

MIBG Sustainability Research

ESG adoption expands, but pressure on flows + returns evident in 2022



STRATEGY

Regional

ASEAN - ESG's long term story is on track

We follow-up on our 'ASEAN ESG Alpha' series note in Aug 2022 ([link](#)) covering performance of low-risk ESG companies in the ASEAN-6 markets. Our analysis for Dec'22 period suggests that a) ESG adoption has improved across ASEAN, b) low/medium ESG risk companies continue to outperform the benchmark across 1-3-5 years, c) geopolitics and anti-ESG propaganda hurt ESG flows and outperformance in 2022 but the long-term trend of outperformance is intact. More than 53% of the low/medium ESG risk stocks belong to REITS, real estate, telecom and banking. Within the ASEAN coverage, our top ESG picks are Energy/Utilities: MER PM, ACEN PM, YNS MK and SCI SP; Banks and Financials: DBS SP and SGX SP and Automotive: BAUTO MK and MBM MK.

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MY, SG, ID and TH witness improved ESG adoption

MY, SG, ID and TH formed 90% of the Sustainalytics coverage. We applied filters of negligible/low/medium Sustainalytics ESG risk rating, high/average quality of management and low controversies to ascertain low/medium ESG risk companies. The Sustainalytics universe has increased to 628 stocks against 475 in our earlier study. Of this, 36% (37% earlier) formed part of our filtered category. Within MIBG coverage, 46% (43% earlier) are low/medium ESG risk. MY, SG, TH and PH have 38/21/24/12 stocks, respectively, whereas ID has 7 companies and Vietnam 1 low/medium risk company under coverage.

ASEAN ESG TOP PICKS

Company	Bbg code	Curr	CP	Rating	TP
Bermaz Auto	BAUTO MK	MYR	2.20	BUY	2.90
MBM Res.	MBM MK	MYR	3.63	BUY	4.80
Yinson Holdings	YNS MK	MYR	2.63	BUY	5.05
DBS Group	DBS SP	SGD	33.53	BUY	42.69
Sembcorp	SCI SP	SGD	3.80	Buy	4.35
Sing. Exch.	SGX SP	SGD	8.92	BUY	10.73
AC Energy	ACEN PM	PHP	6.30	BUY	8.00
Manila Electric	MER PM	PHP	314.00	BUY	376.00

Source: Bloomberg, Maybank IBG Research
Price as on 9 Mar 2023

Sector performance a mixed bag over 1-3-5 years

The one-year outperformance of the low/medium ESG risk companies within the MIBG universe was driven by REITs, banks, hotels & services, healthcare and transport whereas 3/5 years outperformance was driven by technology and telecom. Consumer discretionary/staples have underperformed across 1-3-5 year periods. Others, which include sectors such as hotels & services, healthcare, gaming and transport, outperformed over one-year, driven by economic re-openings post Covid-19 lockdowns.

ESG flows fall but key investment themes intact

Driven by geopolitical issues, global sustainable funds net inflow declined by 70% YoY to USD189b in 2022, as per Morningstar. Sustainable assets under management declined to USD2.5t as of Dec'22 after hitting a high of USD3.9t in Sep'21. The net inflows to ESG-driven ETFs were 66% lower in 2022 and the global sustainable debt issuance was at USD1.5t vs USD1.8t in 2021. In 2022, the Bloomberg Clean Energy index underperformed the S&P Global Oil Index but still outperformed the MSCI World Index. There were some sustainability indices that underperformed the global benchmarks marginally. Amid all this gloom, however, global investment flows toward energy transition continued to rise to USD1.1t in 2022, +31% YoY. Renewable energy and electrified transport account for 87% of the investments.

1. Scope of the report

In August 2022, we released a report in which we undertook a study to assess the ESG integration in ASEAN-6 markets, back-testing return profiles and performance versus regional 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.

In this report, we follow up on the progress of the above. We also study and compare the change - positive/negative in the return profile, ESG integration etc for the two periods ie 31 Dec 2022 and 31 Mar 2022.

2. ESG coverage of ASEAN expands

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. To arrive at our low/medium ESG risk companies we apply following filters:

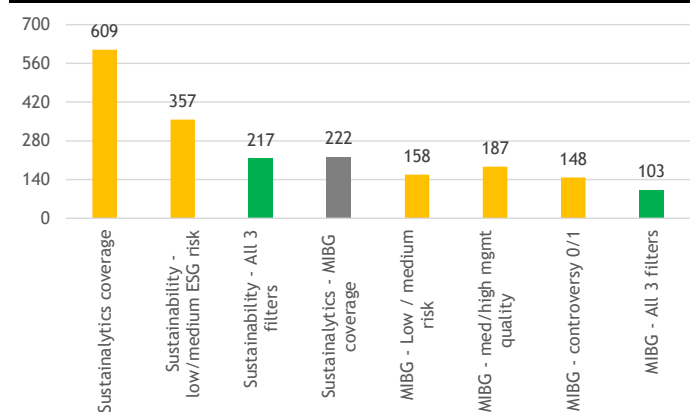
1. Sustainalytics ESG risk ratings (negligible, low and medium risk only)
2. Controversy score (no mention and score 1 only)
3. Management quality (high and average only)

There are 225 companies (36% of total) out of 628 companies and 217 companies (36% of the total) out of the 609 listed companies that are compliant with the above three filters.

Sustainalytics - MIBG universe of 222 companies: 158 companies have a negligible/low/medium ESG risk rating as per Sustainalytics, 148 companies have a controversy score of 0/1 and 187 companies have medium/strong management. Only 103 companies pass all three filters. Countrywise, Malaysia accounts for 38 companies, Singapore has 21 companies, Thailand has 24 companies, Philippines has 12, Indonesia has 7 and Vietnam has 1 company in this filtered list.

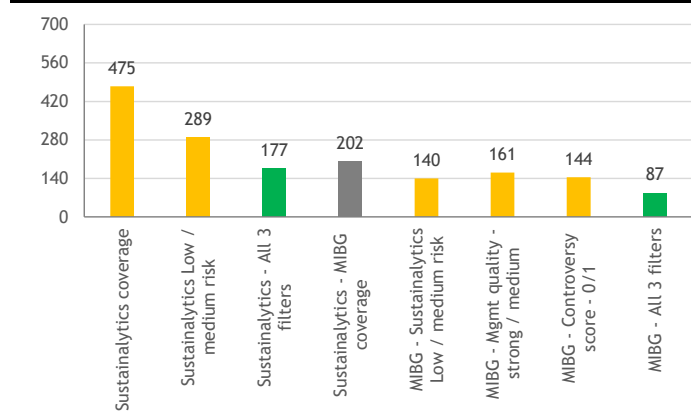
Only 103 companies out of 222 MIBG coverage ticked all our three filters

Fig 1: Dec 2022: 36% of Sustainalytics and 46% of MIBG coverage possess the best ESG characteristics



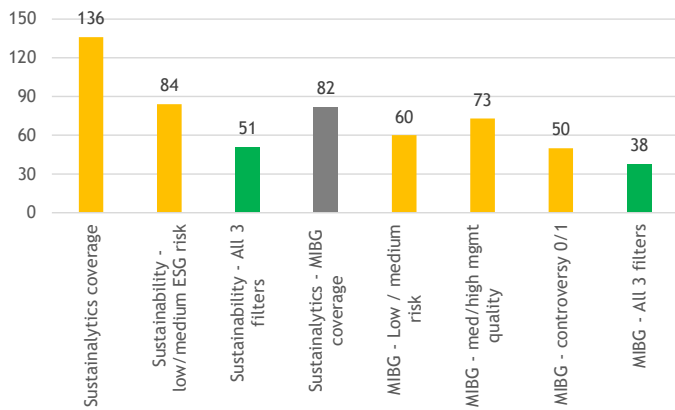
Source: Sustainalytics, Maybank IBG Research

Fig 2: Mar 2022: 37% of Sustainalytics and 43% of MIBG coverage possess the best ESG characteristics



