GROUP BUSINESS REVIEW: Resource-Based Manufacturing

WHO WE ARE & WHAT WE DO

The Group's global resource-based manufacturing business, comprising our refining, oleochemical, specialty oils and fats, and palm wood sub-segments, plays an important role in fortifying our integrated palm value chain. It consists of downstream activities such as refining of crude palm oil ("CPO") and palm kernel oil, and processing of refined palm oil and palm kernel oil into oleochemical and specialty oils and fats products as well as converting oil palm trunks into sustainable palm wood panels. With our local and international manufacturing facilities, we are well-equipped to meet the needs of our customers domestically and internationally.

FINANCIAL HIGHLIGHTS

The Group's resource-based manufacturing segment profit for FY2024 was RM329.3 million as compared to RM691.0 million for FY2023. Excluding the fair value gain on derivative financial instruments of RM37.4 million (FY2023: loss of RM58.1 million), the resource-based manufacturing segment reported an underlying profit of RM291.9 million for FY2024 as compared to RM749.1 million for FY2023. The lower profit reported was due mainly to lower margins from the refining and oleochemical sub-segments, mitigated by higher share of associate results (FY2024: RM145.3 million vs FY2023: RM87.0 million). The higher margins recorded in FY2023 were due to stronger customer demand driven by global supply chain disruptions. In addition, Indonesia's policy restricting CPO exports during that period also contributed to better margins for the refining sub-segment.

REFINING

Manufacturing Facilities
2

Combined Annual Refining Capacity
1.8 million MT

Sales of Total Certified Refined Products
214,803 MT

The Group has two wholly-owned refineries in Malaysia with a combined annual capacity of more than 1.8 million MT. They are strategically located in Pasir Gudang, Johor, and Sandakan, Sabah, which have gateways to major shipping routes with direct port access. Both refineries are closely located to our plantations and mills. They produce palm and palm kernel oil fractions for domestic and export markets, as well as feedstock for the Group's downstream activities. Our refineries are 100% Roundtable on Sustainable Palm Oil ("RSPO"), Malaysian Sustainable Palm Oil ("MSPO") and International Sustainability and Carbon Certification ("ISCC") certified. In addition, our manufacturing premises have attained various national and internationally recognised quality management systems, environment management systems, food safety certifications and more. We are constantly identifying and implementing resource minimisation measures to reduce greenhouse gas ("GHG") emissions.

KEY FOCUS AREAS

Optimise refineries' processing capacity and efficiency	Expand certified sustainable palm oil products and low 3-MCPD and GE markets
Supply consistently high-quality palm oil products that fulfil different customers' needs	Maximise consumer packing capacities in various packing configurations to meet customers' requirements
Ensure efficient supply chain management with uninterrupted supply	Drive innovation and promote sustainable development

KEY BUSINESS HIGHLIGHTS

- Both refineries have recorded higher sales of certified sustainable refined products with improved customers' demand.
- The sales volume of our low 3-MCPD and GE products was affected by customers' demand due to geopolitical and macroeconomic factors.
- Our refineries' utilisation rates have been impacted by the supply tightness of raw materials and slow global vegetable oil demand.

GROUP BUSINESS REVIEW:
RESOURCE-BASED MANUFACTURING

BUSINESS PERFORMANCE REVIEW 2024

Strategic Objectives	Key Initiatives	Achievements In FY2024
Drive innovation and promote sustainable development.	Continuous improvement on process and digitalisation, and reduction of GHG emissions and energy consumption.	• IOI Pan-Century Edible Oils Sdn Bhd successfully installed 100 solar panels, generating 6,250 kWh of solar energy per month and reducing GHG emissions by 4,673.33 kg CO_2 per month. • IOI Edible Oils Sdn Bhd improved the performance of its palmitic and lauric fractionation plants, reducing steam consumption and minimising electricity usage, resulting in GHG emissions reductions by an equivalent of 7,380 kg and 4,458 kg CO_2 per month, respectively. • IOI Edible Oils Sdn Bhd installed a new cooling tower with an enhanced design and performance for the vacuum system, achieving an estimated monthly steam savings of 319 tons and contributing to a GHG emissions reduction of 31,736 kg CO_2 per month. • Shared knowledge and experience in palm oil-related areas through the submission of three articles in *The Chemical Engineer* magazine and three journal articles published by the Sandakan Refinery team.
Expand certified sustainable palm oil products and low 3-MCPD and GE markets.	Focusing on expanding our markets for certified sustainable and value-added palm oil.	• Sales of certified refined palm products was 214,803 MT in FY2024 as compared to 200,785 MT in FY2023.
Maximise consumer packing capacities in various packing configurations to meet different customers' requirements.	Actively participate in World Food Programme tenders and expand other potential markets.	• Delivered 20 shipments totalling 33,833 MT for the United Nations World Food Programme this year.

