Maybank IBG Sustainability Research
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Singapore ESG Compendium 2022

Transition Island

Improving progress. Buy clear commitment

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Singapore ESG Compendium
Transition Island

Improving progress. Buy clear commitment.

Singapore's Net Zero pathway has become significantly clearer in the past 18 months. Execution would be key, especially in overcoming limitations of its energy mix. At the corporate level, low carbon transition and disclosure transparency is diverging between large caps and SMIDs. Critically, there is a notable gap between announced corporate ESG strategies and the public's perception of their effectiveness. Partnerships between regulators, corporates and other stakeholders would be key in closing these gaps. We believe companies geared towards long-term ESG themes and have clear plans to lower emissions would outperform. Top picks: **CLI, CICT, CD, DBS, KREIT, NETLINK, OCBC, SCI, UMSH, UOB**.

Making progress towards Net Zero

Singapore's Net Zero pathway has become much clearer since our last ESG compendium. (*Island in the Sun, 06 Jul 21*) It has a committed timeline of 2050 and distinct 2030 interim targets. Singapore has shown good execution in emissions reductions so far, which should place it on a strong footing to deliver going forward. Challenges remain, particularly due to reliance on natural gas for energy supply. Limited natural resources and small size caps domestic alternative energy options. Nevertheless, it is responding through a two-pronged strategy of (a) resetting its energy mix by expanding solar, developing hydrogen and importing low emission electricity and (b) by building mitigation infrastructure and ambitiously raising carbon taxes, which is expected to hit SGD50-80/ tCO2e by 2030.

Vastly varying speeds in corporate transition

The transition towards better ESG is diverging between large caps and SMIDs. For example, in our coverage, 39% of large caps have clearly defined Net Zero targets, while this is just 8% for SMIDs. Worryingly, there is a sizable gap between corporate sustainability strategies and the public's perception of their effectiveness. Addressing this would be critical in achieving climate goals. Regulators are supportive through lowering barriers to ESG reporting and increasing data transparency through a mix of new regulations and platforms. Corporates are increasing green financing (green bond issuance increased 4x YoY 2021), which should better align climate goals with strategy execution, in our view.

We like transition plays with improving disclosure

For our top pick selection, we first screen for companies with gearing towards long-term ESG investment themes. We then deploy MIBG's new ESG 2.0 scores as an additional lens to filter those that have the strongest potential for executing transition. We believe companies with clear, measurable strategies for transitioning towards carbon neutrality, while investing in greater social and governance transparency should deliver greater outperformance going forward. Indeed, the iEdge SG ESG Leaders index, which constitutes best in class Singapore corporates measured by ESG factors, has outperformed the STI by 6% in the past 4 years. Top ESG Picks: **CLI, CICT, CD, DBS, KREIT, NETLINK, OCBC, SCI, UMSH, UOB**

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Preferred ESG picks

Company	Ticker	Mkt Cap	Rec	Price	TP	MIBG ESG2.0
		SGDbn		LCY	LCY	Score
Capitaland Investments	CLI SP	18.4	Buy	3.54	4.30	63
CICT	CICT SP	13.3	Buy	2.01	2.55	66
ComfortDelGro	CD SP	2.7	Buy	1.24	1.60	78
DBS	DBS SP	86.7	Buy	33.50	42.69	78
Keppel REIT	KREIT SP	3.4	Buy	0.90	1.25	74
Netlink NBN	NETLINK SP	3.2	Buy	0.82	1.02	55
OCBC	OCBC SP	55.0	Buy	12.18	14.70	70
Sembcorp Industries	SCI SP	5.8	Buy	3.23	4.00	53
UMS	UMSH SP	0.8	Buy	1.25	1.34	48
UOB	UOB SP	51.5	Buy	30.56	33.77	74

Source: Maybank IBG Research, Factset

Table of Contents

1. Making progress towards Net Zero

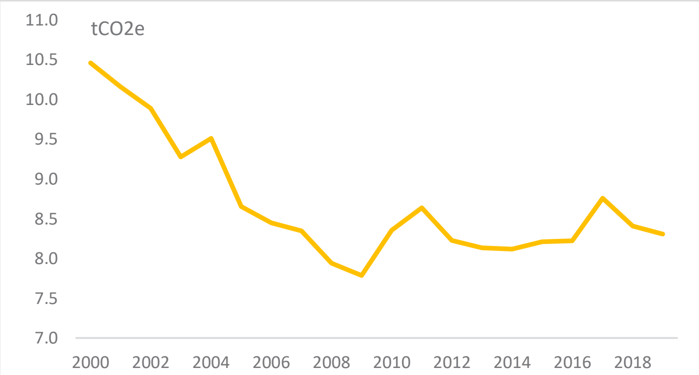
Compared to a year ago, Singapore has made its Net Zero pathway a lot clearer. In October 2022 the county committed to achieving Net Zero emissions by 2050 as part of its long-term low emissions development strategy (LEDS) compared to the earlier signaling of achieving this target 'in or around mid-century'.

Interim targets have also been solidified with estimates of overall emissions peaking before 2030. Singapore now expects to reduce emissions to around 60m tCO2e by 2030 under its revised nationally determined contribution (NDC) following a peak emission of 65m tCO2e .

1.1 Clear track record of emissions reductions

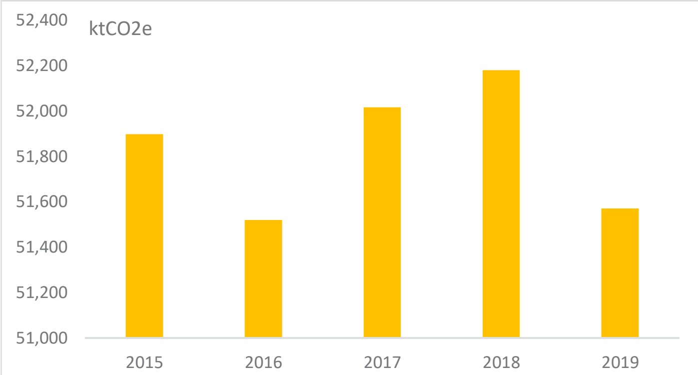
In terms of emissions reduction, in 2009, Singapore first pledged to lower output by 16% of business-as-usual (BAU) levels by 2020. It managed to achieve a 32% lower BAU level in this timeframe, according to the National Climate Change Secretariat. We believe this is a good starting point to achieve the current more ambitious NDC targets.

Fig 1: Singapore per capita GHG emissions (tCO2e/per capita)



Source: World Bank

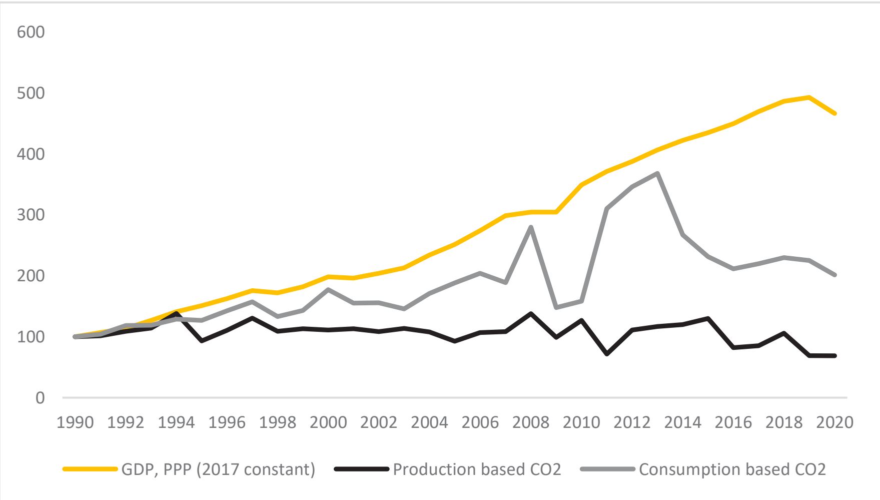
Fig 2: Singapore absolute GHG emissions (ktCO2e)



Source: Statistia

Indeed, Singapore has shown signs of lowering carbon intensity even as it grows its economic output. We note that emissions are decoupling from GDP growth even when taking in to account consumption-based emissions.

Fig 3: Singapore GDP, production, consumption emissions (index 1990=100)

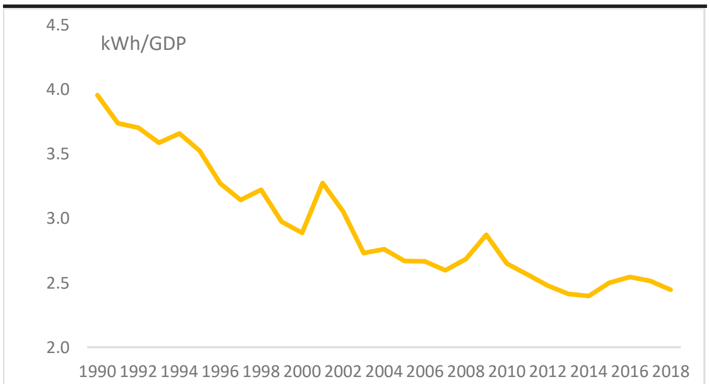


Source: Our World in Data

Between 1990-2020, Singapore's GDP output increased 5x, while consumption emissions increased 2x. Production based emissions have fallen 31% during this time.

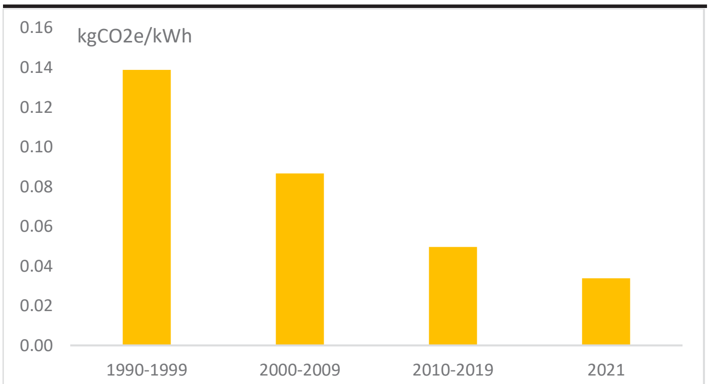
Part of this has been the successful reduction in energy intensity for economic growth. For example, between 1990 to 2000, energy intensity fell from 3.95kWh per unit of GDP to 2.89kWh; a reduction of 27%, according to the World Bank and Our World in Data. The shift in the economic mix towards services – particularly in the financial sector – from the energy intensive manufacturing and industrial segment contributed to this. However, in the subsequent decade from 2000-2010 energy intensity only fell 8%. Between 2010-2018 (the last year data is available), energy intensity fell a further 8%. Progressively bigger falls in energy intensity is likely to be limited under the current economic activity mix, in our view.

Fig 4: Singapore energy intensity (kWh per unit of GDP)



Source: World Bank, Our World in Data

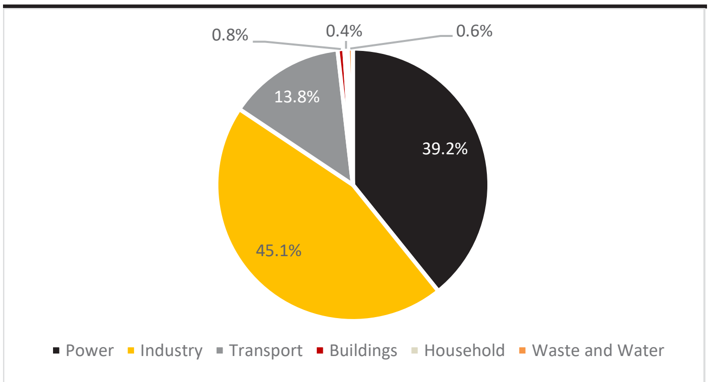
Fig 5: Singapore avg. carbon intensity (kgCO2e/kWh)



Source: Global Carbon Project, Our World in Data

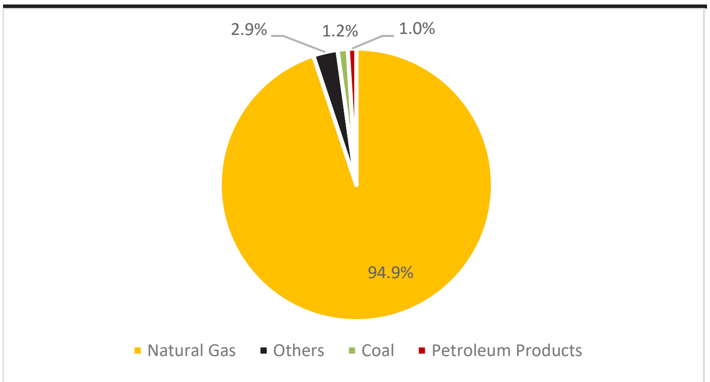
It is to be noted that carbon intensity of generating a unit of energy has seen steep fall over the past few decades. Indeed, carbon intensity has reduced by over a third in 2021 to 0.034 kgCO2e/kW

Fig 6: Singapore emissions sources mix 2019



Source: NEA, Maybank IBG Research

Fig 7: Singapore energy generation feedstock mix 2019



Source: Energy Market Authority

1.2 Challenges remain for further emissions reductions

However, in order to meet Singapore's NDCs by 2030s and to remain in the pathway towards Net Zero by 2050, more emissions reductions would be needed, we believe.

Here, we see significant challenges. Nearly 40% of Singapore's emissions are from the power generation sector. The country has made significant investments and shifted towards lower emission feedstock over the years. Currently, nearly 95% of electricity is generated via natural gas – the cleanest burning or lowest emission fossil fuel. This has been a primary driver of falling carbon intensity in the past few decades, we believe.

However, natural gas is a fossil fuel and there is a floor in terms of lowering carbon intensity by adopting it.

To reduce carbon intensity and drive emissions reductions to Net Zero, Singapore is taking a two-fold pathway.

1. An energy reset to increase contributions from green energy
2. Energy usage reductions and increasing efficiencies

1.2.1 Energy Reset

Singapore has limited options when it comes to alternative energy. Its small land area is not conducive for large-scale solar facilities, while wind speeds are not optimal for efficient wind farms. Similarly, limited water supplies makes hydroelectric generation non-feasible. As a result, just 3.2% of power comes from renewable sources.

Increasing solar

However, the government has set clear targets under its 2030 Green Plan to increase solar energy deployment by 5x to at least 2GW. This will be largely achieved by rooftop solar installations and mini solar farms located on top of reservoirs etc. It will also be investing in 200MW of energy storage systems to be deployed beyond 2025.

Importing low-carbon energy

Singapore has set a target of regionally importing 4GW of low-carbon electricity by 2035, which would be around a third of its electricity supply. The country has set up a licensing system and have been calling for proposals from the private sector. According to Nikkei Asia, it received applications from more than 20 companies. In June 2022, Keppel Electric started proof of concept imports from Laos with an initial capacity of 100MW in the first two years of operations. Separately, an Australian startup – Sun Cable – plans to build a 4,200km undersea cable to Singapore and connect a 12,000ha solar farm in Northern Australia. This is targeting operations by 2029.

Low carbon energy imports are a key and viable decarbonisation pathway for Singapore, we believe. Nevertheless, electricity imports face some critical challenges. Energy security is chief amongst them as generation capacity sits outside a country's borders. At the same time, domestic carbon mitigation goals of exporters could create significant policy uncertainty. For example, Malaysia's plans to export electricity to Singapore have been suspended since early-2022 as domestic priorities are being evaluated.

Low-carbon hydrogen solutions

Singapore unveiled a National Hydrogen Strategy to research and experiment on hydrogen technologies as well as assess the infrastructure requirements for the use of low-carbon hydrogen as an alternative energy feedstock. According to the Straits Times, low-carbon hydrogen could supply up to half of Singapore's power needs by 2050. Singapore has already reached several corporation agreements with New Zealand, Chile and Australia in developing regulatory standards, frameworks and certification as well as technical feasibilities.

In addition to decarbonising the energy sector, hydrogen could also support lower emissions from sectors that are not easily electrified, such as semiconductors and petrochemical processing. The country has launched some pilot projects, including using low-carbon ammonia for power generation, which could supply electricity by 2027.

1.2.2 Usage Reductions and Carbon Mitigation

Transitioning to lower emission feedstocks alone is unlikely to support decarbonisation goals. As a result, Singapore is also putting in place carbon reduction and mitigation targets under its 2030 Green Plan.

Greener Buildings and Infrastructure

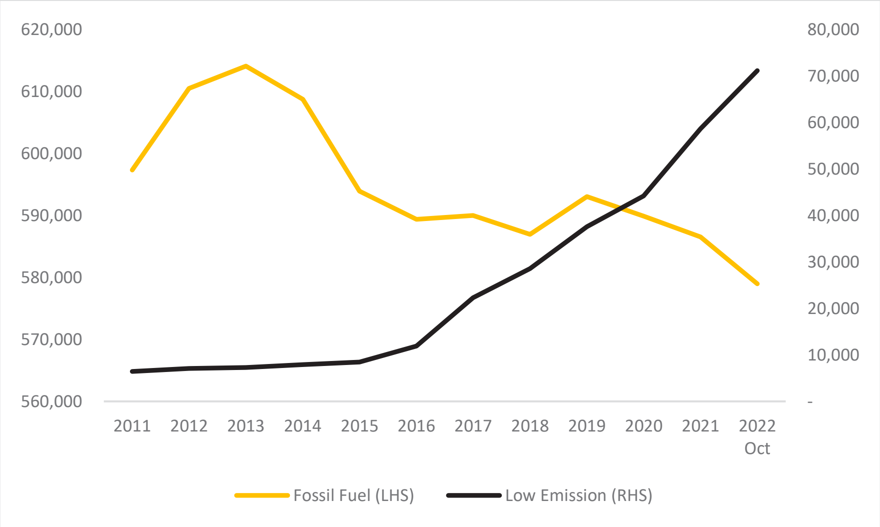
As part of its 2030 Green Plan targets, Singapore is aiming to green 80% of its buildings by gross floor area (GFA), plus 80% of its new buildings by GFA to be super low energy buildings. At the same time, it targets best-in-class buildings to see 80% improvement in energy efficiency by 2030 over 2005 levels. In terms of township developments, Singapore is targeting to reduce energy consumption of exiting public housing by 15%.

By 2025, the government targets the reduction of energy consumption of desalination plants to 2kWh/m^3 compared to the current levels of 3.5kWh/$m^{3,}$ while achieving a 1kWh/m^3 by 2030.

Cleaner Transportation

To reduce transportation emissions, new registrations of diesel vehicles and taxis are to cease by 2025, while all new car and taxi registrations are to be cleaner-energy models by 2030.

Fig 8: Singapore private vehicle population by fuel type



Source: LTA, Maybank IBG Research

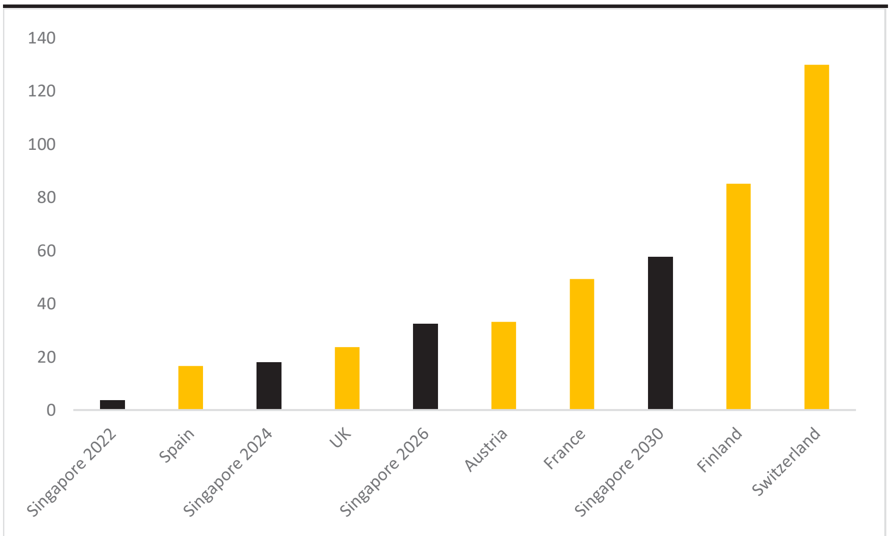
In support of electrification of transport, the government is targeting 60,000 charging points across the country and is set to deploy chargers at all public housing carparks by 2025.

Carbon Taxes

Singapore established a carbon pricing scheme in 2019 as part of its strategy on mitigation as well as a catalyst for low carbon transition in the domestic economy. The current carbon tax is set at SGD5/tCO2e for facilities that directly emit at least 25,000 tCO2e per year.

In November 2022, Singapore passes the Carbon Pricing (Amendment) Bill, which raised the carbon pricing trajectory steeply to SGD25/ tCO2e by 2024 with a view of reaching SGD50-80 /tCO2e by 2030. The step-wise increase in carbon pricing is aimed at giving businesses sufficient time to adapt and remain competitive while aligning to low-emissions strategies in the medium term.

Fig 9: Current carbon taxes and Singapore trajectory (USD/tCO2e)



Source: NCCS, Tax Foundation, Maybank IBG Research

For companies that are categorized as emissions-intensive-trade-exposed (EITE), a transition framework would be put in place to provide a longer runway to adjust to a low-carbon economy. The government would provide transitionary allowances for existing facilities to reach decarbonisation targets.

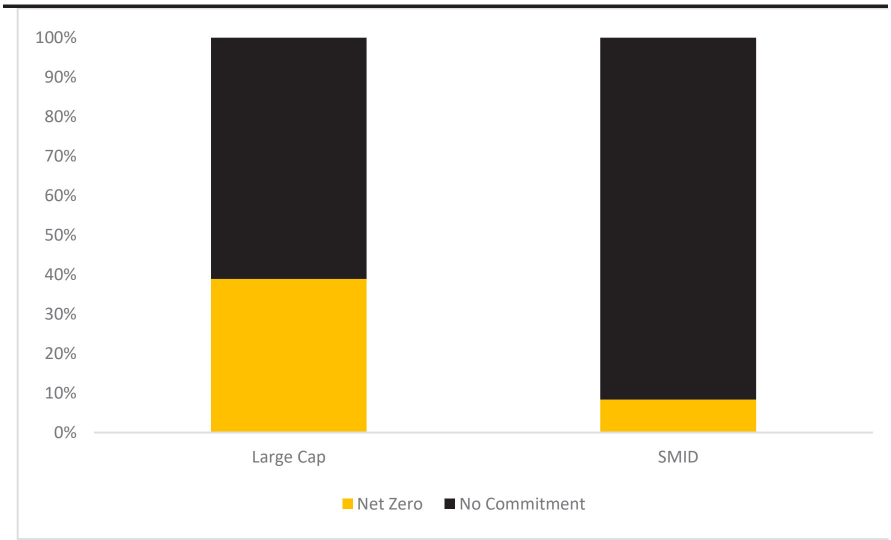
Separately, companies would also be allowed to use international carbon credit to offset up to 5% of their taxable emissions from 2024. This should also provide some support as companies transition. More importantly, it should catalyse the formation of carbon markets in Singapore.

SGX, DBS, Standard Chartered Bank and Temasek have collaborated since 2021 to launch the Climate Impact X (CIX) exchange with an aim of developing a regional carbon exchange in Singapore. While volumes are still low, we expect this to scale as carbon taxes rise and the ecosystem matures.

2. Vastly varying speeds of corporate transition

At the corporate level, we find that the transition process is incrementally progressing vs. our last assessment a year ago. However, the speeds at which this is happening is vastly varying with the larger cap corporates having a clear lead. The small and medium caps (SMID) are significantly behind.

Fig 10: MIBG coverage: clear Net Zero commitments by market cap



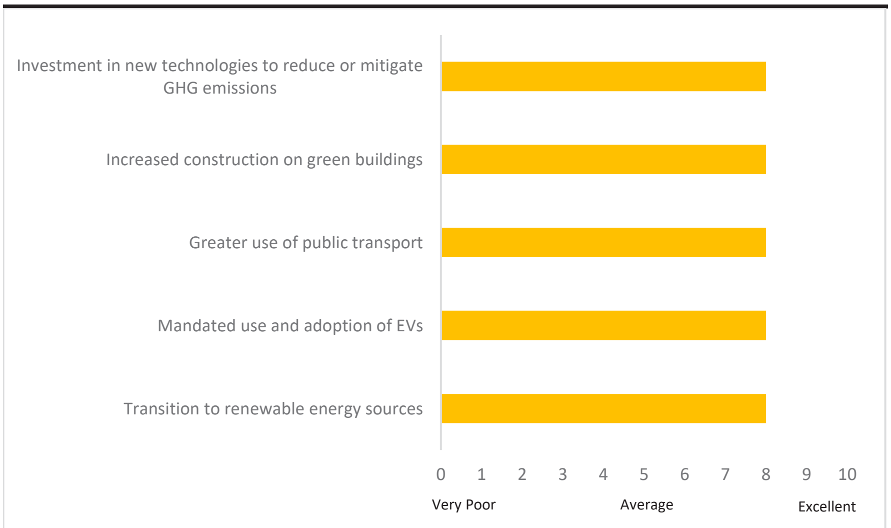
Source: Maybank IBG Research

2.1 Small-mid caps falling behind

When comparing MIBG's coverage stocks, 39% of large caps have stated a clear Net Zero goal with time-bound targets. The comparable figure for SMIDs, is only 8%.

When taken as a whole of Singapore's corporate landscape, in 2021, SMEs made up 99% of Singapore's total enterprises and accounted for 71% employment share, according to Singstat. They were also responsible for 44% of nominal value-added amongst enterprises. As a result, driving SMIDs to shift higher in the sustainability adoption and deployment curve is critical for Singapore's overall green ambitions, in our view.

Fig 11: Corporate support to reduce GHG emissions in Singapore



Source: Singapore Green Pulse Survey, Schneider Electric, Maybank IBG Research

Positively, in the latest Schneider Electric Singapore Green Pulse survey of 500 businesses interviewed in March 2022, it is clear that most companies are supportive of decarbonisation. Their support for action that align with Singapore's Green Plan are materially above average.

However, the alignment of the corporate targets with those of the perception of employees is somewhat disjointed. When the Green Pulse survey was extended to 500 members of the public, 63% believed the sustainability performance of their organization was average at best. Even more worryingly, 53% admitted to being unenthusiastic towards their company's sustainability strategy, while 51% believe sustainability is not central to their company's strategy.

2.2 Perception gap needs to be closed

This huge gap between stated corporate purpose on sustainability and actual strategy and employee alignment could lead to sub-optimal execution of transition journeys increasing ESG risks.

2.2.1 Lower barriers to climate reporting

As a mitigation response as well as a strategy towards ecosystem development, since the start of 2022, SGX has been mandating all issuers to provide climate reporting on a "comply or explain" basis on sustainability reports. Climate reporting could be mandatory for corporates in financials, energy, agriculture, food and forest industries from 2023 and for materials and buildings, transportation from 2024.

All corporates are required to provide relevant disclosures under recommendations of TCFD (task force of climate-related disclosures).

In an effort to overcome hurdles in consistent and comparable ESG reporting, SGX and MAS introduced the ESGenome platform in September 2022. It is aimed at helping corporates to simplify their ESG disclosure process and have their metrics mapped to global standards and frameworks. We believe this should provide significantly more transparency as well as consistency in ESG data.

More importantly, this should provide a boost to SMIDs in their capacity building in ESG transition, we believe. Given the ESGenome platform has the ability to generate sustainability reports in the format required by SGX to be published, it should support significant accessibility to sustainability reporting to smaller corporates, in our view.

Apart from ESG disclosures, MAS as part of its industry development mandate is supporting the development of robust data infrastructure. This includes:

1. Data Orchestrator, which aims to aggregate ESG data from multiple data sources and provide consent-based access to these sources. This aims to enable new data insights through data analytics and support better investment and financing decisions.
2. ESG Registry aims to record and maintain the provenance of ESG certificates as well as data verified by certification bodies, helping to improve trust and data integrity.
3. Greenprint Marketplace aims to connect green technology providers to investors, financial institutions and corporates to drive partnerships and investments.

MAS has also set up three Centres of Excellence to drive research and skills development in the green financial sector as part of enhancing Singapore's status as a Green Financing centre.

We believe these structural and regulatory changes should further provide support for all corporates in Singapore to drive towards transition as well as aid in closing the gaps that exist in terms of corporate purpose and execution.

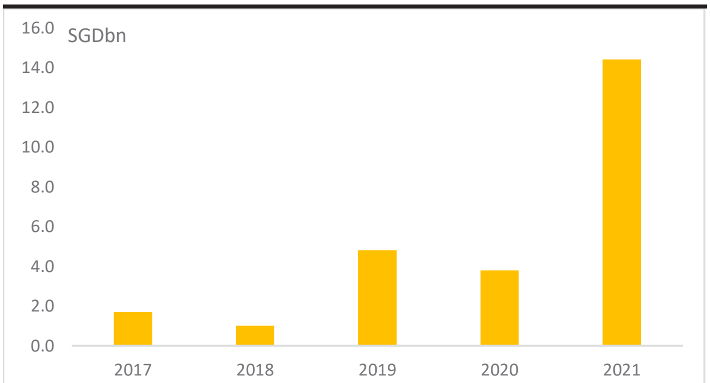
2.2.2 Increasing access to Green Financing

We believe Singapore's strategy of developing in to a green finance hub should further help in closing gaps between corporate purpose and corporate strategy when it comes to sustainable transition.

Access to Green and sustainability-linked finance at competitive rates should provide corporates with a broader mix of funding and also clearly align their sustainability objectives.

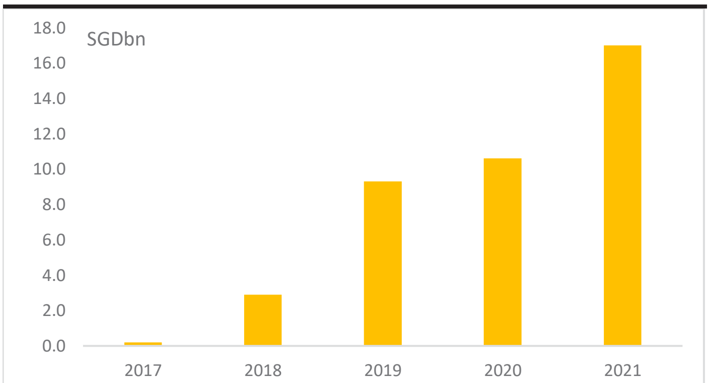
Indeed, green, social and sustainable bond issuances in Singapore has jumped close to 4x YoY in 2021 and demand is robust growing at a 71% CAGR 2017-2021. Similarly, sustainability-linked loan volumes have grown at a 204% CAGR 2017-2021, significantly above the ~2% system loan growth CAGR during the same period.

