Malaysia ESG Quarterly (1Q23)

Headway despite headwinds

Maybank IBG Sustainability Research

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2022 flows + 1Q23 Sustainability newsflow: highlights

Global sustainable net fund flows, buffeted by a combination of political pushback in the US, greenwashing shake-out in the EU and fallout from the Ukraine-Russia conflict, saw net inflows declining by 70% YoY in 2022 (Fig 1). However, investment flows towards energy transition continued to rise, hitting USD1.1t (+31% YoY; Fig 6), with renewable energy and electrified transport a combined 87% share (Fig 7). Among notable 1Q23 headlines, Singapore's Government Chief Sustainability Officer (CSO) is coordinating national initiatives to achieve the country's Green Plan 2030 (Fig 11) – a similar role in Malaysia is a priority given broad but unintegrated step-up in sustainability initiatives/targets over the last 18 months (as articulated in our 2022 Malaysia ESG Compendium ("*Shifting into higher gear*", dated Nov 29). Carbon credits (CC)/offsets (Fig 10) are in focus following critical media reporting and inaugural CC auction by Bursa Carbon Exchange (BCX).

1Q23 MY Sustainalytics scoring: trends, standouts

Reviewing the 2022 quarterly trend re Sustainalytics risk scores for our Malaysian stock coverage per Fig 18, overall bias was positive, with certain sectors such as Banks, Consumer, Gaming and Gloves seeing significant and broad improvements in scoring. Significant rating improvement was noted for stocks in high carbon-emitting sectors such as O&G and Utilities (Bumi Armada, Dialog, Yinson, Velesto, MFCB), while two negative standouts were Inari (ESG targets/standards) and Cahya Mata (governance). The latter's risk rating recovered to "High" in 1Q23 (from "Severe"; Fig 19) on improvements in both exposure and management scoring. ViTrox and Eco World Dev. also improved in risk rating category, from "Medium" to "Low", while Tenaga's score improved -6.3, to 31.8, though risk rating is still High.

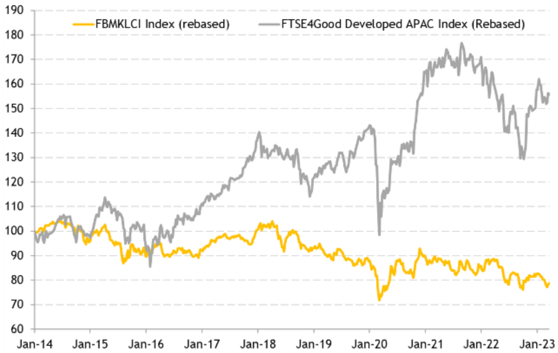
ASEAN ESG Assessment: a work in progress

Using 3 Sustainalytics-based stock filters namely ESG risk rating, quality of management and level of controversies (pg.19), the 217 ASEAN companies' outperformance vs. MSCI ASEAN was a wide 6.8%/9.2%/5.6% over 1/3/5 years (Fig 28); however, single-filter (risk rating only) showed greater outperformance, implying investors still only consider headline ESG risks.

MY ESG Portfolio: continuing to outperform

Our refreshed ESG Portfolio (Fig 33), first introduced in 2021, is balanced both in terms of ESG risk scoring (comprising 10 qualitative/quantitative filtered + 5 "momentum" stocks) as well as core business diversity. Per Fig 34, we backtested the performance of this portfolio to end-March 2023, whose annualised returns of -4.3%/11.5%/1.4% over 1/3/5 years continue to beat overall market coverage baskets and the MSCI Malaysia, as well as the broader 38 filtered MY stocks covered by MIBG (list is in Appendix 2).

KLCI vs. FTSE4Good APAC Index



Top BUY picks (General Portfolio)

Stock	BB Ticker	Price	TP	*Upside (%)*
Large Caps				
HL Bank	HLBK MK	20.24	24.10	19.1%
Press Metal	PMAH MK	5.11	5.65	10.6%
Axiata	AXIATA MK	3.00	3.80	26.7%
RHB	RHBBANK MK	5.75	7.10	23.5%
KL Kepong	KLK MK	21.66	23.90	10.3%
Telekom	T MK	5.00	6.50	30.0%
Genting Bhd	GENT MK	4.65	5.65	21.5%
MR D.I.Y	MRDIY MK	1.63	2.40	47.2%
Dialog	DLG MK	2.40	4.90	104.2%
Gamuda	GAM MK	4.22	4.60	9.0%
Inari	INRI MK	2.34	3.20	36.8%
Yinson	YNS MK	2.66	5.05	89.8%
Greatech	GREATEC MK	4.82	6.70	39.0%
Alliance Bank	ABMB MK	3.32	4.00	20.5%
Frontken	FRCB MK	3.18	4.10	28.9%
Mid-small Caps				
Axis REIT	AXRB MK	1.91	2.16	13.1%
Mega First	MFCB MK	3.49	4.30	23.3%
Capital A	CAPITALA MK	0.79	0.90	14.0%
CTOS	CTOS MK	1.32	1.97	49.2%
Farm Fresh	FFB MK	1.53	1.75	14.4%
Bermaz	BAUTO MK	2.38	3.55	49.2%
Padini	PAD MK	3.96	5.20	31.3%
Allianz	ALLZ MK	13.84	16.75	21.0%
Hibiscus	HIBI MK	1.10	1.90	72.7%
Leong Hup	LHIB MK	0.56	1.00	78.6%
AEON (M)	AEON MK	1.28	2.00	56.3%
Berjaya Food	BFD MK	0.91	1.50	64.8%
Aurelius	ATECH MK	2.72	3.90	43.5%
InNature	INNATURE MK	0.59	0.70	19.7%

Source: Maybank IBG Research, FactSet (13 Apr)

MY ESG Portfolio: recommended constituents

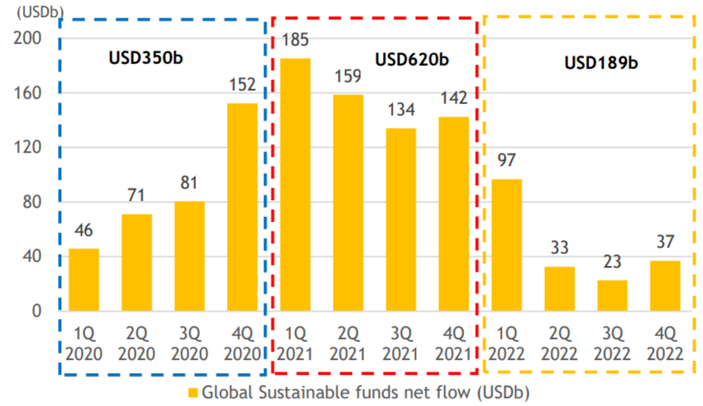
Stock	BBG Code	Mkt Cap. (MYRm)	Rec.	Price (MYR)	TP (MYR)	PER (x) FY23E	PER (x) FY24E	ROE (%) FY23E	Yield (%) FY23E	Risk Rating*	Risk Score*	Management Rating*	Controversy Score*	MIBG ESG Score	In FBM4G Index?^
Filtered Stocks															
Petronas Chemicals	PCHEM MK	59,200	Hold	7.40	7.35	13.2	11.3	10.9%	3.8%	23.4	Medium	Strong	0	69	Yes
CelcomDigi	CDB MK	51,501	Hold	4.39	4.60	24.8	24.5	12.6%	3.6%	24.1	Medium	Average	0	67	Yes
Hong Leong Bank	HLBK MK	43,875	Buy	20.24	24.10	10.7	10.1	12.0%	3.3%	18.7	Low	Strong	0	76	Yes
Westports	WPRTS MK	12,208	Hold	3.58	3.85	15.1	14.4	23.3%	5.0%	10.4	Low	Strong	1	62	Yes
Inari	INRI MK	8,735	Buy	2.34	3.20	22.0	19.7	15.7%	3.6%	28.1	Medium	Average	0	70	Yes
Yinson	YNS MK	7,731	Buy	2.66	5.05	14.1	9.3	11.7%	0.8%	17.4	Low	Strong	1	78	Yes
Sunway	SWB MK	7,676	Hold	1.57	1.67	11.5	12.1	6.4%	2.7%	13.6	Low	Strong	0	74	No
Bursa	BURSA MK	5,204	Hold	6.43	6.60	21.5	20.2	29.5%	4.4%	15.2	Low	Strong	0	73	Yes
Axis REIT	AXRB MK	3,325	Buy	1.91	2.16	19.1	15.7	6.3%	4.7%	14.0	Low	Average	0	59	Yes
Bermaz Auto	BAUTO MK	2,777	Buy	2.38	3.55	9.5	8.6	35.3%	7.9%	10.8	Low	Average	0	65	Yes
Momentum Stocks															
MISC	MISC MK	31,960	Hold	7.16	7.19	13.2	13.3	6.3%	4.6%	18.0	Low	Strong	2	71	Yes
RHB Bank	RHBBANK MK	24,422	Buy	5.75	7.10	8.4	7.9	10.1%	7.4%	25.8	Medium	Average	2	65	Yes
Telekom	T MK	19,110	Buy	5.00	6.50	12.9	12.8	17.1%	3.9%	27.8	Medium	Average	2	67	Yes
Gamuda	GAM MK	11,222	Buy	4.22	4.60	14.3	18.0	16.7%	11.8%	34.0	High	Average	1	68	No
ViTrox	VITRO MK	7,455	Hold	7.89	8.60	35.3	27.6	20.5%	0.7%	14.3	Low	Strong	0	55	Yes

* *derived from leading external ESG research & data provider Sustainalytics*
^ *FTSE4Good Bursa Malaysia (F4GBM) Index (98 constituents as of Dec 2022)*

2022 flows + 1Q23 Sustainability newsflow: highlights

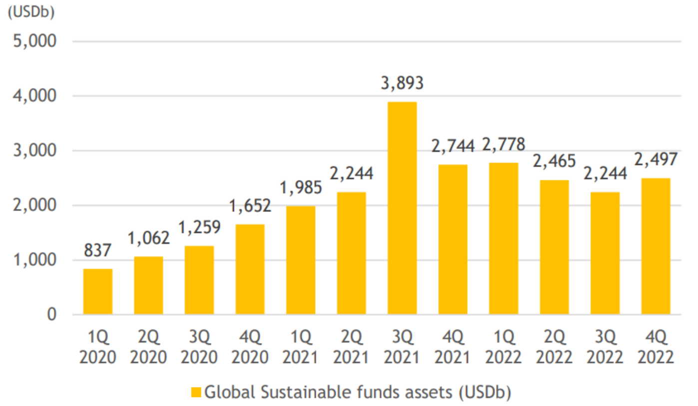
Global sustainable funds net inflow declined by 70% YoY to USD189b in 2022 and close to halved as compared to 2020, as per data released by Morningstar (Fig 1). Sustainable Assets under management declined to USD2.5t as of Dec 2022 after hitting a high of USD3.9t in Sep 2021 (Fig 2). We believe the geopolitical uncertainty since March 2022 stemming from the start of the Ukraine-Russia conflict coupled with anti-ESG campaigns / backlash in the US (political) and EU (greenwashing) led to this decline. A similar trend is visible in the Bloomberg New Energy Finance (BNEF) data, which shows a 66% decline YoY in net inflows for ESG ETFs (Fig 3). Global sustainable debt raising was at USD1.5t in 2022 vs USD1.8t in 2021 (Fig 4) - we believe ESG AUMs and sustainable debt raising will increase from 2023 onwards as countries and corporates focus on new technologies to reduce environmental stress and gain self-sufficiency in energy requirements.

Fig 1: Global sustainable net fund flows at USD189b in 2022, -70% YoY and -46% vs. 2020



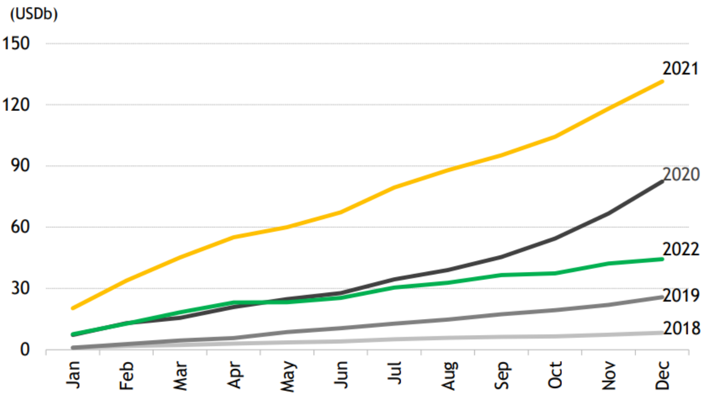
Source: Morningstar, Maybank IBG Research

Fig 2: Global sustainable fund assets under management showed decline in 2022



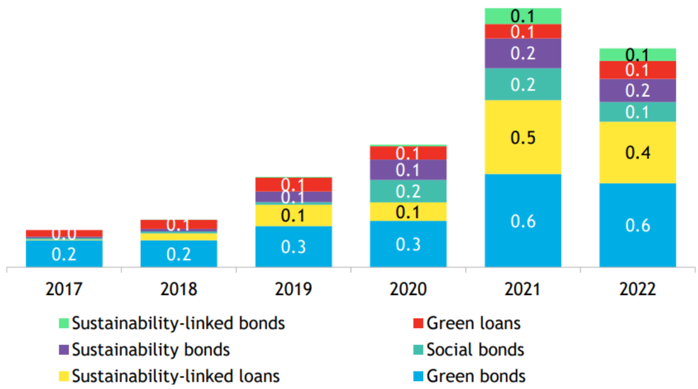
Source: Morningstar, Maybank IBG Research

Fig 3: Net inflows into ESG ETFs were 66% lower YoY in 2022 and 46% lower vs. 2020



Source: BNEF, Maybank IBG Research

Fig 4: Global sustainable debt issuance was lower at USD1.5t in 2022 vs. USD1.8t in 2021

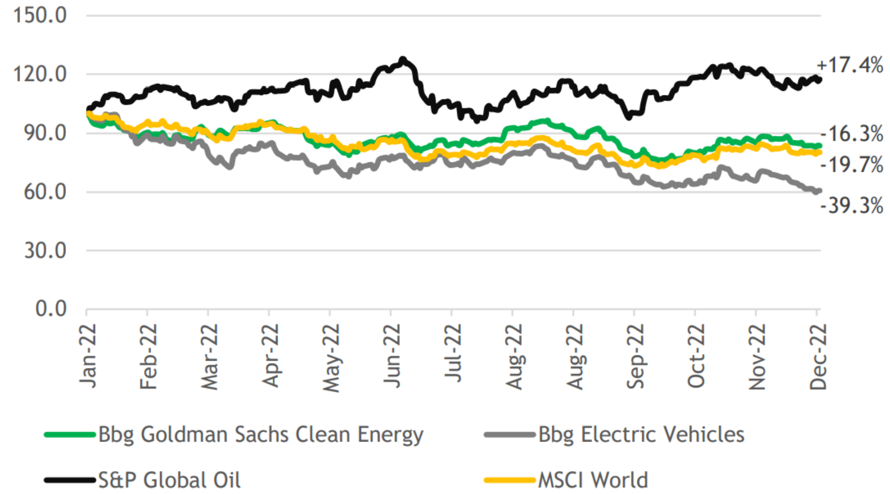


Source: BNEF, Maybank IBG Research

Various sustainability and ESG-driven indices, per Fig 5, underperformed the benchmark indices in 2022 mainly due to the dislocations caused by the Ukraine-Russia conflict that resulted in a refocus on fossil fuels to fulfil energy requirements and surge in the prices of metals and commodities. The Bloomberg Goldman Sachs Clean Energy Index and the Bloomberg Electric Vehicle Index fell 16.3% and 39.3% vs a 17.4% rise in S&P Global Oil Index. The Bloomberg Goldman Sachs Clean Energy Index, however, outperformed the MSCI World Index, which declined 19.7% in 2022. Similarly, the Morningstar Asia ex-Japan Index (-16.3%) outperformed the Regional Index (-18.2%).

Though there was underperformance in 2022, sustainability indices outperformed the benchmarks when considering longer periods. Over 2015-2022, the Morningstar Global Sustainability index (+76.9%) outperformed the Global Markets Index (+73.9%); similarly, the Eurozone Sustainability Index (+115.1%) beat the Eurozone Global Index (+61.3%) by a wide margin, as did the Asia ex-Japan Sustainability Index (+81.6%) when compared to the Asia ex-Japan Global Index (+38.5%).