Challenges/Risks	Mitigation Actions
Huge fluctuations in demand and prices will affect our units' sales and bottom line.	• We are consistently looking for opportunities to capture demand and lock in positive margins whenever possible. • We will continue to increase our sales of value-added products like low 3-MCPD and GE in line with our strategic objective.
Stiff competition of raw materials will affect our plant productivity and efficiency.	• We always keep abreast of changes in market competition and adopt necessary strategies to secure more raw materials domestically and overseas whenever available.

OUTLOOK & PROSPECTS

We expect palm prices to be volatile, especially if macroeconomic conditions unexpectedly shift from their current slow but steady state. Looking ahead, an anticipated better soybean harvest in the United States ("US") and higher palm oil output could challenge CPO prices. Higher demand is expected from importing countries, particularly as Europe stocks up ahead of the European Union Deforestation Regulation ("EUDR"). Additionally, concerns over unpredictable weather and intensified geopolitical tensions disrupting the supply chain are likely to provide support for CPO prices.

On the demand side, we look forward to any biofuel and sustainable aviation fuel mandates to provide additional support. China's growing GDP is also expected to bolster demand. While the outlook for the refining sub-segment remains subdued due to low refining margins – largely driven by the overcapacity of refineries in Indonesia and the raw material price advantage from the country's CPO export duty policy – we remain confident. Our refining margins are expected to improve due to our capabilities in producing low-contaminant oils and our focus on cost optimisation. Overall, we are optimistic about the outlook of the palm oil industry and foresee that demand for palm oil will remain resilient and steady.

OLEOCHEMICAL

Manufacturing Facilities
4

Export to Over
80
Countries Worldwide

Combined Annual Oleochemical Capacity
890,000 MT

The principal activities of the Group's oleochemical sub-segment are manufacturing and sales of fatty acids, glycerine, soap noodles and downstream oleochemical products such as fatty esters and specialty derivatives. These versatile products are used in a wide variety of applications from industrial sectors such as automotive, construction and plastic to food, nutrition, pharmaceutical and cosmetics. Our oleochemical products are exported to more than 80 countries worldwide. Our main customers are located in Japan, China, Europe and the US, which include some of the world's most esteemed and well-known multinational corporations.

The Group's oleochemical manufacturing activities are undertaken by four manufacturing facilities – two are located in Peninsular Malaysia while another two are in Germany – with a total combined production capacity of up to 890,000 MT per annum. The Penang and Johor plants are exclusively palm oil-based whereas the plants in Germany use mainly palm oil supplemented by other vegetable oils such as coconut oil, rapeseed oil and sunflower oil. These plants complement and add value to each other through technical know-how collaborations and application of basic oleochemicals into niche derivatives.

All our manufacturing facilities are certified and accredited by globally recognised bodies in various aspects of quality and international standards compliance. Apart from ISO 9001, ISO 14001 and ISO 50001 certifications, the Penang, Johor and Wittenberge sites have obtained the Food Safety System Certification ("FSSC") 22000 on food safety management, while the Witten site is certified by the European Union-Good Manufacturing Practice ("EU-GMP") and the US Food and Drug Administration ("FDA") for the production of Active Pharmaceutical Ingredients ("API").

KEY FOCUS AREAS

- Drive business growth by increasing sales and expanding new market segments
- Enhance cost efficiency by optimising plant capacity and improving operational efficiency
- Develop niche markets by exploring new product applications and launching new products