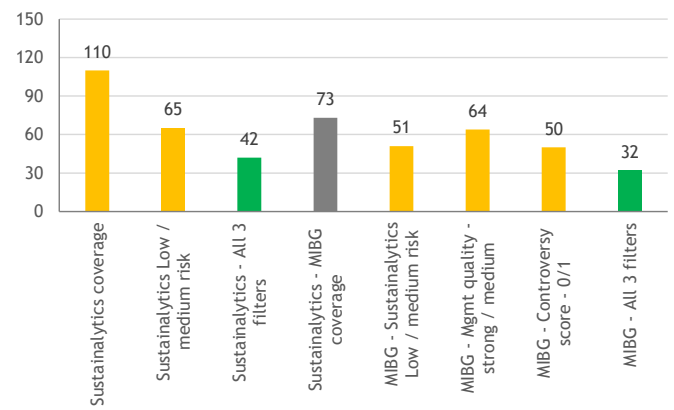
Source: Sustainalytics, Maybank IBG Research

Fig 3: Malaysia (Dec 2022) - 38 companies out of 82 MIBG coverage pass all three filters



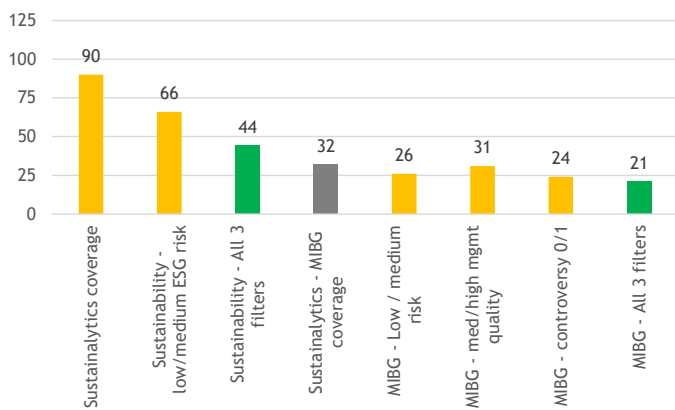
Source: Sustainalytics, Maybank IBG Research

Fig 4: Malaysia (Mar 2022) - 32 companies out of 73 MIBG coverage pass all three filters



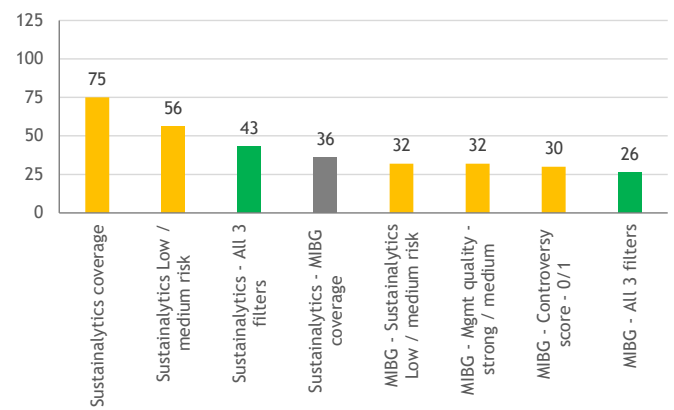
Source: Sustainalytics, Maybank IBG Research

Fig 5: Singapore (Dec 2022) - 21 companies out of 32 MIBG coverage pass all the three filters



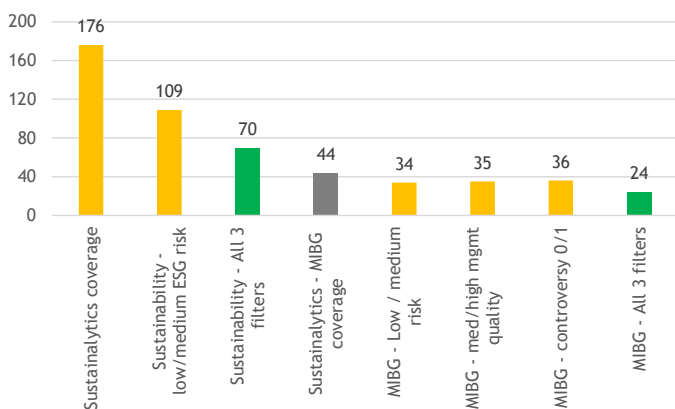
Source: Sustainalytics, Maybank IBG Research

Fig 6: Singapore (Mar 2022) - 26 companies out of 36 MIBG coverage pass all the three filters



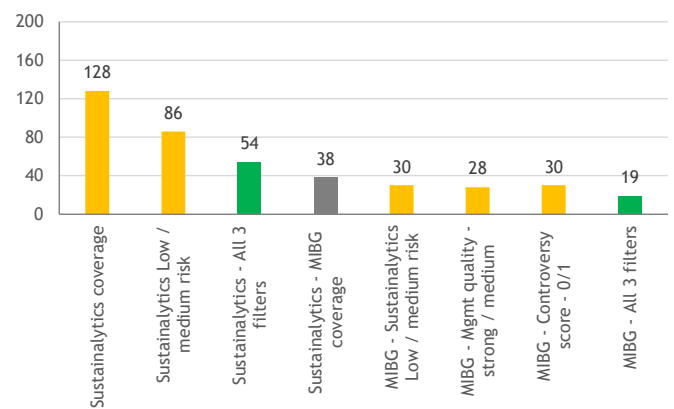
Source: Sustainalytics, Maybank IBG Research

Fig 7: Thailand (Dec 2022) - 24 companies out of 44 MIBG coverage pass all the three filters



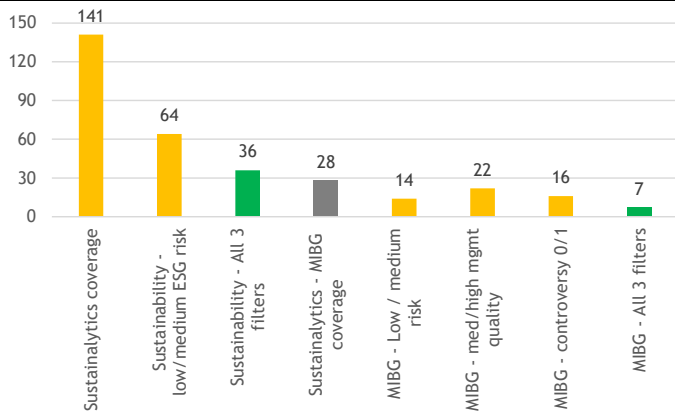
Source: Sustainalytics, Maybank IBG Research

Fig 8: Thailand (Mar 2022) - 19 companies out of 38 MIBG coverage pass all the three filters



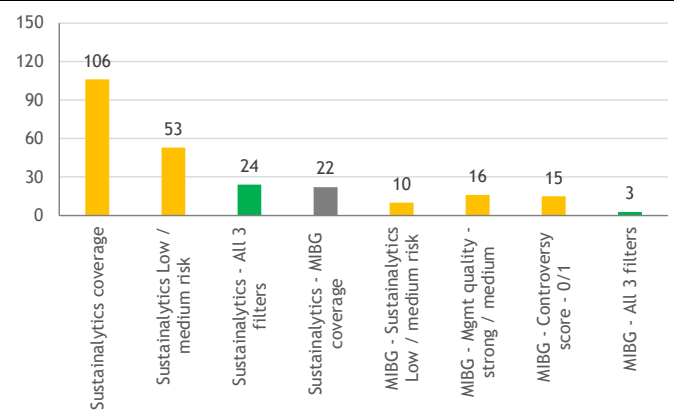
Source: Sustainalytics, Maybank IBG Research

Fig 9: Indonesia (Dec 2022) - 7 companies out of 28 MIBG coverage pass all the three filters