Fig 12: SG: Green, social and sustainability bond issuance



Source: MAS

Fig 13: SG: Green and sustainability-linked loan issuance



Source: MAS

Regulatory drivers and the network effects of a maturing sustainability ecosystem should support continued growth for green financing in Singapore, in our view.

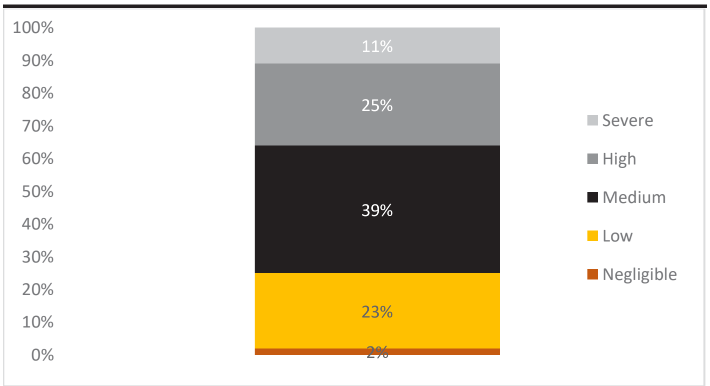
Over the longer term, this should be a key contributor towards driving domestic corporates transitioning towards lower emissions, we believe.

3. We like transition plays with improving disclosure

We believe Singapore offers a compelling entry point for building ESG exposure regionally. The regulatory and business-strategy drive to incorporate sustainability disclosure and align towards lower emissions have resulted in a corporate mix that is trending towards lower sustainability mix.

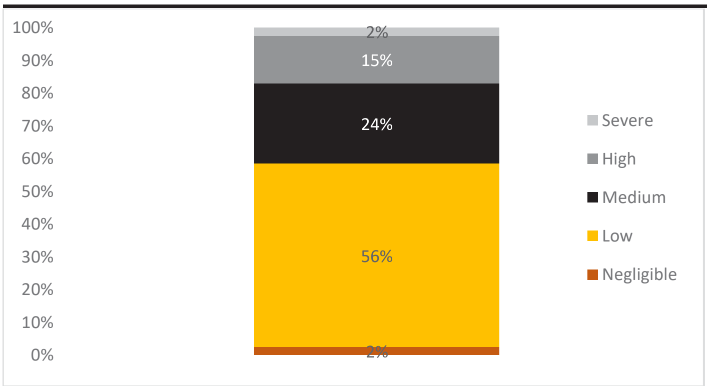
Under the Sustainalytics ESG scoring, 58% of MIBG's coverage universe falls under Low to Negligible risk categories. Only 25% of Sustainalytics' global coverage fall in to this category.

Fig 14:MIBG Singapore Sustainalytics ESG score distribution



Source: Sustainalytics, Maybank IBG Research

Fig 15:Sustainalytics global coverage ESG score distribution



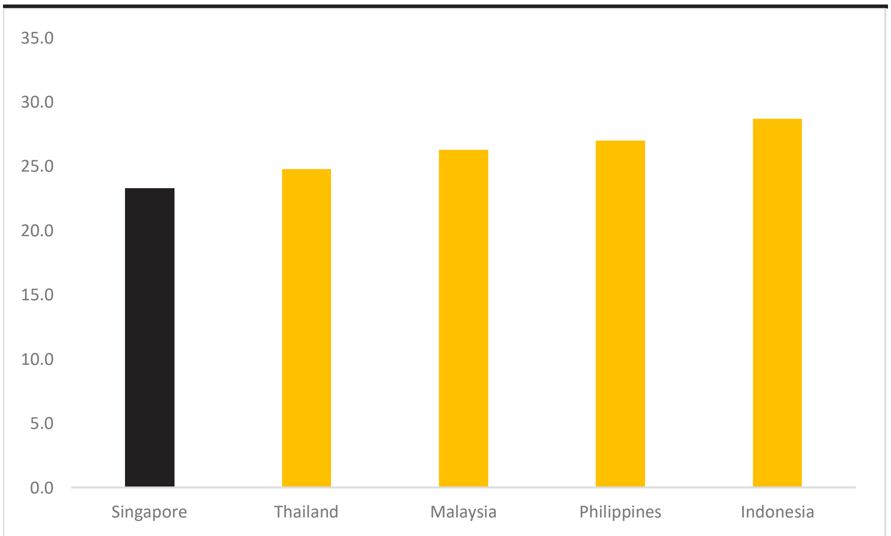
Source: Sustainalytics, Maybank IBG Research

The prevalence of REITs, developers, financials, technology sectors in Singapore and the lower representation of higher emission industries such as plantations, metals & mining, petrochemicals etc., is likely a key driver for this differential.

3.1 Singapore offers lower ESG risk *vis-à-vis* the region

At the same time, from a regional context, Singapore's ESG risks is the lowest. We compare the Sustainalytics risk scores of the top-10 market cap components of regional indices. Here we see that Singapore has a score of 23.3, compared to a regional average of 26.0 (the lower the score, less the ESG risk).

Fig 16: Average ESG scores of top-10 market cap components of regional indices

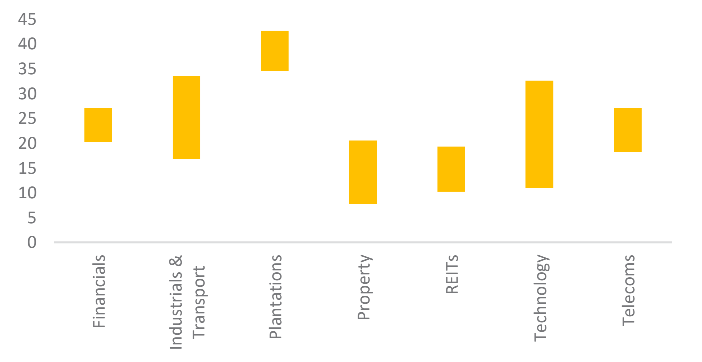


Source: Sustainalytics, Bloomberg, Maybank IBG Research

We believe the lower ESG risk profiles displayed by Singapore corporates could be a strategic advantage in attracting regional sustainable liquidity flows to Singapore. This could be catalyst for higher earnings multiple in the long term, we believe.

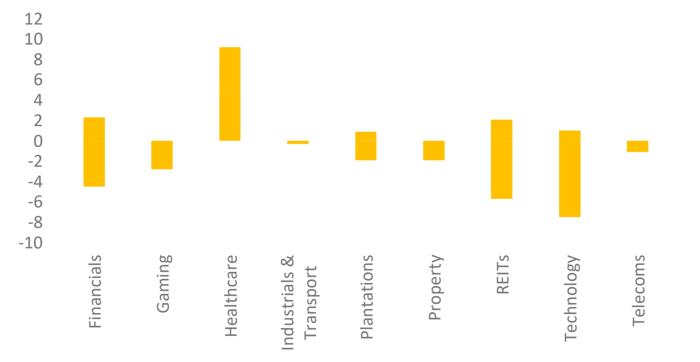
When drilling down to sector level, we see lower ESG risk score and improving ESG score momentum for REITS, Property and Financials. Industrials and Plantations display higher risk scores, but compared to our last review on 5 July 2021, the range of momentum has improved. The outlier here is Technology, where the momentum range has widened towards negative. However, this is largely due to the addition of smaller cap Frencken (FRKN SP, SGD1.00, HOLD, TP: SGD1.05), which was absent from the previous review.

Fig 17: Singapore coverage: ESG core range by sector



Source: Sustainalytics, Maybank IBG Research

Fig 18: Singapore coverage: Momentum range by sector



Source: Sustainalytics, Maybank IBG Research

Overall, incrementally improving risk scoring as well as scoring momentum points to increasing focus amongst corporates in incorporating ESG in to their operating strategies. Of course, as we discuss earlier, significant headway remains to be made, in not only optimizing these strategies, but also executing those while improving buy-in from key stakeholders.

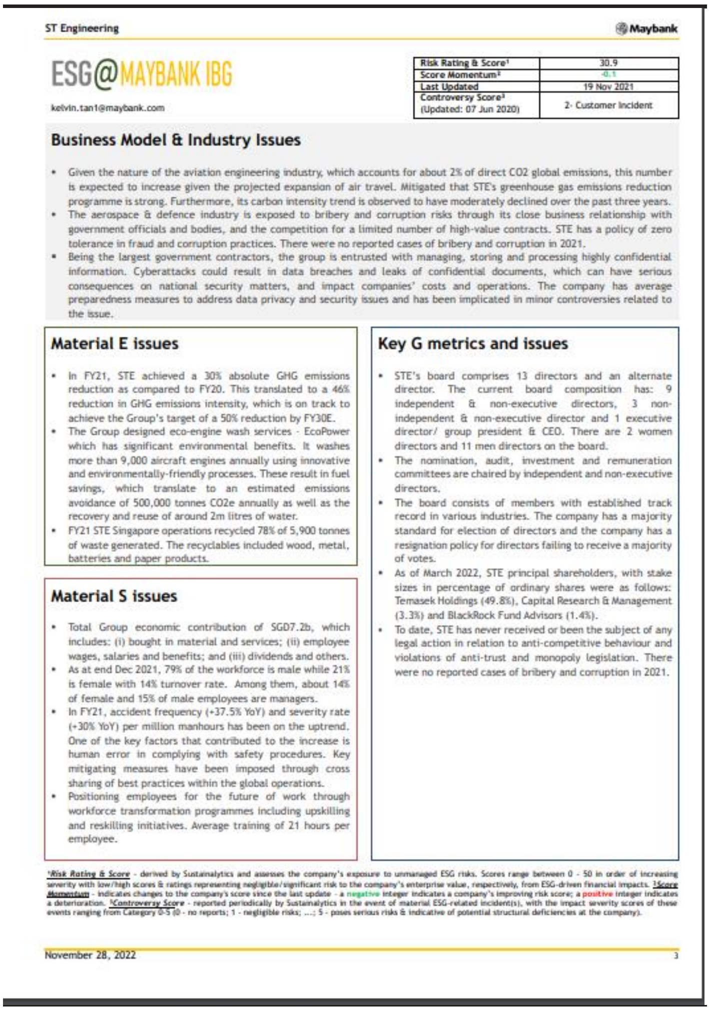
Nevertheless, we believe picking corporates that have the highest likelihood of success here by deeply examining their ESG disclosure levels, targets and existing mitigation actions together with management quality and competitive moats and long-term gearing towards growth themes should drive long-term outperformance.

3.2 Introducing MIBG ESG 2.0 for deeper dives on corporate disclosure, targets and mitigation plans

The MIBG equity research team across ASEAN (30+ analysts covering over 200+ stocks) has been publishing one-page ESG tear sheets for companies under coverage since mid-2020. As at end-2021, all of MIBG's ASEAN equity research coverage, spanning across all sectors, now comes with a qualitative-centric ESG tear sheet insert (ESG 1.0) 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 publicly available data together with inputs from Sustainalytics. This 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).

Fig 19: Original ESG 1.0 Sheet. Example ST Engineering



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Risk Rating & Score[1]	30.9
Score Momentum[2]	-0.1
Last Updated	19 Nov 2021
Controversy Score[3] (Updated: 07 Jun 2020)	2- Customer Incident

Business Model & Industry Issues

- Given the nature of the aviation engineering industry, which accounts for about 2% of direct CO2 global emissions, this number is expected to increase given the projected expansion of air travel. Mitigated that STE's greenhouse gas emissions reduction programme is strong. Furthermore, its carbon intensity trend is observed to have moderately declined over the past three years.
- The aerospace & defence industry is exposed to bribery and corruption risks through its close business relationship with government officials and bodies, and the competition for a limited number of high-value contracts. STE has a policy of zero tolerance in fraud and corruption practices. There were no reported cases of bribery and corruption in 2021.
- Being the largest government contractors, the group is entrusted with managing, storing and processing highly confidential information. Cyberattacks could result in data breaches and leaks of confidential documents, which can have serious consequences on national security matters, and impact companies' costs and operations. The company has average preparedness measures to address data privacy and security issues and has been implicated in minor controversies related to the issue.

Material E issues

- In FY21, STE achieved a 30% absolute GHG emissions reduction as compared to FY20. This translated to a 46% reduction in GHG emissions intensity, which is on track to achieve the Group's target of a 50% reduction by FY30E.
- The Group designed eco-engine wash services - EcoPower which has significant environmental benefits. It washes more than 9,000 aircraft engines annually using innovative and environmentally-friendly processes. These result in fuel savings, which translate to an estimated emissions avoidance of 500,000 tonnes CO2e annually as well as the recovery and reuse of around 2m litres of water.
- FY21 STE Singapore operations recycled 78% of 5,900 tonnes of waste generated. The recyclables included wood, metal, batteries and paper products.

Material S issues

- Total Group economic contribution of SGD7.2b, which includes: (i) bought in material and services; (ii) employee wages, salaries and benefits; and (iii) dividends and others.
- As at end Dec 2021, 79% of the workforce is male while 21% is female with 14% turnover rate. Among them, about 14% of female and 15% of male employees are managers.
- In FY21, accident frequency (+37.5% YoY) and severity rate (+30% YoY) per million manhours has been on the uptrend. One of the key factors that contributed to the increase is human error in complying with safety procedures. Key mitigating measures have been imposed through cross sharing of best practices within the global operations.
- Positioning employees for the future of work through workforce transformation programmes including upskilling and reskilling initiatives. Average training of 21 hours per employee.

Key G metrics and issues

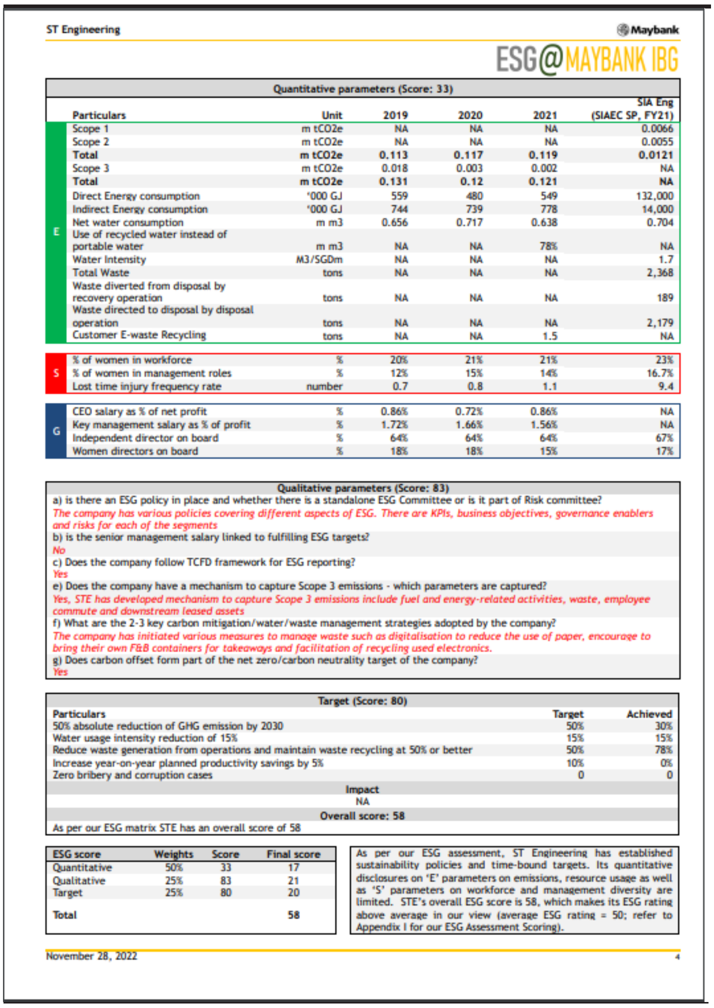
- STE's board comprises 13 directors and an alternate director. The current board composition has: 9 independent & non-executive directors, 3 non-independent & non-executive director and 1 executive director/ group president & CEO. There are 2 women directors and 11 men directors on the board.
- The nomination, audit, investment and remuneration committees are chaired by independent and non-executive directors.
- The board consists of members with established track record in various industries. The company has a majority standard for election of directors and the company has a resignation policy for directors failing to receive a majority of votes.
- As of March 2022, STE principal shareholders, with stake sizes in percentage of ordinary shares were as follows: Temasek Holdings (49.8%), Capital Research & Management (3.3%) and BlackRock Fund Advisors (1.4%).
- To date, STE has never received or been the subject of any legal action in relation to anti-competitive behaviour and violations of anti-trust and monopoly legislation. There were no reported cases of bribery and corruption in 2021.

[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).

November 28, 2022 3

Source: Maybank IBG Research

Fig 20: Expanded ESG 2.0 Sheet, Example ST Engineering



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	Quantitative parameters (Score: 33)					
	Particulars	Unit	2019	2020	2021	SIA Eng (SIAEC SP, FY21)
E	Scope 1	m tCO2e	NA	NA	NA	0.0066
	Scope 2	m tCO2e	NA	NA	NA	0.0055
	Total	**m tCO2e**	**0.113**	**0.117**	**0.119**	**0.0121**
	Scope 3	m tCO2e	0.018	0.003	0.002	NA
	Total	**m tCO2e**	**0.131**	**0.12**	**0.121**	**NA**
	Direct Energy consumption	'000 GJ	559	480	549	132,000
	Indirect Energy consumption	'000 GJ	744	739	778	14,000
	Net water consumption	m m3	0.656	0.717	0.638	0.704
	Use of recycled water instead of portable water	m m3	NA	NA	78%	NA
	Water Intensity	M3/SGDm	NA	NA	NA	1.7
	Total Waste	tons	NA	NA	NA	2,368
	Waste diverted from disposal by recovery operation	tons	NA	NA	NA	189
	Waste directed to disposal by disposal operation	tons	NA	NA	NA	2,179
	Customer E-waste Recycling	tons	NA	NA	1.5	NA
S	% of women in workforce	%	20%	21%	21%	23%
	% of women in management roles	%	12%	15%	14%	16.7%
	Lost time injury frequency rate	number	0.7	0.8	1.1	9.4
G	CEO salary as % of net profit	%	0.86%	0.72%	0.86%	NA
	Key management salary as % of profit	%	1.72%	1.66%	1.56%	NA
	Independent director on board	%	64%	64%	64%	67%
	Women directors on board	%	18%	18%	15%	17%

Qualitative parameters (Score: 83)

a) is there an ESG policy in place and whether there is a standalone ESG Committee or is it part of Risk committee?
The company has various policies covering different aspects of ESG. There are KPIs, business objectives, governance enablers and risks for each of the segments
b) is the senior management salary linked to fulfilling ESG targets?
No
c) Does the company follow TCFD framework for ESG reporting?
Yes
e) Does the company have a mechanism to capture Scope 3 emissions - which parameters are captured?
Yes, STE has developed mechanism to capture Scope 3 emissions include fuel and energy-related activities, waste, employee commute and downstream leased assets
f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?
The company has initiated various measures to manage waste such as digitalisation to reduce the use of paper, encourage to bring their own F&B containers for takeaways and facilitation of recycling used electronics.
g) Does carbon offset form part of the net zero/carbon neutrality target of the company?
Yes

Target (Score: 80)		
Particulars	Target	Achieved
50% absolute reduction of GHG emission by 2030	50%	30%
Water usage intensity reduction of 15%	15%	15%
Reduce waste generation from operations and maintain waste recycling at 50% or better	50%	78%
Increase year-on-year planned productivity savings by 5%	10%	0%
Zero bribery and corruption cases	0	0
Impact		
NA		
Overall score: 58		
As per our ESG matrix STE has an overall score of 58		

ESG score	Weights	Score	Final score
Quantitative	50%	33	17
Qualitative	25%	83	21
Target	25%	80	20
Total			58

As per our ESG assessment, ST Engineering has established sustainability policies and time-bound targets. Its quantitative disclosures on 'E' parameters on emissions, resource usage as well as 'S' parameters on workforce and management diversity are limited. STE's overall ESG score is 58, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

November 28, 2022 4

Source: Maybank IBG Research

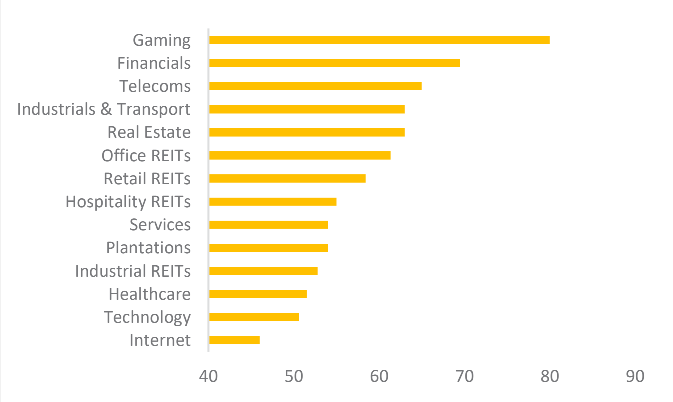
Most recently, we have launched our own proprietary ESG scoring model per the addition of a quantitative-focused tear sheet (ESG 2.0), with the target being to roll out ESG 2.0 to all ASEAN big-caps coverage (>USD1b market cap) by end-2022. In terms of methodology, we evaluate the ESG ratings based on 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.

3.3 ESG 2.0 disclosure levels good, but significant headroom to improve

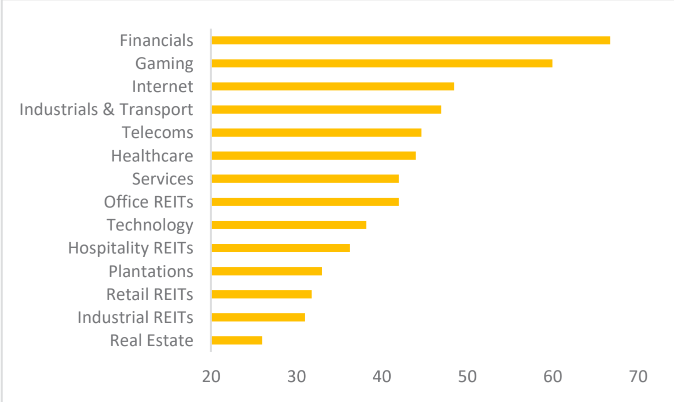
95% of our coverage universe currently has ESG 2.0 disclosures. Notably, all of these have scored above average (>50) overall scores. Gaming, Financials and Telecoms sectors have significant leads in terms of scoring, whereas Services, Plantations, Industrial REITs, Technology and Healthcare generally score in the lower end of the range.

Fig 21: Singapore ESG 2.0 overall scores by sector



Source: Company data, Maybank IBG Research

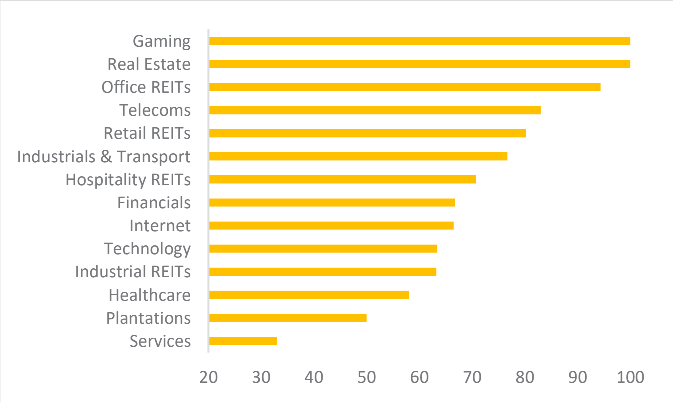
Fig 22: Singapore ESG 2.0 quantitative scores by sector



Source: Company data, Maybank IBG Research

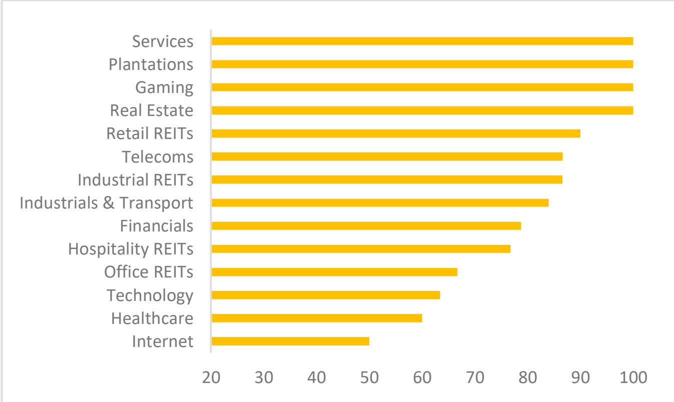
In terms of quantitative disclosure, we find the Financials and Gaming are the most comprehensive so far. This includes factors such as GHG emissions, energy intensity as well as water and waste-related metrics together with diversity, inclusivity and corporate governance disclosures. The property and REIT sector lag notably behind, particularly in the areas of social and governance factor disclosures.

Fig 23: Singapore ESG 2.0 qualitative scores by sector



Source: Company data, Maybank IBG Research

Fig 24: Singapore ESG 2.0 target disclosure scores by sector



Source: Company data, Maybank IBG Research

Interestingly, property and some REIT sectors score relatively better on qualitative factors. These include disclosures of execution of well-defined carbon mitigation strategies as well as senior management target setting for achieving ESG KPIs, amongst others.

On target setting, services, plantations, gaming and property sectors currently display leadership. Here targets on Net Zero timelines together with lowering resource use intensity as well as improving gender and diversity metrics have been key disclosures we have looked for.

3.4 Singapore ESG Top Picks

A majority of our Singapore coverage universe are clustered on above average (>50) scoring under the MIBG's ESG 2.0 methodology. Correspondingly, these also broadly reflect the Sustainalytics ESG risk scoring, when taken as an additional filter.

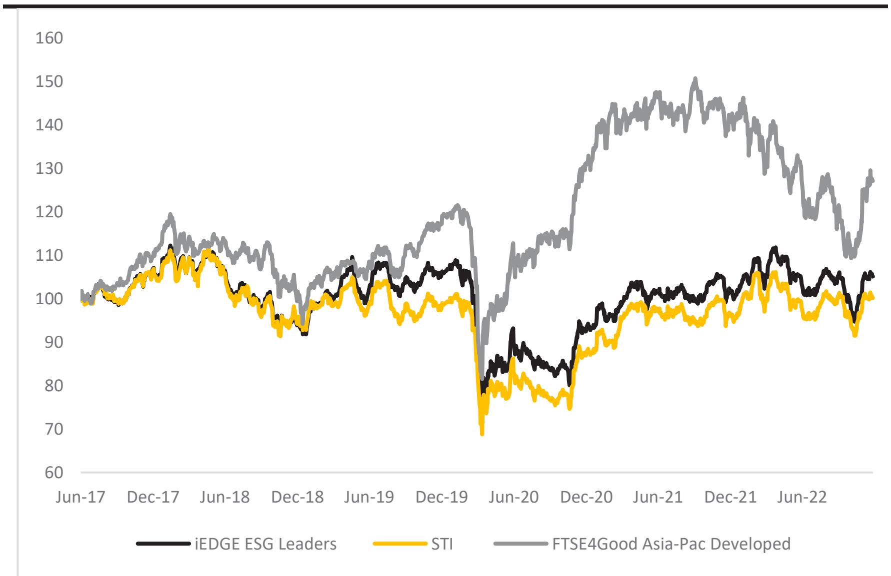
When mapped against Sustainalytics risk scoring momentum (which indicates incremental improvements/ worsening of ESG risk), we find a large number of the lower ESG scoring corporates are displaying sequential improvements.

Fig 25: MIBG SG coverage mapped by ESG2.0 risk score and rating momentum

Source: Sustainalytics, Maybank IBG Research

We believe fundamentally, companies that have higher levels of transparency and well-articulated targets in terms of emissions reductions as well as engaging key stakeholders should carry lower operating, financing and controversy risks.

Fig 26: STI performance against ESG factor indexes



Source: Bloomberg, Maybank IBG Research

This should have a beneficial impact on lowering equity risks premiums vs. those that are less transparent and have no solid targets to deal with longer term headwinds of climate challenges and/or meeting multi-stakeholder expectations.

Indeed when comparing the performance of the STI (that comprises of Singapore's blue chips) over the past 4 years, indexes that incorporate ESG factors have notably outperformed. We use the last 4-year period as it takes in to account Covid, Russia's invasion of the Ukraine, US-China tensions along with the immediate pre-Covid year to give a rounded overview of a risk cycle.

One of the indexes compared was the iEdge SG ESG Leaders index, developed by SGX with factor inputs from Sustainalytics. The index is constructed with constituents from Singapore that are considered best in class from a sustainability perspective, and also saw less downside during downturns vs. the conventional index. Here the index outperformed by 6% in the past 4 years.

Similarly, the FTSE4Good Developed Asia Pacific Index saw an even stronger outperformance against the STI of 21% during the same period. This index has constituents that are mostly larger caps, Asian developed market companies from Hong Kong, Australia, New Zealand, Japan where ESG integration is at a more progressive stage than ASEAN peers. In our view, this shows that stronger ESG integration and transparency leads to improved outperformance.

This is further supported by MIBG's recent sustainability study that incorporated quant screening to better understand the impact of ESG integration on stock returns. In the research report "*ASEAN - evidence of better ESG driving outperformance*" (12 Aug 2022), we find that low/medium risk ESG companies tend to show tangible outperformance against the benchmark MSCI ASEAN index.