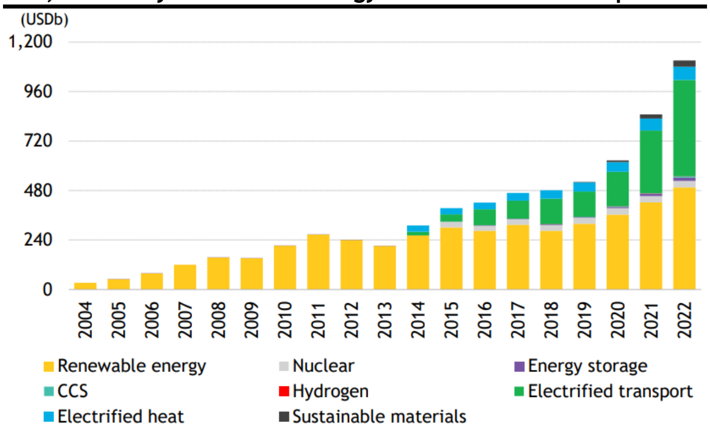
Fig 5: ESG-driven indices underperform the global oil index in 2022



Source: Company, Maybank IBG Research

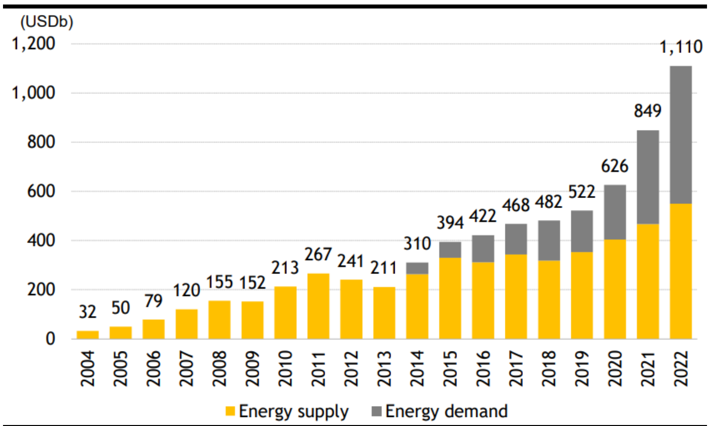
Although sustainability-driven fund flows and returns from ESG benchmarked indices were lower in 2022, investment flows toward energy transition remained on an uptrend. As per BNEF, the global energy transition investment in 2022 was USD1.1t, an increase of 31% YoY (Fig 6), with renewable energy and electrified transport accounting for 87% of the investments. The other important trend in 2022 was that investments towards fulfilling energy demand for the first time breached 50% i.e. it formed 50.5% of total investments vs. 45% in 2021 and nil until 2013 (Fig 7). Energy demand includes electrified transport, electrified heat and sustainable materials. Investments towards energy storage was USD15.8b (+47% YoY), carbon capture & storage was USD6.4b (+171% YoY) and hydrogen was USD1.1b (+227% YoY). In terms of geographies (Fig 8), Asia Pacific, driven by China, accounted for 59% of global investments; Europe, Middle East and Africa (EMEA) was 24% and Americas was 17%. China, at USD546b, formed 49% of the 2022 global energy transition investments (Fig 9).

Fig 6: Global energy transition investments expanded +31% YoY, driven by renewable energy and electrified transport



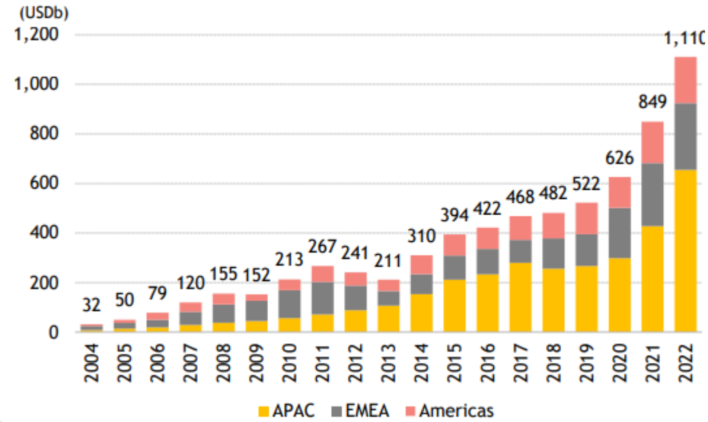
Source: BNEF, Maybank IBG Research

Fig 7: Investments towards fulfilling energy demand surpass the 50% mark in 2022 for the first time



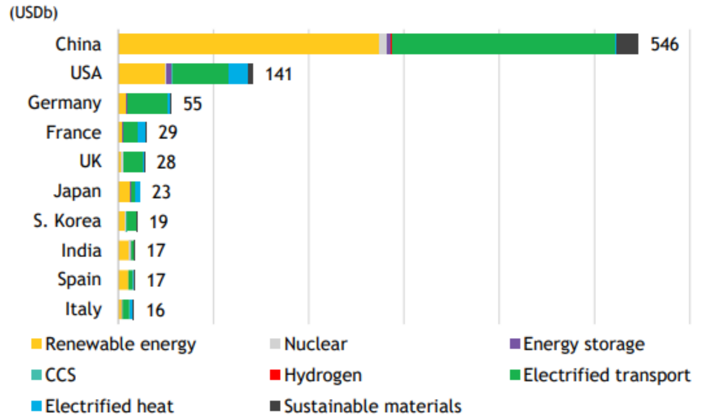
Source: BNEF, Maybank IBG Research

Fig 8: Asia Pacific has the lion's share of investment, followed by EMEA



Source: BNEF, Maybank IBG Research

Fig 9: China leads with a 49% share of total global energy transition investments



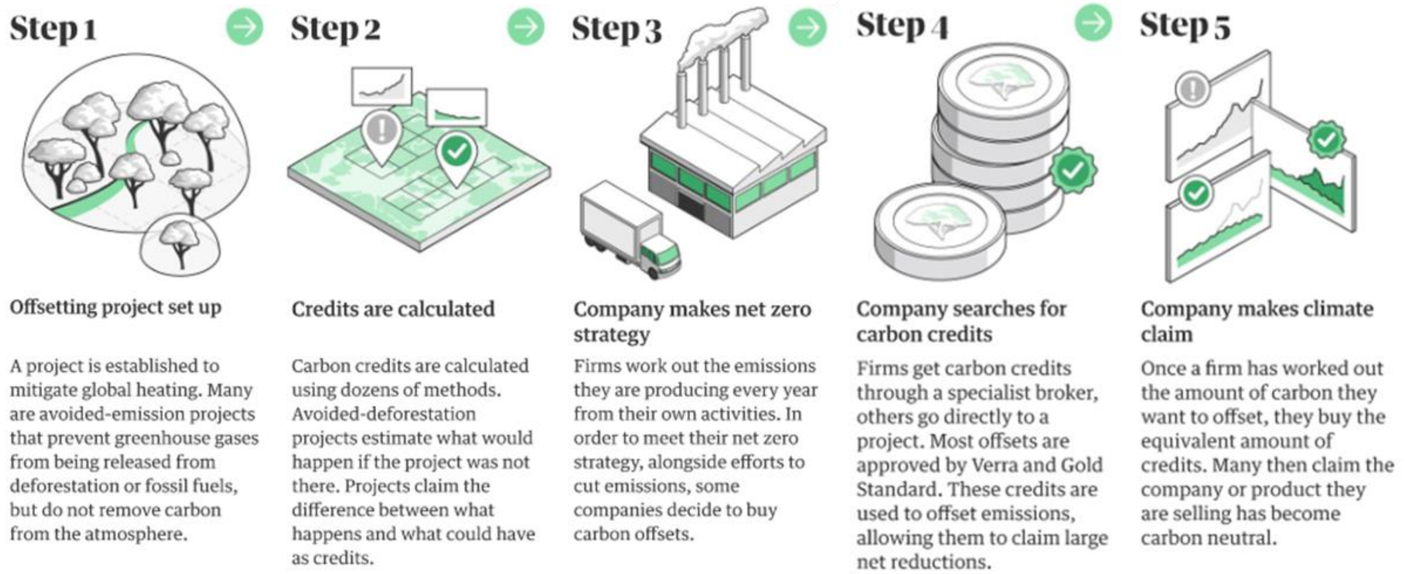
Source: BNEF, Maybank IBG Research

Against this mixed sustainable funds flow backdrop, key underlying developments over 1Q23 in the global and domestic sustainability/ESG sphere are flagged below:

- **Carbon offsets ecosystem under increased scrutiny:** Carbon credits and Voluntary Carbon Markets (VCMs) were thrust into the spotlight following media reports which questioned the quality of carbon credits and the related need for greater transparency. While voluntary carbon credits support specific projects, it appears that only a small percentage of the sales proceeds, with the rest going to intermediaries such as traders, governments and registries. Most damagingly, a 9-month investigation undertaken by the Guardian newspaper, the German weekly Die Zeit and SourceMaterial, a non-profit investigative journalism organisation, and which centred on Verra, the world's leading carbon standard for the rapidly growing USD2b voluntary offsets market, found that more than 90% of their rainforest offset credits – among the most commonly used by companies – are likely to be "phantom credits" and do not represent genuine carbon reductions i.e. had no benefit to the climate. The findings – which have been strongly disputed by Verra – were published in Jan 2023 and pose serious questions for companies that are depending on offsets as part of their net zero strategies. In March, an article in Bloomberg added fuel to the backlash by highlighting that South Pole, the world's leading purveyor of carbon offsets, is facing allegations of exaggerated climate claims around its forest-protection projects – in particular, re South Pole's flagship Kariba forest project in Zimbabwe, most of the Euro100m in proceeds appear to have gone to South Pole and its project partner Carbon Green Investments, and not (as both companies had previously indicated in interviews and public blog posts) to people in the rural communities who do the actual work of fighting deforestation.

  As such, corporates intending to use carbon offsets to achieve emission targets (Fig 10) will need to conduct much greater due diligence to guarantee that the credits they buy have an impact (and also to protect themselves from potential reputational damage) – one potential solution is to buy credits directly from governments trying to preserve their rainforests. If these credits are Paris compliant (i.e. Reducing Emissions from Deforestation and Forest Degradation or REDD+ schemes), the funds are distributed nationally and protect the entire rainforests, not just specific projects in which agents / intermediaries take a cut. In any case, more regulation of VCMs is likely, both to improve the underlying quality / effectiveness of carbon credits on offer as well as to provide greater distinction between voluntary and sovereign carbon credits.

Fig 10: How companies use carbon offsetting to hit emission goals



Source: The Guardian

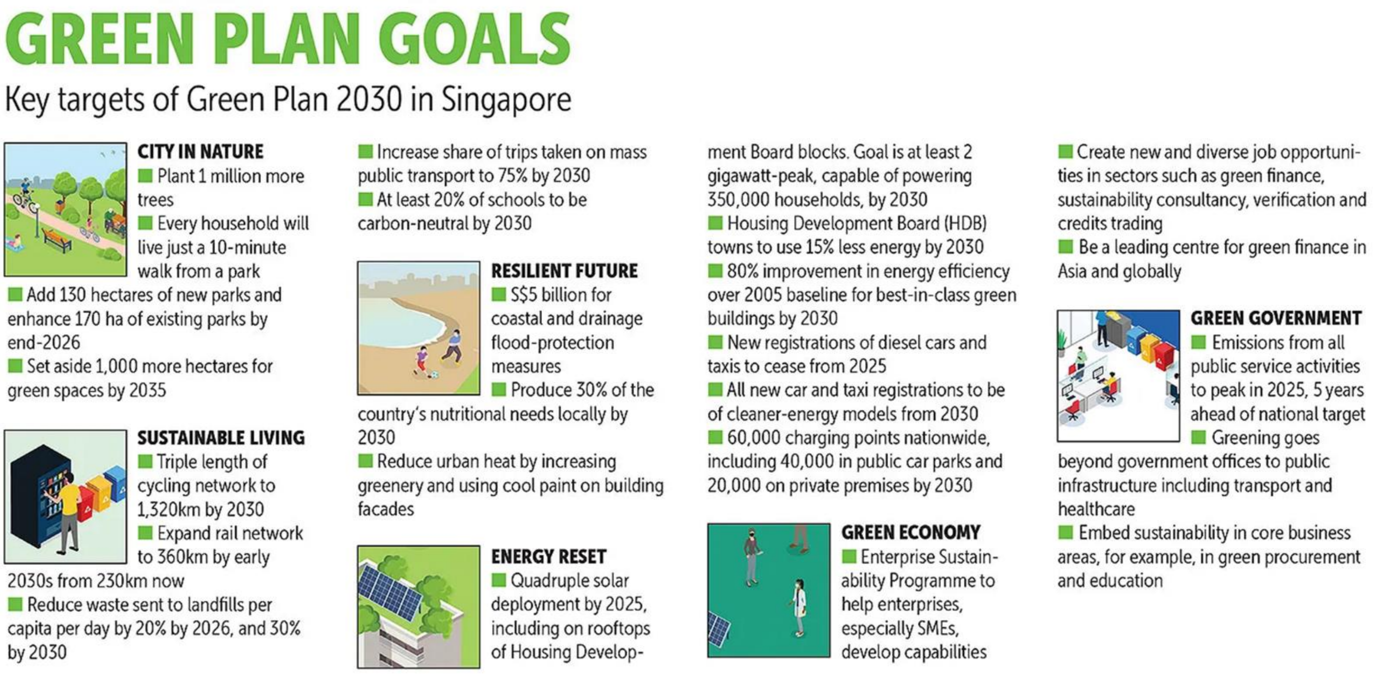
- **Bursa Malaysia's inaugural carbon credit auction:** Closer to home, Bursa Malaysia (Bursa) via its subsidiary Bursa Carbon Exchange (BCX) carried out the nation's inaugural carbon credit auction on March 16th, with 15 buyers from various industries purchasing a total of 150,000 Verified Carbon Standard (Verra)-registered carbon credits. The auction facilitated the price-discovery of carbon credits from two new products offered by the BCX — the Global Technology-Based Carbon Contract (GTC; carbon credits from the Linshu Biogas Recovery and Power Generation Project in China) and the Global Nature-Based Plus Carbon Contract (GNC+; carbon credits from the Southern Cardamom Project, which is a REDD+ project from Cambodia). Successful bidders including a wide range of local banks and corporates, and the price discovery is expected to incentivise local project owners to develop carbon credit projects, helped by a government MYR10m seed funding incentive.

  Less positively, outside observers have noted that all credits were sold at the minimum reserve price set by Bursa (with Bursa itself being a purchaser), underscoring the fact that Malaysia has no large pool of domestic carbon buyers and sellers, and also no supporting regulatory framework such as a carbon tax. The current modest carbon market ecosystem consists of carbon credit project developers, local certifiers and sellers, including projects supported by state governments. These projects are often transacted through direct negotiations between buyers and sellers, given the longer time frames involved and the various tiers of value add / pricing generated depending on the inclusion of other sustainable development goals (SDGs) – hence, not amenable to trading on a standardised spot carbon market like BCX which, if not supported by appropriate government policy (i.e. carbon tax, termination of carbon fuel subsidies) and regulatory infrastructure, appears destined to conduct only a modest share of the country's carbon credit trading.

- **Petronas withdraws from India clean energy stake bid:** Malaysia's National Oil Company (NOC) Petronas withdrew its mid-March offer of USD460m to acquire a 20% stake in the green energy arm of India's largest power producer, state-owned NTPC. The offer would have valued NTPC Green Energy (NGEL), which is now expected to head for an IPO, at USD2.3b. Petronas had earlier stated that its clean energy arm would be focusing on India and Australia as its key markets for growth. NTPC plans to use proceeds raised from the stake sale to expand its non-fossil businesses, having committed to adding 60GW of renewable energy capacity by 2032 on a total group capacity of 130GW by that date. To recap, India has set a goal to become net-zero by 2070 and has committed to have 50% of its installed power capacity (c.500GW) from non-fossil fuel-based energy by 2030. On its part, Petronas plans to spend MYR300b capex over the next 5 years, of which 20% or c.MYR15b a year will be earmarked for decarbonisation and energy transition activities – these will not be just solar or wind investments, but also what the NOC considers “low hanging fruit” such as curbing methane emissions.

- **Singapore appoints Government Chief Sustainability Officer (GCSO):** in Dec 2022, the Ministry of Sustainability and the Environment (MSE) established the position of GSCO to drive the nation’s sustainability efforts, such as Singapore Green Plan 2030, which is meant to put the country on the path to being more resource-efficient and climate-resilient. The GSCO will oversee the ministry’s Public Sector Sustainability Office and Sustainability Partnerships Office, working with public sector agencies to develop and coordinate strategies for GreenGov.SG, a sustainability movement for the public sector. He will also spearhead the Government’s partnerships with businesses, civil society groups and individuals to advance the national sustainability agenda. To recap on Green Plan 2030 (Fig 11), Singapore plans to quadruple its solar energy deployment by 2025, reduce its waste to landfill by 30 percent by 2030, reduce its overall water consumption, increase green buildings, and increase requirements for clean energy vehicles. The underlying aim is to reach peak emissions by 2030 and speed up efforts to achieve net-zero emissions by 2050.