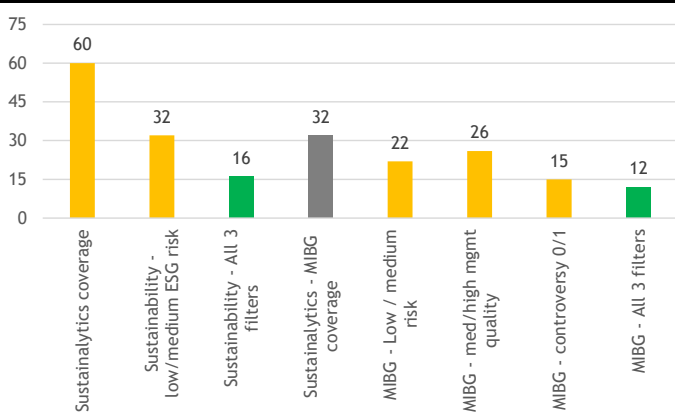
Source: Sustainalytics, Maybank IBG Research

Fig 10: Indonesia (Mar 2022) - only 3 companies out of 22 MIBG coverage pass all the three filters



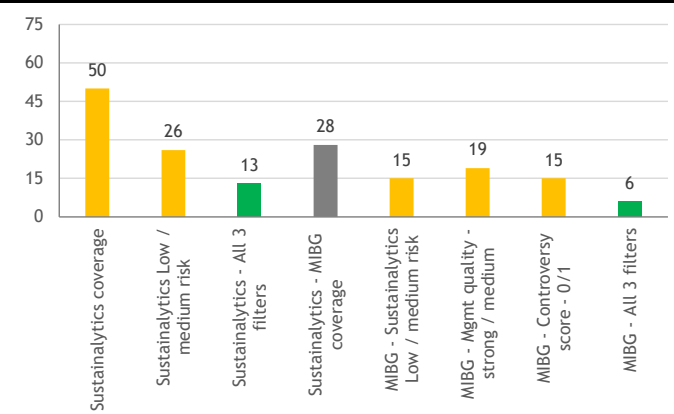
Source: Sustainalytics, Maybank IBG Research

Fig 11: Philippines (Dec 2022) - 12 companies out of 32 MIBG coverage pass the three filters



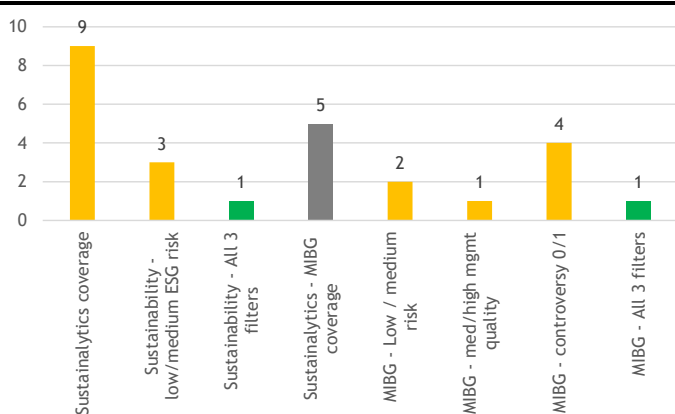
Source: Sustainalytics, Maybank IBG Research

Fig 12: Philippines (Mar 2022) - 6 companies out of 28 MIBG coverage pass the three filters



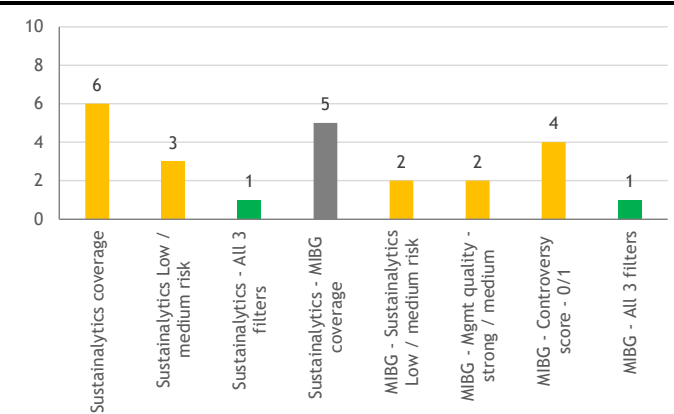
Source: Sustainalytics, Maybank IBG Research

Fig 13: Vietnam (Dec 2022) - only 1 company out of 5 MIBG coverage passes the three filters



Source: Sustainalytics, Maybank IBG Research

Fig 14: Vietnam (Mar 2022) - only 1 company out of 5 MIBG coverage passes the three filters



Source: Sustainalytics, Maybank IBG Research

Low/medium risk companies outperform the regional MSCI Index

As discussed earlier, of the Sustainalytics universe of 628 companies, 369 companies' are assigned negligible/low/medium ESG risk by Sustainalytics. If we use our filters discussed earlier, this number comes down to 225 companies. To better calculate the under/outperformance of companies to the MSCI regional index, we leave out companies which are listed in international bourses. This brings down the number of companies to 217 out of 609 listed companies in the home market. The three companies excluded (ie 225 to 217) 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.

Out of the Sustainalytics universe, 357 companies have a Sustainalytics ESG risk rating of low/medium/negligible. These 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.

Of the Sustainalytics universe, 217 companies' fall under our filtered category of low/medium/negligible Sustainalytics ESG risk + management quality strong/medium + controversy score of 0/1. These 217 companies' outperformance was 6.8%/9.2%/5.6% for 1-3-5 years on a market cap weighted basis. This reinforces the conclusion of our previous study that low/medium ESG risk companies generally out-perform the benchmark index due to favorable attributes and less volatility.

Of the Sustainalytics universe of 628 companies, 369 companies' are assigned negligible/low/medium ESG risk by Sustainalytics

Of the Sustainalytics universe, 217 companies fell under our 3 filters, outperformance was 6.8%/9.2%/5.6% for 1-3-5 years

Fig 15: Return analysis of ASEAN 6 companies listed in local exchanges within Sustainalytics universe

Particulars	no of companies	MCAP weighted return								
		MSCI			annualised returns			Out/underperformance		
		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

If we look at the MIBG coverage within the Sustainalytics universe, there are 158 companies, which have a Sustainability ESG risk rating of low/medium risk/negligible. 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.

Of the MIBG coverage, 103 companies' fall under our filtered category of Sustainalytics ESG risk score of low/medium/negligible risk + management quality (medium/strong) +controversy score (no or 1). These 103

companies' outperformance was 2.2%/2.6%/2.5% for 1-3-5 years on a market cap weighted basis.

The above data clearly suggests that investors are only considering the headline risks while assessing ESG risks. They are not digging deep into parameters such as management quality and low controversies, which we have considered in our filtering. This explains that higher ESG risk rated companies have done relatively better than our filtered companies' in the short term.

Fig 16: Sustainalytics - MIBG universe - Return analysis of ASEAN 6 companies listed in local exchanges

Particulars	no of companies	MCAP weighted return								
		MSCI			annualised returns			Out/underperformance		
		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

Overall we believe that **a)** investors in ASEAN markets are still not fully factoring ESG risks into their investment strategy; **b)** investors may not be currently factoring controversies and management quality in ascertaining ESG risks; **c)** ESG themed or induced investment is well below global level in the ASEAN markets evident from the overall performance of better rated ESG companies; **d)** stock prices of poor ESG companies in high risk sectors such as O&G and Metals outperformed in the period following Russia-Ukraine, overshadowing the low ESG risk companies' stock price performance; **e)** high inflation and interest rates also hurt the low ESG risk companies' stock price performance; **and f)** 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.

Amongst the five countries (excluding Vietnam due to negligible coverage), Malaysia and Thailand are faring better than the other three regions which we believe is mainly due to better ESG coverage and disclosure.