Fig 27: Low/medium ESG risk companies outperformed vs. MSCI ASEAN Index benchmark

		MCAP weighted return								
		MSCI			Annualised returns			Out/underperformance		
Particulars	No. of comp-anies	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret	5Y Ann. Ret	3Y Ann. Ret	1Y Ret
Overall										
Sustainalytics ASEAN -6 markets companies	475	3.30%	-0.30%	2.60%	7.90%	8.70%	7.50%	4.60%	9.00%	4.90%
ESG risk score -- low/medium + controversy (no or 1) + mgmt (medium or strong)	177	3.30%	-0.30%	2.60%	7.60%	4.20%	4.60%	4.30%	4.50%	2.00%
MIBG coverage	201	3.30%	-0.30%	2.60%	7.50%	8.80%	8.40%	4.30%	9.10%	5.70%
ESG risk score -- low/medium + controversy (no or 1) + mgmt (medium or strong)	86	3.30%	-0.30%	2.60%	5.90%	0.70%	3.40%	2.60%	1.00%	0.70%

Source: Maybank IBG Research

We believe in a risk environment where cost of risk remains high for longer, corporates that display better transparency and execute well on reaching climate, social and governance targets should see a positive divergence in performance against those that remain less engaged.

As a result, in constructing a Singapore ESG portfolio, our selection criteria has been guided by stocks that can attract incremental ESG investment flows. Here we took in to account the following drivers:

- Improving risk rating momentum
- Gearing towards major ESG investment themes
- Participating in or facilitating transition towards lower emissions

We then overlay this screen with MKE's fundamental analysis and valuations to arrive at the final candidates.

Fig 28: Preferred ESG Picks

Company	Ticker	Sector	Market Cap	Rec	Price	TP	MIBG ESG2.0 Score	Sust. Risk Score	Sust. Momentum
			SGDbn		LCY	LCY			
Capitaland Investments	CLI SP	Real Estate	18.4	Buy	3.54	4.30	63	14.9	0.0
CICT	CICT SP	REITs	13.3	Buy	2.01	2.55	66	10.2	-0.7
ComfortDelGro	CD SP	Transport	2.7	Buy	1.24	1.60	78	16.8	-0.2
DBS	DBS SP	Financials	86.7	Buy	33.50	42.69	78	20.2	0.3
Keppel REIT	KREIT SP	REITs	3.4	Buy	0.90	1.25	74	11.0	-5.7
Netlink NBN	NETLINK SP	Utilities	3.2	Buy	0.82	1.02	55	27.0	-1.1
OCBC	OCBC SP	Financials	55.0	Buy	12.18	14.70	70	27.1	-4.5
Sembcorp Industries	SCI SP	Industrials	5.8	Buy	3.23	4.00	53	33.5	-0.3
UMS	UMSH SP	Technology	0.8	Buy	1.25	1.34	48	18.1	-7.5
UOB	UOB SP	Financials	51.5	Buy	30.56	33.77	74	20.3	0.7

Source: Sustainalytics, Factset, Maybank IBG Research

On an overall portfolio basis, our picks display an average ESG risk score of 19.9 (Low/Medium Risk) and a Risk Rating momentum of -1.9. The portfolio offers a 23% average upside on a 12-month basis

3.4.1Preferred ESG Picks

CapitaLand Investments (CLI SP, SGD3.54, BUY, TP: SGD4.30)
CLI puts sustainability at the core of everything it does. It is the first mover in the space with its prior parent entity being the first Singapore listed company to publish Global Sustainability Report in 2010 referencing Global Reporting Initiative. It recently elevated its commitment to sustainability by aiming to achieve net zero emissions by 2050. It sustainability effort is overseen by a full board committee chaired by its lead independent director. It has an established ESG framework, internal polices, measurable targets and robust disclosures. In the near term, CLI will benefit from growth in funds under management, recovery in global lodging and higher fee-related earnings.

CapitaLand Integrated Commercial Trust (CICT SP, SGD2.01, BUY, TP: SGD2.55)
CICT's long-term ESG targets are aligned to its sponsor's science-based goals and achievement of net zero emissions by 2050. The manager has been able to obtain the minimum green rating for the entire portfolio. About a third of its borrowings are green/sustainability-linked debt. CICT maintained the highest 5-start rating in GRESB 2021 rankings, which is at the top 20% globally in the benchmark. The REIT is the proxy for Singapore commercial real estate and a beneficiary of reopening, return to office and resilient domestic consumption.

ComfortDelGro (CD SP, SGD1.24, BUY, TP: SGD1.60, ESG Rating: MEDIUM)
CD has made steady progress in electrifying its global fleet of vehicles with close to 70% hybrid, electric and CNG taxis across Singapore (65%), Australia (73%) and China (71%). Come 2023, the Group aims to achieve 100% hybrid vehicles for its taxi fleet, backed by favourable government policy. Transition of its fleet to green vehicles should lead to better fuel efficiency and lower GHG emissions. With the Group putting in place clear decarbonisation roadmap, we believe this would help to drive ESG re-rating in the longer term. We also like CD for its strong balance sheet and continued ridership growth, with scope for potential margins improvement.

DBS (DBS SP, SGD33.50, BUY, TP: SGD42.69, ESG Rating: MEDIUM)
DBS has set a clear pathway to achieving Net Zero and has strong levels of transparency around its emissions and targets. The Group has published a clear, science-based approach to achieving Net Zero. By 2023, the Group plans to disclose decarbonisation transition pathways and set interim targets for 2030. While it publishes Scope 3 operational emissions, disclosure of financed emissions are at an early stage. However, DBS is targeting detailed reporting by 2024. Notably, under its social targets, the Group has increased sustainable investing AUM for its private banking products to 53% vs. a target of 50% by 2024. A significant portion of its financial inclusion strategy is based on digitalized banking access. Separately, better prospects from increasing interest income and potentially higher dividends should drive earnings momentum.

Keppel REIT (KREIT SP, SGD0.90, BUY, TP: SGD1.25)
While the REIT has yet to enunciate net-zero targets, it aims to halve Scope 1 and 2 emissions by 2030 from 2019 levels and obtain 100% green certification by 2023 (currently at 90%). The manager has started disclosing relevant sustainability data pertaining to environmental targets from last year. About half of its borrowings is sustainability-linked. KREIT has maintained its green star status in GRESB 2021 rankings. The REIT's portfolio of Grade A premium office buildings are an address of choice for blue-chip

tenants and poised to benefit from Singapore becoming the desired business hub.

Netlink Trust (Netlink SP, SGD0.82, BUY, TP: SGD1.02, ESG Rating: LOW)

Netlink's ESG has shown improvement over the past few years. It's recent decarbonisation strategy is to reduce scope 1 and 2 emission by 50% by FY30 and achieve net zero by 2050. The company has maintained island-wide fibre coverage and 99.9% network availability in Singapore. NetLink Trust continues to invest in its own infrastructure and explore opportunities to invest in telecoms infrastructure businesses overseas that are likely to generate stable cashflows. We believe that NetLink Trust is a defensive play amid the current backdrop of rising inflation and a potential economic slowdown given its strong earnings visibility and stability.

OCBC (OCBC SP, SGD12.18, BUY, TP: SGD14.70, ESG Rating: MEDIUM)

OCBC is executing on its green financing targets strongly and scores well on workplace inclusivity and diversity. OCBC has successfully deployed SGD34b of sustainable financing, making good progress on its SGD50b by 2025 target. It has also set targets to reaching carbon neutrality from its operations by end-2022. Contrastingly, there is limited disclosure on the Group's intended pathway towards Net Zero or a timeline. However, the Group has become a signatory to the Net Zero Banking Alliance and it plans to announce interim and 2050 targets for decarbonisation by 1H23. Operationally, expect the strong NIM improvement momentum delivered in 1H22 to flow through to 2H22 as Fed rate hikes get further baked in. At the same time, the Group's gearing towards North-South supply chain and wealth flows gives it earnings visibility. China re-opening could be a near-term upside catalyst.

Sembcorp Industries (SCI SP, SGD3.23, BUY, TP: SGD4.00, ESG Rating: MEDIUM)

Sembcorp's vision is to be a leading provider of sustainable solutions. The Group has laid out a strategic roadmap to transform its portfolio from brown to green, by focusing on growing their Renewables and Integrated Urban Solutions businesses. Since unveiling SCI's long-term strategic plan underpinned by clear targets, the company has delivered strong performance (earnings up more than 9x YoY) while making strides in growing its sustainable solution business. The market has also reacted positively as well with the share price up more than 20% since the announcement. Sembcorp's current total gross renewable capacity increases to 9.4GW, including work-in-progress assets, very close to its 10GW target by 2025. We believe SCI's renewables expansion plan will remain tenacious and it is likely to set a higher target in FY23E. Moving forward, we expect continual high electricity tariffs in Singapore and India to continue to buoy SCI's earnings.

UMS Holdings (UMSH SP, SGD1.25 BUY, TP: SGD1.34, ESG Rating: Low)

UMS has a pretty low rating based on our ESG scoring, in line with that of the tech space. However, they are committed to align their economic success with environmental and social responsibility. It is reinforced through their ongoing cooperation and support of key customer's efforts as member of the Responsible Business Alliance. They have also been proactive in their ESG reporting and we do expect greater levels of disclosure. Management's 6-month outlook remains robust with a large order backlog from its key customer coupled with the gain of a new large customer. We feel positive on UMS's outlook despite the current challenges facing the semi-con space.

UOB (UOB SP, SGD30.56, BUY, TP: SGD33.77, ESG Rating: MEDIUM)

UOB's quantitative ESG disclosures are the most extensive compared to domestic peers. This significantly improves transparency and risk measurement. Additionally, the Group has articulated a commitment to reach Net Zero by 2050. Part of its commitment includes comprehensive interim 2030 targets. We also note UOB's asset management and venture capital divisions are aligning their portfolios towards low carbon factors, while also practicing stewardship with increased engagement in investee companies on ESG topics. Operationally, NOII is likely to remain under pressure in the context of current market conditions; we believe rapidly improving NIMs from Fed hikes should provide an offset. At the same time, the Group's gearing towards secular ASEAN growth driven by domestic consumption as well as North-South supply chain shifts should support medium-term earnings visibility.

4. ESG Sector Reviews

4.1 Banks & Finance

- **Banks have been progressively improving disclosures and have made clear commitments to Net Zero. They are set to achieving operational Net Zero by end-2022**
- **Nevertheless, notable ESG risks remain, especially with limited availability of financed emissions, cybersecurity as well as social risks including Fair Dealing and financial inclusion**
- **Board independence and diversity are a key area for improvement, where the sector trails global banks**

Critical ESG issues in the sector

The sector has made notable progress in quantitative disclosure on emissions, waste, resource consumption, etc. vs. a year ago. However, Scope 3 emissions reporting remains limited, while reporting financed emissions have not yet begun. Barring DBS, there is no clear pathways available on achieving Net Zero nor any interim targets. Under the 'social' lens, the sector has elevated 'Fair Dealing' risks when selling financial products given their large wealth management pillars. At the same time, given their operational footprints in ASEAN – where there are a large proportion of under-banked – financial inclusion is notable issue, in our view. Significant investments made in technology, digitalization exposes the sector to cyber-security, data privacy, and infrastructure availability risks and failures here could have material impact on earnings and capital. On governance, Board independence and diversity remain below levels seen amongst global banks although some progress is seen in increasing female participation at senior management levels. In terms of ESG strategy implementation and governance, barring DBS, there are no Board level ESG sub-committee appointed within the sector.

Mitigation Outlook

The sector follows the TCFD framework for ESG reporting and disclosure levels are progressively improving. All three banks have made Net Zero commitments and in the process of fleshing out pathways and interim targets (DBS has already done so). The sector has made commitments to reach operational carbon neutrality by 2022 (with UOB already achieving this in 2021). All three banks are also undergoing climate-change risk assessments and stress testing of their portfolios to assess transition and physical risks going forward. Additionally, as part of the strategy of increasing portfolio mix towards low emission sectors, the sector has announced 3-4 year sustainable financing targets with clear disclosures of funding deployments. At the same time, clear commitments have been made in terms of exiting coal exposure as well as onboarding only sustainable palm oil clients. All three banks have in place frameworks and policies under corporate risk governance to mitigate technology risks.

Sector Outlook

The sector is set to continue to enjoy net interest income tailwinds as central banks hike interest rates, which should drive further Net Interest Margin (NIM) upgrades. While loan growth is expected to soften as regional economic growth decelerates, higher margins should offset this risk. Nevertheless, the potential for a recessionary environment could result in downside surprises for NPLs, which could trigger higher credit charges. However, strong provisioning cover (>100%) and strong capital ratios are offsetting factors for these risks, in our view.

Fig 29: Banks Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
DBS Group	Buy	33.50	85,892	Medium	20.2	2
OCBC Bank	Buy	12.18	51,847	Medium	27.1	2
United Overseas Bank	Buy	30.56	51,357	Medium	20.3	2
Singapore Exchange Ltd	Buy	9.08	9,731	Medium	20.2	0

Source: Sustainalytics, Factset, Maybank IBG Research

DBS Group (DBS SP)

thilanw@maybank.com

Risk Rating & Score[1]	20.2
Score Momentum[2]	+0.3
Last Updated	03 Oct 2022
Controversy Score[3] (Updated: 03 Oct 2022)	2

Business Model & Industry Issues

- The nature of DBS' business of lending and investments exposes it to multiple risks including environmental, social, money laundering, corruption through its clients. It has been increasing weightings towards green, sustainability linked lending along with clean energy (52% of incremental loans in 2021) with a sustainable financing target of SGD50bn by 2024.
- Its extensive investments in digitisation and automation of banking processes & digital banking exposes it to data and cyber-security risks. While there were no material data or security lapses in the past 5-years, it suffered system outages in 2021
- DBS' significant private banking and wealth management business exposes it to product governance, business ethics risks. Its long term exclusive relationship with Manulife for insurance distribution also exposes DBS to similar risks
- DBS displays no exceptional risks not typical for a large, regional bank for ESG. In our view, it has a regionally above average track record of disclosure in terms of adhering to ESG standards. This is complemented by an overlay of a strong balance sheet and proactive regulatory oversight by MAS

Material E issues

- Establishing a methodology to measure, manage and reduce carbon emissions from lending activities with a target for completion by 2023. Ceased accepting new customers who derive >25% revenue from thermal coal
- Potential contagion risks from lending & investment to sectors with ESG issues. However, pledged to phase out thermal coal financing by 2039 and is exiting palm oil clients who do not commit to NDPE or RSPO by a fixed date.
- Fist SG bank signatory to the NZBA commitment letter to align business to limit emissions to Net Zero by 2050
- Established CIX, a carbon exchange and market place for carbon credits to support industry decarbonisation efforts
- The Group is targeting to become carbon neutral by end-2022

Material S issues

- Potential financial inclusion risks from vulnerable sectors such as low income, elderly, migrant workers etc. DBS has launched multiple digital inclusion programs including robo-advisory for retail clients, co-lending partnerships and instant approval digital loans in Indonesia and appointing elderly digital ambassadors through their heartland POSB franchise in Singapore. DBS has also launched digital banking inclusion program for migrant workers
- Social impact risks from investing activities. DBS has surpassed its sustainable investment AUM of >50% by 2024 already. New target is pending.
- Employee diversity and equal opportunity risks. Female employees make up 49% of the workforce. It has a Board level diversity policy. It also has a whistleblowing program to escalate employee concerns

Key G metrics and issues

- Established a Board-level sustainability committee – so far the sole domestic bank to have done so
- DBS has not had any material accounting & tax, lobbying & public policy, sanctions related, data privacy or security controversies in the past 5-yers
- Given the breadth of products offered and the large wealth and PB franchise, fair dealing risks cannot be ignored. This is addressed by the Group Fair Dealing and Conduct Committee (FDCC) – chaired by CEO - and the Board's Risk Management Committee. DBS has not had any material fair dealing controversies since its temporary product selling ban following mis-selling complex 'mini-bond' products to unqualified investors in 2008/9
- Significant investments in technology for systems and business integration as well as online banking opens it to material cyber-security risks. In Feb 2022, DBS was required to set aside SGD930m (0.4% CAR) of additional capital by MAS in response to technology disruptions in 4Q21. It has Data Governance and Data Privacy policies in place to deal with data governance risks.
- Corporate Governance Risks. 60% of Board composition is Independent Directors. Gender diversity is lower with 20% of female Board representation. In the Management committee this is 25%
- DBS is a signatory to the UN Global Compact. It has been producing a detailed standalone sustainability report since 2018. The report has been prepared under the ESG standards of SGX, GRI, ABS and the recommendations of TCFD

[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).

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	Quantitative Parameters (Score: 67)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**HSBC (2021)**
E	Scope 1 GHG emissions	tCO2e	1,547	992	757	22,000
	Scope 2 GHG emissions	tCO2e	42,310	40,724	37,119	307,000
	Total	**tCO2e**	**43,857**	**41,716**	**37,876**	**329,000**
	Scope 3 GHG emissions	tCO2e	23,038	13,008	17,482	12,000
	Total	**tCO2e**	**66,895**	**54,724**	**55,358**	**341,000**
	GHG intensity (Scope 1 and 2)	kgCO2e/emp	1,537	1,431	1,328	1,470
	Energy consumption	MWh	102,897	98,507	99,228	833,000
	Water consumption	m3	200,801	174,896	139,058	1,594,000
	Printing paper from eco-friendly sources	%	N/A	91%	98%	N/A
	Total waste generated	ton	1,421	977	1,163	13,000
	Cases of environmental non-compliance	number	0	0	0	N/A
S	% of women in workforce	%	51.9%	51.5%	49.0%	52.0%
	% of women in management roles	%	40.0%	40.0%	40.0%	32.0%
	Policy, data & framework breaches	number	0	0	0	0
	Average training hours per employee	hours	38.7	38.9	39.2	26.3
	Non-compliance concerning fair dealing outcomes	number	0	0	0	N/A
G	MD/CEO salary as % of reported net profit	%	0.19%	0.19%	0.20%	0.04%
	Board salary as % of reported net profit	%	0.07%	0.09%	0.06%	0.05%
	Independent directors on the Board	%	60%	55%	60%	85%
	Female directors on the Board	%	20%	27%	20%	38%

Qualitative Parameters (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, the group has established a Board Sustainability Committee chaired by the CEO. This is supported by Group Sustainability Council comprising of pillar heads. There is also a specialised Climate Steering Committee co-chaired by the CRO, Head of Institutional Banking and the CSO

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

Yes. The BSC KPI's include strengthening risk, compliance frameworks as well as championing efforts in responsible banking, responsible business practices and impacts beyond banking. The Remuneration Committee takes these into account when setting senior management variable pay

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, ongoing. It is quantifying Scope 3 financed emissions across 9 priority sectors representing 34% of its wholesale portfolio. For 5 sectors DBS publishes financed emission intensities compared to 2020 reference baselines. The Group is also disclosing Scope 3 operational emissions.

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

The Group is retrofitting its office buildings into net-zero energy buildings. Employees are given remote working flexibility 40% of the time and installed sensors in office building to optimise energy usage according to occupancy. It is also installing solar arrays. Water reduction is achieved through implementing Greenmark standards as well as waste condensate reclamation.

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

Yes

Target (Score: 80)		
Particulars	**Target**	**Achieved**
SGD 50bn Sustainable financing target by 2024	50.0	39.4
DBS Private Bank suite of sustainable products to 50% of AUM by 2023	50%	53%
Zero thermal coal exposure by 2039	0%	N/A
Carbon neutral operations by 2022 (tons)	0	32.7
Net-zero carbon emissions by 2050	Net 0	N/A
Impact		
NA		
Overall Score: 78		
As per our ESG matrix, DBS (DBS SP) has an overall score of 78.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	67	33
Qualitative	25%	100	25
Target	25%	80	20
Total			**78**

DBS displays a very high degree of transparency in its ESG disclosures. It is the only one amongst its peers with a Board Level Sustainability Committee and have initiated aligning senior management rewards with ESG outcomes. Improving Board diversity and independence, benchmarked to global banks could drive further scoring upside. (See Appendix 1)

OCBC Bank (OCBC SP)

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Risk Rating & Score[1]	27.1
Score Momentum[2]	-4.5
Last Updated	03 Oct 2022
Controversy Score[3] (Updated: 03 Oct 2022)	2

Business Model & Industry Issues

- The nature of OCBC's business of lending and investments exposes it to multiple risks including environmental, social, money laundering, corruption through its clients. Target for sustainable financing commitment established at SGD50bn by 2025, while 60% of incremental loans in 2021 were classified as sustainable finance
- The industry is facing rising cyber-security and data protection threats as more and more banking goes online – especially accelerated by COVID-19 lockdowns. OCBC has had several service disruption issues in the past 10-years (2011 & 2018) due to IT infrastructure failures and faced issues handling SMS phishing scams in 2021
- OCBC has significant private banking and wealth management business exposes through its Bank of Singapore franchise as well as its Great Eastern Insurance subsidiary, which may lead to product governance, business ethics risks.
- We believe OCBC displays no exceptional risks not typical for a large, regional bank for ESG.

Material E issues

- Potential contagion risks from lending & investment to sectors with ESG issues. OCBC does not provide specific public disclosure on exposure to coal, palm oil, but total commodities exposure is 4% of loans, O&G 4%. Have adopted the Poseidon Principles to drive emissions reductions in shipping portfolios
- Committed to no new coal mining, brown coal, offensive weapons and exploitative labour funding
- OCBC has developed sector specific policies for ESG risk assessment and management. These policies cover all industries identified as 'high risk' by ABS Responsible Financing Guidelines.
- OCBC has set a target to achieve operational carbon neutrality by 2022 for its own emissions

Material S issues

- Potential financial inclusion risks. OCBC has developed inclusion products for the young, youth and elderly. However, there is limited information on how the group is tackling the under-banked, migrant workers and other socially vulnerable groups
- Increasing digitalisation as a response to financial inclusion. 60% of new secured consumer loans are approved digitally and all SME accounts are opened digitally (vs. 40% in 2020)
- Employee diversity and equal opportunity risks. Female employees make up 58% of the workforce. While women comprise 39% of leadership roles, only 33% are in senior management
- >75% of wealth management recommended funds carry a minimum BB MSCI ESG rating
- OCBC has a whistleblowing program to escalate employee concerns

Key G metrics and issues

- Regulators in Hong Kong found against OCBC in a mis-selling case in 2016 in its private banking arm. The mis-selling occurred before the entity was acquired by OCBC in 2009
- OCBC has not had any material accounting & tax, lobbying & public policy, sanctions related, data privacy or security controversies in the past 5-yers
- Given the breadth of products offered and the large wealth and PB franchise, fair dealing risks cannot be ignored. The group has a Fair Dealing monitoring program that measure quantitative and qualitative aspects of its performance. OCBC has also set up a Board Level Ethics and Conduct committee
- Significant investments in technology for systems and business integration as well as online banking opens it to material cyber-security risks. The group has developed a framework of policies and practices under corporate risk governance to tackle these issues. Nevertheless, the group has had 2 major digital infrastructure related incidents in the past 10-years
- The Group had SGD330m of additional capital (0.2% CAR) being imposed in 2Q22 by MAS for deficiencies in mitigating risks from SMS phishing scams in 2021
- Corporate Governance Risks. 75% of Board composition is Independent Directors. Gender diversity is low with 25% of female Board representation. In the Management committee this is 25%
- OCBC is a signatory to the UN Global Compact. It produces a sustainability report as part of its Annual Report. The report has been prepared under the ESG standards of SGX, GRI, and the recommendations of TCFD

[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).

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	Quantitative parameters (Score: 78)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**HSBC (2021)**
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	237	22,000
	Scope 2 GHG emissions	tCO2e	71,361	65,188	61,375	307,000
	Total	**tCO2e**	**N/A**	**N/A**	**61,612**	**329,000**
	Scope 3 GHG emissions	tCO2e	N/A	N/A	278	12,000
	Total	**tCO2e**	**N/A**	**N/A**	**61,890**	**341,000**
	GHG intensity (Scope 1 and 2)	kgCO2e/emp	N/A	N/A	2,017	1,470
	Energy consumption	MWh	123,042	114,887	109,790	833,000
	Water consumption	m3	591,936	507,510	407,051	1,594,000
	Printing paper from eco-friendly sources	tons	N/A	N/A	N/A	N/A
	Total waste generated	tons	N/A	N/A	N/A	13,000
	Cases of environmental non-compliance	number	0	0	0	N/A
S	% of women in workforce	%	59.0%	59.0%	58.0%	52.0%
	% of women in senior management roles	%	24.0%	39.0%	39.0%	32.0%
	Policy, data & framework breaches	number	0	0	0	0
	Average training hours per employee	hours	44.2	33.9	45.1	26.3
	Non-compliance concerning fair dealing outcomes	number	0	0	0	N/A
G	MD/CEO salary as % of reported net profit	%	0.23%	0.24%	0.21%	0.04%
	Board salary as % of reported net profit	%	0.08%	0.11%	0.08%	0.05%
	Independent directors on the Board	%	64%	64%	75%	85%
	Female directors on the Board	%	18%	18%	25%	38%

Qualitative Parameters (Score: 50)

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

No. It is part of the Risk Committee. However, there is a Sustainability Council chaired by the CEO that supports the Board

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

Not disclosed

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?

Currently OCBC is capturing parameters including business air travel. It is planning to expand Scope 3 coverage to align with industry best practices. However, there is no disclosure on when it plans to capture financed emissions.

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

It is implementing Green Mark certifications for its building operations and data centres. Similarly, it is reducing water consumption through installing water efficient fittings and aligning for BCA Green Mark standards

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

No. But it has indicated of plans to do so going forward

Target (Score: 75)		
Particulars	**Target**	**Achieved**
SGD50bn Sustainable financing target by 2025	50bn	34bn
Carbon neutral operations by 2022	0	N/A
Integration of climate-related considerations in to ESG Risk Assessments by 2022 in alignment with TCFD and MAS		
Help 1m vulnerable individuals by 2023 in core markets from a 2017 baseline	1m	N/A

Impact

NA

Overall score: 70

As per our ESG matrix, OCBC (OCBC SP) has an overall score of 70.

ESG score	Weights	Scores	Final Score
Quantitative	50%	78	39
Qualitative	25%	50	13
Target	25%	75	19
Total			**70**

OCBC displays a reasonably high degree of transparency in its ESG disclosures. Its overall impact on 'E' has the potential to be higher with more transparent disclosures on waste disposal as well as Scope 3 financed emissions. Strong progress has been made meeting sustainability financing targets. However, we believe disclosures on alignment of senior management rewards towards ESG outcomes is critical going forward.

United Overseas Bank (UOB SP)

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Risk Rating & Score[1]	19.8
Score Momentum[2]	+0.2
Last Updated	03 Oct 2022
Controversy Score[3] (Updated: 03 Oct 2022)	2

Business Model & Industry Issues

- The nature of UOB's business exposes it to multiple ESG risks – directly and through its clients. Particular risks include environmental, governance, money laundering and corruption.
- 17% of incremental lending in 2021 is classified as sustainable financing, compared to domestic peers where classifications averaged 56%. Its total sustainability portfolio is around 5% of total loans.
- UOB has invested significantly in a standardised IT platform across all its regional operations (IT expenses +17% CAGR 2016-2021). This has helped it to build scale and deploy financial inclusion solutions quickly and effectively. On the flip side, this exposes UOB to data, cybersecurity and privacy risks.
- UOB displays no exceptional risks typical for a large, regional D-SIB for ESG. It is complemented by a strong balance sheet and proactive regulatory oversight by MAS.

Material E issues

- UOB is integrating sustainability considerations to its credit approach and have adopted a Group Environmental Risk Framework together with the Equator Principles for ESG risk assessments.
- It is limiting coal-mining exposure to clients with diversification strategies towards lower carbon business activities and has ceased expansion projects. It has also stopped financing coal power plants and exiting exposures
- UOB is conducting climate change risk scenario analysis to assess transition and physical risks to its portfolios. 7% of the portfolio is exposed to high carbon intensity sectors (excluding real estate and financials).
- Its U-Solar solar energy financing platform for corporates and consumers have financed projects that generated 279GWh on energy in 2021. 142k tCO_2e avoided emissions. .
- Additional U-Energy and U-Drive platforms launched to develop energy efficient buildings and transportation infrastructure.

Material S issues

- As a bank with significant Singapore SME market share, UOB has elevated social risks – particularly in times of market volatility and recessions
- The Group is increasing sustainable wealth management product offerings across its retail and private banking segments with SGD9bn of ESG related AUM at end 2021
- The Group's digital banking product – TMRW – is a key conduit for financial inclusion regionally. It targets to achieve 75% digitally registered customers with a monthly active rate of 35% by 2025
- The group has a long-standing history of supporting the development of the Arts with YoY growth in spending on related causes

Key G metrics and issues

- Between 2018-2019, five UOB Personal Bankers have been jailed and/or sanctioned on separate cases of mis-selling and cheating. In 2022 a former relationship manager was jailed for misappropriation of client funds
- While in each case the bank took action, it raises Fair Dealing risks. The Group has a Fair Dealing Guidelines Committee comprising of senior management that is appointment by the CEO. The Board also overseas this through the Risk Management Committee and Risk & Capital Committees.
- The Group is exposed to data security risks. It has established cross-border guidelines on dealing with personal data transfers. Additionally, an Enterprise Data Ethics Team as well as a Data Governance & Data Quality Team has been set up ensure responsible data handling. UOB has been awarded the Data Protection Trustmark and APEC Cross Border Privacy Rules System certifications by IMDA Singapore.
- UOB's asset management has established a sustainability framework and has an active ownership policy. .
- The Group has also established a Sustainability Committee that reports to the Management Executive Committee – this is not a Board level committee.
- Diversity Risks. Women make up 36% of senior management roles – comparable with peers. At Board level, women make up 20% - low compared to global banks.
- Corporate Governance Risk: 70% of Board composition is Independent Directors, which is lower than 2020 and is lower compared to global banks.
- UOB is a signatory to the UN PRI. It includes a section on sustainability as part of its Annual Report, which is prepared under GRI and SGX standard with recommendations under TCFD.

[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).