Fig 11: Singapore's Green Plan 2030: key targets



Source: The Guardian

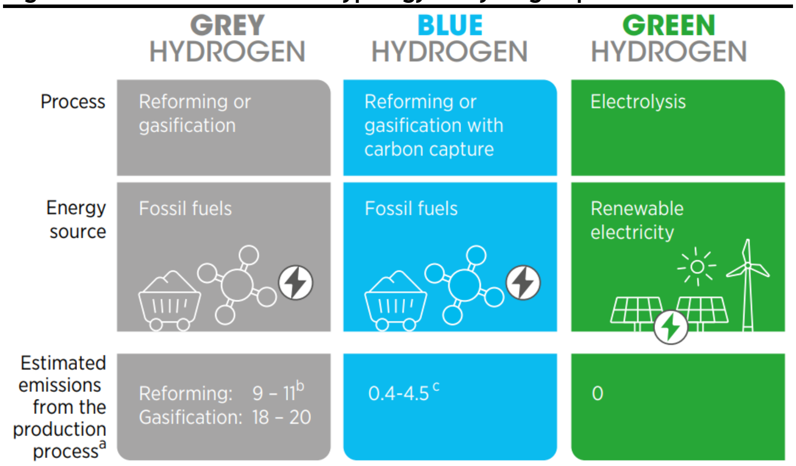
- **Indonesia is enjoying a commodities IPO boom:** Indonesia’s Harita Nickel raised Rp10tn (c.USD660m) from a wide range of investors including commodities trader Glencore and Asian sovereign wealth funds in what is to be the country’s largest IPO so far in 2023. With the shares successfully offered at the top end of the pricing range, investors appear confident in the country’s announced plan to develop an end-to-end electric vehicle (EV) supply chain. Indonesia holds the world’s largest nickel reserves, a vital input for EVs and energy storage - Harita operates the country’s first high-pressure acid leaching smelter, with a second plant to come online next year doubling its’ total contained nickel production capacity to

120,000 tonnes/year. Other Indonesian companies in this space lining up for IPOs include Merdeka Battery Minerals and Amman Mineral International, the latter being Indonesia's second largest copper and gold miner. Trading debut on the JSE is slated for April 12th.

- **Indonesia's carbon trading mechanism for coal plants:** in a country where coal makes up more than half of total power generation, the first phase of the mandatory carbon trading for coal power plants was launched on 22nd Feb, covering 99 power plants with total installed capacity of 33.6GW. Under the mechanism, power plants that emit more carbon that their given quota can buy carbon credits from plants with below-quota emissions or from renewable power plants. A market mechanism will set the price but the energy ministry expects the range to be between USD2 and USD18 per tonne. This carbon trade currently only applies to power plants with a capacity of at least 100MW but will be progressively rolled out to other smaller and fossil-fuelled plants, with plans to set up agencies to monitor and verify emissions volumes. One of the world's largest greenhouse gas emitters, Indonesia stepped up its NDC (Nationally Determined Contribution) target for reduction in emissions intensity in 2022, with a stated aim to achieve net zero emissions by 2060. It is currently studying potential implementation of a carbon exchange.

- **Settling on a definition for "clean" hydrogen:** according to guidelines from the International Energy Agency (IEA), hydrogen produced using natural gas or other fossil fuels can still be considered "clean" if it meets set emission standards. Under the agreed rules, production of 1kg of hydrogen must emit less than 7kg of carbon dioxide to be considered as meeting the clean standard. To recap, hydrogen can be burned without emitting carbon dioxide but the process of producing hydrogen itself can be carbon intensive. "Green" hydrogen is typically made with electricity from renewable energy while "blue" hydrogen refers to hydrogen made with fossil fuels combined with carbon-capturing technology. In the past, there have been no clear standards re defining what constitutes green or blue hydrogen, and this has hindered growth of the hydrogen market. It is now clear that blue hydrogen producers will be able to keep the clean label if they use carbon-capturing tech to bring net carbon emissions below the 7kg threshold. Although the guidelines are not legally binding, they will serve to inform investment decisions given the likelihood they will be made legally binding by national governments in due course. The IEA expects hydrogen will cover 12% of global end-use energy demand in 2050 if the world attains net-zero greenhouse gas emissions by then.

Fig 12: Selected colour-code typology of hydrogen production



Source: The World Economic Forum

- **Green bonds spur ESG debt sales:** according to Bloomberg, the global sustainable bond market had its busiest February on record (i.e. since green bonds first emerged in 2007), driven by large deals from government and debut transactions from large corporates. New sales of green, social, sustainability (proceeds of which can be used for both environmental and social projects) and sustainability-linked debt reached USD87.75b (Jan saw an even higher raise of USD115b), with green bonds accounting for more than half of the total (notable raises include by the European Investment Bank, the first institution to issue a green bond). Growth prospects are strong as current and prospective issuers continue to provide more ESG data, European regulations drive demand and lower-quality credits gain increasing acceptance by the market – on the latter, c.25% of high-yield issuance in Europe is ESG-labelled, with banks dominating in green junk deals, according to Morgan Stanley strategists.

1Q23 MY Sustainalytics scoring: trends, standouts

As articulated in our 123-page Malaysia ESG Compendium entitled "*Sustainability: No longer optional*", dated April 8, 2021, the MIBG equity research team across ASEAN (35+ analysts covering 250+ stocks) has been publishing one-page ESG tear sheets for companies under coverage since mid-2020. As at end-2021, all of Maybank Investment Bank (MIB)'s ASEAN equity research coverage, spanning across all sectors, now comes with a qualitative-centric ESG tear sheet insert (ESG 1.0; Fig 13) that outlines key E, S and G considerations for the company, and how these feed into the company's core business model in terms of recognition of material ESG issues and strategies on addressing related risks and opportunities.

Since 2Q21, these qualitative tear sheets have included a quantitative scoring element for a more complete consideration of the company's ESG issues and dynamics, hence providing both a backward looking/current quantitative view and a forward-looking, MIBG analyst-driven qualitative outlook. The quantitative ESG inputs are sourced from Sustainalytics which is a leading external ESG research and data provider that MIBG has partnered with for ESG services that range from company-focused ESG ratings reports, through to portfolio ESG and carbon analytics. Sustainalytics also acts as the data source for other service providers such as Morningstar (ESG fund ratings and indices) and FTSE Russell (ESG ratings and customized indices, including FTSE4Good indices).

Most recently, in parallel with the publication of the maiden Regional Utilities report ("*Geopolitics accelerating transition to renewables*", dated April 24) by the newly-established MIBG Sustainability Research Team based in India, we have launched our own proprietary ESG scoring model per the addition of a quantitative-focused tear sheet (ESG 2.0, example per Fig 14 below), with the target being to roll out ESG 2.0 to all ASEAN big-caps coverage (>USD1b market cap) by end-2022. Re methodology, we evaluate the ESG ratings based on quantitative, qualitative and ESG targets. We assign a score for each of these three parameters. The overall rating is based on the weighted average of the scores: quantitative (50%), qualitative (25%) and ESG target (25%).

For the quantitative, qualitative and ESG target, the sub-parameters are assigned a score - '0' for data not available, '+1' for improving trajectory, positive change, 'Yes', better than peers or a positive number if historical is not available and '-1' for declining trajectory, negative change, 'No', lower than peers or a negative number. The total of the scores of all the sub-parameters is divided by the total number of sub-parameters is the score of each of the three parameters. The sub-parameters may be different for different industries depending on the key areas to monitor for each industry. A company should achieve a minimum score of 50 for an average ESG rating.

Fig 13: PChem Tear Sheet: Qualitative (Original ESG 1.0)

Petronas Chemicals

ESG@MAYBANK IBG

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Risk Rating & Score[1]	28.0 (Medium)
Score Momentum[2]	+1.1
Last Updated	07 Dec 2021
Controversy Score[3] (Updated: 30 Nov 2021)	0 - No reported incidents

Business Model & Industry Issues

- As an integrated chemicals producer, PCHEM's biggest ESG challenge lies in the negative sentiment surrounding single-use plastics. However, we note that its single-use plastic capacity is only <5% of its total capacity and PCHEM is actively expanding its bio-friendly product portfolio. Meanwhile, much of the world's recyclable plastics end up in landfills/oceans due to low recycling rates. Hence, via its New Plastic Economy (NPE) initiatives, PCHEM hopes to raise awareness amongst the local communities whilst simultaneously investing in infrastructure to enable recycling initiatives in the future.
- PCHEM primarily uses natural gas as its fuel, which is the cleaner option. Its key 2024 targets include: (i) capping GHG emissions at 6.98 million tonnes (2021: 7.0 million tonnes) and (ii) increasing its waste recycling (3R) rate to 82% (2021: 75%).
- We are positive on the sector's long-term growth as we believe the demand for plastics will remain robust given that there is no real alternative.
- PCHEM also scores above-average in our proprietary scoring methodology (see Pg. 3) with an overall score of 69/100.

Material E issues

- Energy intensity was 15.76 GJ/T in 2021 (2020: 15.73 GJ/T), representing a 11% reduction against the baseline in 2014. It had achieved its 10% reduction target in 2020.
- GHG emission intensity increased to 0.67 tonne CO_2e/tonne (+2% YoY). Its target is to cap its Scope 1/2 emissions at 6.92 million tonnes by 2024 (FY21: 7.0 million tonnes).
- In 2021, its freshwater withdrawal intensity was up to 3.69m^3/tonne (+5% YoY), while its wastewater discharge was lower at 171.4 tonnes (-4% YoY) due to lower discharge from plant turnarounds and ongoing improvements. PCHEM is currently in the midst of setting water reduction targets.
- PCHEM's hazardous waste recycling (3R) rate was 75% in 2021 (2020: 85%) - It has a formal target of increasing and maintaining the 3R rate to 82% by 2024.
- Its SO_x emissions were markedly lower in 2021, with a YoY reduction of 21%. Overall emissions intensity (inc. NO_x) was however up 10% YoY in 2021 from higher flaring activities.
- PCHEM aims to recover plastic waste that is the equivalent of 100% of its domestic polymer sales volume by 2030.

Material S issues

- Recorded a third straight year of zero fatalities across its scope of operations in 2021.
- Lost time injury frequency (LTIF) halved YoY to 0.07 incidents per million man-hours in 2021 (2020: 0.14).
- Women made up only c.17% of its workforce in 2021 as its manufacturing ops workers are mostly male. Encouragingly, 1/4 hires were female in FY21 while female representation at Senior Mgmt/Mgmt Committee level was 25%/36% respectively.
- Its CSR initiatives' (e.g. *ecoCare*, *Be Green*, *Back To School*) reach was 295,000 people in 2021 (2020: 70,000). It has set itself a new target to reach 1 million people by 2024.

Key G metrics and issues

- As of 31 Dec 2021, the Board had a total of 8 Directors, out of which, 4 (or 50%) were Independent Non-Executive Directors (INEDs).
- The Board has 2 female Directors, representing 25% of the Board's composition (lower than the minimum of 30%). PCHEM is considering hiring another female Director within a year in order to achieve the minimum target of 30%.
- PCHEM's major shareholder is PETRONAS, which holds a 64.4% equity stake. PETRONAS has 4 Directors on the Board (or 50% of the Board's composition).
- Datuk Md Arif Mahmood was the Non-Independent Non-Executive Chairman and also represents PETRONAS. His remuneration package was MYR326,500 in 2021. However, as a PETRONAS appointee, the remuneration was paid to PETRONAS instead.
- The Top 5 Senior Management (MD/CEO, CFO, Chief Manufacturing Officer, Chief Commercial Officer and Head of Strategic Planning and Ventures) are seconded from PETRONAS. Their remuneration packages are benchmarked against the industry but PCHEM does not disclose the remuneration amounts as it is subject to the Personal Data Protection Act (PDPA) 2010.
- KPMG PLT is the external auditor and has served PCHEM for more than 10 years.
- PCHEM has numerous related party transactions (RPTs) with PETRONAS as the businesses are inter-related. PETRONAS explores and produces gas while PCHEM uses the gas as feedstock and fuel to produce a wide range of chemical products. In FY21, the largest RPT was for the purchase of processed gas and natural gas from PETRONAS, which amounted to MYR3.8b (or 36% of its COGS in FY21). Transactions with Government related entities are also considered RPTs as the ultimate holding company of PCHEM and PETRONAS is the Government of Malaysia. Examples of these RPTs include the purchase of electricity from Tenaga Nasional (TNB MK, HOLD, TP: MYR9.30) and sale of petro-chemical products to Pertubuhan Peladang Kebangsaan.

[1]*Risk Rating & Score* - derived by Sustainalytics and assesses the company's exposure to unmanaged ESG risks. Scores range between 0 - 50 in order of increasing severity with low/high scores & ratings representing negligible/significant risk to the company's enterprise value, respectively, from ESG-driven financial impacts. [2]*Score Momentum* - indicates changes to the company's score since the last update - a negative integer indicates a company's improving risk score; a positive integer indicates a deterioration. [3]*Controversy Score* - reported periodically by Sustainalytics in the event of material ESG-related incident(s), with the impact severity scores of these events ranging from Category 0-5 (0 - no reports; 1 - negligible risks; ...; 5 - poses serious risks & indicative of potential structural deficiencies at the company).

Source: Company, Maybank IBG Research (Tear Sheet)

Fig 14: PChem Tear Sheet: Quantitative (Expanded ESG 2.0)

Petronas Chemicals

ESG@MAYBANK IBG

Quantitative parameters (Score: 39)

	Particulars	Unit	2019	2020	2021	TPIA IJ (2021)
E	Scope 1 GHG emissions	m tCO2e	5.73	5.77	5.67	1.96
	Scope 2 GHG emissions	m tCO2e	1.29	1.33	1.33	0.47
	Total	**m tCO2e**	**7.02**	**7.10**	**7.00**	**2.43**
	Scope 3 GHG emissions	m tCO2e	N/A	3.06	3.27	N/A
	Total	**m tCO2e**	**7.02**	**10.16**	**10.27**	**N/A**
	GHG intensity (Scope 1 and 2)	tCO2e/t	0.68	0.66	0.67	0.63
	Energy intensity	GJ/ton	15.37	15.73	15.76	11.43
	Share of renewable energy use in operations	%	N/A	N/A	N/A	N/A
	Wastewater discharge (chemical O_2 demand)	tonnes	153.7	177.8	171.4	22.7
	Hazardous waste 3R rate	%	70%	85%	75%	98%
	Air emissions intensity	ton/kT	2.83	2.21	2.42	N/A
	NPE (New Plastic Economy) investments	MYR m	8	3	3	N/A
	Cases of environmental non-compliance	number	0	0	0	N/A
S	% of women in workforce	%	17.4%	17.2%	17.3%	15.2%
	% of women in management roles	%	30.8%	30.2%	21.9%	21.3%
	Lost time injury frequency (LTIF) rate	number	0.08	0.14	0.07	0.11
	Lives impacted by CSR outreach ('000)	number	20	70	295	N/A
G	MD/CEO salary as % of reported net profit	%	N/A	0.10%	0.02%	N/A
	Board salary as % of reported net profit	%	0.06%	0.21%	0.04%	N/A
	Independent directors on the Board	%	50%	50%	50%	33%
	Female directors on the Board	%	25%	25%	25%	0%

Qualitative Paramaters (Score: 100)

a) is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?

Yes - as of FY21, it has an established framework and a working sustainability committee that reports quarterly to the Board.

b) is the senior management salary linked to fulfilling ESG targets?

Yes - in FY21, sustainability KPIs were introduced in top management performance appraisals.

c) Does the company follow the task force of climate related disclosures (TCFD) framework for ESG reporting?

Yes

e) Does the company have a mechanism to capture Scope 3 emissions - which parameters are captured?

Yes - purchased goods and services (Cat. I) and use of sold products (Cat. II); calculated using Simplified IPCC Tier 1 method.

f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?

It has a framework to reduce 20%/80% of emissions by 2030/40 based on the 2020 baseline, in line with its 2050 NCZE aspiration. It conducted a feasibility study with a private firm to turn non-recyclable plastic waste into crude naphtha and also invested MYR40m in a plant that produces Bio-MEG from palm biomass. To reduce air emissions, it utilises UHPM fuel cell applications (24% lower CO_2 emissions) while for water mgmt, it deployed mobile reverse osmosis tech to reduce raw water consumption by 16% and has invested MYR3m in an automated water quality management system powered by renewable energy.

g) Does carbon offset form part of the net zero/carbon neutrality target of the company?

Yes

Target (Score: 100)

Particulars	Target	Achieved
Reduce Scope 1 & 2 GHG emissions (tonnes) by 2024	6.98	7.00
Reduce energy intensity (GJ/tonne) vs 2014 baseline	10%	11%
Recover plastic waste from total MY polymer production volume by 2030	100%	N/A
Increase hazardous waste 3R (reduce, reuse, recycle) rate by 2024	82%	75%
Increase number of people reached by CSR outreach initiatives ('000)	1,000	295
Reduce 2030/40 carbon emissions vis-a-vis 2020 baseline	20%/80%	N/A
Net-zero carbon emissions by 2050	Net 0	N/A

Impact

NA

Overall score: 69

As per our ESG matrix, Petronas Chemicals Group (PCHEM MK) has an overall score of 69.

