders.
- Ways to secure investment capital from the globe into Okinawa focusing on the investments into local Asian businesses in fostering cross-border activities to facilitate connectivities of individual Asian Markets. It is very simple. Create a special taxation zone in Okinawa to allow tax free or low tax rate treatment on the capital gains for investment professionals who manage the investment capital.