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	Quantitative Parameters (Score: 83)					
	Particulars	Unit	2019	2020	2021	HSBC (2021)
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	4,300	22,000
	Scope 2 GHG emissions	tCO2e	71,300	68,800	66,000	307,000
	Total	**tCO2e**	**N/A**	**N/A**	**70,300**	**329,000**
	Scope 3 GHG emissions	tCO2e	11,600	1,500	600	12,000
	Total	**tCO2e**	**N/A**	**N/A**	**70,900**	**341,000**
	GHG intensity (Scope 1 and 2)	kgCO2e/emp	N/A	N/A	2,888	1,470
	Energy consumption	MWh	137,700	133,900	129,400	833,000
	Water consumption	m3	567,300	467,400	404,600	1,594,000
	Printing paper from eco-friendly sources	%	33%	35%	35%	N/A
	Total waste generated	ton	2,115	1,540	2,153	13,000
	Cases of environmental non-compliance	number	0	0	0	N/A
S	% of women in workforce	%	60.9%	61.3%	61.5%	52.0%
	% of women in management roles	%	N/A	34.9%	36.3%	32.0%
	Policy, data & framework breaches	number	0	0	0	0
	Average training hours per employee	hours	53.0	48.9	50.4	26.3
	Non-compliance concerning fair dealing outcomes	number	0	0	0	N/A
G	MD/CEO salary as % of reported net profit	%	0.25%	0.34%	0.27%	0.04%
	Board salary as % of reported net profit	%	0.06%	0.09%	0.11%	0.05%
	Independent directors on the Board	%	60%	73%	70%	85%
	Female directors on the Board	%	10%	9%	20%	38%

Qualitative Parameters (Score: 50)

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

No. There is no Board sustainability committee, but there is a Group Sustainability Committee reporting to the CEO and a Corporate Sustainability Office.

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

Not disclosed.

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?

Currently it is capturing parameters including business air travel to/from Singapore, Indonesia, Malaysia, Thailand, Greater China and Vietnam. Financed emissions not disclosed.

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

Installing sustainability features in building including energy-efficient fixtures and adopting operational technologies to maintain critical building parameters.

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

Yes. Sourcing carbon offsets to address Scope 1-3.

Target (Score: 80)		
Particulars	**Target**	**Achieved**
Achieve 14% reduction in electricity use intensity by 2030 with baseline 2018	-14%	N/A
Achieve green building certifications for all key wholly-owned buildings by 2030		Ongoing
Operational carbon neutrality for Scope 1-3 emissions by 2021	2021	Achieved
Have 90% of suppliers in SG acknowledge group supplier sustainability principles	90%	100%
Sustainable financing target of SGD30bn by 2023	SGD30bn	SGD17bn

Impact

NA

Overall Score: 74

As per our ESG matrix, UOB (UOB SP) has an overall score of 74

ESG score	Weights	Scores	Final Score
Quantitative	50%	83	42
Qualitative	25%	50	13
Target	25%	80	20
Total			**74**

UOB displays a relatively high degree with transparency in its ESG disclosures. Its overall breadth of quantitative disclosures are strong, but lacking in historical comparisons. It also provides detailed qualitative targets that are trackable and measurable. We believe better disclosure levels are needs on Scope 3 financed emissions as well as alignment of senior management rewards towards achieving ESG outcomes. See Appendix 1.

Singapore Exchange Ltd (SGX SP)

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Risk Rating & Score[1]	20.2
Score Momentum[2]	+2.7
Last Updated	06-Oct-2022
Controversy Score[3] (Updated: 06-Oct-2022)	None

Business Model & Industry Issues

- As Singapore's sole securities exchange and as a self-regulatory organisation, SGX faces significant reputational and regulation risks. Disruptions to operating its markets in a fair, orderly and transparent manner could have material social and financial risks to market participants, the financial system and the general public
- SGX's heavy reliance on technology exposes it to risks on systems resiliency, cyber security and data protection. Increasing digitalisation of markets are set to broaden these risks further
- The Group has published clear targets in terms of Scope 2 carbon emissions reductions by FY31 with a FY21 base year. In governance, SGX aims to increase female Board representation by 25-30% in 3-5 years, which is a fairly long time frame compared to peers such as HKEX, who have already reached that level

Material E issues

- Member of the Net Zero Financial Service Providers Alliance (NZFSPA) contributing to the definition of 'net zero' for exchanges
- SGX formulated and launched an Environmental Policy in 2016 which encapsulates direct and indirect impacts on energy consumption
- As a firm heavily reliant on technology, there is a significant dependency on readily available energy. Starting from FY20, SGX is using Renewable Energy Certificates to offset electricity consumption in its offices
- The Group's primary datacentre has been awarded the SS564 certification for Green Datacentres and its secondary datacentre has a BCA Green mark Platinum certification

Material S issues

- SGX's primary social responsibility is to ensure the participation in its markets are carried out in a fair, orderly and transparent manner
- Disruptions to its market or regulatory operations can have material social risks to the financial community, retail investors and the public at large
- The Group needs to ensure operational resiliency. SGX regularly conducts BCP and pandemic scenario testing
- It is increasing financial inclusivity through stakeholder education – particularly for retail investors by reaching out through the SGX Academy

Key G metrics and issues

- As a self-regulatory organisation, SGX faces significant regulation and reputation risks. While SGX's RegCo is segregated and governed as an independent organisation, perceptions of balancing corporate profitability with market integrity risks remain
- As a business model heavily reliant on technology, significant risks exist on service availability, capacity, latency, cyber security and data protection. The Group uses self-assessment benchmarked to history as well as global peers to monitor operational resiliency. There are data protection policies in place, while it deploys machine learning to detect early signs of trouble in its systems
- In its role as regulator, in 2021 SGX amended the listing rules to require issuers to provide TCFD recommended climate related reporting in their sustainability reports
- The Group has policies in place for Conduct & Ethics, Staff Dealing, Regulatory Conflicts, Whistleblowing
- Sustainability strategy and execution is conducted through the Executive Management Committee (EMCO), which includes the CEO and the Sustainability Steering Committee. The Board overseas the Group's sustainability approach, but there is no disclosure of a specific sustainability committee.
- 58% of the Board are classified as Independent. Only 17% of directors are female. In FY22, the middle management pay gap between male and female has closed (-3% favouring female), while executive level gap has also fallen (11% FY20 to 9% FY22)
- SGX reports under the GRI framework and is part of the Bloomberg ESG Data Index, Bloomberg Gender-Diversity Index, MSCI World ESG Leaders Index, iSTOXX Global ESG Select 100 Index and iEdge SG ESG Leaders Index

[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).

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	Quantitative Parameters (Score: 39)					
	Particulars	**Unit**	**FY20**	**FY21**	**FY22**	**HKEX (2021)**
E	Scope 1 GHG emissions	tCO2e	45	65	35	102
	Scope 2 GHG emissions	tCO2e	4,352	4,324	3,735	14,939
	Total	**tCO2e**	**4,397**	**4,389**	**3,770**	**329,000**
	Scope 3 GHG emissions	tCO2e	4,535	3,937	4,966	949
	Total	**tCO2e**	**8,932**	**8,326**	**8,736**	**15,990**
	GHG intensity (Scope 1 and 2)	kgCO2e/emp	4,693	4,176	3,348	6,520
	Energy consumption	MWh	9,896	9,761	8,073	37,446
	Water consumption	m3	N/A	N/A	N/A	N/A
	Printing paper from eco-friendly sources	tons	N/A	N/A	N/A	100%
	Total waste generated	tons	N/A	N/A	N/A	64
	Cases of environmental non-compliance	number	0	0	0	0
S	% of women in workforce	%	49.0%	45.0%	45.0%	41.0%
	% of women in senior management roles	%	20.0%	26.0%	26.0%	36.0%
	Policy, data & framework breaches	number	0	0	0	0
	Average training hours per employee	hours	47.0	55.0	45.0	96.0
	Reported incidents of discrimination	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	1.03%	1.21%	1.44%	0.07%
	Board salary as % of reported net profit	%	0.46%	0.50%	0.51%	0.18%
	Independent directors on the Board	%	75%	67%	58%	92%
	Female directors on the Board	%	27%	27%	17%	33%

Qualitative Parameters (Score: 67)

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

No. There is no Board sustainability committee, but there is a Sustainability Steering Committee comprising of Management Committee members. The Board oversees and monitors sustainability and climate risks as part of the normal course of business.

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

Not disclosed

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?

Currently it is capturing parameters including purchase of goods and services, waste generated, business travel, employee commuting and downstream leased assets.

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

It is reducing electricity consumption by conserving energy use for lighting and air conditioning in business facilities and data centres. It is also promoting waste reduction and recycling amongst employees.

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

It is planning on offsetting Scope 3 emissions from carbon credits. SGX is part of the founding group for CIX - a carbon exchange

Target (Score: 80)		
Particulars	**Target**	**Achieved**
Reduce Scope 2 absolute emissions by 42% by FY31	-42%	-14%
Achieve 40 average hours of training per employee per year	40	45
25-30% female representation at Board level in next 3-5 years	25%-30%	17%
Launch SGX ESG disclosure portal for listed companies	FY22	Launched
Committed to interim targets to limit 1.5C temp increase		

Impact

NA

Overall Score: 56

As per our ESG matrix, SGX (SGX SP) has an overall score of 56.

ESG score	Weights	Scores	Final Score
Quantitative	50%	39	19
Qualitative	25%	67	17
Target	25%	80	20
Total			**56**

SGX displays a reasonably high degree with transparency in its ESG disclosure. The Group provides a wide breadth of disclosures on data security and systems availability, which are material not just from a business continuity perspective, but also for the efficient functioning of capital markets in Singapore. We note a lower proportion of diversity and independence in its Board compared to HKEX. See Appendix 1.

4.2 Gaming

- **Integrated resorts face three main ESG risks which relate primarily to waste, problem gamblers and money laundering.**
- **Yet, the regulatory framework in Singapore mitigates most if not all of the aforementioned risks.**
- **To be sure, the gaming sector has recovered fast but we do not see much upside from current levels.**

Critical ESG issues in the sector

Integrated resorts (IR) around the world face three main ESG risks. First, IRs attracted millions of visitors every year pre-COVID, which led to a lot of waste generated, especially non-biodegradable plastic. Second, IRs often get a bad reputation for 'preying' on problem gamblers. Third, IRs have often been accused of facilitating money laundering directly or indirectly, via junkets.

Mitigation Outlook

First, IRs have gradually phased out single use plastics. For example, Genting Singapore's Resorts World Sentosa (RWS) phased out plastic straws/bottles in 2018/2019, saving 3m straws and 6.7m plastic bottles p.a. Second, Singaporean citizens and PRs are discouraged from gambling via having to pay casino entry levies of SGD150 per 24 hours or SGD3,000 p.a. Recall that the casino entry levies were hiked by 50% in Apr 2019.

Problem gambling is also regulated by the National Council on Problem Gambling, which can issue visit limits and exclusion orders at the request of individuals, casinos or on its own initiative. Third, the Casino Control Act does not permit Macau-style junkets in Singapore which have often been accused of money laundering.

Sector Outlook

We estimate that 3Q22 industry VIP volume recovered to 74% of 3Q19 levels and 3Q22 industry mass market gross gaming revenue (GGR) recovered to 100% of 3Q19 levels despite Mainland Chinese not being able to travel freely yet. That said, RWS ceded market share due to lack of manpower. We estimate that RWS' share of VIP volume fell to 31% in 3Q22 (3Q19: 47%) and RWS' share of mass market GGR fell to 32% in 3Q22 (3Q19: 37%).

While we expect RWS' market share to improve as it rebuilds its manpower, we do not expect industry VIP volume and mass market GGR to recover much more despite the potential return of Mainland Chinese tourists. On the VIP market, recall that China banned cross-border gambling that targeted Chinese VIPs in Mar 2021. On the mass market, we expect the return of Mainland Chinese gamblers to be offset by the departure of Singaporean gamblers gambling overseas.

Fig 30: Gaming Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
Genting Singapore	Hold	0.89	10,764	Low	19.8	1

Source: Sustainalytics, Factset, Maybank IBG Research

Genting Singapore (GENS SP)

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Risk Rating & Score[1]	20.9 (Medium)
Score Momentum[2]	-0.2
Last Updated	6 Apr 2022
Controversy Score[3] (Updated: 5 Apr 2022)	0 - No reported incidents

Business Model & Industry Issues

- GENS' Resorts World Sentosa (RWS) operates, in our opinion, in the most highly regulated casino jurisdiction in the world. In our view, GENS has strong ESG credentials which stand out among its regional peers, especially the Macanese ones.
- To be sure, the strong ESG credentials are not without 'costs'. For example, RWS has to bear VIP credit risk as the engagement of Macau style junkets which have often been accused of money laundering is not permitted.
- Moreover, the 50% increase in casino entry levies for Singaporean citizen and permanent resident (SCPR) gamblers effective 4 Apr 2019 also caused RWS to rely less on the steadier base of local gamblers and more on fickle international gamblers.
- That said, countries seeking to liberalise their casino industries often look to Singapore's highly regulated casino industry and the strong ESG credentials it engenders for guidance. This could give GENS an advantage in bidding for a casino license there.
- GENS also scores above average in our proprietary scoring methodology (see Pg. 4) with an overall score of 80/100.

Material E issues

- No material environmental issues. RWS was built on the demolished plot of the Imbiah lookout on Sentosa Island.
- RWS even houses 2.9 ha of protected secondary forest and >100,000 marine animals in the S.E.A. Aquarium (SEAA)
- SEAA is accredited by the Association of Zoos and Aquariums and World Association of Zoos and Aquariums.
- SEAA partners Marine Stewardship Council and James Cook University Singapore for research.
- Phased out plastic straws/bottles in 2018/2019, saving 3m straws and 6.7m plastic bottles p.a.
- Committed SGD10m for research on biodiversity, decarbonisation and nature-based solutions in 2021.
- Won the inaugural Special Award for Sustainability at the Singapore Tourism Awards 2021.
- RWS and its hotels are the first to be certified to the Global Sustainable Tourism Council's criteria in 2021.
- RWS pledges to be carbon neutral by 2030.

Material S issues

- Regulated by the Casino Regulatory Authority (CRA) under the Casino Control Act (CCA).
- Problem gambling regulated by the National Council on Problem Gambling (NCPG).
- SCPR gamblers required to pay casino entry levies of SGD150 per 24 hours or SGD3,000 p.a.
- NCPG can issue visit limits and exclusion orders at the request of individuals, casinos or on its own initiative.
- In Nov 2015, RWS became the first casino in Asia Pacific to receive RG Check accreditation from the Responsible Gambling Council.
- Since Dec 2018, RWS attained RG Check reaccreditation and achieved the highest score amongst >150 venues.
- Launched Manage Game Play Programme in 2020, a tool to help patrons self-regulate time spent at gaming machines.
- Stations RG Ambassadors to inform and assist patrons on responsible gambling. RWS also holds RG road shows.
- Won the Special Award for Community Care (Business and Individuals) at the Singapore Tourism Awards 2021.
- Added to Bloomberg Gender-Equality Index which tracks public companies' commitment to gender equality in 2021.

Key G metrics and issues

- BOD comprises Executive Chairman, CEO, Lead Independent Director and 3 Independent Non-Executive Directors (INED).
- Madam Chan Swee Liang Carolina, Lead Independent Director is the sole woman director.
- Tan Sri Lim Kok Thay, Executive Chairman represents Genting Berhad, GENS' largest shareholder at 53%.
- No members of Tan Sri Lim's family hold management positions in GENS.
- FY21 reported directors' remuneration of SGD13.9m was down 60% YoY and accounted for 8% of net profit.
- Audit & Risk, Nominating and Remuneration Committees comprise three members each who are all INEDs.
- Two of five RWS key management personnel are women, the CFO and CCO.
- PricewaterhouseCoopers LLP is the independent auditor. They have been appointed for >10 years.
- Last major related party transaction was in 2010 when Genting UK was sold to Genting Malaysia for GBP340m.
- That said, the investment community was of the opinion that the transaction favoured GENS over GENM.
- This was because GENM acquired Genting UK at valuation multiples that were higher than its own.
- Occasionally fined by the CRA but the fines were for infractions which were minor, in our view.
- Most fines were for SCPRs entering/remaining in the casino without valid casino entry levies
- Governed by the CCA which contains anti-money laundering regulations.
- CCA does not permit Macau style junkets which have often been accused of money laundering.
- Developed and employs a Prevention Of Money Laundering and Terrorism Financing Framework.

[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).

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	Quantitative Parameters (Score: 60)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**LVS US (2021)**
E	Scope 1 emissions	tCO2e	4,872	6,214*	3,553	60,878
	Scope 2 emissions	tCO2e	87,857	82,592*	64,468	547,990
	Total	**tCO2e**	**92,729**	**88,807***	**68,021**	**608,868**
	Scope 3 emissions	tCO2e	35,016	29,401*	30,782	299,062
	Total	**tCO2e**	**127,745**	**118,208***	**98,803**	**907,930**
	Scope 1 & 2 emissions intensity	tCO2e/m2	0.23	0.22*	0.17	0.14
	Energy consumption intensity	GJ/m2	2.4	2.0*	1.5	1.0
	Water consumption intensity	m3/m2	5.7	4.2*	3.3	0.4
	Waste generated intensity	kg/m2	25.6	17.1*	13.7	24.4
	% of waste diverted away from landfill	%	24%	20%	21%	16%
S	Locals as a % to total employees (localisation)	%	73%	82%	79%	N/A
	Investment in community projects	% of net profit	1.0%	N/A	1.3%	N/M
	% of local suppliers	%	80%	82%	87%	77%
	Employee attrition rate	%	16.3%	12.8%	19.9%	14.6%
	Employee training per employee	hours	26	32	34	54
	Significant fines imposed by (i.e. >SGD10,000)	number	1	-	1	-
G	Board salary as % of reported net profit	%	3%	50%	8%	N/M
	Independent directors on the Board	%	67%	67%	67%	64%
	Female directors on the Board	%	17%	17%	17%	27%
	Distribution to shareholders	% of net profit	70%	174%	66%	0%

Qualitative Parameters (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. It also has a Sustainability Steering Committee, Sustainability Working Committee and Sustainability Department (in order of hierarchy). The Sustainability Steering Committee reports to the CEO.

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

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. Captures business travel (Category 6), employee commute (Category 7), upstream transportation & distribution (Category 4), waste (Category 5), downstream leased assets (Category 13), fuel & energy (Category 3) and water.

f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?
Has installed solar panels that generate 615,732kWh p.a., 33,610m2 of ETFE roofs that deflect heat, 32,000m3 lagoon that harvests rainwater, recycling bins, food grinders and waste digesters. Has plans to quadruple number of solar panels.

g) Does carbon offset form part of the net zero/carbon neutrality target of the company?
Yes. Developing nature-based carbon offset strategy. Benchmarking and sourcing of carbon offset standards and sources ongoing.

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Reduce carbon emission intensity by 30% by 2030 (2015 as baseline year)	30%	35%
Reduce waste to landfill by 50% by 2030 (2015 as baseline year and ex-construction waste)	50%	21%
Green 75% of buildings by GFA by 2030	75%	74%
100% electric transportation by 2030	100%	N/A
Quadruple EV charging stations by 2030 (2019 as baseline year)	4.0	1.5
>500,000 hours in cumulative volunteer hours by 2030	500,000	469,688
>90% spend on local suppliers by 2030	90%	87%
Carbon neutrality by 2030	Net 0	N/A

Impact

NA

Overall Score: 80

As per our ESG matrix, Genting Singapore (GENS SP) has an overall score of 80.

ESG score	Weights	Scores	Final Score
Quantitative	50%	60	30
Qualitative	25%	100	25
Target	25%	100	25
Total			**80**

As per our ESG assessment, GENS has an established framework, internal policies, and tangible mid/long-term targets. GENS' overall ESG score is 80, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

** denotes annualised figures*

4.3 Healthcare

- **ESG factors are prevalent considerations as healthcare players are often highly regulated. That said, emissions reporting seems to be a low priority for most of them.**
- **The sector is actively implementing several measures to minimise wastage and reducing environmental footprint and energy costs across their hospitals, medical centres and clinics.**
- **Medical tourism is set for revival on strong travel demand, which leads to sustained recovery in foreign patients load and higher-margins elective procedures.**

Critical ESG issues in the sector

For the Healthcare sector, patient-centricity is at the heart of everything amidst the different challenges brought about by the COVID-19 pandemic. ESG factors are prevalent considerations as healthcare players are often highly regulated and play a critical role in the communities that they serve. Other sustainability concerns also include: the disposal of hazardous biochemical waste, emissions from radiation therapy, accessibility and affordability of healthcare services and products, as well as the quality and safety of these services and products. Nevertheless, we note that emissions reporting has been a low priority for much of the sector, putting it behind others that are voluntarily tracking and disclosing carbon data. These factors and others usually result in relatively poor ESG scores, leaving socially responsible investors with much to consider.

Mitigation Outlook

Most local healthcare players recognise that conserving and protecting the environment for future generations is critical and considers sustainability issues as part of the development of their overall strategy. As such, they are implementing measures to minimise wastage and reducing environmental footprint and energy costs across their hospitals, medical centres and clinics. In adherence to the requirements outlined in the Private Hospital and Medical Clinics Act by MOH, the operators need to engage licensed waste disposal suppliers from National Environmental Agency (NEA) approved list of medical waste contractors to collect and dispose sharps and biohazardous waste. All QNM new clinics were also installed with refrigerated areas to store clinical waste prior to disposal. As for RFMD flagship hospital in Singapore, management has invested in a food waste digester to reduce food waste disposal at its premises. To lower total electricity consumption, it has put in place IoT sensors in critical systems that consumer high energy.

Sector Outlook

Following a two-year period of strict border controls and lockdowns, medical tourism has gradually begun to recover since Apr 2022. Anecdotally, healthcare players are seeing higher foreign patients, particularly from regional countries, while local residents who postponed their elective surgery also returned for their treatment. In addition, outpatient volumes at GP clinics have surpassed pre-pandemic levels amid the ongoing wave of Covid-19 infections driven by new sub-variant. Coupled with the removal of indoor mask requirement and resumption of social/mass gatherings, this has made it easier for common illness such as cold and flu to spread. Key risks include: dampening demand for high-end healthcare services due to rising inflationary costs, while supply chain and labour constraints may also negatively impact the sector.

Fig 31: Healthcare Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
Q&M Dental Group	Buy	0.33	262	High	30.1	0
Raffles Medical Group	Hold	1.37	2,571	N/A	N/A	0

Source: Sustainalytics, Factset, Maybank IBG Research

Raffles Medical Group (RFMD SP)

ericong@maybank.com

Risk Rating & Score[1]	25.5
Score Momentum[2]	-1.5
Last Updated	14 April 2021
Controversy Score[3] (Updated: 05 July 2017)	Low -1

Business Model & Industry Issues

- As a medical services provider, regulatory compliance and patient safety are among the highest priorities for both RMG and stakeholders. Employees' welfare, access to healthcare, economic performance and customer experience are also important priorities. The lowest priorities include waste and local supplies.
- While RMG sees energy and water usage as of medium significance, whereas stakeholders view these as low priority.
- RMG complies with all relevant laws and regulations and it submits periodic reports to relevant parties. RMG also has procedures to safeguard customer information.
- Raffles Hospital Singapore has been JCI accredited since 2008, and it has various committees to review clinical quality to promote patient safety.

Material E issues

- Raffles Hospital Singapore received the Green Mark certification in 2019 by the Building & Construction Authority. Among other requirements, Green Mark buildings have to maintain temperature in public areas within 24-26C and relative humidity less than 65%.
- In 2021, the water consumption index improved to 1.18m3/GFA (2020: 1.38); the electricity consumption index was comparable at 1.86 kWh/GFA) from 186; and recycling tonnage improved to 78 tons from 42 tons.
- Among practical measures that RMG has taken to be more energy and water efficient are to install smart meters, timers and motion sensors, as well as water-efficient fittings.

Material S issues

- RMG trains physicians, nurses, allied health and healthcare managers in collaboration with local medical schools, polytechnics and vocational institutions to provide clinical training for undergraduates and postgraduates.
- It observes fair employment practices and also promotes workplace diversity as this is an advantage in catering to its various patient groups.
- As at 2021, RMG had a workforce of 2,766 employees (FY20: 2,631).
- Average training hours per employee fell to 6.5 in 2021 from 16 in 2020.
- Workplace injury rate increased to 19.5 in 2021 from 12.5 in 2020. However, this was due to improved reporting processes.
- Employee turnover rate fell to 22% in 2021 from 28% in 2020.

Key G metrics and issues

- The board consists of 11 members, of which three are executives, including the founder, chairman and CEO Dr Loo Choon Yong, and one is non-executive and non-independent. The remaining directors are independent (64%).
- The nominating, audit and remuneration committees are chaired by independent directors.
- Two independent directors have served for more than nine years. The board determined that these two directors remain independent.
- Auditor is KPMG LLP, appointed in 2019.
- RMG complies with all relevant statutory and regulatory requirements, and submits periodic reports to relevant government agencies and bodies.
- Raffles Hospital Singapore has been accredited by the JCI since 2008; a testament to its commitment to patient safety and care.
- There are several committees (e.g. medical audit committee, critical care committee etc) that look into the different areas of clinical quality. In addition, the quality committee has oversight of these committees with the aim to improve patient safety.
- RMG has clear policies relating to Personal Data Protection Act, and it has data protection officers to ensure adequate action is taken to protect personal data, including customers'. There was no incident of leak, theft or loss of customer data in 2021.

[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).

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Quantitative Parameters (Score: 38)						
	Particulars	Unit	2019	2020	2021	KPJ MK (2021)
E	Scope 1 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Scope 2 GHG emissions	m tCO2e	N/A	N/A	N/A	110.4
	Total	**m tCO2e**	N/A	N/A	N/A	110.4
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	6.8
	Total	**m tCO2e**	N/A	N/A	N/A	117.2
	GHG intensity (Scope 1 and 2)	tCO2e/t	N/A	N/A	N/A	16.2
	Electricity consumption	kWh/GFA	175	186	125	161.1
	Water consumption	m3/GFA	1.38	1.18	0.79	1.26
	General waste (non-hazardous) consumption	ton/GFA	0.013	0.009	0.005	1.56
	Biohazard Waste Index	bins/GFA	0.056	0.098	0.062	0.53
	Paper recycled	tonnes	42	78	48	N/A
	Food waste digested	tonnes	N/A	N/A	30	N/A
	Cases of environmental non-compliance	number	0	0	0	0
S	% of women in workforce	%	N/A	N/A	N/A	78%
	% of women in management roles	%	45%	45%	45%	36%
	Patient safety incidents	number	0	0	0	0
	Employee Turnover	%	28%	22%	32%	10%
	Average training hours per employee	hours	16	6.5	11.7	34
G	CEO/MD salary as % of reported net profit	%	N/A	N/A	N/A	2.6%
	Board salary as % of reported net profit	%	N/A	N/A	N/A	4.0%
	Independent directors on the Board	%	64%	64%	64%	45%
	Female directors on the Board	%	18%	18%	18%	18%

Qualitative Parameters (Score: 52)

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. The Committee is responsible for monitoring and overseeing the group's sustainability efforts and strategy.

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

No

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

Yes

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

No

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

The group is embarking on projects that have significant savings in its cooling towers, such as adopting technology and reducing usage of chemical treatment in cooling tower maintenance. These will help achieve higher efficiency while reducing water consumption.

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

No

Target (Score: 80)		
Particulars	**Target**	**Achieved**
Reduce electricity consumption by 2022	10%	33%
Reduce general waste consumption by 2022	5%	44%
Reduce water consumption by 2022	5%	33%
Reduce food waste digested (tonnes) by 2022	30	30
Amount of paper recycled (tonnes) by 2022	50	48

Impact

NA

Overall Score: 52

As per our ESG matrix, Raffles Medical Group (RFMD SP) has an overall score of 52.

ESG score	Weights	Scores	Final Score
Quantitative	50%	38	19
Qualitative	25%	52	13
Target	25%	80	20
Total			**52**

As per our ESG assessment, RFMD has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. Its overall ESG score is 52 which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Q&M Dental Group (QNM SP)

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

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Business Model & Industry Issues

- As a dental services provider, its first priority was the safety of all patients and employees amid the current COVID-19 pandemic and it had implemented tighter access and strict infection control protocols.
- In managing its supply chain, the Group ensures that its suppliers are continually assessed by management in accordance with the guiding principles established in its procurement policies.
- On the clinical front, it is working towards gradually obtaining "Eco-Shop" certifications at its clinics over the next few years. This is aimed at guiding and encouraging retailers to fit out their shops in an environmentally-sustainable manner, as well as to adopt eco-friendly habits and implement green practices in their daily operations.

Material E issues

- Q&M handles different types of clinical waste on a daily basis and it is important that its waste management process is conducted under a safe and sustainable manner.
- Licensed waste disposal vendors are engaged to collect and dispose sharps and biohazardous waste to ensure adherence to requirements stated in the Private Hospital and Medical Clinics Act by the Ministry of Health.
- The Group has yet to implement tracking mechanism to measure the quantity of waste disposed. However, the vendors it engaged have a proper system in place to collate data on the amount of waste collected to analyse.
- It will ensure all the defective ionising radiation irradiating apparatus such as x-ray machines are properly returned to the equipment vendor/distributor for proper disposal.
- There were no reported non-compliances with regulations relating to disposal of hazardous and non-hazardous waste.

Material S issues

- As at 31 Dec 2021, the group has a total of 713 employees under its Singapore and Malaysia operations. Of which, 77 are temporary employees and they are treated in accordance with salary practices in the region it operates in as part of the fair working environment practice.
- To ensure sustainability of its pool of dentists, the Group has launched its first private dentistry institution in Singapore, Q&M College of Dentistry which offers post-graduate diploma studies in clinical dentistry and Q&M Dental Group Scholarship Scheme in Oct '19.
- All dentists must meet the mandatory requirements under the Dental Registration Act and the Medical Registration Act respectively. They are also required to fulfil certain number of hours of Continuing Professional Education in order to proceed with their practicing certificates renewal.
- In FY21, there were 3 minor and non-fatal workplace accidents where clinic assistants suffered cuts and/or pricks by needles.