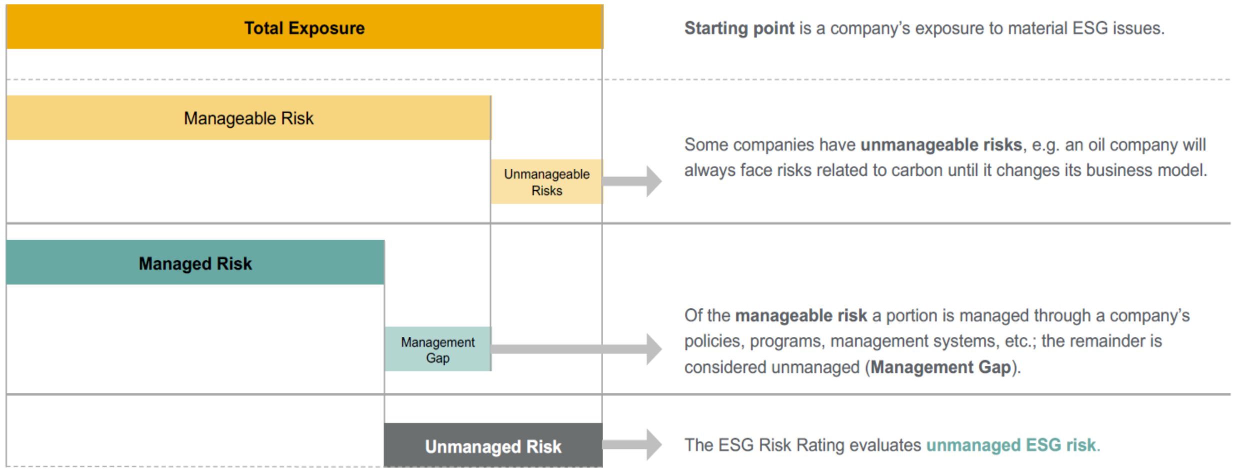
ESG score	Weights	Scores	Final Score
Quantitative	50%	39	19
Qualitative	25%	100	25
Target	25%	100	25
Total			69

As per our ESG assessment, PCHEM has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. PCHEM's overall ESG score is 69, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Source: Company, Maybank IBG Research (Tear Sheet)

The Sustainalytics' ESG risk rating measures the extent to which the company's economic value is at risk from unmanaged ESG risks (Fig 15). This is done by giving points for specific material risk factors, identified from industry exposure and management indicators, to be added up across all the identified issues for a total overall score, which is then rated via five risk category ratings. These risk categories are absolute i.e. a certain risk assessment reflects a comparable degree of unmanaged ESG risk across the research universe, regardless of the sector or business the company operates in. Sustainalytics' company-specific ESG reports are updated annually on average, while score-influencing controversies are monitored and reported on an on-going basis – hence, the scoring for the company can change more often than the annual report update.

Fig 15: Sustainalytics: ESG risk rating top-down methodology



Source: Sustainalytics

As mentioned, MIBG displays key Sustainalytics metrics in the upper right corner of the business model section at the top of the ESG 1.0 tear sheets, with a focus on the following:

- **Score:** this is the company's final ESG Risk Rating Score (Unmanaged Risk Score). It is derived by a materiality-driven risk decomposition process, starting with assessing the company's exposure to ESG risks at the industry level, followed by an assessment of the company's ESG management (i.e. actions and commitments that demonstrate how ESG issues are managed). This is finally followed by the score calculation of unmanaged risk, which is defined as material ESG risk that has not been managed by the company, the key components of which are unmanageable risk (cannot be addressed by company initiatives) and the management gap (risks that could be managed but are as yet not sufficiently addressed by management).

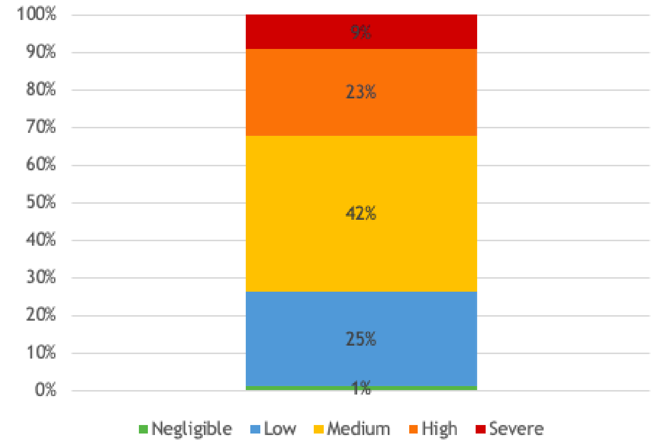
- **Rating:** company scores derived as above are assigned to five ESG risk categories, as shown in Figs 16-17. These are: **i)** negligible risk - score of 0-10; enterprise value (EV) considered to have negligible risk of material financial impacts driven by ESG factors; **ii)** low risk - score of 10-20; EV at low risk of material financial impacts; **iii)** medium risk - score of 20-30; EV at medium risk; **iv)** high risk – score of 30-40; EV at high risk; and **v)** severe risk – score of 40+; EV at severe risk of material financial impacts driven by ESG factors. These risk categories are absolute i.e. a particular risk assessment reflects a comparable degree of unmanaged ESG risk across the research universe, regardless of the sector the company is in.

- **Momentum:** this indicator shows the change in company score since the last assessment (on average, Sustainalytics updates its company scores around once a year, barring any major controversy event), and is broken down into changes in exposure momentum and management momentum. A negative number means overall risk score is improving (and vice versa). This indicator is of key interest to investors seeking to generate positive alpha via ESG momentum strategies i.e. by investing in companies showing improvement in ESG score, which is expected to flow through to improved operational performance and/or intangible value accretion.

- **Controversies:** where relevant, Sustainalytics also publishes controversy reports for companies for which it has ESG scores. These reports are generated when there is an event or aggregation of events relating to an ESG topic i.e. incidents that have a negative impact on the environment, society and external stakeholders. An event assessment is based on the highest impact or risk score assigned to the related incidents, alongside a broader assessment of event trend and company preparedness and response. The related event categories range from Category 1 (event has a low impact on the environment and society, and poses negligible risks to the company) up to Category 5 (event has a severe impact on the environment and society, posing serious risks to the company), with

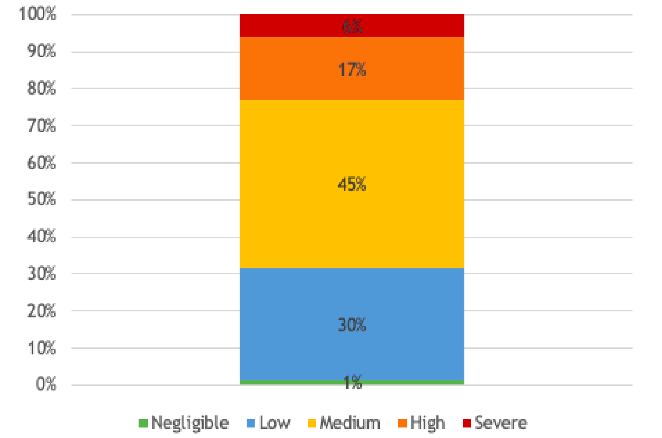
Category 4 and 5 events often indicative of structural problems at the company. The controversy reports also have an outlook (Positive, Negative or Neutral) that forecasts how the controversy rating will change over the next 12 months e.g. if negative, the event is likely to deteriorate, leading to a downgrade rating of the corresponding indicator, feeding back to the management score for the company.

Fig 16: Sustainalytics: risk categories (global coverage)



Source: Sustainalytics, Maybank KE (Chart)
Note: Comprises 12,174 public-listed companies with accessible data

Fig 17: Sustainalytics: risk categories (M'sia tear sheets)



Source: Sustainalytics, Maybank KE (Chart)
Note: Comprises 82 public-listed companies with accessible data

Reviewing the 2022 quarterly trend re Sustainalytics risk scores for our Malaysian stock coverage, as detailed in Fig 18 below, the overall bias was positive, with certain sectors such as Banks, Consumer, Gaming and Gloves seeing significant and broad improvements in scoring over the course of the year (note a negative integer for the score momentum column indicates assessed ESG risk for the stock is declining, and hence is a positive change). Of particular note were the significant score improvements for certain stocks in the prima facie "brown" or high carbon emitting sectors such as Oil & Gas and Utilities, related highlights as follows:

- **Bumi Armada (BAB MK):** risk rating category improved from High to Medium following a -12.6 decline in overall ESG risk score, to 20.4. Exposure (extent to which a company is exposed to different material ESG issues) score improved, driven by better operating performance and financial flexibility, while Management (referring to how well a company is managing its relevant ESG issues via robust programs, practices and policies) score jumped significantly, helped by strong showing in sub-categories such as Health & Safety Management, Human Capital Development, Whistleblower Programmes and (lack of) Controversies.

- **Dialog Group (DLG MK):** risk rating category improved from High to Medium following a -5.2 decline in overall ESG risk score, to 20.4. While Exposure score was relatively flat (i.e. medium, similar to subindustry average), there was a significant improvement in Management score (to the high end of the Average score range of 25-50), with noted drivers being the linking of ESG targets to evaluating executive performance, with a management committee overseeing ESG issues, as well as adequate whistleblower programmes and environmental policy.

- **Velesto Energy (VEB MK):** risk rating category improved from High to Medium following a -14.6 decline in overall ESG risk score, to 21.2. While Exposure score was relatively flat, there was a significant improvement in Management score, to 59.8 (Strong), from 24.9 (Weak) previously. The improvements were broad-based, with notable categories being EMS (Environmental Management System) Certification, Human Capital Development, Health and Safety Management, and a new category of QMS (Quality Management Systems) certification.

- **Yinson (YNS MK):** risk rating category improved from Medium to Low following a -4.3 decline in overall ESG risk score, to 17.4. While Exposure score was relatively flat (i.e. Medium, similar to subindustry average), there was a significant improvement in Management score (Strong, at 71.5, +9.9, vs. Strong score range of 50-100), noting that overall ESG-related disclosure follows best practice, signaling strong accountability to investors and the public. The company has also appointed the Board Risk and Sustainability Committee to oversee ESG issues, suggesting that these are integrated in its core business strategy. Based on company reporting, executive compensation is tied to ESG performance targets (though no clear reference to ESG targets in the remuneration policy). Whistleblower programme and environmental policy are considered strong.

- **Mega First (MFCB MK):** risk rating category improved from Severe to High following a -12.0 decline in overall ESG risk score, to 39.3. Management score improved from Weak to Average, albeit still low at 25.4, with better scoring for EMS, Community Involvement Programmes and Board Diversity. The bigger driver was improved Exposure score (from 62.5 high risk to 53.1 medium risk), with negative beta indicators for Operating performance, Solvency, Asset Performance and Regional Water Stress.

In terms of deteriorating risk scores, these were mostly incremental and sector-neutral in nature, though we note dramatic increases for the following stocks:

- **Inari (INRI MK):** risk rating category changed to Medium from Low following a +16.7 increase in overall ESG risk score, to 28.1, the latter being in line with local OSAT peers (UNI MK and MPI MK, both scoring 29.1). The increase in unmanaged ESG risk appears to be due to a more detailed analysis of specific sub-categories (principally Human Capital, Corporate / Product Governance, Carbon Emissions and Resource usage), the broader industry's labour issues and a lack of clear ESG targets / adherence to leading ESG reporting standards. Management is committed to improving on the latter, while also noting that its labour practices are subject to stringent audits by its key customers annually.

- **Cahya Mata Sarawak (CMS MK):** risk rating category changed from High to Severe following a +9.8 increase in overall ESG risk score, to 48.3. There was deterioration in both the Exposure score (from 55.8 to 63.2), primarily due to weaker scores for Qualitative Overlay and Regional Water Stress, as well as the Management score, from 34.1 (Average) to 25.9 (Average). The latter was weighed down by lower scores for Carbon Intensity, QMS Certification and Board Independence. Note that in May 2021, CMS suspended its Group CFO to "facilitate investigations into allegation of possible financial mismanagement in relation to the Company's investments and operations". His employment contract was subsequently not renewed on expiry on 31 Aug 2021.

Fig 18: Sustainalytics: risk score trend for MIBG coverage stocks in 2022

Sector/ Company	BBG Ticker	Rating	Sustainalytics Risk Score (Annual Trend) 31 Dec 2021	31 Mar 2022	30 Jun 2022	30 Sep 2022	30 Dec 2022	Score Momentum (YoY Dec)
Automotive								
Bermaz Auto	BAUTO MK	Buy	10.8	10.8	10.8	10.8	10.8	
MBM Resources	MBM MK	Buy	14.2	N/A	N/A	N/A	N/A	
Sime Darby Bhd	SIME MK	-	24.9	25.8	25.8	25.8	25.8	*0.9*
Tan Chong Motor	TCM MK	Sell	N/A	N/A	N/A	N/A	N/A	
UMW Holdings	UMWH MK	Buy	28.2	28.2	28.2	28.2	28.2	
Banking								
Alliance Bank	ABMB MK	Buy	29.0	27.3	27.3	27.3	27.3	*-1.7*
AMMB Holdings	AMM MK	Buy	30.0	30.0	27.9	27.9	27.5	*-2.5*
BIMB Holdings	BIMB MK	Hold	35.5	N/A	N/A	N/A	29.0	*-6.5*
CIMB Group	CIMB MK	Buy	19.8	19.9	19.5	19.5	19.5	*-0.3*
Hong Leong Bank	HLBK MK	Buy	24.3	24.3	18.5	18.5	18.7	*-5.6*
Hong Leong Financial	HLFG MK	Buy	30.4	30.4	27.6	27.6	27.4	*-3.0*
Public Bank	PBK MK	Hold	26.6	26.6	26.6	26.8	26.8	*0.2*
RHB Bank	RHBBANK MK	Buy	24.3	24.3	24.5	25.4	25.8	*1.5*
Construction								
Cahya Mata Sarawak	CMS MK	Buy	38.5	48.3	48.3	N/A	48.3	*9.8*
Gamuda	GAM MK	Buy	35.8	35.3	35.3	35.3	35.3	*-0.5*
IJM Corporation	IJM MK	Buy	35.7	35.7	33.1	33.1	33.3	*-2.4*
Pintaras Jaya	PINT MK	Hold	N/A	N/A	N/A	N/A	N/A	
Sunway Construction	SCGB MK	Hold	26.3	26.3	26.3	26.3	26.3	
Consumer								
AEON Co. (M)	AEON MK	Buy	20.7	20.7	20.5	20.5	20.5	*-0.2*
Berjaya Food	BFD MK	Buy	N/A	N/A	N/A	N/A	N/A	
Carlsberg Brewery	CAB MK	Hold	18.2	18.2	18.2	18.2	18.2	
Heineken Malaysia	HEIM MK	Buy	21.6	21.6	21.6	21.6	21.6	
InNature	INNATURE MK	Buy	N/A	N/A	N/A	N/A	N/A	
Leong Hup Int'l	LHIB MK	Buy	50.4	50.4	50.4	N/A	50.9	*0.5*
MyNews Holdings	MNHB MK	Hold	N/A	N/A	N/A	N/A	N/A	
MR D.I.Y. Group (M)	MRDIY MK	Buy	31.4	31.4	31.4	31.4	31.4	
Nestle Malaysia	NESZ MK	Sell	19.4	19.4	19.3	19.3	19.3	*-0.1*
Padini Holdings	PAD MK	Buy	16.2	16.2	14.6	14.6	14.6	*-1.6*
QL Resources	QLG MK	Sell	41.6	41.1	41.1	41.1	41.1	*-0.5*
7-Eleven Malaysia	SEM MK	Hold	30.9	N/A	N/A	N/A	N/A	
Farm Fresh	FFB MK	Buy	N/A	N/A	N/A	N/A	N/A	
Gaming								
Genting Malaysia	GENM MK	Buy	27.7	27.7	27.7	27.7	27.7	
Genting Bhd	GENT MK	Buy	27.7	27.7	27.3	N/A	27.0	*-0.7*
Magnum	MAG MK	Hold	28.3	28.3	27.6	27.6	27.6	*-0.7*
Sports Toto	SPTOTO MK	Hold	30.8	31.1	29.1	29.1	29.1	*-1.7*
Healthcare/Gloves								
Hartalega	HART MK	Sell	17.6	17.6	16.6	16.6	17.1	-0.5
Kossan Rubber	KRI MK	Sell	20.0	20.0	19.6	19.6	14.6	-5.4
Top Glove	TOPG MK	Sell	24.4	24.4	22.8	22.8	23.1	-1.3
IHH Healthcare	IHH MK	Buy	30.5	30.6	30.6	30.6	34.7	4.2
KPJ Healthcare	KPJ MK	Hold	20.9	20.9	23.0	23.0	23.0	2.1
Optimax	OPTIMAX MK	Buy	N/A	N/A	N/A	N/A	N/A	
Logistics								
Capital A	CAPITALA MK	Buy	32.6	32.1	32.1	N/A	34.5	1.9
Malaysia Airports	MAHB MK	Hold	20.1	20.1	20.1	20.2	21.5	1.4

Source: Sustainalytics

Note: Companies with scores classified as N/A are not in Sustainalytics' coverage universe

Fig 18: Sustainalytics: risk score trend for MIBG coverage stocks in 2022 (cont'd)