Returns lower but outperformance higher in Dec'22 vs Mar'22 in the ESG filtered stocks

Considering the Sustainalytics - MIBG universe, we compared the returns of the filtered ie low/medium ESG risk stocks for Dec'22 (103 companies) vs our earlier study of Mar'22 (87 companies). The observations are that

- The returns show all companies declined by -5.3%/-1.4%/-5.5% for 1-3-5 years;
- All regions reported a decline in returns across 1-3-5 years for Dec'22 vs Mar'22 except for Indonesia;

- c) However, the outperformance to benchmark is higher for all companies across 1-3-5 years for Dec'22 vs Mar'22
- d) Except Thailand (1-3-5 years) and Malaysia (1/5 years), most regions report this outperformance across periods

Fig 18: Sustainalytics - MIBG universe: Return analysis of ASEAN 6 companies Dec'22 vs Mar'22

Particulars	Change in annualised returns			Change in out/underperformance		
	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret
ESG risk score -- low/medium/negligible + controversy (no or 1) + management (medium or strong)						
All companies	-5.5%	-1.4%	-5.3%	-0.1%	1.7%	1.4%
Malaysia	-6.2%	0.9%	-10.4%	-1.2%	1.7%	-5.3%
Singapore	-2.8%	-2.1%	-3.7%	3.1%	3.8%	14.4%
Thailand	-6.6%	-2.6%	-3.2%	-1.3%	-2.3%	-5.9%
Indonesia	8.9%	19.3%	14.3%	13.3%	21.9%	20.5%
Philippines	-4.1%	-2.8%	-19.5%	3.1%	4.8%	1.2%
Vietnam	-11.1%	-20.4%	-47.0%	8.9%	-5.0%	7.5%

Source: Sustainalytics, Maybank IBG Research

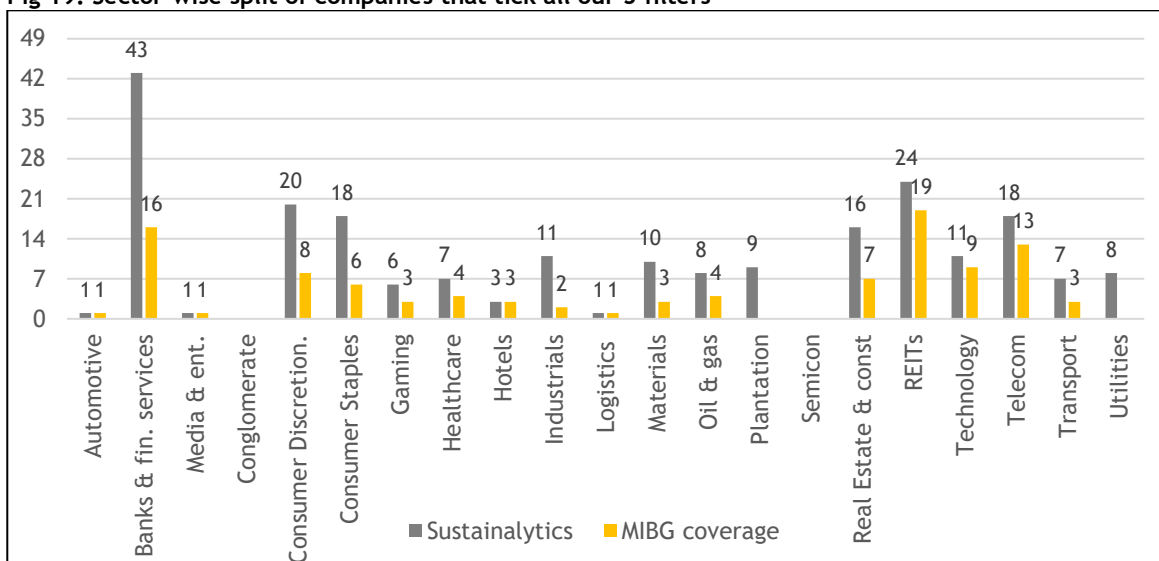
Telecommunication and technology underperformed in past 1-year while hotels, healthcare and transport outperformed

Of the filtered 103 companies, 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.

REITs, real estate & construction, telecom and banks form 53% of the MIBG filtered universe

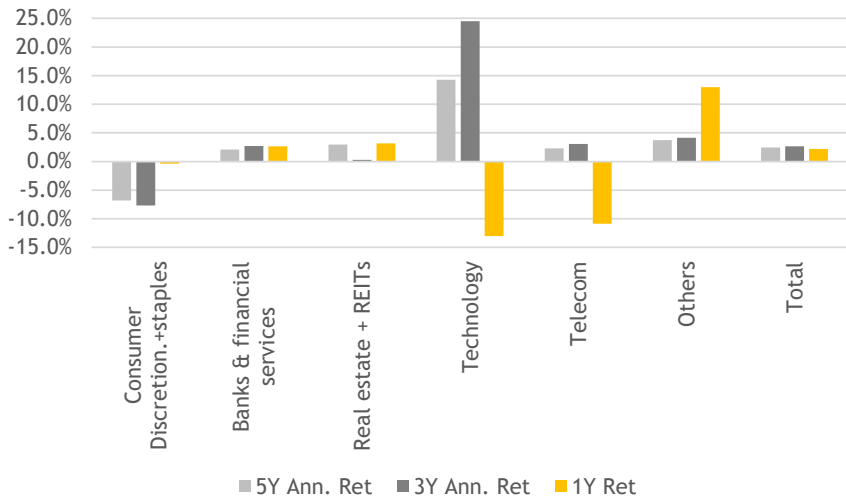
The stocks in consumer discretionary/staples sectors have been laggards across 1-3-5 years, reporting negative returns. Banking & financial services returns are inline or slightly ahead of overall returns. Real estate & REITs outperformed in 1/5 years but underperformed in 3 years. Technology has outperformed 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 opening up of the economy post Covid-19 lockdowns.

Fig 19: Sector-wise split of companies that tick all our 3 filters



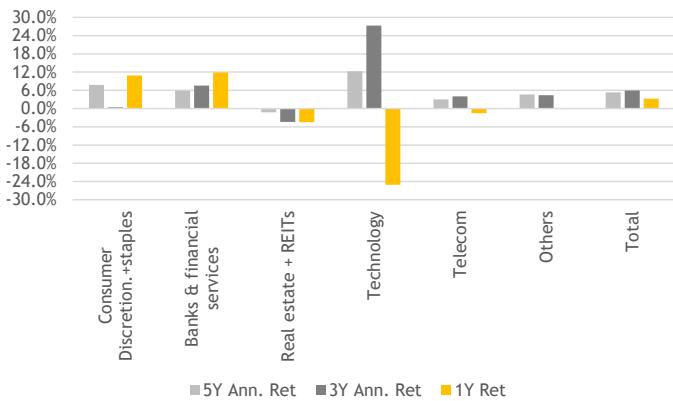
Source: Sustainalytics, Maybank IBG Research

Fig 20: MIBG coverage (103 companies): Technology, telecom underperformance in 1-year period after outperformance in 3/5 years, consumer discretionary/staples underperform across periods



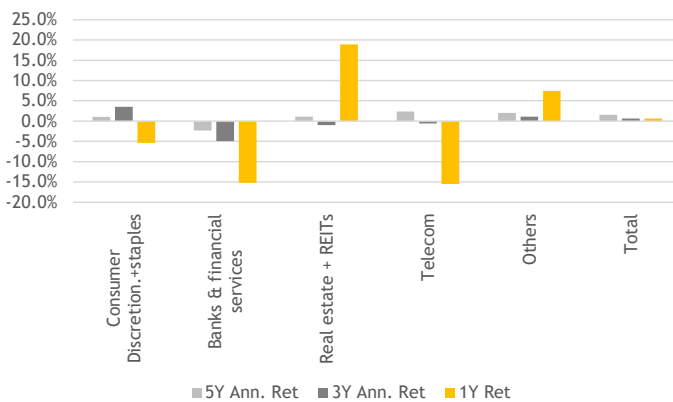
Source: Sustainalytics, Maybank IBG Research

Fig 21: Malaysia (38 companies): Consumer and banks drive 1-year outperformance, technology & REITs underperform



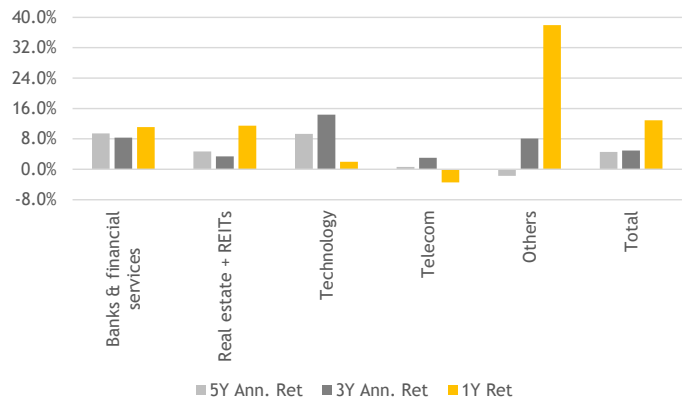
Source: Sustainalytics, Maybank IBG Research