Key G metrics and issues

- Board consists six directors, of whom two are executive directors, one is a non-executive, non-independent chairman, and three are independent (50%). There is one female director.
- The nominating, audit and remuneration committees are chaired by independent directors.
- Founder and CEO Dr. Ng Chin Siau's deemed stake in company is approximately 54.46%.
- Two independent directors have served more than nine years from date of appointments. This will be taken into consideration when evaluating its board renewal.
- Diversified background of independent directors from legal and accounting with strong industry knowledge.
- Key management/ directors' compensation accounted for c.2%/1% of total employee compensation in 2021.
- Auditor is RSM Chio Lim LLP, which were appointed in 2016.
- It has a zero tolerance approach towards corrupt and dishonest practices or acts of bribery to obtain an unfair advantage and its employees are expected to report any concerns or unethical behaviour.
- All complaints or information would be forwarded to the Chairman of AC or CFO. There was no reported incident pertaining to whistle blowing during FY21.
- In Sep '20, the Group had discovered a case relating to the misappropriation of company's funds which involved two employees from its clinics in Johor. A police report has been lodged immediately following the discovery of the incident and the investigation is still ongoing.
- In Jan '21, Q&M reached a full settlement for RM3.5m against Madam Chong Lee Lee and her husband, Dr Hong An Liang on claim that the duo transferred company funds into their personal accounts. Thy also had set up a competing outfit behind Q&M Johor clinics, using its resources without permission.

[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).

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	Quantitative Parameters (Score: 58)					
	Particulars	Unit	2019	2020	2021	RFMD SP (2021)
E	Scope 1 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Scope 2 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Total	**m tCO2e**	N/A	N/A	N/A	N/A
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Total	**m tCO2e**	N/A	N/A	N/A	N/A
	GHG intensity (Scope 1 and 2)	tCO2e/t	N/A	N/A	N/A	N/A
	Energy consumption	m KWh	1.92	2.08	2.28	N/A
	Energy intensity ratio	KWh/m^2	258.4	274.0	247.1	N/A
	Water consumption	m3	20,228	19,198	21,439	N/A
	Water intensity ratio	m3/m2	2.8	2.6	2.3	N/A
	Air emissions intensity	ton/kT	N/A	N/A	N/A	N/A
	NPE (New Plastic Economy) investments	SGD m	N/A	N/A	N/A	N/A
	Cases of environmental non-compliance	number	0	0	0	0
S	% of women in workforce	%	79%	78%	84%	N/A
	% of women in management roles	%	40%	29%	33%	45%
	Lost time injury frequency (LTIF) rate	number	0.0	0.0	0.0	0.0
	Average training hours per employee	hours	13.9	3.7	4.1	11.7
G	CEO/MD salary as % of reported net profit	%	7.8%	3.6%	9.1%	N/A
	Board salary as % of reported net profit	%	2.7%	3.2%	4.3%	N/A
	Independent directors on the Board	%	50%	37.5%	37.5%	64%
	Female directors on the Board	%	16.7%	12.5%	12.5%	18%

Qualitative Parameters (Score: 68)

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. Led by the CEO and COO, the committee oversees the implementation of the group's overall sustainability strategy.

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

No

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?

No

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

1) Installation of thimbles in taps; 2) All new clinics were installed with refrigerated areas to store clinical waste prior to disposal; and 3) engaged licensed waste disposal suppliers to collect and dispose sharps & biohazardous waste.

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

Yes

Target (Score: 40)		
Particulars	**Target**	**Achieved**
Reduce electricity consumption per clinic	N/A	N/A
Maximise water efficiency per clinic	N/A	N/A
Minimise clinical waste per clinic	N/A	N/A
Maintain zero-reported data privacy incidents	0	0
Increase average training hours for staff	3.0	4.1

Impact

NA

Overall Score: 56

As per our ESG matrix, Q&M Dental (QNM SP) has an overall score of 56.

ESG score	Weights	Scores	Final Score
Quantitative	50%	58	29
Qualitative	25%	68	17
Target	25%	40	10
Total			**56**

As per our ESG assessment, Q&M has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. Its overall ESG score is 56, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

4.4 Industrials

- **The industrial sector, especially energy companies, is facing multiple ESG risks given the nature of their business in emission. Critical here is the lack of standardise framework to use, supply chain issues that disrupt the development of sustainable energy source and energy security, which is further escalated by the global volatility.**
- **Most industrial companies are increasing environmental disclosures, according to the work developed by TCFD. The incumbent has provided key information on their greenhouse gas (GHG) emissions, energy water and low carbon. Sembcorp Industries has remodelled their business strategy and brand on environmental sustainability principles from "brown" to "green".**
- **Supply chain disruptions and talent shortages may be the biggest risks or challenges for** aerospace and defense **organizations in 2023. Energy companies are likely to find balance equation for energy security, supply diversification and low carbon transition while generating profitability.**

Critical ESG issues in the sector

The lack of any current requirement for which frameworks and standards to use and which elements of such to report and disclose presents unique challenges. Sembcorp has been heavily scrutinized for "greenwashing" after its plan to sell off the company's coal power business in India. ESG enthusiast argue that coal generation/carbon footprint of SEIL should not be de-consolidated from SCI's footprint until full payment for the transaction has come through. Supply chain issues stemming from the prevailing geopolitical and economic conditions have caused significant disruptions to renewables development. Global gas prices had increased significantly due to high demand and tight gas supply. The conflict in the Ukraine has further exacerbated the need to ensure energy security and the availability of energy sources at an affordable price. Transparency is an important issue for the aerospace and defense (A&D) sector, considering the sensitive nature of the business and vulnerability to corruption risks.

Mitigation Outlook

War in Ukraine has underlined the importance of improving both grid resiliency and energy security. Companies in the Industrial sector are adjusting their energy transition strategies to respond to the rising pressure to access sufficient energy in the short term, while moving to carbon-free renewable sources in the long term. There is a shift towards mandatory sustainability and climate-related reporting and disclosure obligations. Notably, the 2 entities under coverage has been disclosing ESG by utilizing TCFD frameworks, which typically include both qualitative and quantitative information. Current qualitative information has been centred around sustainability, core values, and net-zero emissions targets and pledges to showcase how these factors generate both shareholder and stakeholder value. Current quantitative disclosures dive into the metrics used for reporting and measurement toward targets identified in qualitative information, energy data encompassing scope 1, 2, and 3 greenhouse gas emissions. STE has taken additional proactive approach to increasing transparency and integrity measures and preventing corruption.

Sector Outlook

Energy companies would now be seeking a solution to balance energy security, supply diversification, and low-carbon transition. A major driving force behind the rise of green hydrogen has been the decreasing costs of renewable energy. As renewable energy penetration on the grid increases, green hydrogen development is also expected to grow, owing to its potential to act as long-duration and seasonal storage of fuel available on demand to generate power. SCI is also responding to this and looking for suitable opportunities to ramp up renewable hydrogen production.

With the global economy gradually recovering from the COVID-19 pandemic, the A&D industry has shown signs of a strong rebound, but supply chain disruptions and talent shortages may be the biggest risks challenges for A&D organizations in 2023. Furthermore, strong recovery in air travel is leading to increased aircraft orders and aftermarket activity. Domestic traffic levels registered about 81% of the pre-pandemic 2019 levels (in September 2022), and international traffic levels have shown strong growth with easing travel restrictions worldwide. The defense segment remained stable through 2022 and is expected to outperform the commercial aerospace segment as an increase in defense budgets in the wake of the invasion is boosting demand for military equipment globally.

Fig 32: Industrials Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
ST Engineering	Buy	3.36	10,492	High	30.9	2
Sembcorp Industries	Buy	3.23	5,774	High	33.5	1

Source: Sustainalytics, Factset, Maybank IBG Research

ST Engineering (STE SP)

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Risk Rating & Score[1]	30.9
Score Momentum[2]	-0.1
Last Updated	19 Nov 2021
Controversy Score[3] (Updated: 07 Jun 2020)	2- Customer Incident

Business Model & Industry Issues

- Given the nature of the aviation engineering industry, which accounts for about 2% of direct CO2 global emissions, this number is expected to increase given the projected expansion of air travel. Mitigated that STE's greenhouse gas emissions reduction programme is strong. Furthermore, its carbon intensity trend is observed to have moderately declined over the past three years.
- The aerospace & defence industry is exposed to bribery and corruption risks through its close business relationship with government officials and bodies, and the competition for a limited number of high-value contracts. STE has a policy of zero tolerance in fraud and corruption practices. There were no reported cases of bribery and corruption in 2021.
- Being the largest government contractors, the group is entrusted with managing, storing and processing highly confidential information. Cyberattacks could result in data breaches and leaks of confidential documents, which can have serious consequences on national security matters, and impact companies' costs and operations. The company has average preparedness measures to address data privacy and security issues and has been implicated in minor controversies related to the issue.

Material E issues

- In FY21, STE achieved a 30% absolute GHG emissions reduction as compared to FY20. This translated to a 46% reduction in GHG emissions intensity, which is on track to achieve the Group's target of a 50% reduction by FY30E.
- The Group designed eco-engine wash services – EcoPower which has significant environmental benefits. It washes more than 9,000 aircraft engines annually using innovative and environmentally-friendly processes. These result in fuel savings, which translate to an estimated emissions avoidance of 500,000 tonnes CO2e annually as well as the recovery and reuse of around 2m litres of water.
- FY21 STE Singapore operations recycled 78% of 5,900 tonnes of waste generated. The recyclables included wood, metal, batteries and paper products.

Material S issues

- Total Group economic contribution of SGD7.2b, which includes: (i) bought in material and services; (ii) employee wages, salaries and benefits; and (iii) dividends and others.
- As at end Dec 2021, 79% of the workforce is male while 21% is female with 14% turnover rate. Among them, about 14% of female and 15% of male employees are managers.
- In FY21, accident frequency (+37.5% YoY) and severity rate (+30% YoY) per million manhours has been on the uptrend. One of the key factors that contributed to the increase is human error in complying with safety procedures. Key mitigating measures have been imposed through cross sharing of best practices within the global operations.
- Positioning employees for the future of work through workforce transformation programmes including upskilling and reskilling initiatives. Average training of 21 hours per employee.

Key G metrics and issues

- STE's board comprises 13 directors and an alternate director. The current board composition has: 9 independent & non-executive directors, 3 non-independent & non-executive director and 1 executive director/ group president & CEO. There are 2 women directors and 11 men directors on the board.
- The nomination, audit, investment and remuneration committees are chaired by independent and non-executive directors.
- The board consists of members with established track record in various industries. The company has a majority standard for election of directors and the company has a resignation policy for directors failing to receive a majority of votes.
- As of March 2022, STE principal shareholders, with stake sizes in percentage of ordinary shares were as follows: Temasek Holdings (49.8%), Capital Research & Management (3.3%) and BlackRock Fund Advisors (1.4%).
- To date, STE has never received or been the subject of any legal action in relation to anti-competitive behaviour and violations of anti-trust and monopoly legislation. There were no reported cases of bribery and corruption in 2021.

[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).

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	Quantitative Parameters (Score: 39)					
	Particulars	Unit	2019	2020	2021	SIA Eng (SIAEC SP, FY21)
E	Scope 1	m tCO2e	NA	NA	NA	0.0066
	Scope 2	m tCO2e	NA	NA	NA	0.0055
	Total	**m tCO2e**	**0.113**	**0.117**	**0.119**	**0.0121**
	Scope 3	m tCO2e	0.018	0.003	0.002	NA
	Total	**m tCO2e**	**0.131**	**0.12**	**0.121**	**NA**
	Direct Energy consumption	'000 GJ	559	480	549	132,000
	Indirect Energy consumption	'000 GJ	744	739	778	14,000
	Net water consumption	m m3	0.656	0.717	0.638	0.704
	Use of recycled water instead of portable water	m m3	NA	NA	78%	NA
	Water Intensity	M3/SGDm	NA	NA	NA	1.7
	Total Waste	tons	NA	NA	NA	2,368
	Waste diverted from disposal by recovery operation	tons	NA	NA	NA	189
	Waste directed to disposal by disposal operation	tons	NA	NA	NA	2,179
	Customer E-waste Recycling	tons	NA	NA	1.5	NA
S	% of women in workforce	%	20%	21%	21%	23%
	% of women in management roles	%	12%	15%	14%	16.7%
	Lost time injury frequency rate	number	0.7	0.8	1.1	9.4
G	CEO salary as % of net profit	%	0.86%	0.72%	0.86%	NA
	Key management salary as % of profit	%	1.72%	1.66%	1.56%	NA
	Independent director on board	%	64%	64%	64%	67%
	Women directors on board	%	18%	18%	15%	17%

Qualitative Parameters (Score: 83)

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

The company has various policies covering different aspects of ESG. There are KPIs, business objectives, governance enablers and risks for each of the segments

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

No

c) Does the company follow TCFD framework for ESG reporting?

Yes

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

Yes, STE has developed mechanism to capture Scope 3 emissions include fuel and energy-related activities, waste, employee commute and downstream leased assets

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

The company has initiated various measures to manage waste such as digitalisation to reduce the use of paper, encourage to bring their own F&B containers for takeaways and facilitation of recycling used electronics.

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

Yes

Target (Score: 80)		
Particulars	**Target**	**Achieved**
50% absolute reduction of GHG emission by 2030	50%	30%
Water usage intensity reduction of 15%	15%	15%
Reduce waste generation from operations and maintain waste recycling at 50% or better	50%	78%
Increase year-on-year planned productivity savings by 5%	10%	0%
Zero bribery and corruption cases	0	0

Impact

NA

Overall Score: 58

As per our ESG matrix SCI has an overall score of 58

ESG score	Weights	Scores	Final Score
Quantitative	50%	33	17
Qualitative	25%	83	21
Target	25%	80	20
Total			58

As per our ESG assessment, ST Engineering has established sustainability policies and time-bound targets. Its quantitative disclosures on 'E' parameters on emissions, resource usage as well as 'S' parameters on workforce and management diversity are limited. STE's overall ESG score is 58, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Sembcorp Industries (SCI SP)

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Risk Rating & Score[1]	33.5
Score Momentum[2]	-2.7
Last Updated	08 May 2022
Controversy Score[3]	1 - Operational Incident and Business Ethics Incidents

Business Model & Industry Issues

- SCI is a leading energy and urban solutions provider. It aims to transform its portfolio towards a greener future and be a leading provider of sustainable solutions.
- In order to transform its portfolio from brown to green, SCI targets to increase Group net profit contribution from sustainable solutions to 70% by FY25E. This is done through: 1) increasing gross installed RE capacity to 10GW; 2) triple land sales to 500 hectares by providing a full suite of sustainable urban solution; and 3) reduce GHG emission intensity by 25% to 0.40 tonnes of carbon dioxide equivalent per megawatt hour.
- The company has a balanced energy portfolio of 16.3GW, with 6.8GW of gross RE capacity comprising solar, wind and energy storage globally. SCI also has a proven track record of transforming raw land into sustainable urban developments, with a project portfolio spanning over 13,000 hectares across Asia.

Material E issues

- SCI aims to reduce GHG emission intensity by 25% to 0.4 tonnes of carbon dioxide equivalent per megawatt hour (tCO_2e/MWh) by FY25E. In FY21, the GHG emission intensity was 0.51tCO_2e/MWh compared to 0.54tCO_2e/MWh in FY20.
- Gross installed RE capacity comprising wind, solar and energy storage assets grew slightly from 2.6GW in FY20 to over 2.7GW in FY21. SCI's global energy portfolio mix stands at 72% conventional energy, 27% renewables and 1% energy-from-waste. In FY21, the company was ranked 52nd in the Top 100 Green Utilities report by Energy Intelligence.
- In FY21, SCI generated 2.4m tonnes of waste, a 37% increase from the previous year due to higher electricity production of thermal plants in India. 95% of non-hazardous waste was recycled into bricks and cement, which were used in the filling of low-lying areas, construction of roads and flyovers, and the raising of dykes.

Material S issues

- An increase in both lost time injury rate and total recordable injury rate since FY20. This is largely increase in workplace incidents involving minor injuries. SCI constantly reviews and improves work conditions and practices.
- Employee turnover was 15.7% in FY21 compared to 12.4% in FY20 largely due to increase in the voluntary turnover rate, which was 12.5% in FY21, up from 9.0% in FY20, mirroring the global trend of resignations.
- SCI achieved an average of 27.0 training hours per employee in FY21, up from 23.6 in FY20.

Key G metrics and issues

- Temasek Holdings (Temasek) is SCI's substantial shareholder. As a Temasek company, SCI is committed to sound corporate governance practices that include having an independent and high-calibre board.
- SCI is led by a 9-member board, including Chairman Ang Kong Hua and Group President & CEO Wong Kim Yin. The average tenure of the independent directors is 5 years. There is one woman on the board of directors.
- The board, which largely comprises independent non-executive directors, leverages its diversity and experience to provide sound leadership to management.
- To date, SCI has never received or been the subject of any legal action in relation to anti-competitive behaviour and violations of anti-trust and monopoly legislation. There were no reported cases of bribery and corruption in 2021.
- The changes of CEO and CFO in the past 5 years are a point to note in terms of strategic direction. That said, we should note that the current CEO is more intent on increasing SCI's renewable energy mix. We think this should work in SCI's favour if this strategy is executed well.

[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).

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Quantitative Parameters (Score: 22)						
	Particulars	Unit	2019	2020	2021	JSW Energy (JSW IN, FY21)
E	Scope 1	m tCO2e	25.9	26.3	25.9	14.5
	Scope 2	m tCO2e	0.3	0.2	0.2	0.0
	Total	**m tCO2e**	**26.2**	**26.5**	**26.2**	**14.5**
	Scope 3	m tCO2e	8.3	9.7	8.9	1.8
	Total	**m tCO2e**	**34.5**	**36.2**	**35.0**	**16.3**
	Scope 1 emission intensity	tCO2e/MWh	0.6	0.5	0.5	680
	Green energy share of capacity	%	21.5%	21.6%	22.5%	31%
	Net water consumption	m m3	64.6	50.7	49.2	25.7
	% of flyash recycled/treated	%	NA	NA	NA	100%
	% of recycled material used	%	NA	NA	NA	NA
	% of debt from green instruments	%	NA	NA	14.5%	55%
	NOx (excluding N2O)	tons	NA	NA	NA	20,274
	SOx	tons	NA	NA	NA	35,203
	SPM/particulate matter (PM10)	tons	NA	NA	NA	3,054
S	% of women in workforce	%	NA	NA	NA	4.0%
	% of women in management roles	%	NA	NA	NA	14.0%
	Lost time injury frequency rate	number	1.1	0.9	1.50	0.11
G	MD/CEO salary as % of net profit	%	1.22%	<100%	1.6%	0.3%
	Top 10 employees salary as % of profit	%	2.5%	<100%	7.3%	2.9%
	Independent director tenure <10 years	%	75%	66%	50%	67%
	Women directors on board	%	17%	8%	10%	17%

Qualitative Parameters (Score: 67)

a) is there an ESG policy in place and whether there is a standalone ESG Committee or is it part of Risk committee?
The company has various policies covering different aspects of ESG. There are KPIs, business objectives, governance enablers and risks for each of the segments

b) is the senior management salary linked to fulfilling ESG targets?
No

c) Does the company follow TCFD framework for ESG reporting?
Yes

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

f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?
The company has been increasing non-fossil fuel capacity

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

Target (Score: 100)

Particulars	Target	Achieved
Renewable share of NPAT by 2025	70%	35%
Reach to 10GW of installed renewable capacity	10	5.3
Reduce GHG emission intensity by 25% by 2025 to 0.4tCO2e/MWh	0.4	0.54
Increase sustainable urban developments to 500ha by 2025	500	168
Carbon neutral before 2050		
Reduce GHG emissions to 2.7tCO2e by 2030	2.7	26.2

Impact

Assuming a carbon price of USD10/50/100 and absolute annual reduction of 0.9m tCO2e to reach net zero by 2050, the impact calculated on FY21 EBITDA works out to 1.0-10.8% and on FY21 net profit works out to 4.4-43.9%. The impact will change depending on the carbon price and basis on calculation of carbon tax - absolute emission or carbon emission intensity

Overall Score: 53

As per our ESG matrix SCI has an overall score of 53

ESG score	Weights	Score	Final score
Quantitative	50%	22	11
Qualitative	25%	67	17
Target	25%	100	25
Total			**53**

As per our ESG assessment, SCI has established sustainability policies and time-bound targets. Its quantitative disclosures on 'E' parameters on emissions, resource usage as well as 'S' parameters on workforce and management diversity are limited. SCI's overall ESG score is 53, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Civmec Ltd (CVL SP)

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Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- Given the cyclical nature of the industry, combined with limitations on available resources due to the pandemic and restrictions, attraction and retention of skilled employees is a prime focus and potential risk for its business in the long term.
- As is typical in the construction and engineering industry, which undertakes predominantly manual work, the principal nature of recordable injuries are sprains and strains. However, about 30% of recordable injuries were from contractor employees.
- Construction waste is a significant environmental issue given the business it is in. As such, Civmec employs a range of waste-minimisation strategies, including: i) increase environmental awareness; ii) reduce not only its own waste, but also waste that occurs within the supply chain, including packaging; and iii) capture all recyclable materials and reducing the amount of waste that goes to landfill.
- Defence sector exposure could lead to social and reputational risks, although the contacts are with Australian government.

Material E issues

- Due to the nature of the business, its energy inputs are high; therefore, having a stable, economical, and efficient energy source is essential.
- Currently, local electrical networks in WA and NSW provide 100% of the electricity at its manufacturing/production sites. But given the diverse project arrangements in often isolated places, it is difficult to accurately estimate energy usage at its projects.
- In FY21, its emissions intensity increased by 51% when compared to FY20 levels. This is associated with an increase in operational activities from its Henderson Assembly Hall, along with the significant increase in hours worked.
- The Henderson manufacturing facility is presently transitioning the fleet of fossil-fuelled forklifts to electric-powered forklifts where there is an alternative available.

Material S issues

- Continuous focus on staff development with 150 people seeking professional qualifications via apprenticeship, traineeship and undergraduate programmes.
- As at end-Dec 2021, the proportion of females in the Group's head office totalled 48.1% (with 12.8% in management roles) and 7.1% across its entire workforce.
- In FY21, the group had a reduction in its Lost Time Injury Frequency Rate to 0.21 per million hours worked, decreasing from 0.36 in FY20 due to its continued efforts to drive strong field leadership and proactive leading indicators, including hazard reporting, workplace inspections and behavioural observations.
- There was a slight increase in its All Injury Frequency Rate, which records all injuries requiring at least first aid treatment, to 31.96 per million hours worked. It has since implemented manual handling and ergonomics programme on its operational site.

Key G metrics and issues

- The board has six directors, including the Executive Chairman and CEO, one Executive Director and four independent Non-Executive Directors.
- The nominating, audit and remuneration committees are chaired by independent directors.
- The board is currently made up of 100% males between the ages of 50-69. Hence, there is room to further improve the diversity and composition of its Board, with the future appointment of a female member.
- But there is regular participation at Board meetings of other senior managers from across the business, including a number of women. At the Key Management Personnel/General Managers/Group Managers level, women hold 9% of positions.
- Executive Chairman, James Finbarr Fitzgerald and CEO Patrick John Tallon own about 19.51% and 19.47% stakes in the company respectively.
- Key management/ directors' compensation accounted for about 12%/15% of total employee compensation in 2021.
- The external auditor is Moore Stephens LLP.
- Till date, Civmec has never received or been the subject of any legal action in relation to anti-competitive behaviour and violations of anti-trust and monopoly legislation.
- All new major suppliers are required to comply with the Supplier Code of Conduct, committing to respect Civmec's zero-tolerance policy concerning bribery and corruption.
- In FY21, zero incidents of discrimination were reported through the confidential whistleblowing line.

[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).

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	Quantitative Parameters (Score: 46)					
	Particulars	**Unit**	**FY19**	**FY20**	**FY21**	**MND AU (FY21)**
E	Scope 1 GHG emissions	tCO2e	1,268	689	836	N/A
	Scope 2 GHG emissions	tCO2e	3,118	3,498	5,844	N/A
	Total	**tCO2e**	**4,386**	**4,187**	**6,680**	**18,355**
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	4,619
	Total	**tCO2e**	**4,386**	**4,187**	**6,680**	**22,974**
	GHG intensity (Scope 1 and 2)	tCO2e/AUDm	29.4	17.6	26.6	N/A
	Total Energy Consumption	TJ	33.70	27.82	42.95	268
	Energy intensity	TJ/AUDm	0.23	0.12	0.17	N/A
	RE as % of total energy consumption	%	N/A	N/A	N/A	
	Non-Hazardous Waste - Recycled	Ton	4,746	2,637	4,732	N/A
	Non-Hazardous Waste - Landfill	Ton	603	478	535	N/A
	Hazardous Waste - Treated	Ton	1,036	585	878	N/A
	Hazardous Waste - Landfill	ton	235	255	376	N/A
	Recycling participation rate	%	8%	21%	18%	
	Cases of environmental non-compliance	number	0	0	0	0
S	% of women in workforce	%	6.0%	8.3%	7.1%	N/A
	% of women in management roles	%	28.0%	22.2%	12.8%	0%
	Lost time injury frequency (LTIF) rate	number	0.22	0.36	0.21	0.16
	Fatalities/Fines/Prosecutions	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	12.3%	4.3%	2.2%	2.9%
	Board salary as % of reported net profit	%	26.2%	9.1%	4.6%	2.1%
	Independent directors on the Board	%	50%	50%	50%	71.4%
	Female directors on the Board	%	0%	0%	0%	28.7%

Qualitative Parameters (Score: 16)

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

No.

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

No.

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?

No.

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

1) Incorporating more solar panels to reduce energy intensity; 2) all new paint and blast shed has been built with a garnet recycling system to reduce the amount of waste and cost of disposing garnet.

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

No

Target (Score: 64)		
Particulars	**Target**	**Achieved**
Reduce energy intensity to at least 0.17 and lower	0.17	0.17
Reduce emissions intensity to at least 17.59 and lower	17.59	26.61
Increase recycling participation rate to at least 22%	22%	18%
Increase no. of apprentices & trainees employed by 10%	10%	60.6%
Maintain LTIFR rate to below 0.25	<0.25	0.21
Maintain zero cases of workplace fatalities	0	0

Impact

NA

Overall Score: 52

As per our ESG matrix, Civmec Limited (CVL SP) has an overall score of 52.

ESG score	Weights	Scores	Final Score
Quantitative	50%	46	23
Qualitative	25%	16	4
Target	25%	64	25
Total			**52**

As per our ESG assessment, CVL has an established framework, internal policies, and tangible near-term targets but needs to make headway in improving its qualitative parameters. CVL's overall ESG score is 52, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

4.5 Internet and Telecom

- **Internet and Telco companies face scrutiny over data security given the nature of their business of holding massive amount of client information. Noted emissions and water consumption increases in relation to business activities.**
- **Players within the sector have scored well above the average ESG ratings. In order to enhance measures of network reliability and resiliency, the government and regulators are looking to impose additional measures and regulations.**
- **The sector is expected to face headwinds in 2023 amid rising cost of funding and heightened competition within incumbent. We expect internet companies to remain lean with growth and valuation restricted, especially with a recession looming posing challenges to most businesses.**

Critical ESG issues in the sector

The Internet and Telecom sector is exposed to several ESG Issues, including Data Privacy and Security, Business Ethics, Human Capital and Product Governance. Product Governance issues in the telecom industry include service quality, maintaining reliable, high-speed networks, and responding to customer billing concerns. The industry is heavily regulated by government bodies which can investigate and enforce penalties for providing poor-quality service and publicly report on registered customer complaints. These incidents emphasize the importance of network reliability and resiliency, given their role as critical infrastructure and supporting the development of new technologies such as 5G and the internet of things. We also observed that emissions are increased with overall rise in business activities and the senior management salary is not tied to fulfilling ESG targets in the companies within our coverage.

Mitigation Outlook

Across the five players under our coverage, most of them (mainly in the telecom sector) have scored well above the average ESG ratings (55). Following data breach incidents, governments and regulators are looking to impose additional measures and regulations to ensure the resiliency of this critical infrastructure. COVID-19 outbreak has prompted telecom providers to accelerate ESG initiatives, Telecom CEOs recognize the importance of devoting more attention to ESG issues and to lock in any sustainability and climate change gains made as a result of the crisis. As such, all 5 players in this sector have set specific plans and milestones towards the net zero emissions target, they produce sustainability disclosures largely under the GRI standards and informed by TCFD. From a governance perspective, there is full disclosure on management team's salary as a proportion of the overall net profit of the company for telco companies but not comparable to internet companies as management are remunerated by shares. In terms of diversity, we notice that there is more female management in the telco sector as compared to the internet companies.

Sector Outlook

With the current overall high interest rate environment, it is down to how much these tech companies can save and deploy cash to the areas that is the most lucrative and how long their cash is going to last, hence I think internet companies will continue to undergo cost cutting where it make sense. Moving forward, we can expect tech companies to have lower earnings and their valuation to remain low amid higher cost of funding and tougher macroeconomic environment until the Fed shows signs of tapering the ongoing rate hike to battle inflation and also likely pricing in for an economic downturn. As a result, we expect speed bumps for internet companies in the short term, depending on how deep the recession is. For telcos, while mobile revenue growth is resuming with reopening, we think momentum will be gradual. Consumers' shift to SIM-only plans amid stiff market rivalry and high inflation may prolong mobile post-paid ARPU woes, likely negating any roaming sales boost.

Fig 33: Internet and Telecom Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
Singtel	Buy	2.64	43,599	Low	18.2	2
StarHub	Buy	1.07	1,853	Medium	25.3	1
Netlink NBN	Buy	0.82	3,176	Medium	27	0
Sea Ltd	Buy	58.52	32,873	N/A	N/A	0
Grab Holdings	Hold	2.94	10,941	Medium	23.5	1

Source: Sustainalytics, Factset, Maybank IBG Research

Singapore Telecommunications (ST SP)

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Risk Rating & Score[1]	18.5
Score Momentum[2]	-0.0
Last Updated	16 Dec 2021
Controversy Score[3] (Updated: 16 Dec 2021)	0 - No reports

Business Model & Industry Issues

- Singtel is most exposed to cybersecurity and personal data leakage risks given its nature of business. There have been minor lapses due to IT, process and human errors over the years, and Singtel was penalised for an immaterial sum.
- Going forward, Singtel will continue to educate its staff and improve practices and processes to minimise data breaches.
- As Singtel is in the business of connectivity, it is supporting digital inclusion through connecting communities and supporting the disadvantaged.
- Notably in FY20, the telco supported migrant workers with free remittance service and their WiFi and mobile data needs. It also provided refurbished laptops and data SIMs to disadvantaged students for their home-based learning. In Australia, Optus scaled up “Donate Your Data” to support disadvantaged students by offering them free mobile data access for online learning.
- Singtel displays no exceptional risks for a telco operator for ESG and is in line with peers in tackling ESG issues.