Sector/ Company	BBG Ticker	Rating	Sustainalytics Risk Score (Annual Trend)					Score Momentum (YoY Dec)
			31 Dec 2021	31 Mar 2022	30 Jun 2022	30 Sep 2022	30 Dec 2022	
MISC Bhd	MISC MK	Hold	18.8	18.8	18.8	18.1	18.0	-0.8
Westports Holdings	WPRTS MK	Hold	11.2	11.2	11.2	10.4	10.4	-0.8
Swift Haulage	SWIFT MK	Buy	N/A	N/A	N/A	N/A	N/A	
Media								
Astro Malaysia	ASTRO MK	Hold	14.9	14.9	14.9	14.9	14.9	
Non-Bank Financials								
Allianz Malaysia	ALLZ MK	Buy	N/A	N/A	N/A	N/A	25.3	
Bursa Malaysia	BURSA MK	Hold	13.1	13.1	13.1	13.1	15.2	2.1
MNRB	MNRB MK	Hold				N/A	N/A	
RCE Capital	RCE MK	Hold	N/A	N/A	N/A	N/A	N/A	
Oil & Gas								
Bumi Armada	BAB MK	Hold	33.0	33.0	33.0	20.4	20.4	-12.6
Dialog Group	DLG MK	Buy	31.6	31.6	26.4	26.4	26.4	-5.2
Favelle Favco	FAVCO MK	Hold	N/A	N/A	N/A	N/A	N/A	
Hibiscus Petroleum	HIBI MK	Buy	N/A	N/A	N/A	N/A	N/A	
Icon Offshore	ICON MK	Buy	N/A	N/A	N/A	N/A	N/A	
Malaysia Marine	MMHE MK	Buy	N/A	N/A	N/A	N/A	N/A	
Sapura Energy	SAPE MK	Sell	36.4	36.4	35.3	35.3	35.3	-1.1
Velesto Energy	VEB MK	Sell	35.8	35.8	21.2	N/A	21.2	-14.6
Wah Seong	WSC MK	Buy	N/A	N/A	N/A	N/A	N/A	
Yinson Holdings	YNS MK	Buy	21.7	21.7	21.7	21.7	17.4	-4.3
Petrochemicals								
Petronas Chemicals	PCHEM MK	Hold	28.0	28.0	23.7	23.7	23.7	-4.3
Lotte Chemical Titan	TTNP MK	Sell	N/A	N/A	N/A	N/A	26.3	
Plantations								
Boustead Plantations	BPLANT MK	Hold	N/A	N/A	N/A	N/A	N/A	
Genting Plantations	GENP MK	Hold	43.3	43.3	43.3	42.6	42.6	-0.7
IOI Corporation	IOI MK	Hold	25.0	25.0	25.0	25.0	25.0	
KL Kepong	KLK MK	Buy	38.5	38.5	38.5	38.5	38.5	
Sime Darby Plant	SDPL MK	Hold	33.9	31.9	31.9	31.9	31.7	-2.2
Sarawak Oil Palms	SOP MK	Hold	N/A	N/A	N/A	N/A	36.3	
Ta Ann Holdings	TAH MK	Buy	N/A	N/A	N/A	27.5	27.5	
TH Plantations	THP MK	Sell	N/A	N/A	N/A	N/A	N/A	
TSH Resources	TSH MK	Sell	N/A	N/A	N/A	N/A	N/A	
Property								
Eco World Dev	ECW MK	Buy	25.5	N/A	N/A	N/A	20.6	-4.9
Eco World Int'l	ECWI MK	Buy	20.6	N/A	N/A	N/A	N/A	
Sime Darby Property	SDPR MK	Buy	14.2	14.2	14.2	14.2	14.2	
SP Setia	SPSB MK	Hold	17.4	17.4	17.4	17.4	17.4	
Sunway Bhd	SWB MK	Hold	13.6	13.6	13.6	13.6	13.6	
Tambun Indah Land	TILB MK	Hold	N/A	N/A	N/A	N/A	N/A	
UEM Sunrise	UEMS MK	Hold	15.9	15.9	15.9	N/A	15.9	
REITs								
Axis REIT	AXRB MK	Buy	14.9	14.9	14.9	14.9	14.9	
CapitaLand (M)	CLMT MK	Hold	N/A	N/A	N/A	N/A	N/A	
IGB REIT	IGBREIT MK	Hold	18.3	18.3	18.3	18.3	16.8	-1.5
KLCCP Stapled Group	KLCCSS MK	Hold	N/A	N/A	N/A	N/A	12.3	
Pavilion REIT	PREIT MK	Buy	18.2	18.2	18.2	N/A	16.2	-2.0
Al-Salam REIT	SALAM MK	Buy	N/A	N/A	N/A	N/A	N/A	
Sentral REIT	SENTRAL MK	Hold	N/A	N/A	N/A	N/A	N/A	

Source: Sustainalytics

Note: Companies with scores classified as N/A are not in Sustainalytics' coverage universe

Fig 18: Sustainalytics: risk score trend for MIBG coverage stocks in 2022 (cont'd)

Sector/ Company	BBG Ticker	Rating	Sustainalytics Risk Score (Annual Trend)					Score Momentum (YoY Dec)
			31 Dec 2021	31 Mar 2022	30 Jun 2022	30 Sep 2022	30 Dec 2022	
Sunway REIT	SREIT MK	Hold	15.0	15.0	15.0	15.0	15.0	
YTL Hospitality REIT	YTLREIT MK	Buy	24.0	24.0	24.0	N/A	N/A	
Renewables								
Cypark Resources	CYP MK	Buy	N/A	N/A	N/A	N/A	N/A	
Solarvest Holdings	SOLAR MK	Hold	N/A	N/A	N/A	N/A	N/A	
Software								
CTOS Digital	CTOS MK	Buy	N/A	N/A	35.6	35.6	35.6	
GHL Systems	GHLS MK	Hold	N/A	N/A	N/A	N/A	N/A	
MyEG Services	MYEG MK	Buy	21.5	21.5	21.5	21.5	21.5	
Ramssol	RAMSSOL MK	Buy	N/A	N/A	N/A	N/A	N/A	
Revenue Group	REVENUE MK	Hold	N/A	N/A	N/A	N/A	N/A	
Technology								
Aurelius Technologies	ATECH MK	Buy	N/A	N/A	N/A	N/A	N/A	
Frontken Corp.	FRCB MK	Buy	29.8	29.8	29.8	29.8	29.8	
Greatech Tech	GREATEC MK	Buy	19.1	19.1	19.1	19.1	19.1	
Globetronics Tech	GTB MK	Sell	31.3	31.3	31.3	N/A	N/A	
Inari Amertron	INRI MK	Buy	11.4	11.4	11.2	28.1	28.1	16.7
ViTrox Corporation	VITRO MK	Hold	24.6	24.6	24.6	24.6	24.6	
V.S. Industry	VSI MK	Hold	13.3	13.3	9.5	9.5	9.5	-3.8
Telcos								
Axiata Group	AXIATA MK	Buy	28.7	28.4	28.4	27.9	27.9	-0.8
DiGi.com	DIGI MK	Hold	23.9	24.1	24.1	24.1	24.1	0.2
Maxis Bhd	MAXIS MK	Hold	26.3	27.8	27.8	28.2	27.9	1.6
Telekom Malaysia	T MK	Buy	26.1	26.1	26.1	26.1	25.8	-0.3
TIME dotCom	TDC MK	Hold	26.2	26.2	26.2	26.2	26.2	
Utilities								
Gas Malaysia	GMB MK	Buy	N/A	N/A	N/A	N/A	33.4	
Mega First Corp.	MFCB MK	Buy	51.3	40.4	40.4	40.4	39.3	-12.0
Malakoff Corporation	MLK MK	Hold	43.9	43.9	43.9	N/A	43.9	
Petronas Gas	PTG MK	Hold	31.8	31.8	31.8	31.4	28.8	-3.0
Tenaga Nasional	TNB MK	Hold	38.0	38.0	38.2	38.1	38.1	0.1
YTL Power	YTLP MK	Hold	53.3	52.7	52.7	N/A	52.7	-0.6
Ranhill Utilities Bhd	RAHH MK	Buy	N/A	N/A	N/A	N/A	N/A	

Source: Sustainalytics
Note: Companies with scores classified as N/A are not in Sustainalytics' coverage universe

Over 1Q23, the trend re Sustainalytics risk scoring for Malaysia was broadly positive, as detailed in Fig 19 below. Among some of the bigger changes were:

- **Cahya Mata Sarawak (CMS MK):** overall ESG risk score improved from 48.3 (Severe) to 37.6 (High). Exposure risk scoring improved from 63.2 (High risk) to 53.6 (Medium) though this appears to be solely due to a change in Sustainalytics own overall subindustry exposure score. Management score rose to 33.6 (Average), from 25.9 (Average) previously, with improvements in the categories of Water Management programmes, Whistleblower programmes and the new category of Lobbying and Political Expense.

- **ViTrox Corp. (VITRO MK):** risk rating category improved from Medium to Low following a -10.3 decline in overall ESG risk score. While there was a slight improvement in Exposure score, the big change was in the Management score, from 20.2 (Weak) to 51.5 (Strong). The latter was scored better across all categories, with the biggest positive changes being for Eco-Design, Diversity programmes, Whistleblower programmes, ESG governance and the new category of Lobbying and Political Expense.

- **Eco World Dev. (ECW MK):** risk rating category improved from Medium to Low following a -10.2 decline in overall ESG risk score, which now makes ECW the lowest risk developer within our coverage (from highest risk previously). Exposure score was relatively flat but Management score jumped from 37.3 (Average) to 68.8 (Strong). It was indicated that ECW is now following industry best practice in managing material ESG issues, with significant improvements across all weighted management scores, key among which were Environmental Policy and the new category of Lobbying and Political Expense.

- **Tenaga (TNB MK):** risk rating category was unchanged at High but underlying overall ESG risk score improved to 31.8, from 38.1 previously. The improvement stemmed from a combination of reduced Exposure score of 59.4 (High), from 66.4 (High) previously, and slightly better management score of 49.6 (Average), from 45.3 (Average) previously. Exposure score improvement was driven by the categories of Resource Use and "Carbon – Own Operations", the latter underpinned by better results for Energy Supply Mix, Fossil Fuel Involvement and Carbon Solutions Offering. Management score upside came from higher scores for GHG reduction programme and Physical Climate risk management.

Fig 19: 1Q23 Sustainalytics data / scoring updates: highlights

Sector/ Company	BBG Ticker	Rating	Sustainalytics Risk Score (Quarterly Trend)				Score Momentum (QoQ 4Q22)
			31 Dec 2022	31 Jan 2023	28 Feb 2023	31 Mar 2023	
Automotive							
Sime Darby Bhd	SIME MK	-	25.8	26.2	26.2	24.4	-1.4
Banking							
Alliance Bank	ABMB MK	Buy	27.3	27.3	27.3	27.2	-0.1
AMMB Holdings	AMM MK	Buy	27.5	27.5	27.5	27.1	-0.4
CIMB Group Holdings	CIMB MK	Buy	19.5	19.2	19.2	19.2	-0.3
Construction							
Cahya Mata Sarawak	CMS MK	Buy	48.3	48.3	48.3	37.6	-10.7
Gamuda	GAM MK	Buy	35.3	35.3	35.3	34.0	-1.3
Consumer							
Nestle Malaysia	NESZ MK	Sell	19.3	19.3	19.5	19.5	0.2
Gaming							
Genting Malaysia	GENM MK	Buy	27.7	28.9	28.9	28.9	1.2
Healthcare/Gloves							
Top Glove	TOPG MK	Sell	23.1	20.3	20.3	20.3	-2.8
Media							
Astro Malaysia	ASTRO MK	Hold	14.9	14.9	14.9	13.4	-1.5
Oil & Gas							
Dialog Group	DLG MK	Buy	26.4	26.4	26.4	26.0	-0.4
Petrochemicals							
Petronas Chemicals	PCHEM MK	Hold	23.7	23.4	23.4	23.4	-0.3
Plantations							
IOI Corporation	IOI MK	Hold	25.0	25.2	23.3	23.3	-1.7
Sime Darby Plantation	SDPL MK	Hold	31.7	31.7	30.2	27.6	-4.1
Sarawak Oil Palms	SOP MK	Hold	36.3	36.3	33.0	33.0	-3.3
Property							
Eco World Development	ECW MK	Buy	20.6	20.6	10.4	10.4	-10.2
REITs							
Axis REIT	AXRB MK	Buy	14.9	14.0	14.0	14.0	-0.9
Sunway REIT	SREIT MK	Hold	15.0	12.7	12.7	12.7	-2.3
Software							
MyEG Services	MYEG MK	Buy	21.5	21.5	21.5	20.2	-1.3
Technology							
Frontken Corp.	FRCB MK	Buy	29.8	29.8	29.8	25.6	-4.2
ViTrox Corporation	VITRO MK	Hold	24.6	24.6	24.6	14.3	-10.3
Telcos							
Telekom Malaysia	T MK	Buy	25.8	25.8	25.8	27.8	2.0
TIME dotCom	TDC MK	Hold	26.2	26.2	23.9	23.9	-2.3
Utilities							
Malakoff Corporation	MLK MK	Hold	43.9	43.9	43.9	40.5	-3.4
Tenaga Nasional	TNB MK	Hold	38.1	38.1	31.8	31.8	-6.3

Source: Sustainalytics
Note: Companies with scores classified as N/A are not in Sustainalytics' coverage universe

ASEAN ESG Assessment: a work in progress

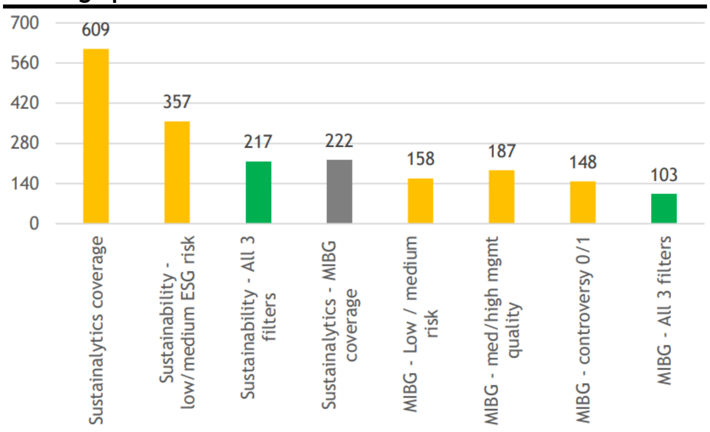
As articulated in MIBG Sustainability Research report "*ESG adoption expands, but pressure on flows + returns evident in 2022*", dated March 9, our Sustainability Research team have broadly updated on their maiden 'ASEAN ESG Alpha' series note ("*ASEAN – evidence of better ESG driving outperformance*", dated Nov 29,in which we undertook a study to assess ESG integration across the ASEAN-6 markets, back-testing of return profiles and performance versus the relevant regional and country MSCI indices over 1/3/5 years, sectors driving ESG performance and sector-specific performance. We used the Morningstar Sustainalytics Risk Ratings database as the base of our study.

Sustainalytics coverage of ASEAN-6 companies (listed in both home and international bourses) has increased to 628 from 475 companies in our exercise six months back. Within these, the companies listed in the home markets have increased to 609 vs 475 previously. To arrive at our basket of low/medium ESG risk companies we apply the following (unchanged vs. Aug) filters:

1. Sustainalytics ESG risk ratings (Negligible, Low and Medium risk only);
2. Sustainalytics Controversy score (no mention and score 1 only); and
3. Sustainalytics Management Quality rating (high and average only).

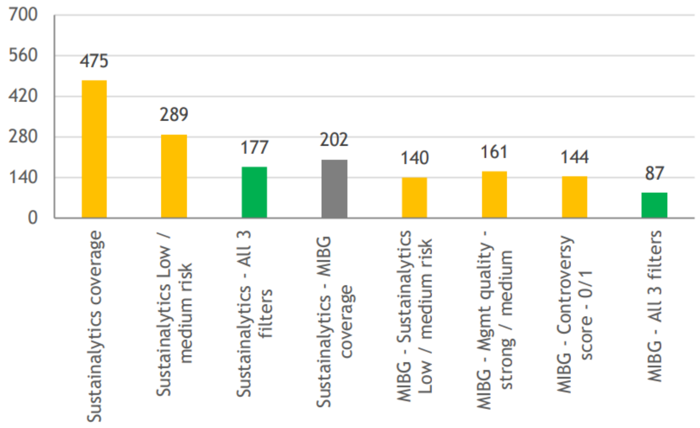
There are 225 companies (36% of total) out of the total 628 companies, and 217 companies (36% of the total) out of the 609 home market-listed companies, that are compliant with the above three filters. Of the 222 Sustainalytics-covered companies that are also covered by MIBG, per Fig 20 below, only 103 (46%) of the latter satisfy all three filter requirements i.e. deemed to be low/medium ESG risk companies (this compares to 87 companies 9 months earlier, as at March 2022 per Fig 21). Further, of these 103 companies within the MIBG research coverage universe, Malaysia accounts for 38 companies (Fig 22; see Appendix 2 for the detailed list), Singapore has 21 companies (Fig 23), Thailand has 24 companies (Fig 24), Indonesia has 7 (Fig 25), Philippines has 12 (Fig 26) and Vietnam has 1 company (Fig 27) in this filtered list.