Fig 23: Thailand (24 companies): Real estate/REITs and others drive 1-year outperformance



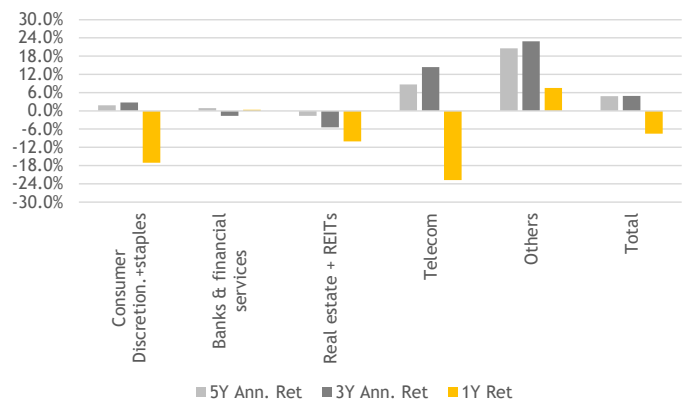
Source: Sustainalytics, Maybank IBG Research

Fig 22: Singapore (21 companies): Consumer, REITs and banks drive 1-year outperformance



Source: Sustainalytics, Maybank IBG Research

Fig 24: Philippines (12 companies): Consumer, real estate/REITs and Telecom drive 1-year underperformance



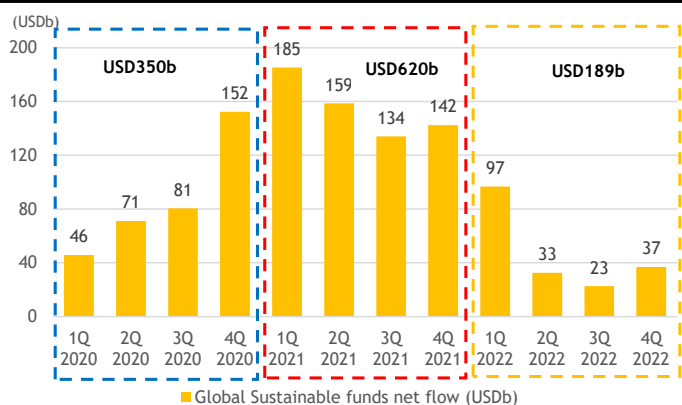
Source: Sustainalytics, Maybank IBG Research

3. ESG fund flow and returns lower in 2022, but outperformance continues over longer periods

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. Sustainable Assets under management declined to USD2.5t as of Dec'22 after hitting a high of USD3.9t in Sep'21. We believe the geopolitical uncertainty since March 2022 coupled with anti-ESG tirade in the US and EU led to this decline. Similar trend is visible in the Bloomberg New Energy Finance (BNEF) data, which shows a 66% decline YoY in net inflows for ESG ETFs. Global sustainable debt raising was at USD1.5t in 2022 vs USD1.8t in 2021. 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.

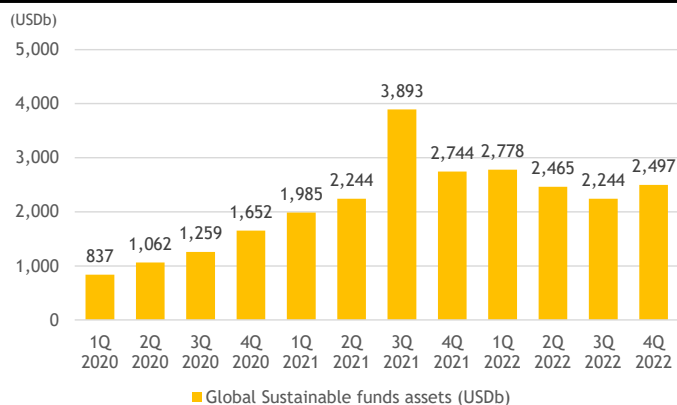
Global sustainable funds net inflow declined by 70% YoY to USD189b in 2022

Fig 25: Global sustainable net fund flows at USD189b in 2022, -70% YoY and -46% vs 2020



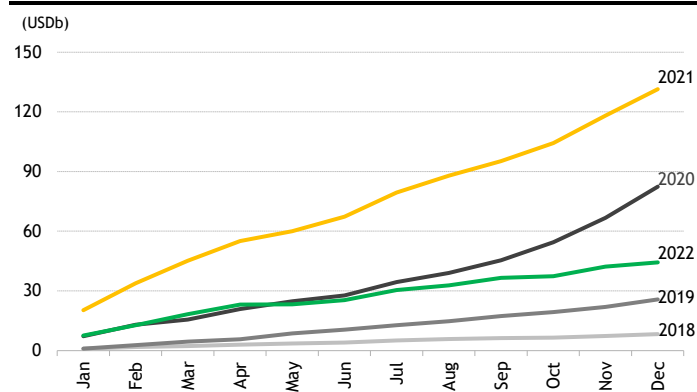
Source: Morningstar, Maybank IBG Research

Fig 26: Global sustainable fund assets under management decline in 2022



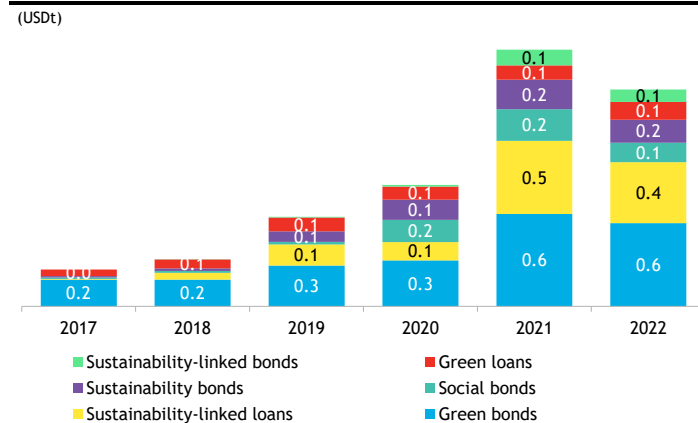
Source: Morningstar, Maybank IBG Research

Fig 27: Net inflows into ESG ETFs 66% lower YoY in 2022 and 46% lower vs 2020



Source: BNEF, Maybank IBG Research

Fig 28: Global sustainable debt issuance was lower at USD1.5t in 2022 vs USD1.8t in 2021



Source: BNEF, Maybank IBG Research

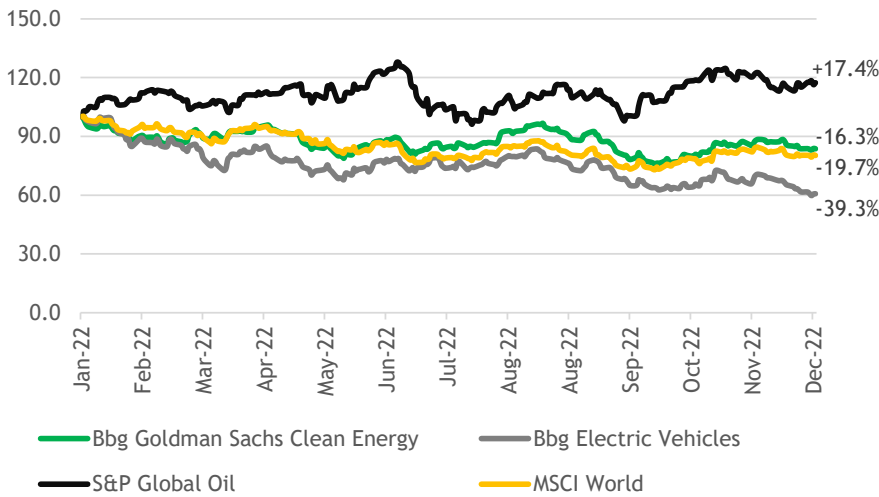
Various sustainability and ESG-driven indices underperformed the benchmark indices in 2022 mainly due to the refocus on fossil fuels to fulfil energy requirements and surge in the prices of metals and commodities. The Bloomberg Goldman Sachs Clean Energy Index and the Bloomberg Electric Vehicle Index 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, the sustainability indices outperformed the benchmarks for longer periods. Over 2015-2022, the Morningstar Global Sustainability index (+76.9%) outperformed the Global markets Index (+73.9%), Eurozone Sustainability Index (+115.1%) vs Eurozone Global Index (+61.3%) and Asia ex-Japan Sustainability Index (+81.6%) vs Asia ex-Japan Global Index (+38.5%).