Material E issues

- Achieved carbon emissions intensity reduction of 70% in 2020, well exceeding our 2030 target of 50%.
- Over 84% of waste generated disposed via reuse, recycling or incineration with energy recovered.
- Only Southeast Asian company among a pioneer group of 28 global companies in July 2019 that committed to keeping global temperature increase within 1.5°C and net zero emissions by 2050.

Material S issues

- 28% of female employees in middle and top management.
- Singtel was included in the 2020 Bloomberg Gender-Equality Index and the Refinitiv Global Diversity & Inclusion Index 2019 and named as one of the top 10 employers for Gender Diversity at The Leonie Awards 2019.
- Total training investment of SGD21.9m and pledged SGD45m to boost the digital skills of its workforce through company-wide initiatives over three years.
- Zero fatality rate across Singtel and Optus in FY20.
- To promote digital inclusion, Optus has launched “Donate Your Data” in Australia to help disadvantaged young people bridge the digital divide.
- Singtel also supported 1,000 vulnerable seniors under CareLine 24-hour telephone befriending service with free mobile phone services to promote digital inclusion and well-being.

Key G metrics and issues

- Board consists of 10 directors, of which one is executive officer (MD/CEO), the remaining are non-executive & independent directors (including Chairman). 30% are female directors.
- The nomination, audit, investment and remuneration committees are chaired by independent directors.
- Key management/directors’ compensation accounted for 9.4%/1.3% of total employee compensation in 2019.
- There have been no corruption cases reported for the past three years.
- Cyber security and data leakage risks. Conducts its businesses in strict adherence to data protection laws - the Personal Data Protection Act in Singapore and the Privacy Act and Telecommunications Act in Australia.
- There have been minor lapses due to IT, process and human errors. Singtel will continue to educate its staff and improve practices and processes to minimise data breaches.

[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).

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	Quantitative Parameters (Score: 88)					
	Particulars	**Unit**	**2020**	**2021**	**2022**	**Starhub (STH SP, FY22)**
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
S	% of women in workforce	%	35.4%	54.8%	54.4%	42%
	% of women in management roles	%	20%	28%	32%	20%
	Lost time injury frequency rate	number	0.4	0.4	0.3	3
G	Group CEO salary as % of net profit	%	0.43%	0.43%	0.18%	0.18%
	Top 10 employees salary as % of profit	%	1.11%	2.97%	0.71%	1.2%
	Independent director on board	%	70%	83%	85%	54%
	Women directors on board	%	40%	25%	31%	23%

Qualitative Parameters (Score: 83)

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

Yes, the group has established a Board Sustainability Committee chaired by the CEO. This is supported by Group Sustainability Council comprising of pillar heads. There are KPIs, business objectives, governance enablers and risks for each of the segments.

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

No

c) Does the company follow TCFD framework for ESG reporting?

Yes

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

Yes, Singtel has developed full Scope 3 indirect GHG emissions inventory and baseline for operations in Singapore and Australia

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

Singtel has various carbon mitigation initiatives such as replacing chillers, replacing UPS and converting to energy efficient mobile base stations in Singapore

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

Yes

Target (Score: 80)		
Particulars	**Target**	**Achieved**
Singtel Group Scope 1 and 2 to reduce by 25% by 2025	25%	3.3%
Scope 3 target to reduce 30% by 2030	30%	Not disc.
Obtained a CDP rating of A-	A-	A-
Zero fatality and well-being score above 80%	80%	82%
One million digitally enabled persons and SMEs by 2025	1,000,000	740,000

Impact

NA

Overall Score: 85

As per our ESG matrix SingTel (ST SP) has an overall score of 85

ESG score	Weights	Scores	Final Score
Quantitative	50%	88	44
Qualitative	25%	83	21
Target	25%	80	20
Total			**85**

As per our ESG assessment, Singtel displays a very high degree of transparency in its ESG disclosures. It is the only one amongst its peers that has high level of ESG quantitative targets. While we note some work being carried out on reducing Scope 3 financed emissions, we believe further actions should be done to meet the 2030 target. ST's overall ESG score is 85, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

StarHub (STH SP)

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Risk Rating & Score[1]	25.3
Score Momentum[2]	-0.0
Last Updated	03 Jul 2021
Controversy Score[3] (Updated: 03 Jul 2021)	1 - Data Privacy and Security Quality and Safety

Business Model & Industry Issues

- StarHub is most exposed to cyber security and personal-data-leakage risks given the nature of its business.
- That said, StarHub complies with all applicable laws, including the Cybersecurity Act and the Personal Data Protection Act, as well as sector specific cyber security requirements imposed by the Infocomm Media Development Authority. Audits are also performed to verify its compliance on an on-going basis.
- Internally, it has implemented cyber security and internal data protection frameworks, which govern how StarHub employees should protect systems against cyber threats and treat customer data.
- As StarHub is in the business of connectivity, it is supporting youths, social and digital inclusion. The telco has donated >SGD1m to 15 voluntary welfare organisations and non-profit organisations to support disadvantaged groups in the areas of digital inclusion and employability through community investment.
- StarHub displays no exceptional risks for telco operator for ESG and it's in line with other peers in tackling ESG issues.

Material E issues

- Carbon tax was introduced in 2019 on large direct emitters, which indirectly led to an increase in StarHub's energy costs.
- As such, StarHub has been increasing its use of renewable energy to 4.6% of its energy consumption in 2020, and is on track to increase it to 10% by 2022.
- Achieved 18% reduction in direct fuel consumption from non-renewable sources.
- About 60,000 tonnes of e-waste (cables, mobile phones, laptops and CPUs) was generated in Singapore, resulting in loss of valuable resources and greenhouse gas emission.
- StarHub has initiated flagship e-waste recycling programme, RENEW, in 2012 to provide avenues for Singaporeans to recycle their electronic waste (e-waste). More than 171 tonnes of e-waste was collected in 2020.

Material S issues

- In 2020, no incidents of discrimination were reported directly to StarHub or through Tripartite Alliance for Fair Employment Practices.
- It has also achieved zero workplace fatality in 2020.
- 25% of the board and 43% of the workforce are female. It also has a whistleblowing programme to escalate employee concerns.
- 16,857 hours of training were provided to 77% of its employees.
- In Mar 2020, StarHub has set up StarHub Cares Covid-19 and raised over SGD1m to fund various community support programmes. The initiatives supported went to a variety of community sectors such as healthcare, lower-income groups, education, migrant workers and its customers.

Key G metrics and issues

- In 2021, StarHub was ranked Asia's most sustainable telco by Corporate Knights Global 100. It was ranked 38th out of 578 Singapore-listed companies in the Singapore Governance and Transparency Index 2020.
- Board consists of 11 independent & non-executive directors, of which 27% are females.
- Independent directors chair the nomination, audit, investment and remuneration committees.
- There were no corruption cases and legal actions taken against StarHub for anti-competitive behaviour in 2020.
- At the most basic level, StarHub complies with all applicable laws, including the Cybersecurity Act and the Personal Data Protection Act.
- Internally, it has implemented cyber security and internal data protection frameworks, which govern how StarHub employees should protect systems against cyber threats and treat customer data.

[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).

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Quantitative Parameters (Score: 18)						
	Particulars	Unit	2019	2020	2021	Singtel (ST SP, FY22)
E	Scope 1	mtCO2e	0.0017	0.0021	0.0014	0.006
	Scope 2	mtCO2e	0.059	0.053	0.055	0.49
	Total	**mtCO2e**	**0.061**	**0.055**	**0.056**	0.50
	Scope 3	mtCO2e	0.013	0.009	0.01	7.3
	Total	**mtCO2e**	**0.074**	**0.064**	**0.066**	7.80
	Scope 1 emission intensity	tCO2e/ revenue m	26.1	27.3	27.4	0.0077
	Green energy share of energy consumption	%	1.96%	4.63%	6.18%	22.5%
	Energy Intensity within organisation	GJ/million	225	245	254	132
	Net water consumption	m m^3	0.0218	0.0097	0.0058	0.933
	Water Intensity	m3/SGDm	9.34	4.76	2.84	62
	Total Hazardous and Non-Hazardous Waste	tons	431	68.4	81.5	3,952
	Customer E-waste Recycling	tons	387	49	73	41
S	% of women in workforce	%	42%	43%	42%	54.4%
	% of women in management roles	%	20%	20%	20%	32%
	Number of reported work injuries	number	3	2	0	0.3
G	Chairman salary as % of net profit	%	0.18%	0.13%	0.18%	0.18%
	Top 10 employees salary as % of profit	%	0.85%	0.87%	1.2%	0.71%
	Independent director on board	%	58%	50%	54%	85%
	Women directors on board	%	25%	25%	23%	31%

Qualitative Parameters (Score: 83)

a) is there an ESG policy in place and whether there is a standalone ESG Committee or is it part of Risk committee?
Yes, the group has established a Board Sustainability Committee chaired by the CEO. This is supported by Group Sustainability Council comprising of pillar heads. There are KPIs, business objectives, governance enablers and risks for each of the segments.

b) is the senior management salary linked to fulfilling ESG targets?
No

c) Does the company follow TCFD framework for ESG reporting?
Yes

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

f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?
Starhub has various waste reduction initiatives such as a) refurbishment of rental electronic devices, b) paperless processes and digital billing, and c) reduction of packaging

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

Target (Score: 100)

Particulars	Target	Achieved
50% reduction in Scope 1 and 2 GHG emissions by 2030	50%	8%
10% energy use from renewable sources by 2022 and 30% by 2030	10%	6%
Average PUE ratio to 1.70 by 2022	1.7	1.76
100% compliance with relevant ratio frequency (RF) radiation safety standards set by regulators	100%	100%
To recycle 100% of e-waste within the operations	100%	100%

Impact

NA

Overall Score: 55

As per our ESG matrix Starhub (STH SP) has an overall score of 55

ESG score	Weights	Score	Final score
Quantitative	50%	18	9
Qualitative	25%	83	21
Target	25%	100	25
Total			**55**

As per our ESG assessment, Starhub has developed a great sustainability framework with key priorities met. The company doubled down on efforts to meet their clean energy and greenhouse gas emissions targets in support of the Singapore Green Plan 2030. However, we believe that further disclosure in green energy and water consumption needs to be disclosed. STH's overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Netlink NBN Trust (NETLINK SP)

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Risk Rating & Score[1]	27.0
Score Momentum[2]	-1.1
Last Updated	01 Apr 2022
Controversy Score[3] (Updated: 01 Apr 2022)	0 - No reported incident

Business Model & Industry Issues

- NetLink provides fibre network services. This exposes it to environmental risks. In particular, energy is consumed to provide power to co-location rooms but NetLink has no direct control over energy consumed by its customers' equipment.
- Its densification of network within data centres exposes it to data centres' environmental risks, as many Singapore data centres, in the middle of their lifespan, were designed without sustainability and energy conservation in mind. That said, NetLink has no direct control over its customers' power consumption.
- The National Climate Secretariat under the Prime Minister's Office laid out a roadmap in 2014 to improve data centre sustainability by improving energy efficiency. SS564 aims to benchmark energy efficiency of data centres and provide the best practices for the industry. BCA-IDA Green Mark has also been implemented. It is a rating system to encourage the adoption of energy efficient data centre design.
- In terms of governance, NetLink is adopting industry best practices, evidenced by its "Most Transparent REITs & Business Trust" award. Its constant disclosure and engagement with stakeholders helped the market to understand its opportunities and risks perception.

Material E issues

- Generated and disposed an average of 0.44% of fibre scraps (excess fibre too short to be reused) against fibre cables issued. This is below its 2.5% FY21 target.
- Recovered 391.4 tonnes of fibre cables from cable diversion. These recovered fibre cables cannot be reused and will be disposed of at National Environment Agency approved facility for incineration.
- In FY20, NetLink invested SGD0.85m to replace fan coil units in co-location rooms to improve energy efficiency of cooling system by 30%.
- Going forward, more initiatives will be rolled out across its co-location rooms to reduce energy consumption. One example is "blanking" project – reduce power consumed for cooling based on containment concept. This will be gradually implemented across all co-location rooms.

Material S issues

- Achieved 5,413 learning hours with an average of 15.4 learning hours per employee.
- Zero incidents of discrimination during FY19.
- Zero work-related incidents resulting in fatalities or permanent disabilities.
- Staff turnover rate of 17.7% is higher than high-tech industry's norm of 15.9%.
- NetLink aims to achieve annual employee turnover rate lower than industry norm in FY21 by investing in employees' skills development and building internal capabilities.
- 71:29 male to female employee ratio. Females make up 36% of "managers and executive" category.
- 64% of workforce is between 30 and 50 years old.

Key G metrics and issues

- Awarded "Most Transparent REITs & Business Trust" by SIAS 20th Investors' Choice Awards in 2019.
- The board consists of eight directors, of which one is executive director (CEO), one is non-executive, non-independent director and six are independent (75%). Two directors are female (25%).
- The nominating, audit and remuneration committees are chaired by independent directors.
- Seven directors have served on the board since 2017 and one since 2018.
- Professional background of independent directors includes accounting, banking, consultancy and law.
- Total remuneration of CEO and top five key management personnel amounts to SGD4.3m, or 5.5% of FY20 PAT and 15.5% of staff cost.
- Independent auditor is Deloitte & Touche LLP since listing in 2017.
- No material contracts were entered into by NetLink or subsidiaries that involved the CEO, any directors or controlling shareholders

[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).

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	Quantitative Parameters (Score: 28)					
	Particulars	Unit	2020	2021	2022	Singtel (ST SP, FY22)
E	Scope 1	tCO2e	NA	NA	619	6,000
E	Scope 2	tCO2e	NA	NA	344	490,000
E	**Total**	**tCO2e**	**NA**	**NA**	**963**	496,000
E	Scope 3	tCO2e	NA	NA	33,372	7,300,000
E	**Total**	**tCO2e**	**NA**	**NA**	**34,335**	7,796,000
E	Scope 1 emission intensity	tCO2e/ revenue m	NA	NA	NA	0.0077
E	Green energy share of capacity	%	NA	NA	NA	22.5%
E	Net water consumption	m m^3	NA	NA	NA	0.933
E	Total Hazardous and Non-Hazardous Waste	tons	266	214	487	3,952
E	Fibre scraps	tons	NA	19.2	17	NA
E	Recovered fibre cables	tons	NA	194.8	470	NA
E	Percentage of fibre waste generated in proportion to total fibre cable issued	%	0.92%	1.35%	1%	NA
S	% of women in workforce	%	30%	29%	31%	54.4%
S	% of women in management roles	%	25%	25%	25%	32%
S	Number of reported work injuries	number	0	0	0	0.3
G	CEO salary as % of net profit	%	1.17%	1.55%	1.98%	0.18%
G	Top 5 Management salary as % of profit	%	0.65%	2.92%	3.38%	0.71%
G	Independent director on board	%	50%	63%	63%	85%
G	Women directors on board	%	25%	25%	25%	31%

Qualitative Parameters (Score: 83)

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

Yes, the group has established a Board Sustainability Committee chaired by the CEO. This is supported by Group Sustainability Council comprising of pillar heads. There are KPIs, business objectives, governance enablers and risks for each of the segments.

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

No

c) Does the company follow TCFD framework for ESG reporting?

Yes

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

Yes

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

Netlink Trust has various waste reduction initiatives such as a) keeping fibre scrap within 2.5% of the total fibre cable issued for the year, b) maintain good cable practice to limit the amount of fibre scraps, and c) reduction of packaging

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

Yes

Target (Score: 80)		
Particulars	**Target**	**Achieved**
50% reduction in Scope 1 and 2 GHG emissions by 2030	50%	0%
Maintain 100% island wide coverage	100%	100%
Zero incidents of significant non-compliance with laws and regulations	0	0
Limiting the percentage of fibre scraps disposed to total fibre issued to less than 2.5%	2.5%	1.0%
To maintain zero work-related incidents	0	0

Impact

NA

Overall Score: 55

As per our ESG matrix Netlink Trust (Netlink SP) has an overall score of 55

ESG score	Weights	Scores	Final Score
Quantitative	50%	28	14
Qualitative	25%	83	21
Target	25%	80	20
Total			**55**

As per our ESG assessment, Netlink Trust has established sustainability policies and time-bound targets. The company has quantitative disclosures on ‘E’ parameters on emissions, resource usage as well as ‘S’ parameters on workforce and management diversity. While the company has disclosed Netlink’s overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Sea Ltd (SE US)

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

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Business Model & Industry Issues

- As an internet business, we believe social issues is the most relevant, followed by governance and then environmental.
- In the e-commerce business, driving social good (e.g. providing and teaching merchants how to use services) is integral to sustainably grow the platform and to retain merchants while monetising them. For instance, in Indonesia, 57% of MSMEs reported that they generated higher profits on Shopee than on other marketplaces.
- We believe the key issues for Garena are: i) addiction; and ii) compliance to local laws. For instance, Bangladesh is reportedly trying to ban Free Fire (alongside other addictive apps like PUBG and Tik Tok). Garena's response to appease authorities is important.
- The financial sector is also a highly regulated one. In our view SeaMoney's growth will be in part influenced by not just adherence to local laws, but how SeaMoney advances government agendas (e.g. facilitate roll-out of financial assistance in Malaysia and regulatory support for digital banking initiatives in ASEAN).
- Data security is also a critical ESG factor. Sea has employed various security measures to ensure this. (e.g. encryption of sensitive data, monitoring for unauthorized access etc).

Material E issues

- Aside from the increased use of packaging materials associated with e-commerce as compared to traditional commerce, we do not see much environmental issues as the remaining businesses are digital based (i.e. gaming and digital financial services).
- We believe carbon emissions from running the computer servers that Sea uses is also a key environmental footprint, although not much has been discussed in Sea's sustainability report pertaining environmental factors.

Material S issues

- Of Sea's >30,000 global workforce, 46% are females. Furthermore, 46% of the middle to senior management positions are held by females. SEA also boast a diverse culture of over 50 different nationalities in their company.
- Sea strongly believes in hiring and grooming local talent, and is one of the largest employers of fresh graduates across Southeast Asia.
- In 2020, Sea conducted more than 5,000 training sessions for employees.
- During the pandemic, Shopee provided financial support and relief to SMEs by easing operational costs and attracting new customers. Shopee also provided the SMEs with online courses to help them to scale and succeed their business in the long run. Furthermore, SEA Limited committed more than USD35m worth of COVID-19 Seller Support Packages across their markets, and provided monetary donation of more than USD510,000.

Key G metrics and issues

- The board consist of 6 members, out of which, 3 are non-executive.
- From a data security standpoint, Sea is committed to ensuring that the processing of personal data of consumers, employers and other stakeholders are carried out lawfully. Sea states that it uses its data collected to improve products to better serve its communities.
- Given a large part of Sea's competitive advantage is derived from the network effects from its large user base across multiple markets, compliance with laws is of utmost importance. Further, we believe complementing its growth strategies with government agenda

[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).

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	Quantitative Parameters (Score: 58)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**Grab (Grab US, FY21)**
E	Scope 1	tCO2e	NA	NA	36,333	0
	Scope 2	tCO2e	NA	NA	112,014	10,800
	Total	**tCO2e**	**NA**	**NA**	**148,347**	**10,800**
	Scope 3	tCO2e	NA	NA	NA	1,489,200
	Total	**tCO2e**	**NA**	**NA**	**148,347**	**1,500,000**
	Total Energy usage	kWh	NA	NA	NA	16,651,127
	Renewable Energy	kWh	NA	NA	NA	7,127,538
	Emission per revenue	tCo2e /USDm	NA	NA	14.9	2222.22
	Emission per employee	FTE	NA	NA	2.20	169.03
	Net water consumption	m m3	NA	NA	NA	NA
	Use of recycled water instead of portable water	m m3	NA	NA	NA	NA
	Water Intensity	M3/SGDm	NA	NA	NA	NA
	Waste saved from operation	m tons	NA	NA	NA	774
	Customer E-waste Recycling	tons	NA	NA	NA	NA
S	% of women in workforce	%	NA	46%	46%	42%
	% of women in management roles	%	NA	46%	44%	34%
	No. of nationalities among employees	number	NA	50	70	NA
G	CEO salary as % of net profit	%	Nm	Nm	Nm	Nm
	Key management salary as % of profit	%	Nm	Nm	Nm	Nm
	Independent director on board	%	0%	0%	0%	67%
	Women directors on board	%	9%	9%	9%	17%

Qualitative Parameters (Score: 33)

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

The company has various policies covering different aspects of ESG. There are KPIs, business objectives, governance enablers and risks for each of the segments

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

No

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?

No

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

The company has initiated various measures to manage waste and carbon emission such as the Energy Efficiency Program and the Unilever Green Delivery Project.

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

Yes

Target (Score: 0)

Particulars	**Target**	**Achieved**
No Targets	NA	NA

Impact

NA

Overall Score: 37

As per our ESG matrix, Sea Ltd has an overall score of 37.

ESG score	Weights	Scores	Final Score
Quantitative	50%	58	29
Qualitative	25%	33	8
Target	25%	0	0
Total			**37**

As per our ESG assessment, Sea Ltd has established sustainability policies but there are no time based targets set for the period. Its quantitative disclosures on ‘E’ parameters on emissions, resource usage as well as ‘S’ parameters on workforce and management diversity are limited. SE’s overall ESG score is 37, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Grab Holdings (GRAB US)

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Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- Grab espouses a ‘double bottom line’ to be both a viable business while creating a social impact.
- Grab’s mobility and delivery segments are fundamentally sharing economy businesses, which have a positive impact environmentally by reducing car ownership and greenhouse gas emissions.
- As a whole, Grab has been promoting digitisation of businesses and the gig economy, creating livelihoods for people across the region. Notwithstanding, the economic security of gig-workers will likely continue to be a key social issue.

Material E issues

- Grab reported that it saved 3.2m kg of CO2 emissions in 2017 and made contributions to reducing congestion in its markets.
- Over USD200m has been invested in electric and hybrid vehicles for the vehicle rental fleet since 2016, with around 31% of vehicles being electric or hybrid as of 1H21. Grab has also introduced a carbon offset feature, which allows consumers to contribute USD0.10 per ride to reforestation and conservation efforts in their country.
- Grab signed on to the WWF-Singapore (Plastic Action) Pact in 2020 committing to the ‘No Plastic in Nature by 2030’ pledge and encouraging the adoption of eco-friendly packaging and reduction of single-use plastics.

Material S issues

- Grab has proliferated the gig economy across the region, opening up new employment opportunities. Notably, 46% of driver-partners did not earn an income before joining Grab and there are 1,100 deaf and physically impaired partners on the platform.
- Grab’s promotion of price transparency in ride-hailing has helped to curtail profiteering by unscrupulous taxi drivers.
- On the flipside, gig economy workers are not currently considered as employees under most laws and are not entitled to certain protections, such as for work injury, but legislation to reform this is underway in some markets.
- Grab has aided in F&B establishments and street food sellers/hawkers to digitise in order to survive.
- However, Grab charges up to a 30% commission and requires partners to charge the same price on their platform as their physical stores, which the media reported was resulting in consistent losses for hawkers in Singapore. This situation has been mitigated somewhat through rebates by Grab and the Singapore government since the issue was raised. However, we remain concerned whether these issues will rise again when these rebates are curtailed.

Key G metrics and issues

- The board consists of 6 members, 4 independent and the remaining 2 are co-founders Anthony Tan and Tan Hooi Ling. There are 2 women and 4 men on the board.
- There are 2 tranches of shares, with Class B carrying 45 votes and class A shares carrying 1 vote. Class B shares are held only by the key executives comprising co-founders Anthony Tan (137m shares, 3.7% stake) and Tan Hooi Ling (27.5m shares) and Group President Ming-Hokng Maa (17.6m shares), but under the shareholders’ deed, all Class B shares are voted solely and deemed beneficially owned by Anthony Tan, giving him sole control over the company with 63.2% of the voting rights.
- As of 6 December 2021, Grab’s principal shareholders, with stake sizes in percentage of ordinary shares were as follows: SVF Investments (18.7%), Uber (14.3%), Didi Chuxing (7.5%) and Toyota Motor Corp (6.0%).
- KPMG is and has been Grab’s auditor since 2015.
- Altimeter, the sponsor promoter of the SPAC, together with JS Capital disclosed in SEC file No. 333-261949 its intent to potentially divest all or in part thereof of its shareholdings in Grab, comprising 90m class A shares and 16m warrants. There continues to be a three-year lock-up on the 12.3m sponsor promote shares.
- Key executives disclosed in SEC file No. 333-261949 their intent to potentially divest all or in part thereof their holdings of class A shares during the offering – Anthony Tan (86.2m), Ming-Hokng (12.8m) and Tan Hooi Ling (32.8m).

[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).

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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	%	NA	NA	42%	46%
	% of women in management roles	%	NA	NA	34%	44%
	No. of nationalities among employees	number	NA	NA	58	70
	Total compensation of women to men	ratio	NA	NA	98%	NA
G	CEO salary as % of net profit	%	Nm	Nm	Nm	Nm
	Key management salary as % of profit	%	Nm	Nm	Nm	Nm
	Independent director on board	%	NA	NA	67%	0%
	Women directors on board	%	NA	NA	33%	9%

Qualitative Parameters (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?

The company has various policies covering different aspects of ESG. There are KPIs, business objectives, governance enablers and risks for each of the segments

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

No

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. Scope 3 includes Purchased Goods & Services, Capital Goods, Business Travels and Use of sold products

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

The company has initiated various measures to manage carbon emission such as switching to low emission vehicles, and fully electric vehicles, using renewable energy for Grab's premises, carbon avoidance and removal programmes.

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

Yes

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Achieving carbon neutrality by 2040	0%	Not available
50% of the car fleet to be EV by 2030	0.5	Not available
Increase women in leadership to 40% by 2030	40%	34%
Double employee resource group by 2025	6	3
Less than 0.5 accidents per 100,000 trips.	0.50	0.07

Impact

NA

Overall Score: 55

As per our ESG matrix, Grab Holding (Grab US) has an overall score of 55.

ESG score	Weights	Scores	Final Score
Quantitative	50%	47	24
Qualitative	25%	67	17
Target	25%	60	15
Total			**55**

As per our ESG assessment, Grab has established sustainability policies with various time based targets set for the period. Its quantitative disclosures on 'E' parameters on emissions, resource usage as well as 'S' parameters on workforce and management diversity are robust. Grab's overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

HRnetGroup Ltd (HRNET SP)

ericong@maybank.com

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- As a recruitment firm, the Group's key asset is human capital and hence, it places the development, engagement and retention of its own staff high on the list of priorities. By enabling their growth and progression, this also helps to cultivate a highly driven and effective workforce.
- The HR industry is also increasingly going digital. These trends lean towards a need for reassessment of various aspects of its business ranging from internal areas such as its own benefits management, working arrangements, and training & education for its workforce, to external-facing elements such as methods of outreach to clientele and candidates, and helping to bridge the gap between the employees and employers.
- Its unique Co-Ownership plans further provide the opportunity for high-performers to unleash the entrepreneurship spirit in them, invest in the Group, and/or a new venture and share in its success as well as its risk of failure.

Material E issues

- Over the past 2+ years, remote working or work-from-home has become the standard for many amid the lingering COVID-19 pandemic. In a way, this is also better for the environment.
- With fewer people in the office at any one time, the group may find that they can afford to downsize, cutting down on office space and energy usage. It will also mean a reduction in people on the roads driving in to work.

Material S issues

- Whenever HRnet starts an overseas business unit, it always seeks to localise leadership roles. This allows the group to kickstart operations as a local business with a staff population that is acutely aware of the nuances and intricacies involved when serving the domestic market.
  It has also committed to the UN's Sustainable Development Goals, in particular with regard to promoting sustainable economic growth, decent work for all, and reducing inequalities.

Key G metrics and issues

- The board consists of six directors, of which half (3) are independent and the rest are Sim family members i.e., Mr Sim Yong Siang, Mr Sim Joo Siang and Ms. Adeline Sim.
- The nominating, audit and remuneration committees are chaired by independent directors.
- None of the independent directors have served on the board beyond nine years from the date of his or her first appointment.
- SIMCO Ltd's (controlled by the Sim family) deemed stake in the company is 77%.
- Key management/ directors' compensation accounted for 3.8%/6.5% of total employee compensation in 2021.
- External auditor is Deloitte & Touche LLP (appointed on 12 Aug '20).
- Recruitment is a heavily regulated industry with the Ministry of Manpower leading the regulations. Non-compliance will lead to costly fines and reputational damage.
- It has therefore put in place a whistle-blowing policy and channels for employees to report any suspicious and non-compliant practices.
- In 2021, there were no incidents of corruption or non-compliance with laws or regulations resulting in significant fines and non-monetary sanctions.

[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).

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	Quantitative Parameters (Score: 44)					
	Particulars	Unit	2019	2020	2021	KELYA US (2021)
E	Scope 1 GHG emissions	m tCO2e	N/A	N/A	N/A	1,553
	Scope 2 GHG emissions	m tCO2e	N/A	N/A	N/A	9,469
	Total	**m tCO2e**	N/A	N/A	N/A	11,022
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	5,577
	Total	**m tCO2e**	N/A	N/A	N/A	16,599
	GHG intensity (Scope 1 and 2)	tCO2e/t	N/A	N/A	N/A	3.6
	Energy intensity	KwH/empl.	N/A	N/A	N/A	N/A
	Share of renewable energy use in operations	%	N/A	N/A	N/A	N/A
	NPE (New Plastic Economy) investments	SGD m	N/A	N/A	N/A	N/A
	Cases of environmental non-compliance	number	0.0	0.0	0.0	0.0
S	% of women in workforce	%	74.6%	73.9%	74%	71%
	% of women in management roles	%	62.5%	64.7%	61.6%%	66%
	Incidences of non-compliance with laws	number	0.0	0.0	0.0	0.0
	Average training hours per employee	hours	77	72	64	N/A
G	MD/CEO salary as % of reported net profit	%	3.9%	4.3%	3.7%	2.5%
	Board salary as % of reported net profit	%	2.9%	3.2%	2.6%	3.5%
	Independent directors on the Board	%	57%	57%	57%	78%
	Female directors on the Board	%	33%	33%	33%	44%
	Dividends payout ratio as % of net profit)	%	55%	54%	61%	15%

Qualitative Parameters (Score: 33)

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. The committee is tasked with developing sustainability, keeping in view the Group's overall long-term plans and vision, setting relevant KPIs and targets, managing and monitoring overall sustainability performance.