Fig 20: Dec 2022: 36% of Sustainalytics and 46% of MIBG coverage possess the best ESG characteristics



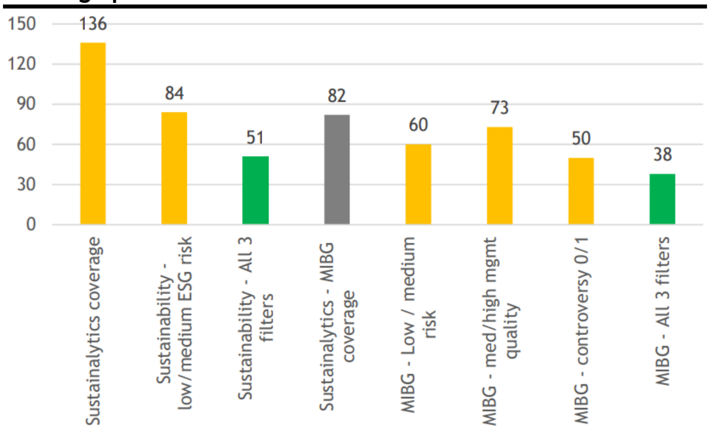
Source: Sustainalytics, Maybank IBG Research

Fig 21: Mar 2022: 37% of Sustainalytics and 43% of MIBG coverage possess the best ESG characteristics



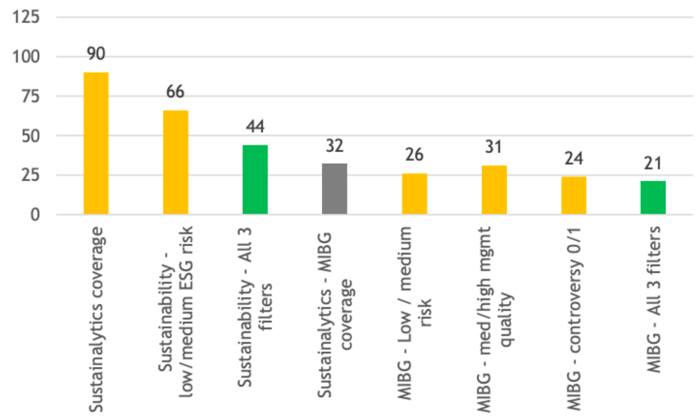
Source: Sustainalytics, Maybank IBG Research

Fig 22: Malaysia (Dec 2022): 38 companies out of 82 MIBG coverage pass all three filters



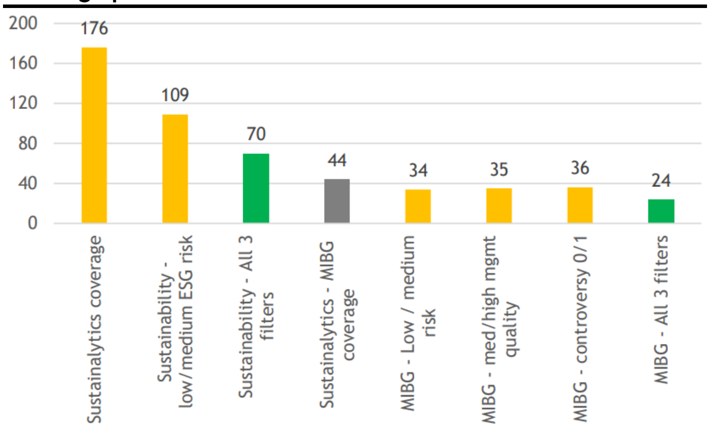
Source: Sustainalytics, Maybank IBG Research

Fig 23: Singapore (Dec 2022): 21 companies out of 32 MIBG coverage pass all the three filters



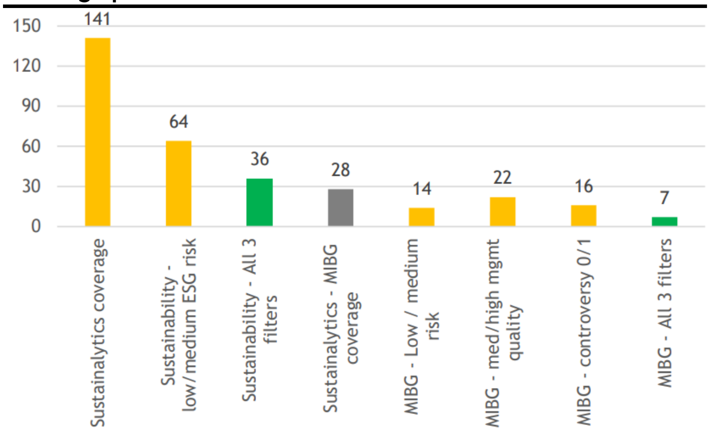
Source: Sustainalytics, Maybank IBG Research

Fig 24: Thailand (Dec 2022): 24 companies out of 44 MIBG coverage pass all three filters



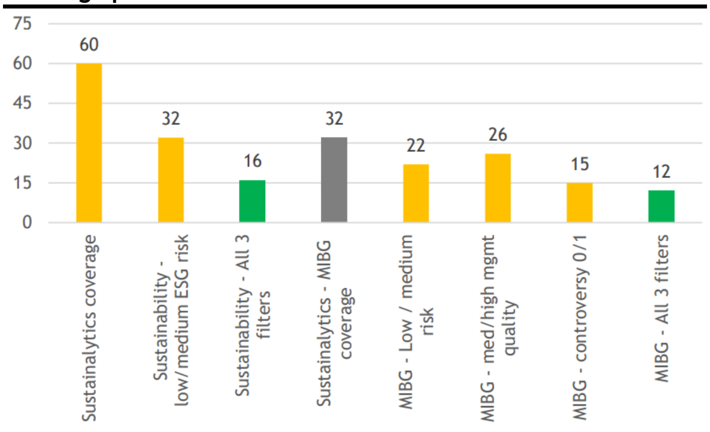
Source: Sustainalytics, Maybank IBG Research

Fig 25: Indonesia (Dec 2022): 7 companies out of 28 MIBG coverage pass all the three filters



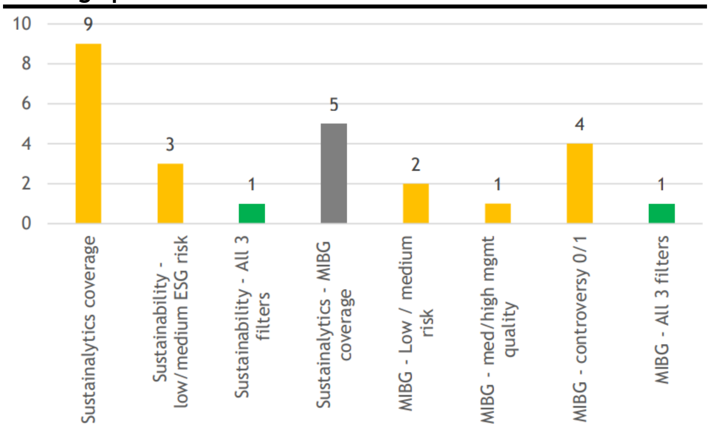
Source: Sustainalytics, Maybank IBG Research

Fig 26: Philippines (Dec 2022): 12 companies out of 32 MIBG coverage pass all three filters



Source: Sustainalytics, Maybank IBG Research

Fig 27: Vietnam (Dec 2022): only 1 company out of 5 MIBG coverage pass all the three filters



Source: Sustainalytics, Maybank IBG Research

Turning to performance, to better calculate under/outperformance of companies against the MSCI regional index, we leave out companies which are listed in international bourses - this brings down the number of filters-compliant companies to 217 (vs. 225 total) out of 609 listed companies in the home markets. The 8 companies excluded are Singapore-based companies Grab, UP Fintech and Sea listed in the US, and XP Power listed in London; Thailand-based Thai Beverage Public Co and Indonesia-based Bumitama Agri Ltd listed in Singapore; unlisted Mapletree Commercial Trust and BW LPG listed on the OSL Exchange.

As detailed in Fig 28 below, the 217 companies' outperformance against the MSCI ASEAN index was 6.8%/9.2%/5.6% for 1-3-5 years on a market cap weighted basis. On a country-specific basis, where the comparative benchmark is the respective MSCI country index, relative outperformance was also broad-based and significant. This appears to reinforce the conclusion of our maiden study in Aug 2022 that low/medium ESG risk companies generally out-perform the benchmark index due to favorable attributes and less volatility. Interestingly, though, a similar exercise for companies which only satisfy the first filter (i.e. Sustainalytics ESG risk score is negligible, low or medium) – 357 companies in total – shows even greater outperformance i.e. the 357 companies outperformed the MSCI ASEAN Index by 9.5%/9.1%/6.3% over 1-3-5 years on a market cap weighted basis.

Fig 28: Return analysis of ASEAN 6 companies listed in local exchanges within Sustainalytics universe

		MCAP weighted return								
		MSCI			annualised returns			Out/underperformance		
Particulars	no of companies	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret
Sustainalytics ESG risk score -- low/medium/negligible										
All companies	357	-2.1%	-3.4%	-4.1%	4.1%	5.7%	5.4%	6.3%	9.1%	9.5%
Malaysia	84	-3.3%	-2.9%	-5.8%	1.1%	2.3%	-2.5%	4.4%	5.2%	3.2%
Singapore	66	-1.9%	-4.5%	-11.0%	3.8%	4.2%	7.0%	5.7%	8.7%	17.9%
Thailand	108	-0.8%	-2.7%	5.2%	7.7%	13.4%	13.3%	8.5%	16.1%	8.1%
Indonesia	64	-0.2%	-0.3%	4.2%	5.0%	4.6%	9.0%	5.2%	4.9%	4.8%
Philippines	32	-5.5%	-6.7%	-13.5%	-2.2%	-3.3%	-12.7%	3.2%	3.5%	0.8%
Vietnam	3	-5.4%	-7.0%	-43.9%	6.0%	-3.4%	-33.7%	11.4%	3.6%	10.1%
ESG risk score -- low/medium/negligible ESG risk score + controversy (no or 1) + management (medium or strong)										
All companies	217	-2.1%	-3.4%	-4.1%	3.5%	5.8%	2.7%	5.6%	9.2%	6.8%
Malaysia	51	-3.3%	-2.9%	-5.8%	1.8%	3.0%	-3.1%	5.1%	5.9%	2.7%
Singapore	44	-1.9%	-4.5%	-11.0%	1.6%	-0.4%	0.2%	3.5%	4.1%	11.1%
Thailand	69	-0.8%	-2.7%	5.2%	7.7%	14.4%	14.0%	8.5%	17.1%	8.8%
Indonesia	36	-0.2%	-0.3%	4.2%	0.2%	1.1%	-1.0%	0.4%	1.4%	-5.3%
Philippines	16	-5.5%	-6.7%	-13.5%	-1.6%	-3.8%	-17.0%	3.8%	2.9%	-3.5%
Vietnam	1	-5.4%	-7.0%	-43.9%	25.2%	30.6%	-2.0%	30.6%	37.6%	41.8%

Source: Sustainalytics, Maybank IBG Research, the above covers a period up to 31 Dec 2022

A similar picture emerges when we look at the performance of MIBG coverage within the Sustainalytics universe, of which there are 158 companies which have a Sustainability ESG risk rating of negligible/low/medium risk i.e. satisfy the first filter only. Per Fig 29 below, these 158 companies outperformed the MSCI ASEAN Index by 8.5%/5.4%/4.8% over 1-3-5 years on a market cap weighted basis. This compares to the 103 companies under MIBG coverage that satisfy all three filters where relative outperformance was a comparatively less impressive but still significant 2.2%/2.6%/2.5% for 1-3-5 years on a market cap weighted basis.

The above-flagged performance divergence between single-filter and all-filters stock baskets appears to suggest that investors are only considering the headline risks (the first filter) while assessing ESG risks. They are not as yet digging deeper to look at other parameters such as management quality and low controversies, which we have considered in our filtering (per our aforementioned second and third filters). This could explain why higher ESG risk rated companies have done relatively better than our filtered companies' in the short term. Contributing to this sub-optimal outcome is the fact that the amount of ESG-driven fund flow is lower in the region due to lack of more stringent investment regulations (ASEAN taxonomy yet to be finalized) and corporate ESG targets/disclosures, hence discouraging greater sophistication and granularity in gauging ESG factors /quality.

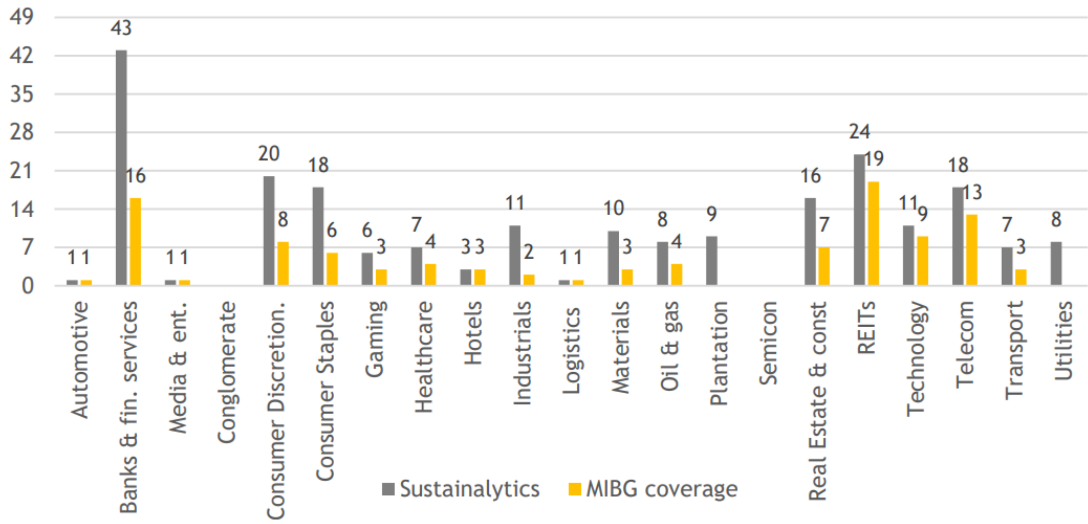
Fig 29: Sustainalytics – MIBG universe – Return analysis of ASEAN 6 companies listed in local exchanges

		MCAP weighted return								
		MSCI			annualised returns			Out/underperformance		
Particulars	no of companies	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret
Sustainalytics ESG risk score -- low/medium/negligible										
All companies	158	-2.1%	-3.4%	-4.1%	2.7%	2.1%	4.4%	4.8%	5.4%	8.5%
Malaysia	60	-3.3%	-2.9%	-5.8%	0.4%	1.1%	-3.9%	3.7%	4.0%	1.9%
Singapore	26	-1.9%	-4.5%	-11.0%	5.2%	5.7%	9.6%	7.0%	10.2%	20.6%
Thailand	34	-0.8%	-2.7%	5.2%	1.0%	-1.4%	7.1%	1.8%	1.3%	1.8%
Indonesia	14	-0.2%	-0.3%	4.2%	4.5%	2.6%	11.6%	4.7%	2.9%	7.4%
Philippines	22	-5.5%	-6.7%	-13.5%	-1.2%	-2.0%	-13.9%	4.2%	4.8%	-0.4%
Vietnam	2	-5.4%	-7.0%	-43.9%	17.0%	19.4%	-17.6%	22.4%	26.4%	26.3%
ESG risk score -- low/medium/negligible Sustainalytics ESG risk score + controversy (no or 1) + management (medium or strong)										
All companies	103	-2.1%	-3.4%	-4.1%	0.4%	-0.8%	-1.9%	2.5%	2.6%	2.2%
Malaysia	38	-3.3%	-2.9%	-5.8%	2.0%	3.1%	-2.5%	5.3%	5.9%	3.2%
Singapore	21	-1.9%	-4.5%	-11.0%	2.7%	0.5%	2.0%	4.6%	4.9%	12.9%
Thailand	24	-0.8%	-2.7%	5.2%	0.7%	-2.1%	5.9%	1.5%	0.6%	0.6%
Indonesia	7	-0.2%	-0.3%	4.2%	-9.0%	-9.1%	-8.2%	-8.8%	-8.7%	-12.5%
Philippines	12	-5.5%	-6.7%	-13.5%	-0.6%	-1.8%	-21.0%	4.8%	4.9%	-7.5%
Vietnam	1	-5.4%	-7.0%	-43.9%	25.2%	30.6%	-2.0%	30.6%	37.6%	41.8%

Source: Sustainalytics, Maybank IBG Research, the above covers a period up to 31 Dec 2022

In terms of sector breakdown, per Fig 30 below, of the aforementioned filtered 103 companies under coverage, 26 companies are REITs, real estate and construction industry. Banks and financial services are 16 companies, 14 companies from the consumer discretionary and staples, 13 companies from the telecommunications industry and 9 from technology industry.