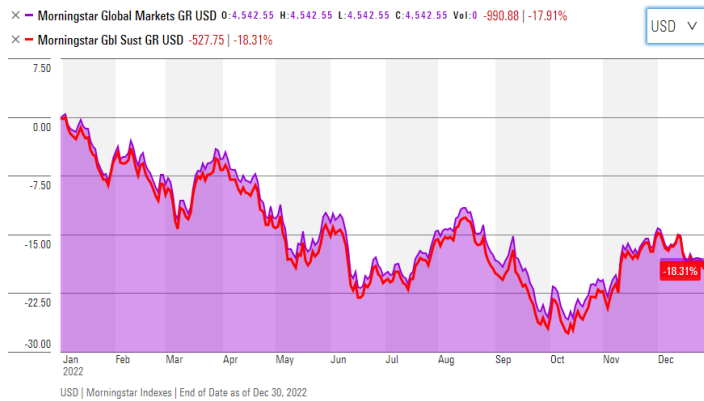
ESG driven indices underperform benchmarks in 2022 but continue to outperform over longer period

Fig 29: ESG driven indices underperform the global oil index in 2022



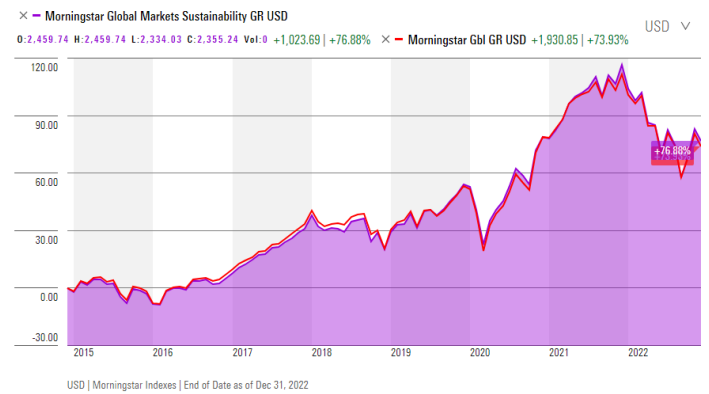
Source: BNEF, Maybank IBG Research

Fig 30: Morningstar Global Sustainability index (-18.3%) underperforms the Global markets Index (-17.9%) in 2022



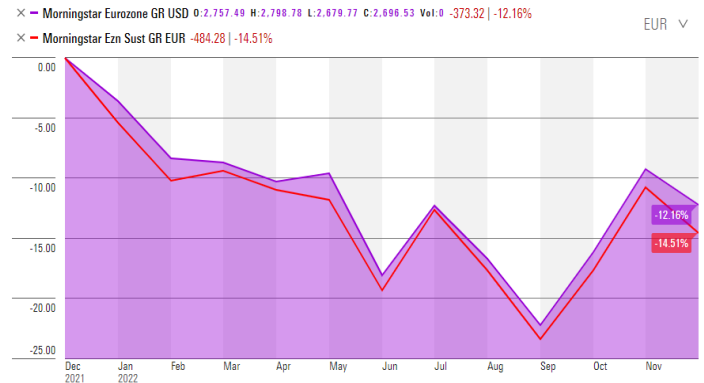
Source: Morningstar Indices

Fig 31: ...but outperforms over the last 8 years - Global sustainability index (+76.9%) vs Global index (+73.9%)



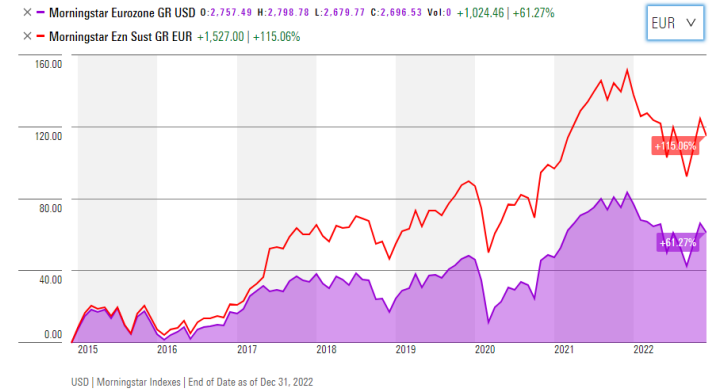
Source: Morningstar Indices

Fig 32: Morningstar Eurozone Sustainability Index (-14.5%) underperforms the Eurozone Global Index (-12.2%) in 2022



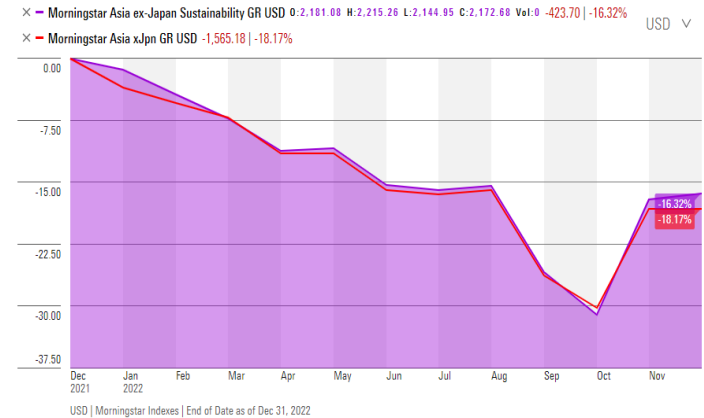
Source: Morningstar Indices

Fig 33: ...but outperforms over 2015-2022 - Sustainability Index (+115.1%) vs the Eurozone Global Index (+61.3%)



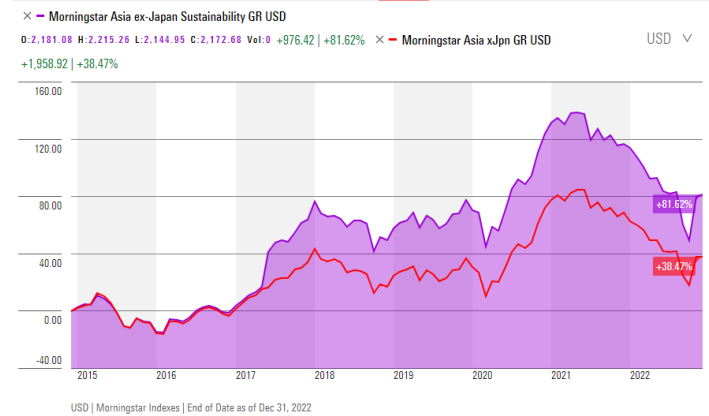
Source: Morningstar Indices

Fig 34: Morningstar Asia ex-Japan Sustainability Index (-16.3%) outperforms the Asia ex-Japan Global Index (-18.2%) in 2022



Source: Morningstar Indices

Fig 35: ...also outperforms over 2015-2022 - Sustainability Index (+81.6%) vs the Global Index (+38.5%)



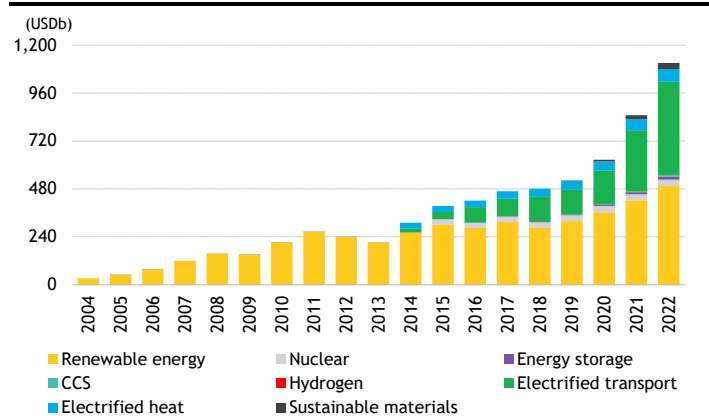
Source: Morningstar Indices

4. Global investments towards energy transition continue to rise

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. Renewable energy and electrified transport accounted for 87% of the investments. The other important trend in 2022 was that investments towards fulfilling energy demand for the first time breached 50%. It formed 50.5% of total investments vs. 45% in 2021 and nil until 2013. 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, 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.