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

No

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

No. But the Group intends to start climate related disclosure per SGX requirement from 2022.

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

No

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

Management has changed its entire on-boarding process to become paperless to reduce its impact on the environment. It recruits engineers for environmental firms and sustainability professionals. The Group also consciously seek to rent offices at green buildings.

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

No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Maintain zero confirmed incidences of leaks, thefts of customer data/losses	0	0
Maintain zero confirmed incidents of discriminations	0	0
Maintain zero confirmed incidents of corruption	0	0
Maintain zero non-compliance with local laws and regulations	0	0
Target an average of at least 60 hours per year per employee	60	64

Impact

NA

Overall Score: 55

As per our ESG matrix, HRnetGroup (HRNET SP) has an overall score of 55.

ESG score	Weights	Scores	Final Score
Quantitative	50%	44	22
Qualitative	25%	33	8
Target	25%	100	25
Total			**55**

As per our ESG assessment, HRNET has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. HRNET's overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

4.6 Plantations

- **Indonesia, the world's largest producer of palm oil, has ~15m ha (207x of Singapore) of oil palm planted area (of which ~40% belongs to smallholders), which naturally faces multiple ESG risks.**
- **Large planters are taking the lead in driving sustainability initiatives in the "E" space for the industry via GHG emissions cut and heightened conservation efforts in addition to existing no deforestation and zero-burning policies.**
- **Only via "S" investment and improved livelihoods of the rural communities can the industry avert potential "E" disasters associated with forest clearing activities.**

Critical ESG issues and Mitigation Outlook

Independent smallholders and communities living within or near oil palm concession areas open the industry to reputational, environmental and social risks. For decades, (poor) Indonesian farmers were allowed to practise open burning as it is the cheapest way to clear land for their annual crop planting (such as rice). Annual forest fires or fire incidences (that sometimes spread from small farmers' land into oil palm concessions during the dry season) may at times result in severe regional haze crisis such as those experienced in 2015. As part of their mitigation strategies, the oil palm concessionaries have set up their own monitoring units (that works with local authorities and agencies) and fire-fighting team to help tackle any fire incidences in and around the concession areas. Concurrent with that, planters are also investing in the communities surrounding their concessionaries to help lift rural communities out of poverty through jobs creation, providing and improving infrastructures, providing free education for the kids, providing start-up capitals as well as raw materials to help community members start their businesses. The aim is to provide an alternative income source to improve their livelihoods so that the local communities are less likely to engage in forest clearing activities.

Thanks to La Nina phenomenon which brought ample rainfall the past 3 years, fire incidences were barely noticeable in recent years. Nonetheless, there is no assurance that the dry season will not return that may again result in a spike in fire incidences in Indonesia. When that happens, the affected oil palm concessionaires are often unfairly targeted and will have to bear the brunt of public's anger. But if people were to think rationally, why would any concessionaires want to kill the goose that lays the golden eggs (ie burn down their cash-generating perennial oil palm trees)?

While weather events are uncontrollable, the sector can definitely do its part to cut down GHG emissions more aggressively. Palm oil mill effluent, a wastewater generated from palm oil milling activities, is the single-largest GHG emissions contributor for the industry. Cognisant of these, the sector is stepping up efforts by repurposing waste into energy (by investing in methane capture facilities or biogas plants) or fertilisers.

Sector Outlook

We are unlikely to witness a repeat of the low CPO prices of ~MYR2,000t in 2018-19 where some planters even struggled to cover their production costs. A general lack of new plantings by the industry since 2015 will cap global palm oil supply growth in the near future, sustaining CPO prices at MYR3,000-4,000/t over the medium term. This, in turn, will allow planters to reap sustainable returns. Only with decent margins can the industry re-invest part of those sustainable profits into sustainable "E" and "S" initiatives.

Fig 34: Plantations Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
Bumitama Agri	Buy	0.61	12,267	Severe	42.6	3
First Resources	Buy	1.48	1,730	High	34.5	3
Wilmar International	Hold	4.05	19,133	High	34.6	3

Source: Sustainalytics, Factset, Maybank IBG Research

Wilmar International (WIL SP)

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Risk Rating & Score[1]	33.9
Score Momentum[2]	-3.4
Last Updated	09 Oct 2022
Controversy Score[3] (Updated: 09 Oct 2022)	3

Business Model & Industry Issues

- The nature of WIL business – as an upstream palm oil/sugar producer – as well as an integrated refiner and trader exposes it to multiple risks. Key risks include deforestation, supply chain monitoring, governance & corruption, labour conditions.
- The group has been the subject of several NGO/lobbyist action on community relations, GHG emissions and anti-palm oil in the past. These open up significant reputational risks as well as regulatory and governance risks.
- WIL has a No Deforestation, No Peat & No Exploitation policy (NDPE) and, since 2021, has started producing a Palm NDPE implementation annual report that highlights their progress on commitments.
- The Group has been progressively increasing its sustainability reporting, and since 2020, its disclosures extend to all key business segments.
- At COP26, the Group has pledged to develop a sectoral roadmap for enhanced supply chain action that is consistent with a 1.5 degree Celsius pathway. Wilmar's scale gives it significant leverage in affecting industry direction in emissions reductions

Material E issues

- 98.2% of its palm oil supply chain (with a 100% target by 2022) and 100% of sugar are traceable to originating mills. It also published NDPE Implementation Reporting Framework profiles for all its mills
- Around 77% of the Group's own acreage and 100% of downstream facilities in Malaysia, Indonesia are certified under RSPO – the industry's sustainability certification body.
- The group has over 20m ha of supplier plantations under monitoring and so far removed over 1.5m ha of palm oil land for non-compliance of its NDPE policies. Nevertheless, significant risks exist given the scale of WIL's procurement
- The Group has a formalised internal protocol since 2019 on prevention, monitoring and reporting of fire incidents and it is being implemented globally
- 31% of the Group's packaging is made from renewable materials and it is driving material efficiency improvements to reduces plastic consumption by 3,000 ton/year

Material S issues

- The Group set up a Human Rights Defender Policy in 2021 under its Human Rights Framework for the palm oil sector
- 100% of its employees and contractors have been assessed to ensure payment of a living wage. 100% of suppliers also assessed to ensure their workers are paid accordingly
- WIL has stated that it benchmarks to international best practices for fair working conditions even in jurisdictions where legal frameworks are yet to evolve.
- The Group has a 100% response rate to all grievances raised via its Grievance Procedure

Key G metrics and issues

- In a 2019 report, Greenpeace claims that some of WIL's subsidiaries were engaging in deforestation and contributing to forest fires.
- WIL's size and scale as the world's largest palm oil trader and a key supplier to global brands and a consumer play in China may continue to expose it to activist and reputational risks as well as regulatory and judicial risks.
- In 2022, the Group established a Board Sustainability Committee which is responsible for setting strategies and identifying risks as well as monitoring ESG implementation
- It has a comprehensive set of codes, policies and frameworks dealing with ESG including Conduct, Ethics, Fraud, Privacy and Whistleblowing.
- The Group's Board is composed of 50% independent directors. Only 15% of the board is female.
- WIL has been producing a separate, detailed Sustainability Report yearly since 2009. Reporting is aligned to SASB and TCFD standards and follows the UN Guiding Principles Reporting Framework on disclosures on human rights
- In 2021 the Group is included in the Dow Jones Sustainability World Index, Dow Jones Sustainability Asia Pacific Index, FTSE4Good Developed Index and FTSE5Good ASEAN 5 Index.
- The Group is a member of the RSPO, EPOA, TFA, Fire Free Alliance, Pongo Alliance, UNGC, Business for Social Responsibility and Grow Asia and Grow Africa

[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).

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	Quantitative Parameters (Score: 33)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**ADM US (2021)**
E	Scope 1 GHG emissions	'000 tCO2e	4,956	7,837	7,882	13,700
	Scope 2 GHG emissions	'000 tCO2e	681	4,672	4,273	2,300
	Total	**'000 tCO2e**	**5,637**	**12,509**	**12,155**	**16,000**
	Scope 3 GHG emissions	'000 tCO2e	N/A	N/A	N/A	66,800
	Total	**'000 tCO2e**	**N/A**	**N/A**	**N/A**	**82,800**
	GHG intensity (Scope 1 and 2)	kgCO2e/sales	70	141	140	295
	Energy intensity	MWh/ ton	0.62	0.56	0.60	1.09
	Energy consumption from renewables	%	75%	61%	57%	7%
	Water consumption	ML	N/A	98,010	98,774	114,800
	Total waste generated	'000 ton	N/A	6,074	6,168	N/A
	Proportion of certified sustainable palm oil	%	38%	45%	43%	52%
	Lost time injury frequency rate	Per 200k h	0.89	0.91	0.75	0.21
S	% of women in workforce (permanent)	%	24.0%	23.0%	23.0%	37.0%
	% of women in management roles	%	24.0%	18.0%	17.0%	26.0%
	Average training hours per employee	hours	N/A	N/A	12.8	N/A
	Ratio of average remuneration - factory worker	male/female	N/A	97%	80%	N/A
G	MD/CEO salary as % of reported net profit	%	0.57%	0.61%	0.62%	0.80%
	Board salary as % of reported net profit	%	0.13%	0.09%	0.12%	0.15%
	Independent directors on the Board	%	50%	50%	50%	91%
	Female directors on the Board	%	7%	7%	15%	27%

Qualitative Parameters (Score: 50)

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, the Group has an integrated policy in place with the CEO responsible for oversight. The Board's Sustainability Committee reviews the CSO updates quarterly.

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

Not disclosed.

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?

The Group does not disclose Scope 3. It is currently mapping this with a target of forming a complete inventory of total emissions for 2020, the baseline year for its climate roadmap. This is targeted to complete by 2022.

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

The Group has a No Deforestation, No Peat, No Exploitation (NDPE) commitment in place. All solid waste from milling operations are composted or consumed for energy recovery.

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

No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Achieve 100% traceability to palm oil mills by 2022	100%	98.2%
Reduce GHG/CPO intensity by 15% by 2023 vs. 2016 baseline in palm oil mills	0.7tCO2e/CPO	N/A
Finalise Group level GHG emissions reductions	2022	Ongoing
Net Zero for subsidiaries Godman Fielder and YKA	2040 to 2060	Ongoing
Reduce loss time injury rate by 40% by 2025 vs. 2020	-40%	-18%
Achieve RSPO certification for all palm oil management units by 2025	100%	78%

Impact

NA

Overall Score: 54

As per our ESG matrix, Wilmar International (WIL SP) has an overall score of 54.

ESG score	Weights	Scores	Final Score
Quantitative	50%	33	16
Qualitative	25%	50	13
Target	25%	100	25
Total			**54**

Wilmar displays a reasonably high degree of transparency in its ESG disclosures. It has set out detailed and comprehensive targets across priority topics. However, incrementally rising resource usage and emissions levels have affected the score on the downside. Improving energy and water intensity could drive a higher score. Similarly, improved board independence and diversity, in line with peers could also support a better score. See Appendix 1.

4.7 Real Estate

- **Large sponsors are embracing Singapore's national climate target of "net zero emissions by 2050". Since our inaugural ESG report, disclosures have improved and are gravitating towards a minimum standard. Green leases are in nascent stages while green/sustainability-linked financing is mainstream.**
- **Firms continue to address social issues as evidenced by targeted rental assistance, asset enhancements to facilitate tenant well-being, hybrid work arrangements and omni-channel distribution.**
- **Boards are generally independent and well-composed. In some cases, the board is overseeing sustainability efforts as well. However, certain items like compensation granularity, alignment with ESG outcomes, board diversity vary across firms.**

Saving the environment

Leading sponsors have enunciated net zero targets in line with Singapore's own climate goals. CapitaLand Investment (CLI) and Mapletree joined City Developments and Frasers Property in disclosing their net zero ambitions. In May this year, CLI elevated its commitment to sustainability by aiming to achieve Net Zero emissions by 2050. Meanwhile, Mapletree's refreshed sustainability strategy will include the development of a "Net-Zero by 2050" roadmap. REITs are likely to be guided by sponsor's sustainability targets as well. ESG disclosures are becoming more robust and standard with firms incorporating Scope 1, 2 and 3 emissions. This is also being helped by external benchmarking such as GRESB rankings. Landlords are extending sustainability practices across the supply chain through responsible sourcing and green leases. Most REITs have set up green financing framework and in some cases such borrowings account for half of debt funding.

Building communities

Social issues continue to be at the forefront with rising inequality of opportunities, disruption of traditional business models and competing interests of various stakeholders. While hard to quantify, landlords have continued with their efforts to train people and positively contribute to the communities in which they operate. Targeted rental assistance are being given while assets are being repositioned to support hybrid working and well-being of tenants. Retail landlords are helping tenants to go online and embrace omni channel business model. Disclosures pertaining to staff training, workforce diversity and hours spent in community service projects are becoming standard. In the pursuit for safer workplaces, firms have begun to disclose number of accidents at their contractors as well.

Strong and improving governance

Good corporate governance helps to provide safeguards for investors and unitholders while facilitating the growth of the REIT market in Singapore. While externally managed, SREITs are well governed by the regulator's Property Fund Guidelines. In most cases, at least half of the board is composed of independent directors. Related party transactions are reviewed by the audit committee and voted by unitholders at an EGM if transaction value exceeds 5% of NAV. There have been instances where privatizations below NAV have been voted down. Disclosures related to key management compensation and the practice of linking management appraisals to ESG outcome is not uniform across the firms.

Fig 35: Real Estate Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
CapitaLand Investment Ltd	Buy	3.54	18,419	Low	14.9	1
CapitaLand Ascott Trust	Buy	0.99	3,086	N/A	N/A	0
Frasers Hospitality Trust	Hold	0.44	847	Low	12.8	1
CDL Hospitality Trust	Buy	1.22	1,506	Low	16.2	0
Far East Hospitality Trust	Buy	0.61	1,140	Low	12.3	0
CapitaLand Ascendas REIT	Buy	2.76	8,072	Low	12.1	0
Mapletree Industrial Trust	Buy	2.20	3,965	Low	13.4	0
Mapletree Logistics Trust	Buy	1.61	4,026	Low	13.1	0
AIMS APAC REIT	Buy	1.21	867	Low	17.3	0
ESR-LOGOS REIT	Buy	0.37	2,474	Low	19.3	0
CapitaLand Integrated Commercial Trust	Buy	2.01	13,317	Low	10.2	0
Frasers Centrepoint Trust	Buy	2.03	2,266	Low	11	0
Mapletree Pan Asia Commercial Trust	Buy	1.67	5,558	Low	15.1	0
Suntec REIT	Buy	1.39	3,927	Low	13	0
Sasseur REIT	Buy	0.78	956	Low	16.2	0
Keppel REIT	Buy	0.90	3,067	Low	11	0
Prime US REIT	Buy	0.47	434	Low	18.5	0
Manulife US REIT	Buy	0.37	467	N/A	N/A	0

Source: Sustainalytics, Factset, Maybank IBG Research

CapitaLand Investment Ltd (CLI SP)

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Risk Rating & Score[1]	14.9 (Low)
Score Momentum[2]	-0.0
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	1

Business Model & Industry Issues

- CLI is one of the world's largest real estate investment managers (REIMs) and it has adopted the CapitaLand group's 2030 Sustainability Master Plan (SMP), which was unveiled in 2020. It is intended that the SMP will be a dynamic blueprint, with its outlined goals, focus areas and targets that will be reviewed every two years.
- The group aims to increase the quantum of sustainable finance to SGD6b by 2030. To effectively quantify the impact of its sustainability efforts, it is developing a new metric, Return on Sustainability (ROS), in addition to the regular financial return.
- It has incorporated KPIs that are tied to remuneration of all employees, including its top management, with targets that were disclosed from its inaugural annual report, at end-May 2022.
- CLI was in Nov 2021 included in the Dow Jones Sustainability World Index (DJSI World) and Dow Jones Sustainability Asia Pacific Index (DJSI Asia Pacific). It marks CapitaLand's 10th/13th consecutive year of recognition on the DJSI World/DJSI Asia Pacific.

Material E issues

- It is transiting to a low-carbon business aligned with climate science as validated by the Science Based Targets initiative (SBTi) for a 'well-below 2°C' scenario; it raised scope 1 and 2 carbon emissions reduction target in FY22 by 46% (from 28%) to be in line with a 1.5°C trajectory.
- It achieved green certifications in FY21 for 46% of its global portfolio and targets to green all properties by FY30.
- Its KPIs, which include reducing carbon emissions/energy consumption intensity by 78%/35%, attributing 35% of total electricity consumption from renewable sources, and achieving 25% recycling rate in day-to-day operations, are linked to remuneration for its staff and top management.
- It has secured SGD7b of sustainable finance across its business units and REITs/ BTs as of end-FY21.

Material S issues

- The group has established a social charter, which upholds and respects the principles to protect individual rights with a zero-tolerance stance towards child/ forced labour and unlawful discrimination.
- It has introduced new training courses to equip employees with future economy skills, and delivered >41 hours on average in FY21 (vs 43/55 hours in FY20/19).
- Gender diversity is high among all >9,900 employees with female representation at 53% (in FY21), but lower at the senior management level at c.40%.
- Launched SGD50m CapitaLand Innovation Fund, of which at least 50% will be allocated for sustainability innovation.

Key G metrics and issues

- The CapitaLand group was placed 4th out of 577 listed companies in the Singapore Governance and Transparency Index 2020 (was 3rd in 2019), an annual study conducted by the National University of Singapore Business School's Centre for Governance, Institutions and Organisations.
- Board independence for CLI is high, with its Chairman and CEO as the only 2 non-independent members out of the 11-member board. It has 3 female members, vs the Council of Board Diversity Singapore's target of 30% women on boards of listed companies by 2030.
- CLI owns and manages six REITs/BTs, with activities relating to their permissible investments, leverage limits and annual reporting requirements, regulated by the MAS under Singapore's code on collective investment schemes.
- CLI's expected dividend policy is consistent with that of CAPL, which is to declare a dividend of at least 30% of the annual cash PATMI, defined as the sum of operating PATMI, portfolio gains/losses and realised valuation gains/loss.
- The group has completed two transformative acquisitions, first of Ascendas-Singbridge, which received 90% approval from shareholders in Apr 2019 and then the privatisation of its development business followed by the listing of CLI, which saw an approval of 97.6%.
- Its listed funds have acquired >SGD14b of assets over the last six years (from 2016-21), with two-thirds from third parties. Recent acquisitions like AREIT's 11 European data centre deal, have focused on new economy space.
- The group has generated shareholder value from its listed funds, notably the redevelopment of Ascott Orchard under ART, Funan under CICT, as well as the Market Street car park into CapitaGreen, and of Golden Shoe car park into CapitaSpring.

[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).

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	Quantitative Parameters (Score: 37)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**MPACT SP (2021)**
E	Scope 1 GHG emissions	tCO2e	34,795	23,300	24,862	38.61
	Scope 2 GHG emissions	tCO2e	695,525	607,547	613,314	23064
	Total	**tCO2e**	730320	630847	638176	23102.61
	Scope 3 GHG emissions	tCO2e	23355	18776	678857	N/A
	Total	**tCO2e**	753675	649623	1317033	23102.61
	GHG intensity	kgCO2/m2	47.8	39.70	39.70	50.00
	Energy intensity	kWh/sqm	100.7	82.7	84.1	131.03
	Share of renewable energy use in operations	%	2.0	3.2	4.3	3.01
	Water intensity	m3/m2	1.01	0.76	0.76	N/A
	Share of recycled water use in operations	%	12.1	10.3	9.2	63.00
	Recyclable waste	%	3.8	5.2	8.1	8.00
	Cases of non-compliance	%	2	7	9	0.00
	Share of green certified buildings	%	58	52	48	N/A
S	% of women in workforce	%	53	53	53	54
	% of women in management roles	%	34.0	36	40	61
	Lost-time injury rate	number	1.5	1.6	1.4	N/A
	Fatality rate	%	0	0	0.05	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.05	N/A	0.05	0.27
	Independent directors on the Board	%	81.8	81.8	81.8	58
	Female directors on the Board	%	9	9	27	33

Qualitative Parameters (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 - CLI's Strategy Committee is responsible for overseeing sustainability strategies and goals, while CLI Sustainability Management Committee is responsible for strategic management of ESG implementation across CLI Group

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

Yes - KPIs are linked to remuneration for all staff; performance is tracked via the online CLI Environmental Tracking System (ETS)

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

(1) passive design enhancements and active energy efficiency measures, e.g. optimization and upgrade of key building systems to reduce on-site electricity consumption. (2) implement on-site renewable energy generation where feasible.

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

Yes

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Reduce carbon emissions intensity (tonnes) by 2030 vs 2008 baseline	78%	54%
Reduce energy intensity by 2030 vs 2008 baseline	35%	43%
Increase % of renewable energy use in properties	35%	4.30%
Reduce water consumption intensity (vs 2008)	45%	52%
Improve recycling rate in its day-to-day operations	25%	8%
Portfolio with green rating	100%	48%

Impact

NA

Overall Score: 68

As per our ESG matrix, CapitaLand Investment (CLI SP) has an overall score of 68.

ESG score	Weights	Scores	Final Score
Quantitative	50%	37	18
Qualitative	25%	100	25
Target	25%	100	25
Total			**68**

As per our ESG assessment, CLI has an established framework, internal policies, and tangible mid/long-term targets. Scores can be improved further by lowering energy intensity, using more recycled water and getting more buildings green certified. CLI's overall ESG score is 68, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

CapitaLand Ascott Trust (CLAS SP)

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	na

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Business Model & Industry Issues

- ART invests in serviced residences, rental housing properties and other hospitality-related assets, undertakes AEIs, and redevelops properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- Participated for the first time in the Global Real Estate Sustainability Benchmark (GRESB) in FY21 and received a 4-star rating and scored 'A' for public disclosure; was also named 'Global Sector Leader - Hotel', and was first ranked in the 'APAC Hotel – Listed' category.

Material E issues

- About 35% of its portfolio (by GFA) is green-certified (vs 33% in FY20), while it continues to implement energy and water conservation measures across its assets.
- Has achieved 40% reduction in carbon emissions intensity since FY08, to align with its sponsor, which has set science-based goals for a 'well-below 2°C' scenario and raised its 2030 targets for carbon emissions, energy and water in FY20.
- Was the first hospitality S-REIT to secure a green loan (of SGD50m in Jan 2021), to finance its maiden development project and co-living property (lyf one-north in Singapore), and also the first hospitality trust globally to launch a sustainability-linked bond (of SGD200m in Apr 2022).
- 100% of the energy procured by its properties in Belgium, Germany and the UK are from renewable sources.

Material S issues

- Has together with its parent Ascott, been accommodating returning nationals, workers affected by border closures, healthcare professionals and those seeking alternative work-from-home arrangements due to the pandemic.
- Reported an average of 40 hours training per staff in FY21, vs 48 hours in FY20, similar to FY19, and down from 54 hours in 2018.
- Gender diversity is high, with female representation at 52% amongst all employees, and 75% at the management level including the CEO.
- Its global team participates regularly in various charitable activities organised by CapitaLand Hope Foundation, its sponsor's philanthropic arm.
- Regular employee engagement initiatives like its sponsor's global LIFE Heartware awards, aim to recognise staff who have consistently demonstrated exemplary service.

Key G metrics and issues

- A stapled group, managed externally by wholly-owned subsidiaries of its sponsor CapitaLand, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is fairly high – 4 of its 7 members, including the Chairman are independent, and the CEO is the only executive and non-independent member.
- Management fee structure, with a base fee at 0.3% of property values, performance fee at 4.0% pa of gross profit (+1% of YoY difference if gross profit >6.0% pa), and acquisition and disposal fee at 1.0% and 0.5% enterprise value, is comparable to peers.
- The cumulative remuneration of its key management team including the CEO has represented <1.6% of the REIT's distributable income when this was first reported in FY16.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency.
- Has scaled up its portfolio via a balanced combination of stable income (master leases and management contracts with minimum guaranteed income) and growth-income sources (management contracts).
- Developed markets contributed >75% of its EBITDA in FY18 and FY19.
- Its merger with Ascendas Hospitality Trust in 2019 resulted in a SGD7.4b AUM, inclusion in the FTSE EPRA Nareit Global Real Estate Index Series (Global Developed Index) on 22 Jun 2020, and higher trading liquidity.
- Has successfully recycled assets, by divesting at c.2% exit yield, then investing at c.5% EBITDA yield on average, to unlock SGD225m in gains from FY20-21.
- Ranked 1st amongst REITs and business trusts in the Singapore Governance and Transparency Index 2021.
- Maintains a strong balance sheet – leverage has averaged 32% between FY17-21.

[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).

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	Quantitative Parameters (Score: 39)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**FEHT SP (2021)**
E	Scope 1 GHG emissions	m tCO2e	2670	1915	2040	212
	Scope 2 GHG emissions	m tCO2e	37422	29522	25801	13928
	Total	**m tCO2e**	40093	31437	27841	14140
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Total	**m tCO2e**	40093	31437	27841	14140
	GHG intensity (Scope 1 and 2)	kgCO2e/m2	N/A	N/A	N/A	60
	Energy intensity	kWh/sqm	N/A	N/A	N/A	155.2
	Share of renewable energy use in operations	%	1.3	1.9	6.2	N/A
	Water intensity	m3/m2	N/A	N/A	N/A	1.87
	Share of recycled water use in operations	%	1.4	1.4	1.5	N/A
	Number of green certified buildings	number	6	21	21	5
	% green certified	%	N/A	N/A	33	N/A
S	% of women in workforce	%	53	53	52	62.5
	% of women in management roles	%	N/A	N/A	N/A	N/A
	Work-related injury rate	%	N/A	2.3	2.8	N/A
	Work-related fatality	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	2.27
	Board salary as % of reported net profit	%	0.23	0.68	0.62	1.51
	Independent directors on the Board	%	57	55.5	62.5	66.7
	Female directors on the Board	%	28.6	22.2	25	50

Qualitative Parameters (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 part of CapitaLand Investment Limited, it follows the group level 2030 Sustainability Master Plan. On trust level, it has an Sustainability Committee led by the CEO.

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

Yes - in FY21, sustainability KPIs were part of the Balanced Scorecard framework in Key Management Personnel's performance appraisals.

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

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment? - *Yes*

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

(1) In 2018, Ascott signed a Memorandum of Understanding with IFC to pioneer a green certification for the serviced residence industry, as part of the IFC's Excellence in Design for Greater Efficiencies (EDGE) programme. (2) ART will pioneer a market study to establish green certification typologies for niche real estate asset classes such as rental housing and student accommodation properties. (3) Ascott has reduced the use of single-use plastics at its properties, including replacing plastic bottled water, laundry bags and amenities with environmentally friendly alternatives.

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 2030 vs 2008 baseline	78%	40%
Reduce energy intensity by 2030 vs 2008 baseline	35%	25%
Increase % of renewable energy use in properties	35%	4.30%
Achieve green certification for % portfolio by 2025	50%	35%
Reduce water consumption intensity (vs 2008)	45%	45%
Improve recycling rate in its day-to-day operations	25%	8.10%
Annual ISO 14001 certification for Environmental Management System (EMS)	Maintain	Achieved

Impact

NA

Overall Score: 69

As per our ESG matrix, Ascott Residence Trust (ART:SP) 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**

We recognize ART's efforts in reducing GHG, energy and water intensity, and its leading role in setting green certification standards for the hospitality industry. We note that ART could improve its quantitative metrics disclosure. ART has an overall ESG score of 69, which makes its ESG rating above average.

Frasers Hospitality Trust (FHT SP)

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Risk Rating & Score[1]	12.8 (Low)
Score Momentum[2]	-1.4
Last Updated	22 Nov 2022
Controversy Score[3] (Updated: 22 Nov 2022)	1

Business Model & Industry Issues

- FHT draws on its available pool of funds to invest in hospitality real estate, undertake asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with international experience, essential in our view, as its overseas portfolio is a sizeable growth platform.
- Introduced near to long-term sustainability targets in 2020 to align with its sponsor, including achieving BCA Green Mark (Gold) certification for 80% and to green finance the majority of its assets by 2024, as well as to be net zero carbon by 2050.
- It had expanded reporting to cover 14 properties since FY18, excluding Maritim Hotel Dresden (given master lease limitations) and participated for a 2nd time in the Global Real Estate Sustainability Benchmark Assessment 2020 to maintain a score of 60 and 2-star rating. At the asset level, five UK properties are enrolled in the globally recognised Green Tourism programme.

Material E issues

- Its InterContinental Singapore was certified BCA Green Mark GoldPLUS (in FY18), while three UK serviced residences and the Park International London were awarded Bronze and Frasers Edinburgh Silver by the Green Tourism programme.
- While carbon emissions and energy and water consumption fell 25.0% YoY, 21.7% YoY and 23.8% YoY in FY20 due to significantly lower occupancies, their intensities rose 19.1% YoY, 24.4% YoY and 20.4% YoY, as utilities were essential to maintain key amenities across its properties.
- Reiterated its targets to achieve energy and water intensity cuts of 3.0% and 1.5% pa. for the portfolio from 2018-24.
- Expanded waste reporting in FY20 to 10 (from 8 in FY19) of its sponsored-managed properties, and to raise this to 14 assets by end 2021, while establishing a recycling target.

Material S issues

- Front-office excellence training, and epitome training and grooming conducted for all staff at FHT-managed properties, while new, existing staff at InterContinental Singapore trained on chain's approach to hospitality, and new hires and Novotel Melbourne undergo Peopleology service training prior to employment.
- Guests' feedback is collated from in-room, post-stay surveys and travel service platforms to monitor service satisfaction, while independent mystery shopper audits are deployed by external parties to assess service quality.
- Recorded an average of 49 training hours per employee in FY20, above the 40-hour group-level target.
- Gender diversity is high, with female representation at 75% amongst all employees (in FY20), and two-thirds at the management level.