Fig 30: Sector-wise split of companies that satisfy all 3 filters

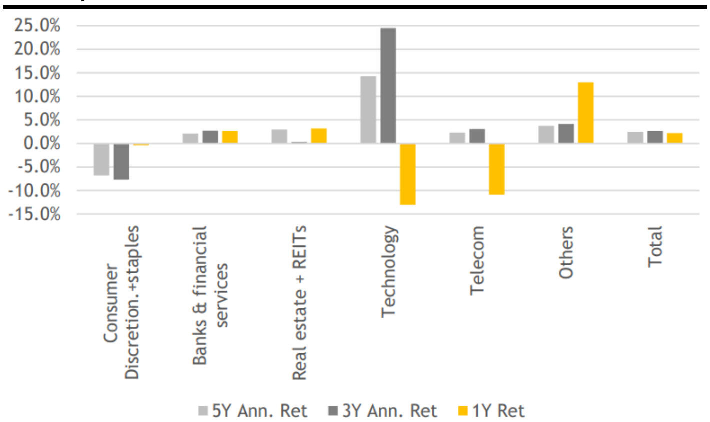


Source: Sustainalytics, Maybank IBG Research

Per sector relative performance detailed in Fig 31 below, the stocks in the consumer discretionary/staples sectors have been laggards across 1-3-5 years, reporting negative returns. Banking & financial services returns are inline or slightly ahead of overall returns. Real estate & REITs outperformed in 1/5 years but underperformed in 3 years. Technology has outperformed materially in 3/5 years by 24.5%/14.3% but underperformed in 1 year. Telecommunications has underperformed in 1-year and marginally outperformed in 3/5 years. Others, which include hotels & services, materials, oil & gas, healthcare, gaming, transport and industrials, materially outperformed in 1-year, with outperformance in 3/5 years.

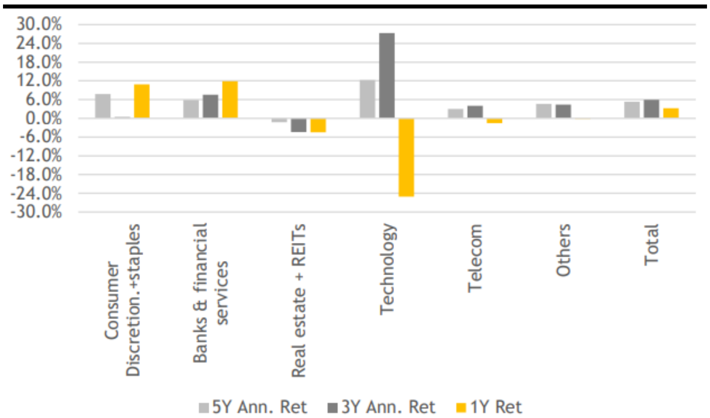
The material outperformance of the "Others" segment was driven by hotels & services, healthcare, gaming and transport, which can be attributed to the full reopening of regional economies into 2022 after two years of sporadic pandemic-related lockdowns. For Malaysia specifically (Fig 32), relative outperformance is broadly observed across the three time periods for all sectors except REITs, while the technology sector has seen material underperformance over 1 year, reflecting poor investor sentiment in the face of sharply rising interest rates and less favourable demand-supply dynamics in the aftermath of the pandemic.

Fig 31: MIBG coverage (103 companies): Technology, Telekom underperformance in 1-year period after outperformance in 3/5 years, Consumer Discretionary/Staples underperform across period



Source: Sustainalytics, Maybank IBG Research

Fig 32: Malaysia (38 companies): Consumer and Banks drive 1-year outperformance, Technology and REITs underperform



Source: Sustainalytics, Maybank IBG Research

MY ESG Portfolio: continuing to outperform

To recap on our ESG Portfolio stock selection process, we combined the granular insights from the ESG 1.0 Tear Sheets with data and risk scoring from Sustainalytics to generate our maiden 16-stock ESG Portfolio in April 2021. We have since, per our recently-published Malaysia ESG Compendium 2022 "*Shifting into higher gear*" report dated Nov 29, utilised a combination of insights from our completed ESG 2.0 Tear Sheets and the three aforementioned Sustainalytics-based stock filters namely **i)** ESG risk ratings (negligible-low-medium only); **ii)** quality of management (average-high only); **and iii)** level of controversies (0-1 score only), to guide us in refreshing the constituent make-up of our ESG portfolio, together with consideration for the following combination of factors and parameters:

- **Analyst stock rating:** as ESG factors lend support and de-risk existing business models that are fundamental drivers of long-term shareholder returns, we include both BUY and HOLD-rated companies with attractive business models and long-term growth outlooks, but exclude SELL-rated stocks, the latter notably including some companies with attractive ESG credentials / scores such as filters-satisfying Nestle and UEM Sunrise;

- **Sustainalytics risk score and category:** for many of the constituents we have chosen, there is clear positive correlation or cross-check between the analysts' fundamental stock rating and the risk score from the external ESG research provider – examples are across a diverse set of sectors and include BUY-rated names like Bermaz and Inari, as well as HOLD-rated Westports and Sunway, all of which have strong Sustainalytics risk scores /low risk ratings;

- **Momentum assessment:** while Sustainalytics momentum indicators are useful for flagging near-term changes in risk score, and where they are coming from (i.e. exposure or management issues), the analysts may, from their frequent dialogues with company management and deep understanding of the underlying business, have greater insights into management's commitment and plans to address and improve the company's ESG factors. This bottom-up, forward-looking understanding underscores portfolio picks that are not currently in the filtered 38 stocks list (see Appendix 2 for full list) but show strong signs of joining this list over the medium-term i.e. where current relatively high ESG risk scores have scope to improve significantly on positively pivoting business models and improving ESG factor measurements and disclosures.

  We have chosen 5 such "momentum" stocks to include in our refreshed ESG portfolio notwithstanding these names not satisfying all the 3 aforementioned Sustainalytics filters, namely telco Telekom (controversy score of 2 relating to Bribery and Corruption events over the past decade, the last being in 2019), banking group RHB Bank (controversy score of 2 relating to being on the 2022 Global Coal Exit List over financial relationships with the coal industry), construction company Gamuda (high overall ESG Risk Score / Rating), shipper MISC (controversy score of 2 relating to Emissions, Effluents and Waste issues from environmentally-damaging shipbreaking activities, the last such report being in Feb 2022) and tech play ViTrox (weak management score related to poor disclosures, and lack of policies and programmes to manage risks related to its material ESG issues).

- **FTSE4Good membership:** considering whether portfolio constituent stocks are in Bursa's FTSE4Good Bursa Malaysia Index is a useful cross-check - recall this index adopts best-in-class positive screening and inclusion criteria are consistent with the global ESG model that FTSE has developed. However, we note that the 30-stock KLCI substantially overlaps with the 98-stock FTSE4Good index (as at end-Dec 2022; 26 of the KLCI constituent stocks are also in the FTSE4Good) – hence, there is a very high positive correlation between the two indices – therefore, for investors looking to capture differentiated performance vs. the KLCI benchmark, a more refined ESG portfolio appears to be required; and

- **Risk scores and ESG Tear Sheet completion:** we have required constituent stocks to have both a Sustainalytics risk score as well as completed ESG Tear Sheets (1.0 and 2.0). We note that this results at the moment in exclusion of smaller-cap stocks with prima facie promising ESG underpinnings such as Allianz and Aurelius Technologies.

In the most recent iteration of the ESG Portfolio, as contained in our 4Q22 Results Roundup report ("*Downbeat Finish*", dated March 5), we removed **Petronas Chemicals (PChem)** following its' rating downgrade to SELL (see report "*4Q22: Fine margins facing a tight squeeze*", dated Feb 24, for details). However, with its recent rating upgrade to HOLD per update report "Mixed Fortunes", dated April 4, we have re-included this large-cap – hence, the 15-stock ESG portfolio is again similar to that in the Malaysia ESG Compendium 2022 "*Shifting into higher gear*" report dated Nov 29. As mentioned, and as flagged in Fig 33, while the bulk of our ESG Portfolio (10 out of the 15 stocks) are constituted of stocks which satisfy the three quantitative/qualitative Sustainalytics-derived filters as previously articulated, we have also included the 5 "momentum" stocks (**MISC**, **RHB**, **Telekom**, **Gamuda**, **ViTrox**) which, while they do not immediately satisfy all three filters, are, per our on-the-ground research assessment, showing positive momentum re closing the implied disclosure and operational gaps to improve their ESG metrics / scoring over the medium-term.

Fig 33: MY ESG portfolio: recommended constituents

Stock	BBG Code	Mkt Cap. (MYRm)	Rec.	Price (MYR)	TP (MYR)	PER (x) FY23E	PER (x) FY24E	ROE (%) FY23E	Yield (%) FY23E	Risk Rating*	Risk Score*	Management Rating*	Controversy Score*	MIBG ESG Score	In FBM4G Index?^
Filtered Stocks															
Petronas Chemicals	PCHEM MK	59,200	Hold	7.40	7.35	13.2	11.3	10.9%	3.8%	23.4	Medium	Strong	0	69	Yes
CelcomDigi	CDB MK	51,501	Hold	4.39	4.60	24.8	24.5	12.6%	3.6%	24.1	Medium	Average	0	67	Yes
Hong Leong Bank	HLBK MK	43,875	Buy	20.24	24.10	10.7	10.1	12.0%	3.3%	18.7	Low	Strong	0	76	Yes
Westports	WPRTS MK	12,208	Hold	3.58	3.85	15.1	14.4	23.3%	5.0%	10.4	Low	Strong	1	62	Yes
Inari	INRI MK	8,735	Buy	2.34	3.20	22.0	19.7	15.7%	3.6%	28.1	Medium	Average	0	70	Yes
Yinson	YNS MK	7,731	Buy	2.66	5.05	14.1	9.3	11.7%	0.8%	17.4	Low	Strong	1	78	Yes
Sunway	SWB MK	7,676	Hold	1.57	1.67	11.5	12.1	6.4%	2.7%	13.6	Low	Strong	0	74	No
Bursa	BURSA MK	5,204	Hold	6.43	6.60	21.5	20.2	29.5%	4.4%	15.2	Low	Strong	0	73	Yes
Axis REIT	AXRB MK	3,325	Buy	1.91	2.16	19.1	15.7	6.3%	4.7%	14.0	Low	Average	0	59	Yes
Bermaz Auto	BAUTO MK	2,777	Buy	2.38	3.55	9.5	8.6	35.3%	7.9%	10.8	Low	Average	0	65	Yes
Momentum Stocks															
MISC	MISC MK	31,960	Hold	7.16	7.19	13.2	13.3	6.3%	4.6%	18.0	Low	Strong	2	71	Yes
RHB Bank	RHBBANK MK	24,422	Buy	5.75	7.10	8.4	7.9	10.1%	7.4%	25.8	Medium	Average	2	65	Yes
Telekom	T MK	19,110	Buy	5.00	6.50	12.9	12.8	17.1%	3.9%	27.8	Medium	Average	2	67	Yes
Gamuda	GAM MK	11,222	Buy	4.22	4.60	14.3	18.0	16.7%	11.8%	34.0	High	Average	1	68	No
ViTrox	VITRO MK	7,455	Hold	7.89	8.60	35.3	27.6	20.5%	0.7%	14.3	Low	Strong	0	55	Yes

Source: Maybank IBG Research, Sustainalytics, FactSet, Bloomberg (as of 13 Apr)
** derived from leading external ESG research & data provider Sustainalytics*
^ FTSE4Good Bursa Malaysia (F4GBM) Index (98 constituents as of Dec 2022)

Turning to performance, in Fig 34 below, we have updated (to end-March 2023) the backtesting of the performance of the 15-stock ESG Portfolio against Sustainalytics and MIBG Malaysia overall and filtered coverage. When considering relative performance vs. the benchmark MSCI Malaysia, both overall and filtered coverage generated significantly superior returns. Further, while there has been a narrowing of the outperformance gap since our last update (for period to end-Dec 2022 per 4Q22 Results Roundup report "*Downbeat Finish*", dated March 5), the MIBG 15-stock ESG portfolio continues to modestly outperform the 51 filtered Sustainalytics stocks. In sum, the backtested 15-stock ESG Portfolio generated returns of -4.3%/11.5%/1.4% over 1/3/5 years, beating both overall market coverage baskets as well as the 38 filtered Malaysian stocks covered by MIBG.

Fig 34: Backtesting our maiden 15-stock ESG Portfolio performance vs. both MSCI and broad coverage (end-Mar 2023)

		MCAP weighted return								
		MSCI Malaysia			annualised returns			Out/underperformance		
	no of companies	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret
Malaysia										
Total companies - Sustainalytics	141	-5.6%	3.0%	-10.9%	-0.1%	12.0%	-4.6%	5.5%	9.0%	6.3%
ESG risk score -- low/medium + controversy (no or 1) + mgmt (medium or strong)	51	-5.6%	3.0%	-10.9%	-0.3%	11.8%	-5.3%	5.3%	8.8%	5.6%
MIBG coverage (overlaps with Sustainalytics)	**87**	**-5.6%**	**3.0%**	**-10.9%**	**-1.4%**	**9.2%**	**-6.6%**	**4.2%**	**6.2%**	**4.3%**
ESG risk score -- low/medium + controversy (no or 1) + mgmt (medium or strong)	38	-5.6%	3.0%	-10.9%	-0.6%	11.5%	-6.3%	5.0%	8.5%	4.6%
MIBG 15-stock ESG Portfolio	15	-5.6%	3.0%	-10.9%	1.4%	11.5%	-4.3%	7.0%	8.5%	6.6%

Source: Sustainalytics, Maybank IBG Research

In conclusion, the ESG Tear Sheets 1.0 and 2.0 for the 15 ESG Portfolio constituent stocks, as well as all MIBG Malaysia Research coverage with market capitalisation above USD1bn (summarised in Fig 35 below) can be referenced in our comprehensive Malaysia ESG Compendium 2022 "*Shifting into higher gear*" report dated Nov 29; refer to pages 45-147 for details on ESG qualitative fundamentals and quantitative Sustainalytics and MIBG proprietary scoring, and how these relate to risks and opportunities that impact the core business model.

Fig 35: MIBG Malaysia Research Coverage: stocks with >USD1b market cap. (46 stocks; ranked by MIBG ESG Score)