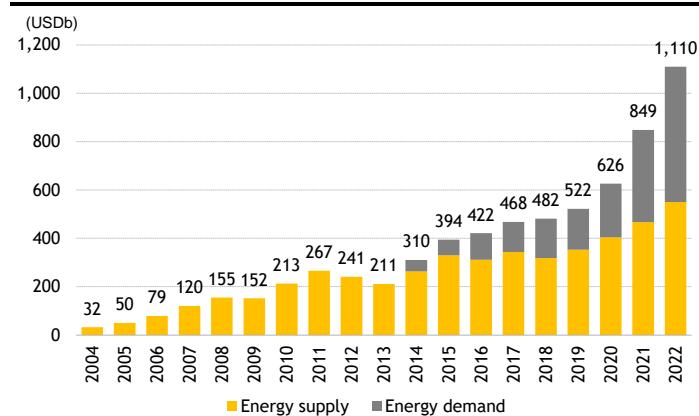
Global energy transition investments increase 31% YoY to USD1.1t in 2022

Fig 36: Global energy transition investments +31% YoY driven by renewable energy and electrified transport



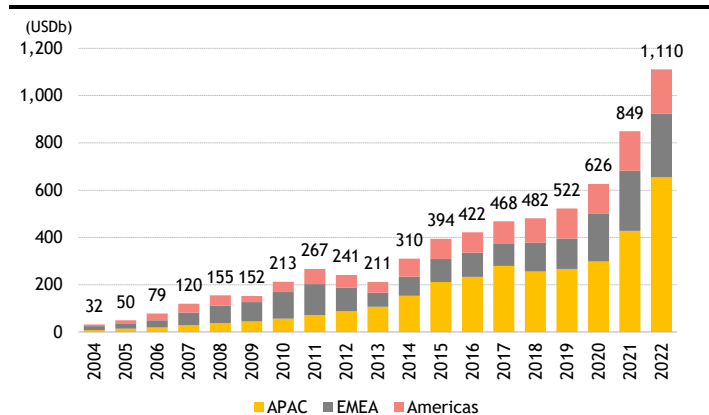
Source: BNEF, Maybank IBG Research

Fig 37: Investments towards fulfilling energy demand surpass 50% mark in 2022 for the first time



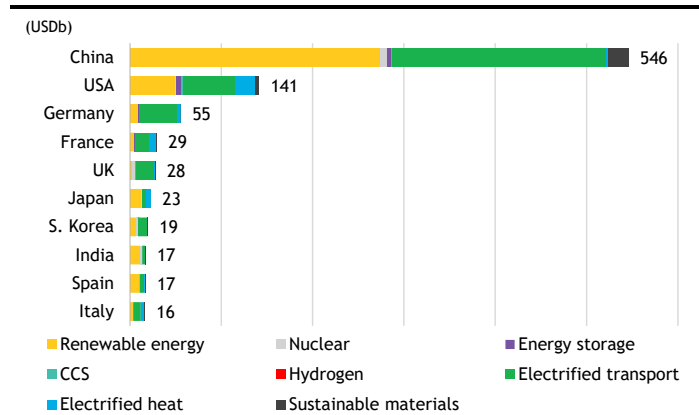
Source: BNEF, Maybank IBG Research

Fig 38: Asia Pacific has lion's share of investment followed by EMEA



Source: BNEF, Maybank IBG Research

Fig 39: China leads with 49% share of the total global energy transition investments



Source: BNEF, Maybank IBG Research

Appendix

List of 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)

Malaysia: MIBG coverage companies satisfying all 3 filters

Company name	BBG code	CP	Rating	TP	Sustainalytics ESG risk	Management quality	Controversy score
AEON Co. (Malaysia) Bhd.	AEON MK	1.34	Buy	2.00	medium	average	No evidence
Alliance Bank Malaysia Bhd.	ABMB MK	3.46	Buy	4.00	medium	average	Category 1
AMMB Holdings Bhd.	AMM MK	3.97	Buy	5.15	medium	average	Category 1
Astro Malaysia Holdings Bhd.	ASTRO MK	0.60	Hold	0.74	low	average	Category 1
Axis REIT	AXRB MK	1.87	Buy	2.16	low	average	No evidence
Bank Islam Malaysia Bhd.	BIMB MK	2.21	Hold	2.50	medium	average	No evidence
Bermaz Auto Bhd.	BAUTO MK	2.13	Buy	2.90	low	average	No evidence
Bumi Armada Bhd.	BAB MK	0.70	Hold	0.58	medium	strong	Category 1
Bursa Malaysia Bhd.	BURSA MK	6.67	Hold	6.60	low	strong	No evidence
Dialog Group Bhd.	DLG MK	2.24	Buy	4.90	medium	average	No evidence
DiGi.com Bhd.	DIGI MK	na	na	na	medium	average	No evidence
Frontken Corp. Bhd.	FRCB MK	3.10	Buy	4.10	medium	average	No evidence
Genting Malaysia Bhd.	GENM MK	2.69	Buy	2.97	medium	average	Category 1
Greatech Technology Bhd.	GREATEC MK	4.95	Buy	6.70	low	average	No evidence
Heineken Malaysia Bhd.	HEIM MK	28.72	Buy	30.80	medium	average	No evidence
Hong Leong Bank Bhd.	HLBK MK	20.58	Buy	24.10	low	strong	No evidence
Hong Leong Financial Group	HLFG MK	18.36	Buy	22.20	medium	average	No evidence
IGB REIT	IGBREIT MK	1.72	Hold	1.70	low	average	No evidence
Inari Amertron Bhd.	INRI MK	2.39	Buy	3.20	medium	average	No evidence
KPJ Healthcare Bhd.	KPJ MK	1.13	Hold	1.20	medium	average	No evidence
Magnum Bhd.	MAG MK	1.21	Hold	1.20	medium	average	No evidence
My E.G. Services Bhd.	MYEG MK	0.74	Buy	0.90	medium	average	No evidence
Nestlé (Malaysia) Bhd.	NESZ MK	135.10	Sell	119.30	low	strong	Category 1
Padini Holdings Bhd.	PAD MK	3.60	Buy	5.20	low	average	No evidence
Petronas Chemicals	PCHEM MK	7.26	Sell	7.35	medium	average	No evidence
Petronas Gas Bhd.	PTG MK	16.52	Hold	17.00	medium	strong	Category 1
Public Bank Bhd.	PBK MK	4.14	Hold	4.60	medium	average	Category 1
S P Setia Bhd.	SPSB MK	0.63	Hold	0.70	low	average	No evidence
Sime Darby Property Bhd.	SDPR MK	0.54	na	na	low	strong	No evidence
Sunway Bhd.	SWB MK	1.63	Hold	1.67	low	strong	No evidence
Sunway Construction Group	SCGB MK	1.68	Hold	1.58	medium	strong	Category 1
Sunway REIT	SREIT MK	1.56	Hold	1.46	low	average	No evidence
Ta Ann Holdings Bhd.	TAH MK	3.43	Buy	3.72	medium	average	No evidence
TIME dotCom Bhd.	TDC MK	5.65	Hold	5.70	medium	average	No evidence
UMW Holdings Bhd.	UMWH MK	3.90	Buy	5.30	medium	average	No evidence
V.S. Industry Bhd.	VSI MK	0.86	Buy	1.15	negligible	strong	No evidence
Westports Holdings Bhd.	WPRTS MK	3.71	Hold	3.85	low	strong	Category 1
Yinson Holdings Bhd.	YNS MK	2.66	Buy	5.05	low	strong	Category 1