GROUP BUSINESS REVIEW: RESOURCE-BASED MANUFACTURING

KEY BUSINESS HIGHLIGHTS

- Our fatty acids sales underperformed in both sales volume and profit margin due to the weak global economy. During the first half of the financial year, the market was quiet due to high inventory, low market demand and geopolitical situation. Many of our customers including multinational companies have reduced their purchases. The margin was suppressed due to severe market competition. Towards the second half of the financial year, we have seen significant improvement in sales volume as the market seems to revive after a long absence. However, the geopolitical situation which leads to escalating freight, longer transit period and tight vessel space has created some constraint in the market. Nevertheless, we are committed to boosting cost efficiency and productivity with our new fatty acids plant, which will not only lower production costs but also provide the flexibility to tailor our products to meet diverse customer needs.
- Our soap noodles business has performed well primarily due to better margins contributed by multinational companies and key customers. The impact of the Indonesian palm oil duty and levy is still significant, taking away market share from standard products, especially in price-sensitive markets such as India and Africa. The new soap plant was successfully commissioned and has enhanced our ability to produce a variety of new products and also improve our cost efficiency. We managed to regain business from some regional customers through relentless effort and follow-up.
- Our specialty business performed well, with medium-chain triglycerides ("MCT") and isopropyl esters leading the way. MCT sales grew due to their multi functional qualities, ranging from basic personal care and cosmetics to specialised use in human and animal nutrition. While growth in volumes was satisfactory, the sharp spike in raw material prices impacted the margins' performance. Sales in the traditional markets of Asia Pacific, the Americas, and Europe remain challenging, while new sales growth in Mexico, Latin America, and the Indian subcontinent was encouraging as it provided impetus for new business and new regional expansion.
- Our German business had a difficult year due to a challenging economic environment. While sales volume and plant utilisation significantly improved in the second half of the financial year, margins were notably affected compared to the previous year. Amid the difficult year, our German team continued to work on their Vision 2030 which consists of the sustainable growth strategy for the pharma and personal care business units. The personal care business unit has successfully launched two new and innovative products for the personal care market. The pharma business unit has successfully scaled up trials of our new product platform, Polyglycerol Esters ("PGE"), for different applications. Efforts to improve plant efficiency and capacity of the MCT plant have taken a step forward with all planned activities realised during the year.

BUSINESS PERFORMANCE REVIEW 2024

Strategic Objectives	Key Initiatives	Achievements In FY2024
Drive business growth by increasing sales and expanding new market segments. **Enhance cost efficiency by optimising plant capacity and improving operational efficiency.** **Develop niche markets by exploring new product applications and launching new products.**	• Optimising plant manufacturing capacity. • Enhancing cost efficiency through plant automation and digitalisation. • Embarking on energy efficiency and water recycling projects. • Revamping and replacing ageing equipment. • Filing patents for new product applications. • Developing new product formulations in CARE Studio.	**IOI Oleochemical Industries Berhad, Penang:** • Adopted advanced technology in warehouse automation to improve efficiency and reduce manpower. • Optimised the Real-time Production Organiser – Operation Management and Visual MESA Energy Management System. • Extended our use of the SAP ERP system by upgrading to SAP S4/HANA Private Cloud Edition ("PCE") and adopting various business process transformations. IOI Oleochemical Industries Berhad and IOI Pan-Century Oleochemicals Sdn Bhd successfully went live with this upgrade in May 2024. **IOI Pan-Century Oleochemicals Sdn Bhd, Johor:** • Equipped packing plant with an auto-printing machine, reducing human dependency and minimising errors. • Expansion of production capability of selected high-value products such as P9818, P5608 and PS8317 to enhance duo site security of supply to key customers. • Digitalisation of biogas boiler at the effluent treatment plant. • Integrated water-jet vacuum system at the Soap Noodles Plant 2 with the existing soap noodles vacuum system and cooling tower. • Replaced the conventional tank farm's steam heating system with a hot water heating system sourced from solar and waste heat recovery. **IOI Oleo GmbH, Germany:** • Successfully filed a patent for the isolation of High-Mono-Ester from PGE to be used in pharma, nutrition and cosmetic applications, and another patent for PGE to be used as novel suppositories. • Developed 15 new personal care applied formulations (12 were launched and three will be launched in the second half of 2024). • Developed new cooling water conditioning treatment in the main production building of Witten site to improve process efficiency while reducing auxiliary consumption, emissions and costs. • Installed automated MCT refining lines at Wittenberge site to reduce the generation of waste and specific energy consumption.

Challenges/Risks	Mitigation Actions
Risk of higher competition in the pharma business unit as a result of the new EUDR imposed on second supplier strategy by customers.	• Intensification of the customer relationship and supply from Witten and Wittenberge.
Risk of eroding contribution margin due to increasing competition especially in our commodity-based businesses.	• Investing in projects to increase our process efficiency. • Focus on high-margin niche products.
Risk of a significant competitive disadvantage caused by scarcity and increase in the price of strategic raw materials caused by the EUDR.	• Development of a supply strategy that is adapted to the EUDR. • Cooperation with associations and authorities to postpone or adapt to the EUDR.