Stock	BBG Code	Mkt Cap. MYRm	Rec.	Price MYR	TP MYR	PER (x) FY22E	PER (x) FY23E	ROE (%) FY23E	Yield (%) FY23E	MIBG ESG Score (total)	*Quant Score*	*Qual Score*	*Target Score*	Sust. Risk Score*	In FBM4G Index? ^
Yinson Holdings	YNS MK	7,615	Buy	2.66	5.05	14.1	9.3	11.7%	0.8%	78	56	100	100	17.4	Yes
Hong Leong Bank	HLBK MK	43,918	Buy	20.24	24.10	10.7	10.1	12.0%	3.3%	76	69	67	100	18.7	Yes
Sunway	SWB MK	7,627	Hold	1.57	1.67	11.5	12.1	6.4%	2.7%	74	47	100	100	13.6	Yes
Bursa Malaysia	BURSA MK	5,220	Hold	6.43	6.60	21.5	20.2	29.5%	4.4%	73	80	100	33	15.2	Yes
MISC Bhd	MISC MK	31,960	Hold	7.16	7.19	13.2	13.3	6.3%	4.6%	71	43	100	100	18.0	Yes
Sunway REIT	SREIT MK	5,514	Hold	1.62	1.54	16.6	15.0	6.6%	5.4%	71	50	83	100	12.7	Yes
Inari Amertron	INRI MK	8,996	Buy	2.34	3.20	22.0	19.7	15.7%	3.6%	70	47	86	100	28.1	Yes
IOI Corporation	IOI MK	23,584	Hold	3.86	3.85	16.8	18.1	12.4%	3.6%	69	39	100	100	23.3	Yes
Petronas Chemicals	PCHEM MK	59,200	Hold	7.40	7.35	13.2	11.3	10.9%	3.8%	69	39	100	100	23.4	Yes
Axiata Group	AXIATA MK	27,537	Buy	3.00	3.80	26.8	24.0	4.3%	3.4%	68	62	83	67	27.9	Yes
Gamuda	GAM MK	10,850	Buy	4.22	4.60	14.3	18.0	16.7%	11.8%	68	53	100	67	34.0	No
CIMB Group	CIMB MK	55,245	Buy	5.20	6.60	8.1	7.4	10.3%	6.0%	67	50	67	100	19.2	Yes
CelcomDigi	CDB MK	51,501	Hold	4.39	4.60	24.8	24.5	12.6%	3.6%	67	43	83	100	24.1	Yes
My EG Services	MYEG MK	5,665	Hold	0.88	0.93	18.2	17.3	16.9%	1.7%	67	67	33	100	20.2	Yes
Telekom Malaysia	T MK	18,957	Buy	5.00	6.50	12.9	12.8	17.1%	3.9%	67	50	67	100	27.8	Yes
Hong Leong FG	HLFG MK	20,729	Buy	18.52	22.20	8.0	7.5	10.4%	2.7%	66	73	17	100	27.4	Yes
RHB Bank	RHBBANK MK	24,210	Buy	5.75	7.10	8.4	7.9	10.1%	7.4%	65	80	0	100	25.8	Yes
AMMB Holdings	AMM MK	12,170	Buy	3.74	5.15	6.7	6.4	9.8%	5.1%	63	30	8	25	27.1	Yes
IJM Corp	IJM MK	5,726	Buy	1.65	2.14	18.9	16.3	2.2%	2.6%	63	44	83	80	33.3	No
Public Bank	PBK MK	77,255	Hold	3.99	4.60	11.6	11.2	12.9%	4.8%	63	60	33	100	26.8	Yes
Tenaga Nasional	TNB MK	52,813	Hold	9.15	10.00	10.5	10.0	8.3%	5.2%	63	25	100	100	31.8	Yes
Westports Holdings	WPRTS MK	12,447	Hold	3.58	3.85	15.1	14.4	23.3%	5.0%	62	30	88	100	10.4	Yes
Hartalega	HART MK	7,382	Sell	2.13	1.18	112.7	64.7	1.3%	0.5%	61	47	50	100	17.1	Yes
KLCCP Stapled Group	KLCCSS MK	12,439	Hold	6.93	6.72	16.6	16.3	5.4%	5.2%	61	47	50	100	12.3	No
Malaysia Airports	MAHB MK	11,249	Hold	7.09	7.15	43.0	20.0	4.2%	1.1%	61	38	67	100	21.5	Yes
Greatech Technology	GREATEC MK	6,139	Buy	4.82	6.70	32.3	24.9	24.2%	0.0%	57	65	100	0	19.1	Yes
Dialog Group	DLG MK	13,373	Buy	2.40	4.90	22.4	20.6	11.1%	1.7%	56	27	71	100	26.0	Yes
Nestle (Malaysia)	NESZ MK	31,986	Sell	136.90	119.30	44.1	41.4	114.9%	2.2%	55	26	67	100	19.5	No
Petronas Gas	PTG MK	33,243	Hold	16.80	17.00	18.6	18.4	13.2%	4.3%	55	19	83	100	28.8	Yes
ViTrox Corp	VITRO MK	7,445	Hold	7.89	8.60	35.3	27.6	20.5%	0.7%	55	67	86	0	14.3	Yes
Heineken Malaysia	HEIM MK	8,163	Buy	26.72	30.80	18.9	18.5	85.7%	5.3%	54	50	33	83	21.6	No
Alliance Bank	ABMB MK	5,217	Buy	3.32	4.00	7.7	7.3	9.9%	6.4%	52	21	67	100	27.2	Yes
Carlsberg Malaysia	CAB MK	6,684	Hold	21.96	24.70	19.4	18.6	nm	4.2%	52	21	67	100	18.2	Yes
Kuala Lumpur Kepong	KLK MK	23,143	Buy	21.66	23.90	15.4	16.6	10.2%	3.9%	52	28	50	100	38.5	Yes
MR D.I.Y. Group (M)	MRDIY MK	15,376	Buy	1.63	2.40	26.7	22.4	33.2%	1.8%	52	29	67	83	31.4	Yes
Sime Darby Plantation	SDPL MK	29,807	Hold	4.32	4.39	17.7	18.1	9.8%	2.8%	52	35	83	50	27.6	Yes
Genting Malaysia	GENM MK	14,963	Buy	2.64	2.97	13.6	13.6	8.6%	6.8%	51	36	33	100	28.9	Yes
Top Glove	TOPG MK	9,208	Sell	1.15	0.57	nm	nm	nm	0.0%	47	11	67	100	20.3	No
Genting Bhd	GENT MK	17,828	Buy	4.65	5.65	12.7	9.3	4.4%	4.3%	46	15	67	86	27.0	No
QL Resources	QLG MK	13,945	Sell	5.80	5.40	37.9	34.9	13.5%	0.6%	45	63	33	20	41.1	No
Bank Islam Malaysia	BIMB MK	4,825	Hold	2.14	2.50	8.5	8.0	nm	5.2%	43	36	0	100	29.0	No
YTL Power	YTLP MK	7,576	Hold	0.94	1.00	10.9	9.0	4.7%	4.8%	42	9	50	100	52.7	No
TIME dotCom	TDC MK	10,186	Hold	5.53	5.70	22.9	22.4	13.5%	2.6%	38	67	17	0	23.9	No
Genting Plantations	GENP MK	5,383	Hold	6.00	6.30	18.1	19.0	5.6%	3.3%	35	6	67	60	42.6	Yes
IGB REIT	IGBREIT MK	6,212	Hold	1.72	1.70	16.7	16.2	9.5%	5.6%	31	20	33	50	16.8	No
Maxis Bhd	MAXIS MK	32,260	Hold	4.17	4.00	23.8	22.2	22.2%	4.8%	31	46	33	0	27.9	Yes

** derived from leading external ESG research & data provider Sustainalytics*

^ FTSE4Good Bursa Malaysia (F4GBM) Index (98 constituents as of Dec 2022)

Source: Sustainalytics, Maybank IBG Research. Bloomberg (as at 13 Apr)

APPENDIX 1: ESG Scoring Methodology

We evaluate the ESG ratings based on quantitative, qualitative and ESG targets. We assign a score for each of these three parameters. The overall rating is based on the weighted average of the scores: quantitative (50%), qualitative (25%) and ESG target (25%).

For the quantitative, qualitative and ESG target, the sub-parameters are assigned a score - '0' for data not available, '+1' for improving trajectory, positive change, 'Yes', better than peers or a positive number if historical is not available and '-1' for declining trajectory, negative change, 'No', lower than peers or a negative number. The total of the scores of all the sub-parameters is divided by the total number of sub-parameters is the score of each of the three parameters.

The sub-parameters may be different for different industries depending on the key areas to monitor for each industry. A company should achieve a minimum score of 50 for an average ESG rating.

APPENDIX 2: Malaysia: MIBG coverage companies satisfying all 3 filters

List of the 39 companies within Maybank IBG Research coverage that satisfy all the three filters namely:

1. Sustainalytics ESG risk ratings (negligible, Low and medium risk only)
2. Controversy score (no mention and score 1 only)
3. Management quality (high and average only)

Stock	BBG Code	Mkt Cap. (MYRm)	Rec.	Price (MYR)	TP (MYR)	Sustainalytics Risk Score	Management Quality	Controversy Score
Public Bank	PBK MK	77,449	Hold	3.99	4.60	Medium	Average	1
Petronas Chemicals	PCHEM MK	59,200	Hold	7.40	7.35	Medium	Strong	0
Celcomdigi	DIGI MK	51,501	Hold	4.39	4.60	Medium	Average	0
Hong Leong Bank	HLBK MK	43,875	Buy	20.24	24.10	Low	Strong	0
Petronas Gas	PTG MK	33,243	Hold	16.80	17.00	Medium	Strong	1
Nestle (Malaysia)	NESZ MK	32,103	Sell	136.90	119.30	Low	Strong	1
Hong Leong Financial	HLFG MK	21,210	Buy	18.52	22.20	Medium	Average	0
Genting Malaysia	GENM MK	14,963	Buy	2.64	2.97	Medium	Average	1
Dialog Group	DLG MK	13,542	Buy	2.40	4.90	Medium	Average	0
AMMB Holdings	AMM MK	12,369	Buy	3.74	5.15	Medium	Average	1
Westports Holdings	WPRTS MK	12,208	Hold	3.58	3.85	Low	Strong	1
TIME dotCom	TDC MK	10,167	Hold	5.53	5.70	Medium	Average	0
Inari Amertron	INRI MK	8,735	Buy	2.34	3.20	Medium	Average	0
Heineken Malaysia	HEIM MK	8,072	Buy	26.72	30.80	Medium	Average	0
Yinson Holdings	YNS MK	7,731	Buy	2.66	5.05	Low	Strong	1
Sunway	SWB MK	7,676	Hold	1.57	1.67	Low	Strong	0
My EG Services	MYEG MK	6,480	Hold	0.88	0.93	Medium	Average	0
IGB REIT	IGBREIT MK	6,176	Hold	1.72	1.70	Low	Average	0
Greatech Technology	GREATEC MK	6,039	Buy	4.82	6.70	Low	Average	0
Sunway REIT	SREIT MK	5,548	Hold	1.62	1.54	Low	Average	0
Bursa Malaysia	BURSA MK	5,204	Hold	6.43	6.60	Low	Strong	0
Alliance Bank	ABMB MK	5,140	Buy	3.32	4.00	Medium	Average	1
Frontken Corp. Bhd	FRCB MK	5,000	Buy	3.18	4.10	Medium	Average	0
KPJ Healthcare	KPJ MK	4,975	Hold	1.14	1.20	Medium	Average	0
Bank Islam Malaysia	BIMB MK	4,802	Hold	2.14	2.50	Medium	Average	0
UMW Holdings	UMWH MK	4,580	Buy	3.92	5.30	Medium	Average	0
Bumi Armada	BAB MK	4,172	Hold	0.71	0.58	Medium	Strong	1
Astro Malaysia	ASTRO MK	3,624	Hold	0.70	0.65	Low	Average	1
Axis REIT	AXRB MK	3,325	Buy	1.91	2.16	Low	Average	0
Sime Darby Property	SDPR MK	3,264	Buy	0.48	0.58	Low	Strong	0
V.S. Industry	VSI MK	3,193	Hold	0.83	0.80	Negligible	Strong	0
Bermaz Auto Berhad	BAUTO MK	2,777	Buy	2.38	3.55	Low	Average	0
Padini	PAD MK	2,605	Buy	3.96	5.20	Low	Average	0
SP Setia	SPSB MK	2,466	Hold	0.61	0.70	Low	Average	0
Sunway Construction	SCGB MK	2,218	Hold	1.72	1.73	Medium	Strong	1
AEON Co. (M)	AEON MK	1,797	Buy	1.28	2.00	Medium	Average	0
Magnum Berhad	MAG MK	1,610	Hold	1.12	1.20	Medium	Average	0
Ta Ann	TAH MK	1,445	Buy	3.28	3.72	Medium	Average	0

Source: Sustainalytics, Bloomberg (as at 13 Apr)

GLOSSARY: Key Sustainability-related terms

No	Term	Definition
1	**Environmental, Social and Governance (ESG)**	The three factors that are considered by an increasing number of businesses, investors, and other stakeholders (alongside more traditional factors) in a variety of decision-making processes (e.g., the undertaking of ESG due diligence as part of an investment, the preparation of ESG-related disclosures by a company, or the preparation of a report by ESG Research Providers). Examples of ESG considerations include a company's sustainability policies (including GHG Emissions), approach to supply chains and ensuring supply chain resilience (including modern slavery issues), labor policies, and governance issues (such as board diversity, reporting systems and processes and good Corporate Governance). A number of organizations establish ESG principles and/or standards that companies can use to guide their ESG-related actions and reporting (e.g., PRI and Sustainable Development Goals). ESG stands for Environmental (e.g. energy consumption, water usage), Social (e.g. talent attraction, supply chain management) and Governance (e.g. remuneration policies, board governance). ESG factors form the basis for the different SI approaches.
2	**Sustainability**	All activity that meets the needs of the present generation without compromising the ability of future generations to meet their needs.
3	**Task Force on Climate-related Financial Disclosures (TCFD)**	An organization devoted to establishing and promoting guiding principles for companies to voluntarily disclose climate-related risks. This information is important to investors because it tells them whether a company is susceptible to climate-related risks and whether the company is developing or has developed plans to mitigate such risks. The Task Force on Climate-related Financial Disclosures (TCFD) has developed voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders.
4	**Net Zero**	A situation in which any greenhouse gas (GHG) emissions are counterbalanced by sequestration efforts, i.e. reforestation. Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.
5	**Green Building Certification**	Green buildings are designed, built and used in a way that is energy efficient, minimises the use of resources and water, encourages biodiversity and provides a healthy indoor environment. Buildings designed, constructed, operated, maintained, renovated and destroyed using environmentally-friendly and resource-efficient processes.
6	**Carbon Pricing**	Carbon price is the price per unit of avoided or released carbon dioxide (CO_2) emission, or its CO_2 equivalent (IPCC, 2014). Carbon pricing is an instrument that captures the external costs of greenhouse gas (GHG) emissions— the costs of emissions that the public pays for, such as damage to crops, health care costs from heat waves and droughts, and loss of property from flooding and sea level rise—and ties them to their sources through a price, usually in the form of a price on the carbon dioxide (CO_2) emitted.
7	**Sustainalytics**	A private company that supports sustainability-minded investors and the Sustainable Finance market, as a form of outsourced ESG diligence, by providing ESG ratings and research.
8	**Financed emissions**	Financed emissions are emissions generated as a result of financial services, investments and lending by investors and companies that provide financial services. They fall under scope 3, category 15 from the Greenhouse Gas Protocol (GHGP).
9	**Transition Risk**	Transition risk occurs as a result of adjustment to a low-carbon economy. Risks associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations. This is in line with the TCFD's definition.
10	**Scope 1-3 emissions**	Categorisation of GHG emissions into where they are emitted along a company's value chain: Scope 1 - direct emissions, scope 2 - indirect emissions from the generation of purchased electricity, scope 3 - other indirect emissions e.g. in supply chain or by customers' use of product.
11	**Sustainable Finance**	Sustainable Finance incorporates climate, green and social finance while also adding wider considerations concerning the longer-term economic sustainability of the organisations that are being funded, as well as the role and stability of the overall financial system in which they operate. The process of taking due account of environmental and social considerations when making investment decisions, leading to increased investment in longer-term and sustainable activities.

12	**Carbon Neutral**	Carbon Neutral is also known as Net Zero CO2 emissions. Net zero carbon dioxide (CO2) emissions are achieved when anthropogenic CO2 emissions are balanced globally by anthropogenic CO2 removals over a specified period. In other words, an individual, organisation or nation is said to be Carbon Neutral when the amount of CO2 removed from the atmosphere is equal to the amount of CO2 emitted into the atmosphere. Having a net zero Carbon Footprint, or in other words, balancing the amount of carbon Emissions released into the Atmosphere with an equivalent amount of carbon removal, or simply eliminating carbon Emissions altogether.
13	**Global Reporting Initiative (GRI)**	Global Reporting Initiative is an international independent standards organization that helps businesses, governments and other organizations understand and communicate their impacts on issues such as climate change, human rights and corruption. The nonprofit organization that created the GRI Sustainability Reporting Standards to guide voluntary corporate sustainability reporting.
14	**Decarbonization**	The process of reducing dependency on carbon power sources in an effort to reduce carbon dioxide emissions specifically, and GHG Emissions in general.
15	**Principles for Responsible Investment (PRI)**	A set of six principles outlined by the United Nations as “voluntary and aspirational” guidelines for “incorporating ESG issues into investment practice.” The principles are as follows: (i) incorporate ESG issues into investment analysis and decision-making, (ii) incorporate ESG principles into ownership and management practices, (iii) seek appropriate disclosure on ESG issues by the subjects of the investment, (iv) promote the PRI within the investment industry, (v) collaborate to optimize effectiveness in implementing the PRI, and (vi) report progress on implementing the PRI. The UN-supported Principles for Responsible Investment (PRI) initiative was launched in 2006. The world’s leading proponent of responsible investment, the PRI is an independent organisation bringing together and supporting an international network of investors to put the six Principles for Responsible Investment into practice. The six Principles are to: Incorporate ESG issues into investment analysis and decision-making processes be active owners and incorporate ESG issues into ownership policies and practices seek appropriate disclosure on ESG issues from invested entities promote acceptance and implementation of the Principles within the investment industry enhance effectiveness in implementing the Principles report on activities and progress towards implementing the Principles.
16	**Nature-Based Solutions**	Actions designed to sustainably manage, protect, and restore ecosystems, addressing societal challenges effectively and adaptively, while also providing human well-being and biodiversity benefits.
17	**Circular Economy**	An economic system concerned with eliminating waste and continued use of resources. An economic framework aimed at eliminating waste. The framework calls for keeping resources in use for as long as possible, to extract the maximum value from them, then recovering and regenerating products at the end of each service life. Implementing a Circular Economy can result in a more competitive economy, as it addresses Climate Change, decreases the amount of waste, drives productivity, allows for growth, and offers a solution to potential resource scarcity.
18	**International Energy Agency (IEA)**	The International Energy Agency works with countries around the world to shape energy policies for a secure and sustainable future.
19	**Green Finance / Bonds**	Any financial initiative, process, product or service that is either designed to protect the natural environment or to manage how the environment impacts finance and investment. Green Finance is broader than Climate Finance in that it also addresses other environmental objectives such as natural resource conservation, biodiversity conservation, and pollution prevention and control.
20	**Electric vehicles**	A vehicle that runs at least partially on electricity. An EV’s electric motor is powered partially or fully by batteries or a fuel cell, which means the vehicle has lower GHG Emissions compared with a motor that is powered by gasoline or diesel.

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