Source: Sustainalytics, Maybank IBG Research

Note: DIGI MK and SDPR MK are currently in restricted list hence no rating and TP

Singapore: MIBG coverage companies satisfying all 3 filters

Company name	BBG code	CP	Rating	TP	Sustainalytics ESG risk	Management quality	Controversy score
AEM Holdings Ltd.	AEM SP	2.78	Sell	2.66	medium	average	No evidence
AIMS APAC REIT	AAREIT SP	1.35	Buy	1.56	low	average	No evidence
CapitaLand Ascendas REIT	CLAR SP	2.78	Hold	2.75	low	average	No evidence
CapitaLand Ascott Trust	CLAS SP	1.02	Buy	1.25	low	strong	No evidence
CapitaLand Integrated	CICT SP	1.89	Buy	2.35	low	average	No evidence
CapitaLand Investment	CLI SP	3.63	Hold	3.65	low	average	Category 1
CDL Hospitality Trusts	CDREIT SP	1.27	Buy	1.40	low	average	No evidence
ESR-LOGOS REIT	EREIT SP	0.33	Buy	0.45	low	average	No evidence
Far East Hospitality Trust	FEHT SP	0.62	Buy	0.80	low	strong	No evidence
Frasers Centrepoint Trust	FCT SP	2.21	Buy	2.40	low	strong	No evidence
Frasers Hospitality Trust	FHT SP	0.48	Buy	0.54	low	strong	Category 1
Genting Singapore Ltd.	GENS SP	1.05	Hold	0.96	low	average	Category 1
Keppel REIT	KREIT SP	0.91	Buy	1.05	low	strong	No evidence
Mapletree Industrial Trust	MINT SP	2.35	Buy	2.60	low	average	No evidence
Mapletree Logistics Trust	MLT SP	1.68	Hold	1.60	low	average	No evidence
NetLink NBN Trust	NETLINK SP	0.87	Buy	0.95	medium	average	No evidence
Singapore Exchange Ltd.	SGX SP	8.77	Buy	10.73	medium	average	No evidence
StarHub Ltd.	STH SP	1.04	Hold	1.15	medium	average	Category 1
Suntec REIT	SUN SP	1.40	Hold	1.35	low	average	No evidence
UMS Holdings Ltd.	UMSH SP	1.02	Hold	1.11	low	average	No evidence
Venture Corp. Ltd.	VMS SP	16.88	Buy	20.20	low	average	No evidence

Source: Sustainalytics, Maybank IBG Research

Philippines: MIBG coverage companies satisfying all 3 filters

Company name	BBG code	CP	Rating	TP	Sustainalytics ESG risk	Management quality	Controversy score
AREIT Inc.	AREIT PM	35.90	Buy	49.50	low	average	No evidence
Ayala Land, Inc.	ALI PM	28.35	Buy	44.00	low	average	Category 1
Converge ICT Solutions	CNVRG PM	15.46	Sell	15.50	medium	average	No evidence
D&L Industries, Inc.	DNL PM	7.80	Buy	10.00	medium	strong	No evidence
Filinvest REIT Corp.	FILRT PM	5.30	Buy	6.90	low	average	No evidence
Globe Telecom, Inc.	GLO PM	1,850.00	Buy	2,695.00	medium	average	Category 1
GT Capital Holdings, Inc.	GTCAP PM	510.00	Buy	900.00	low	average	Category 1
Int'l Container Terminal	ICT PM	200.00	Buy	232.00	low	average	No evidence
Monde Nissin Corp.	MONDE PM	11.64	Buy	15.00	medium	average	Category 1
PLDT, Inc.	TEL PM	1,317.00	Buy	2,075.00	medium	average	Category 1
Robinsons Retail Holdings	RRHI PM	55.00	Buy	76.00	medium	average	No evidence
SM Investments Corp.	SM PM	896.00	Buy	1,200.00	low	average	Category 1

Source: Sustainalytics, Maybank IBG Research

Thailand: MIBG coverage companies satisfying all 3 filters

Company name	BBG code	CP	Rating	TP	Sustainalytics ESG risk	Management quality	Controversy score
Advanced Info Service	ADVANC TB	203.00	Buy	240.00	medium	strong	No evidence
Airports of Thailand	AOT TB	70.50	Buy	84.00	low	strong	Category 1
Asia Sermkij Leasing	ASK TB	28.25	Buy	44.00	medium	average	No evidence
Asset World Corp. Pcl	AWC TB	5.80	Sell	4.23	medium	average	No evidence
Bangkok Dusit Medical Serv.	BDMS TB	28.00	Hold	29.50	medium	average	No evidence
Bangkok Expressway & Metro	BEM TB	9.25	Buy	11.62	medium	average	No evidence
Berli Jucker Public Co. Ltd.	BJC TB	36.50	Buy	44.25	medium	average	No evidence
Bumrungrad Hospital	BH TB	210.00	Sell	190.00	medium	average	No evidence
Central Plaza Hotel	CENDEL TB	55.00	Sell	41.00	medium	average	No evidence
Eastern Polymer Group	EPG TB	8.20	Buy	10.50	low	strong	No evidence
Home Product Center	HMPRO TB	13.90	Buy	18.50	low	average	No evidence
Kiatnakin Phatra Bank	KKP TB	66.75	Buy	90.00	medium	average	Category 1
Major Cineplex Group	MAJOR TB	17.00	Buy	25.50	low	average	Category 1
Mega Lifesciences	MEGA TB	46.25	Buy	60.90	medium	average	No evidence
Minor International	MINT TB	33.25	Buy	47.00	medium	average	Category 1
Muangthai Capital	MTC TB	33.50	Hold	36.00	low	strong	No evidence
SCG Packaging	SCGP TB	53.25	Hold	57.00	low	strong	No evidence
Siam Makro	MAKRO TB	39.75	Buy	44.80	medium	average	Category 1
Srisawad Corp.	SAWAD TB	52.25	Sell	45.00	medium	average	No evidence
The Siam Cement	SCC TB	328.00	Hold	340.00	medium	strong	Category 1
TMBThanachart Bank	TTB TB	1.39	Hold	1.55	medium	strong	Category 1
TOA Paint (Thailand)	TOA TB	31.00	Buy	37.00	low	strong	No evidence
Total Access Comm.	DTAC-TH	NA	merged with TRUE		medium	average	Category 1
True Corp.	TRUE TB	8.60	Hold	9.23	medium	average	Category 1

Source: Sustainalytics, Maybank IBG Research

Indonesia: MIBG coverage companies satisfying all 3 filters

Company name	BBG code	CP	Rating	TP	Sustainalytics ESG risk	Management quality	Controversy score
ACE Hardware Indonesia	ACES IJ	496	SELL	375	low	average	No evidence
Bank Danamon Indonesia	BDMN IJ	2,850	BUY	2,900	medium	average	No evidence
Dayamitra Telekomunikasi	MTEL IJ	685	Buy	950	medium	average	Category 1
H M Sampoerna Tbk	HMSP IJ	1,160	Hold	1,000	medium	average	No evidence
Telkom Indonesia (Persero)	TLKM IJ	3,900	Buy	5,300	medium	average	Category 1
Unilever Indonesia Tbk	UNVR IJ	4,060	Hold	4,750	low	strong	No evidence
XL Axiata Tbk	EXCL IJ	2,090	Buy	3,200	medium	average	No evidence

Source: Sustainalytics, Maybank IBG Research

Vietnam: MIBG coverage companies satisfying all 3 filters

Company name	BBG code	CP	Rating	TP	Sustainalytics ESG risk	Management quality	Controversy score
FPT Corp.	FPT VN	78,500	Buy	1,07,000	low	average	No evidence

Source: Sustainalytics, Maybank IBG Research

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