OUTLOOK & PROSPECTS

The uncertainties surrounding global economic growth and geopolitical conflicts are expected to affect the market. However, we expect better performance for the first half of FY2025 due to stock building by our European customers ahead of the EUDR implementation. Nevertheless, our strong Environmental, Social and Governance ("ESG") commitment coupled with our RSPO-certified palm oil will provide us the advantage to be prepared for the EUDR and thus give us a competitive edge in the European market.

We will continue to protect our market share, and look out for pockets of business opportunities in the new markets and new products with a special focus on the pharma and personal care business segments. We believe that our strength in producing innovative products for high-value markets as well as our prudent financial management, enhanced operation efficiencies and strong commitment to sustainability will give us a leading edge.

SPECIALTY OILS & FATS

Our associate company, Bunge Loders Croklaan Group BV ("BLC") is a leading global producer and supplier of sustainable plant-based specialty oils and fats for the food manufacturing and food service industry globally, and its products are used in a variety of applications from bakery and confectionery to culinary and infant nutrition. Oils and fats are indispensable ingredients that shape taste, nutrition and culinary experience and BLC's specialty oils and fats solutions meet evolving dietary needs and trends, delivering the functionality that the food and nutrition industry demands, and satisfying the diverse tastes of consumers in every part of the world.

Our partnership with Bunge Limited ("Bunge") to build BLC into a global leader in oil and fat ingredients for B2B customers and supplier of choice for many food manufacturers, bakeries, restaurants and food service operators has culminated to its unmatched global presence, with differentiated and comprehensive product offerings based on tropical and seed oils and world-class formulation and application capabilities.

BLC's performance is expected to be more favourable in FY2025 as inflation continues to subside in most parts of the world and demand for food is more resilient. However, the expiry of a lease over a refinery in Rotterdam, from where BLC produces raw material oils for its specialty fats plant in Amsterdam, at the end of 2024 could pose challenges for its European business in securing raw material oils from other sources at reasonable prices. This is a short-term challenge which will be resolved when its new bulk refinery plant complex in Amsterdam is completed around the fourth quarter of 2025.

GROUP BUSINESS REVIEW: RESOURCE-BASED MANUFACTURING

PALM WOOD

The Group's non-crude palm oil subsidiary, IOI Palm Wood Sdn Bhd ("IOI Palm Wood"), has commissioned operations in Segamat, Johor, to convert oil palm by-products such as oil palm trunks ("OPT") into value-added products at a competitive cost under the *OnCore®* product brand. As the industry's pioneer, we have faced many challenges that included procurement, engineering and technical issues.

Currently, we are undergoing further developments to gain the engineering, operational and technical skills needed to process this abundant but very challenging raw material. The initiatives in the forthcoming year will be to optimise the operational technology to increase the capacity, to further reduce costs by installing solar photovoltaic panels, and to improve the recovery technology.

BUSINESS PERFORMANCE REVIEW 2024

Strategic Objectives	Key Initiatives	Achievements In FY2024
Develop new and environmentally friendly products. **Drive innovation and promote sustainable production.**	• Repurposing OPT and engineering them into quality palm wood panels that can replace certain timber products. • Establishing a Centre of Excellence for the sustainable processing of OPT. • Monetising the redundant biomass generated whilst producing palm wood.	• Successfully commissioned new palm wood factory. • Worked with government bodies and other stakeholders to establish quality standards, which include product sustainability verifications, environmental accreditations and chain of custody certifications. • Imported proprietary technologies and operational expertise from Europe. • Established a supply chain structure to effectively procure high-quality OPT from responsibly managed estates. • Enabled OPT waste to be used as 100% fuel for energy plant.

OUTLOOK & PROSPECTS

Global megatrends include the need to mitigate climate change. The production and use of a sustainable material such as our *OnCore®* palm wood is a very positive step in achieving this goal as we take a 'waste' material which is normally left to rot in the fields following the replanting cycle of a productive oil palm estate, and convert it into a material that can be directly substituted for tropical timbers for many applications. As we learn more and improve our technology in production, we will be sequestering more carbon and reducing the pressure to source timbers from natural forests.

Currently, industries rely on sourcing materials from natural forests, or from areas of gazetted forest plantations. The demand for sustainably sourced timber is increasing, but the supply is restricted due to issues regarding legality and sustainability certification. By using OPT as a raw material, we are essentially using an abundant source of sustainable biomass that is being repurposed from waste for these applications. We believe that as customers become more environmentally aware, they will become more discerning and will be looking for climate-positive materials for their furniture, interior design or construction items.