Key G metrics and issues

- Its six Frasers-branded serviced residences and two London hotels, the Park Western Cromwell and Park International, are managed by its sponsor, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and 4 of its 6 members, including the Chairman are independent.
- Management fee structure, with base fee at 0.3% of its deposited property, performance fee at 5.5% pa of distributable income, and acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- The cumulative remuneration of its key management team, including the CEO, has represented <2.8% of the REIT's distributable income since it was first reported in FY18.
- Payout ratio for its taxable income has been consistently maintained above the minimum 90% threshold for tax transparency. Management retained 80% of its distributable income during 2Q20 in anticipation of weaker performance due to COVID-19.
- Maintains a conservative balance sheet with leverage averaging c.36% over 2017-20.
- Holds a global and diversified portfolio of 14 quality, tradable hospitality assets, yet capital recycling efforts have been slow, with its most recent acquisition activity recorded in 4Q 2016, of the Novotel Melbourne on Collins.

[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).

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	Quantitative Parameters (Score:24)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**FEHT SP (2021)**
E	Scope 1 GHG emissions	m tCO2e	N/A	N/A	N/A	212
	Scope 2 GHG emissions	m tCO2e	32237	24176	19766	13928
	Total (14 properties)	**m tCO2e**	**32237**	**24176**	**19766**	**14140**
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Total (14 properties)	**m tCO2e**	**32237**	**24176**	**19766**	**14140**
	GHG intensity	kgCO2e/OR	26.7	32.60	39.20	60
	Energy intensity (grid electricity consumption)	kWh/OR	47.1	58.10	72.60	155.2
	Share of renewable energy use in operations	%	N/A	N/A	N/A	N/A
	Water intensity	m3/OR	0.67	0.79	0.87	1.87
	Waste recycled	%	12	13	15	N/A
	Green certified buildings	number	1	1	1	5
S	% of women in workforce	%	78	75	73	62.5
	Incidents for health and safety non-compliance	number	0	0	0	42
	Work-related injury rate	%	N/A	N/A	0	0
	Work-related fatality	number	N/A	N/A	0	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	2.27
	Board salary as % of reported net profit	%	0.06	0.17	2.06	1.51
	Independent directors on the Board	%	66.7	66.7	80	66.7
	Female directors on the Board	%	0	0	0	50

*OR: Occupied room. Reporting scope for waste went up from 8 portfolio properties to 10 in FY2021.

Qualitative Parameters (Score: 83)

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 - a dedicated Sustainability Task Force comprising the CEO and representatives of key business lines reports to the Board of Directors, who determines, monitors and manages the ESG issues.

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

No - in FY21, sustainability KPIs were not directly included in the remuneration scheme for Key Management Personnel.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

(1) Fraser Suites Glasgow, Fraser Suites Edinburgh, Fraser Suites Queens Gate London and Park International London have been supplied with 100% renewable electricity since 1 January 2021 (translating to 1,080,563 kWh or 229.4 tCO2e avoided emissions). (2) All Frasers Hospitality managed portfolio properties have phased out single-use plastics, with all of them attaining full implementation across focus themes of food & beverage, laundry, and bathroom amenities. (3) Fraser Suites Singapore partnered with non-profit organisation Soap Cycling to recycle used bar soaps for migrant workers.

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

Yes - FHT will develop a net zero carbon roadmap and establish carbon targets to achieve group-wide net zero carbon emissions by 2050.

Target (Score: 40)		
Particulars	**Target**	**Achieved**
Annual reduction of energy intensity by 2024 (vs 2018 baseline)	3%	-25%
Expand waste data coverage to more properties (by Dec FY21)	14	10
Annual reduction of water intensity by 2024 (vs 2018 baseline)	1.5%	-10%
To minimize work-related injuries	0	0
Annual training hours per employee (average)	40	49

Impact

NA

Overall Score: 43

As per our ESG matrix, Frasers Hospitality Trust (FHT) has an overall score of 43.

ESG score	Weights	Scores	Final Score
Quantitative	50%	24	12
Qualitative	25%	83	21
Target	25%	40	10
Total			**43**

FHT has a balanced ESG performance based on our scorecard and tangible mid/long-term targets. We note that it's working towards a net zero carbon roadmap and we anticipate more visible results in terms of its targets. FHT's overall ESG score is 43, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

CDL Hospitality Trusts (CDREIT SP)

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Risk Rating & Score[1]	16.2
Score Momentum[2]	+1.4
Last Updated	22 Nov 2022
Controversy Score[3] (Updated: 22 Nov 2022)	0

Business Model & Industry Issues

- CDLHT draws on its available pool of funds to invest in hospitality-related real estate, undertake asset enhancements, and redevelop properties to optimise value for unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- Engagement with its master lessees and hotel managers has increased to expand the scope of reporting, to all of its 19 properties in FY21 (with the addition of the Claymore Connect retail mall in Singapore, and the Ibis and Mercure hotels in Perth).
- Revamped its ESG framework in FY21, and expects to commence reporting on new materiality topics in FY22 and FY23.

Material E issues

- Its five Singapore hotels are at least BCA Green Mark Gold certified, with M Hotel and Orchard Hotel rated Gold-Plus, while Copthorne King's and Grand Copthorne Waterfront boast the highest Platinum certification.
- Its Millennium & Copthorne (M&C) hotels are subjected to M&C's environmental policy which aims to reduce energy usage and cost by >=3% pa, while Pullman is monitored by Accor's Planet 21 programme, and Cambridge is committed to reducing carbon intensity by 52% by 2030.
- Targets across its portfolio are individually established, and it aims to achieve an aggregate 5-7% reduction in energy consumption and 2-7% reduction in water consumption, over the next five years, from a FY19 comparative baseline.

Material S issues

- Initiatives to enhance retention and employee engagement include identifying strong team performers for successive leadership roles, and quarterly anonymous surveys for the submission of unbiased feedback.
- The Hilton Cambridge City Centre was recognised as the only Lesbian, Gay, Bisexual, Transgender, Queer, and Others (LGBTQ+) led hotel in Cambridge, with all employees having undergone a diversity, inclusion and unconscious bias training, conducted by the hotel's general manager.
- Gender diversity was lower YoY in FY21 as females represented 22% of all permanent and temporary employees (from 37% and 28% in FY20, and 41% and 55% in 2019), and was maintained at 50% for the REIT management team.
- It began disclosing employee training metrics by gender in FY21 as part of its diversity and inclusion strategies.

Key G metrics and issues

- Stapled group managed externally by subsidiaries of its sponsor City Developments, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – 5 of its 6 members are independent, and the CEO is the only executive and non-independent member.
- Revised performance fee from 2.85% of gross revenue to 4.25% of NPI at the 2016 AGM. This, and its base fee at 0.25% of deposited property and acquisition and disposal fee at 1.0% and 0.5% of deal value, is comparable to peers.
- Does not disclose the cumulative remuneration of its key management team including the CEO.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency.
- Rental income supported by the minimum fixed rent received from its master leases in Singapore, Australia, New Zealand, Germany, Italy, and Angsana Velavaru in Maldives.
- Its deal to divest Novotel Clarke Quay at a SGD39.8m gain, forward purchase the new hotel at a fixed valuation cap, and acquire W Sentosa, is well-structured, at a +2.7% DPU accretion, and strengthens its long-term Singapore hospitality presence.
- Maintains a strong balance sheet with leverage averaging c.34% from 2017-21.

[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).

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	Quantitative Parameters (Score: 47)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**ART SP (2021)**
E	Scope 1 GHG emissions	m tCO2e	N/A	N/A	N/A	2040
	Scope 2 GHG emissions	m tCO2e	N/A	N/A	N/A	25801
	Total	**m tCO2e**	N/A	N/A	N/A	27841
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Total	**m tCO2e**	N/A	N/A	N/A	27841
	GHG intensity	kgCO2e/m2	N/A	N/A	N/A	N/A
	Energy consumption	mkWh	68.088	52.645	58.797	66.78
	Fuel consumption	Megajoules	N/A	102,254	101,374	N/A
	Water intensity	m3/m2	N/A	1.62	0.69	N/A
	Waste recycled (Non-Hazardous Waste)	%	N/A	N/A	19.2	N/A
	Green certified properties	number	8	6	6	21
S	% of women in workforce	%	41	37	42	52
	% of women in management roles	%	N/A	N/A	N/A	N/A
	Rate of Recordable Work-Related Injury	%	10.32	24.3	6.9	2.8
	Work-related fatality	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.67	91.48	1.85	0.62
	Independent directors on the Board	%	66.7	83.3	83.3	62.5
	Female directors on the Board	%	16.7	16.7	16.7	25

Qualitative Parameters (Score: 67)

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, CDLHT has a Sustainability Working Committee ("SWC") that reports to the Audit & Risk Committees and Board.

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

Yes - in FY21, sustainability was not directly included in management remuneration KPIs.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

No

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

Although its hotels are largely subject to their respective brand system environmental policy and energy management systems, it strives to promote sustainability through (1) Building Management System ("BMS") or Energy Management System ("EMS") to identify and subsequently manage energy usage across its individual hotels, (2) installing sensor lights to detect motion and halt energy use during non-occupancy at some portfolio properties, (3) including water conservation policies within the environmental policies across all its hotels.

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

No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Reduce water consumption within the next five years (vs 2019 baseline)	2-7%	34%
Reduce energy consumption within the next five years (vs 2019 baseline)	5-7%	13.7%
Minimize incidence of non-compliance with social and environmental laws and regulations	0	0
Minimize incidence of non-compliance with corruption, bribery and misconduct	0	0
Minimize incidence resulting in employee permanent disability or fatality	0	0
Female representation on their boards by 2025	25	16.7

Impact

NA

Overall Score: 65

As per our ESG matrix, CDL Hospitality Trust (CDREIT:SP) has an overall score of 65.

ESG score	Weights	Scores	Final Score
Quantitative	50%	47	24
Qualitative	25%	67	17
Target	25%	100	25
Total			**65**

As per our ESG assessment, CDREIT has an established framework, internal policies, and tangible mid/long-term targets but needs to work towards disclosing emissions metrics. CDREIT's overall ESG score is 65, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Far East Hospitality Trust (FEHT SP)

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Risk Rating & Score[1]	12.3 (Low)
Score Momentum[2]	-2.6
Last Updated	22 Nov 2022
Controversy Score[3] (Updated: 22 Nov 2022)	0

Business Model & Industry Issues

- FEHT draws on its available pool of funds to invest in hospitality and hospitality-related real estate, undertake AEIs, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, even as it remains focused in Singapore.
- Improved 2 places in 2021 to rank 2nd out of 43 companies in the Singapore Governance and Transparency Index (from 4th of 45 in 2020, 6th of 46 in 2019); ranked 9th of 45 in the Governance Index for Trusts, also receiving 5th highest governance score.
- Introduced environmental action targets in 2020, to reduce energy consumption by 2% pa, and to ensure all new developments are designed to minimally qualify for the BCA Green Mark Gold status. We see room for an expansion of its reporting scope to disclose metrics at the asset-level and also to add targets to reduce water and carbon emission intensities.

Material E issues

- Four of its nine hotels achieved the BCA Green Mark certification in 2020 - Oasia Hotel Downtown, Village Hotel Changi, Rendezvous Hotel (Gold) and Village Hotel Albert Court (Platinum), while Village Hotel Bugis was certified as Gold-Plus from Nov 2021.
- Refinanced a SGD125m term loan in Mar 2021 with a first (5-year) sustainability-linked facility.
- Engaged KPMG as external consultant in FY21 to develop a GHG carbon inventory template for monitoring emissions, while adding disclosure of Scope 1 and 2 GHG.
- On track for the BCA certification of its new buildings in Singapore, in particular the Sentosa hotels (Village, The Outpost, and The Barracks), that are designed to minimally qualify for the BCA Green Mark Gold certification.

Material S issues

- Gender diversity is high, with females representing five of its eight permanent employees in FY21 (from 6 of 9 in FY20), 20% at the management level (similar to FY20), and half of the board's members.
- Achieved a 100% participation rate for the annual Colleague Engagement Survey in FY21 (from 88% in FY20), which seeks to assess its employees' level of engagement and to identify their strengths and areas for improvement.
- Have supported charities and not-for-profit organisations for various causes, and also participated in some of its sponsor's community activities; has committed an annual budget from FY21 to supplement efforts.
- Stepped up tenant engagement and assistance to pandemic-affected businesses with temporary revision of rental structure or rental rebates.

Key G metrics and issues

- Stapled group managed externally by wholly-owned subsidiaries of its sponsor Far East Orchard, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and 4 of its 6 members are independent.
- Revised down base fee from 0.3% to 0.28% pa of deposited property, and performance fee to the lower of 4.0% of NPI or 4.0% of distributable income (after base fee, trust expenses and finance costs) in FY20 to better align its management fees to peers. As such, REIT management fees were lower by 12.3% YoY in FY21.
- Its CEO's salary is disclosed separately, while the cumulative remuneration of its key management team including the CEO, represented <3.5% of distributable income since this was first reported in FY15.
- Payout ratio for taxable income has been consistently maintained at above the minimum 90% threshold for tax transparency.
- Its 30% interest in a JV with its sponsor, an 839-room hotel development in Sentosa was at an estimated investment cost of SGD522k per key in Sep 2014, versus comparable market transactions of SGD1-1.3m per key when the property opened in 2019.
- Receives minimum gross revenue that is supported by the fixed rent component of the master leases, which is highest amongst its peers at an estimated 77% of its rental revenue in FY20, which provides downside support to DPUs.
- Divested Central Square for a SGD112m gain, with the sales proceeds reducing borrowings, after securing an outline planning permission from the URA for a 78% increase in maximum GFA and evaluating options for the asset.
- Was added as a constituent of the FTSE EPRA Nareit Global Real Estate Index Series since Sep 2021.

[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).

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	Quantitative Parameters (Score:35)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**FHT SP**
E	Cases of environmental non-compliance	tCO2e	0	251	212	N/A
	Scope 2 GHG emissions	tCO2e	15189	13448	13928	19766
	Total (All properties)	tCO2e	15189	13699	14140	19766
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total (All properties)	tCO2e	15189	13699	14140	19766
	GHG intensity	kgCO2e/m2	70	60	60	110
	Energy intensity (grid electricity consumption)	kWh/sqm	164.2	149.70	155.20	269
	Share of renewable energy use in operations	%	N/A	N/A	N/A	N/A
	Water intensity	m3/m2	2.5	2.2	1.87	0.87
	Cases of environmental non-compliance	number	N/A	N/A	0	N/A
	Green certified properties	number	N/A	N/A	5	1
S	% of women in workforce	%	77.8	66.7	62.5	73
	Number of Workplace Incidents	number	163	33	42	0
	Work-related Occupational Disease	number	0	0	0	0
	Work-related fatality	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	1.81	2.18	2.27	3.58
	Board salary as % of reported net profit	%	0.99	3.36	1.51	2.06
	Independent directors on the Board	%	83.3	87.5	66.7	80
	Female directors on the Board	%	33.3	42.9	50	0

Qualitative Parameters (Score: 33)

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

No - ESG is under the purview of the “Audit Sustainability and Risk Committee”, which provides oversight on Far East H-Trust’s ESG strategies, policies and practices.

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

No - as of FY21, sustainability KPIs were not part of the remuneration KPIs for the CEO and key management personnel.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

No

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

(1) Buildings that Far East H-Trust acquires that are newly built in Singapore to be designed at least to Singapore Green Mark gold status. (2) Progressive replacement of flush valves of water cisterns in all guest rooms at Village Hotel Bugis. (3) Working towards disclosing our Scope 3 carbon emissions in future reports.

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

No

Target (Score: 67)		
Particulars	**Target**	**Achieved**
Reduce average energy consumption of FEHT properties per year	2%	-4%
All new FEHT buildings in Singapore are designed to minimally qualify for the Singapore Green Mark Gold status	100%	N/A
Minimize incidence resulting in employee permanent disability or fatality	0%	0%
Female representation on their boards by 2025	25	50

Impact

NA

Overall Score: 43

As per our ESG matrix, Far East Hospitality REIT (FEHT) has an overall score of 43.

ESG score	Weights	Scores	Final Score
Quantitative	50%	35	18
Qualitative	25%	33	8
Target	25%	67	17
Total			**43**

FEHT scores well for in terms of quantitative metrics compared to its hospitality peers. Meanwhile, we anticipate more visible progress from FEHT in terms of its mid/long-term targets and qualitative parameters. FEHT’s overall ESG score is 43, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

CapitaLand Ascendas REIT (CAREIT SP)

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Risk Rating & Score[1]	11.8 (Low)
Score Momentum[2]	-2.6
Last Updated	04 Oct 2022
Controversy Score[3]	0 - No Reported Incident

Business Model & Industry Issues

- CAREIT draws on its available pool of funds to invest in industrial real estate, carry out asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- It has adopted the CapitaLand group's 2030 Sustainability Master Plan, which was unveiled in 2020. It is intended that the SMP will be a dynamic blueprint, with its outlined goals, focus areas and targets that will be reviewed every two years.

Material E issues

- 94 of its 220 properties (43% by GFA) are under operational control so covered as part of its sustainability reporting; 40 are BCA Green Mark certified, and it targets for all buildings to achieve a minimum green rating by 2030.
- Installed 36 additional EV charging points in Singapore, to a total of 76 across 16 properties, and owns 227 EV charging points globally in FY21 (from 138 in FY20).
- Increased solar panel installation footprint by 2% YoY to 11.4 GWh in FY21, and expected to commence its second phase of works in FY22.
- Starting to implement green leases for its Singapore assets. Has raised SGD1.5b in green financing to-date, accounting for c.23% of total borrowings (from c.7% in FY20).

Material S issues

- Has grown its community-focused capacities with the expansion of its flexible workspace, while AEIs have added collaborative spaces, gyms and end-of-trip facilities.
- CapitaLand provides each employee three days of volunteer service leave to encourage community service contribution; 82% volunteered in FY21 with over 480 hours dedicated (vs 269 hours in FY20).
- CapitaLand has implemented its building capabilities framework to upskill employees, which was rolled out globally in FY20. The average training hours rose to 22 in FY21 (from 17 in FY20).
- Gender diversity improved in FY21, with female representation at 60% (from 44% in FY20) but it declined at the management level to 40% (from 60%).

Key G metrics and issues

- Externally managed by subsidiaries of sponsor CapitaLand Investment (CLI), which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high; it comprises eight members, five of whom including the Chairman are independent, with non-finance/ real estate backgrounds. The CEO is the only executive and non-independent board member.
- Revised computation of management fees (in FY15) in favour of unitholders, with base fee set at 0.5% of adjusted deposited property, and performance fee at 0.1% of adjusted deposited property if DPU growth >2.5% YoY and 0.2% if >5.0% YoY.
- The cumulative remuneration of its key management, including the CEO, has represented <0.9% of the REIT's distributable income since it was first reported in FY17.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency.
- Has grown new economy assets to 81% of AUM as at end-2021 (from 68% at end-2016), helped by a record SGD2.1b of acquisitions completed in FY21.
- Has maintained a sound balance sheet with leverage <38% historically. Its AUM rose c.70% between from 2018-21 due to acquisitions, while leverage stayed low at 35.9% (as of end-Dec 2021) and below the 50% regulatory limit. Scored 'A' for public disclosure in the GRESB survey, and was ranked 3rd amongst 45 REITs and business trusts, on the Singapore Governance and Transparency Index 2021.

[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).

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Quantitative Parameters (Score:42)						
	Particulars	Unit	2019	2020	2021	MLT SP (2021)
E	Scope 1 GHG emissions	tCO2e	N/A	474	770	1341.1
	Scope 2 GHG emissions	tCO2e	N/A	49591	48764	11002.8
	Total	tCO2e	35467	50065	49535	12343.9
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	tCO2e	N/A	50065	49535	12343.9
	GHG intensity (Scope 1 and 2)	kgCO2e/m2	16.29	23.51	21.70	2.37
	Energy intensity	kWh/sqm	51.64	57.38	55.79	6.2
	Renewable energy generated as % consumption	%	N/A	N/A	6.7	63.5
	Water intensity	m3/m2	0.49-0.97	0.53	0.51	0.102
	Share of recycled water use in operations	%	N/A	N/A	N/A	N/A
	Waste recycled	%	N/A	15.7	4.2	18.3
	Green financing as a % of total borrowing	%	N/A	13.1	19	16.1
	Green certified properties	number	31	34	40	5
S	% of women in workforce	%	52	44	60	59
	% of women in management roles	%	60	38.7	51.5	N/A
	Work-related injury	number	24	18	22	0
	Work-related fatality	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.15	0.08	0.09	0.16
	Independent directors on the Board	%	67	62.5	62.5	58.3
	Female directors on the Board	%	22	12.5	12.5	33

Qualitative Parameters (Score: 83)

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 part of CapitaLand Investment Limited, it follows the group level 2030 Sustainability Master Plan. On trust level, it has a Sustainability Committee led by the CEO.

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

Yes - in FY21, sustainability KPIs were part of the Balanced Scorecard framework in Key Management Personnel's performance appraisals.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

It abides by the CLI sustainable policies. (1) Incorporates environment sustainability throughout all stages of any AEI, developments and redevelopments. (2) Biodiversity initiatives are being implemented across Ascends REIT's properties located in the UK and the US. (3) Ascends REIT works with a waste disposal term contractor in Singapore who operates a Materials Recovery Facility. Waste materials such as paper, plastics and metal are treated before being sold to manufacturers as recycled input materials.

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 2030 vs 2008 baseline	78%	54%
Reduce energy intensity vs 2008 baseline	35%	43%
Increase % of renewable energy use in properties	35%	4.3%
Achieve a minimum green rating for all existing buildings	100%	48%
Reduce water consumption intensity	45%	52%
Improve recycling rate in its day-to-day operations	25%	8.1%
Annual ISO 14001 certification for Environmental Management System (EMS)	Maintain	Achieved

Impact

NA

Overall Score: 67

As per our ESG matrix, Capland Ascendas REIT (CAREIT) has an overall score of 67.

ESG score	Weights	Scores	Final Score
Quantitative	50%	42	21
Qualitative	25%	83	21
Target	25%	100	25
Total			**67**

CAREIT has a comprehensive ESG framework and established environmental policies. While CAREIT has shown firm commitments through green financing and green certification progress, we see room for improvement in its quantitative "S" and "G" performance, in areas such as workplace safety and gender diversity of board. Overall, CAREIT's ESG score is 67, which makes its ESG rating above average in our view (average ESG rating = 50).

Mapletree Industrial Trust (MINT SP)

jialin.li@maybank.com

Risk Rating & Score[1]	18.0 (Low)
Score Momentum[2]	+0.1
Last Updated	4 Oct 2022
Controversy Score[3] (Updated: 1 Jan 2000)	0 - No Reported Incident

Business Model & Industry Issues

- MINT draws on its available pool of funds to invest in industrial real estate, carry out asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
  It has steadily driven a transformation of its portfolio, and grown its hi-tech buildings segment through AEIs, built-to-suit projects and acquisitions. The addition of US data centre portfolios, with some properties jointly-held with its sponsor, have accelerated its access to the fast-growing sector, while lifting freehold properties to c.56% of its AUM.

Material E issues

- Steadily reduced electricity and water intensities across its Singapore properties despite an increasing contribution from the hi-tech buildings segment.
- Has set near-term targets to reduce electricity and water intensity, and long-term goals to cut Scope 2 GHG emissions intensity, and raise solar energy generating capacity.
- Achieved the BCA Green Mark Gold certifications or higher for 8 Singapore property clusters in FY22 (vs 7 in FY21), and will introduce sustainability clauses for new leases in its hi-tech buildings and business park buildings.
- Reports electricity and GHG emissions for 6 US data centres (out of 57), which are within operational control.
  Secured maiden sustainability-linked facility, or SGD300m in perpetual securities priced at 3.15% in May 2020.

Material S issues

- Provided SGD12.7m of rental reliefs to tenants in FY21, and prioritised SMEs impacted by lower business volumes and supply chain disruptions with added support measures (eg. case-by-case restructuring of leases).
- The hiring and professional development of its employees, are supported by its sponsor's talent recruitment initiatives (Mapletree Associate, Executive, Internship) and learning and development programmes. Headcount rose c.8% in FY20 with the shift to in-house facilities management for all its clusters, and it stayed at 193 in FY21.
- Management started to conduct at least one employee town hall meeting in FY21 to improve staff engagement efforts, and targets to organise one CSR initiative per year.
  Gender diversity is high with females representing 52% of all employees in FY22 and 50% for the management team of 4; aims to achieve at least 25% of female board representation by 2025 and 30% by 2030, from 18%.

Key G metrics and issues

- Managed externally by wholly-owned subsidiary of its sponsor Mapletree Investments, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is fairly high - 6 of its 11 members are independent, and the CEO is the only executive and non-independent member.
- Management fee structure, with the base fee at 0.5% of its deposited property, performance fee at 3.6% pa of NPI, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- The cumulative remuneration of its key management team including the CEO, has represented <2.0% of the REIT's distributable income since it was first reported in FY17.
- Payout ratio for taxable income has been consistently maintained at 100%, above the minimum 90% threshold for tax transparency. Management withheld tax-exempt distributable income in 4Q20-1Q21 in view of COVID-19 uncertainties and looks to grant SGD20m in rent relief.
- Has scaled up AUM with accretive US data centre portfolio deals following an expansion of its investment mandate in Sep 2017. Its sponsor's remaining stakes in the properties mitigates the investment risks while adding to acquisition growth pipeline.
- Reclassified data centres as a standalone property segment from 1Q21 to reflect its contribution, which rose to 41.2% of AUM as of end-Mar 2021.
- Has generated significant value from five BTS projects, which achieved both growth in occupancies and rental uplifts post redevelopment, and is undertaking its largest at Kolam Ayer 2, set to complete in 2H 2022.
  Trading liquidity has improved after well-timed equity fund raising activities. MINT was added to the benchmark FSSTI in Jun 2020.

[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).

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	Quantitative Parameters (Score:20)					
	Particulars	Unit	2019	2020	2021	CLAS SP (2021)
E	Scope 1 GHG emissions	m tCO2e	19.4	14.9	7	770
	Scope 2 GHG emissions	m tCO2e	23,883	20,963	73,320	48764
	Total (inc. data centres)	**m tCO2e**	23,902	20,978	73,327	49535
	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
	Total	**m tCO2e**	23902.4	20978	73327	49535
	GHG intensity	kgCO2e/m2	13.8	12	15.9	21.70
	Energy intensity	mkWh	33	29.8	40.14	55.79
	Renewable energy generated as % consumption	kWh/sqm	N/A	N/A	N/A	6.7
	Water intensity	%	0.49	0.41	0.37	0.51
	Share of recycled water use in operations	'000m3	14.9	12.4	8.4	N/A
	Waste recycled (Singapore properties)	%	N/A	10.2	3.1	4.2
	Cases of environmental non-compliance	tonnes	0	0	0	N/A
	Green financing as a % of total borrowing	%	N/A	13.4	N/A	19
	Green certified property clusters	number	8	7	8	40
S	% of women in workforce	%	53	52	52	60
	% of women in management roles	%	N/A	61.5	64.3	51.5
	Number of accidents	number	0	0	0	22
	Recordable work injury rate	%	0	0	0	N/A
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.3	0.18	0.18	0.09
	Independent directors on the Board	%	54.5	54.5	54.5	62.5
	Female directors on the Board	%	18	18	18	12.5

Qualitative Parameters (Score: 83)

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

As part of Mapletree Group, the Manager's sustainability management is under the purview of the Sustainability Steering Committee (SSC), which comprises representatives of the sponsor and managers. The SSC constantly manages the overall sustainability performance, sets annual and long term targets.

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

Yes - in FY21, environmental targets have been included in Performance Target Bonus ("PTB").

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?

No - the manager continues to disclose scope 2 emissions and discloses scope 1 emissions from FY21/22 onwards.

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

The three-pronged approach of MINT to energy management includes reducing energy consumption, improving energy efficiencies and increasing the adoption of renewable energy. (1) On a monthly basis, the Property Manager monitors and assesses utility consumption patterns as well as identifies energy saving opportunities. (2) Also, improve property management operations through the deployment of energy-efficient equipment and usage of energy-efficient technologies. (3) Implementing water conservation initiatives such as improvements in chiller performance and upgrading of toilets.

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

No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Reduce average building electricity intensity for MIT's properties in Singapore by 2030 (vs 2020)	15%	9.3%
Reduce average building Scope 2 GHG emissions intensity for MIT's properties in Singapore by 2030 (vs 2020)	17%	13.3%
Reduce FY21/22 average building water intensity for MIT's properties in Singapore	2.5%	2.5%
Improve board diversity in terms of female representation (by 2025)	>=25%	18%
Minimize incidence resulting in employee permanent disability or fatality	0	0

Impact

NA

Overall Score: 56

As per our ESG matrix, Mapletree Industrial Trust (ME8U) has an overall score of 56.

ESG score	Weights	Scores	Final Score
Quantitative	50%	20	10
Qualitative	25%	83	21
Target	25%	100	25
Total			**56**

MINT has improved its GHG emission reporting scope, and put in place incentives for the board to accelerate the ESG transformation. Meanwhile, MINT could set clear targets while it proactively increases the use of renewable energy. MINT attain an overall ESG score of 56, which makes its ESG rating above average in our view.

Mapletree Logistics Trust (MLT SP)

Risk Rating & Score[1]	15.6 (Low)
Score Momentum[2]	-4.4
Last Updated	4 Oct 2022
Controversy Score[3]	0 - No Reported Incident

Jialin.li@maybank.com

Business Model & Industry Issues

- MLT draws on its available pool of funds to invest in industrial (logistics) real estate, carry out asset enhancements and redevelop properties to optimise value for its unit holders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits, and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- Acquisitions have gained momentum since FY18, as portfolio deals boosted its AUM to SGD13.0b. Freehold properties in Australia, Japan, Malaysia and South Korea are c.20% of its assets by NLA.
  A phased approach has been adopted to report energy consumption and improve YoY data representation which covered six of its nine operating markets in FY21. It will participate for the first time in the GRESB Real Estate Assessment in FY22.

Material E issues

- Expanded the scope for energy intensity reduction in FY23 by 1.0-1.5% from a FY22 baseline, to all assets with operational control, up from six markets in FY22.
- Aims to raise solar energy generating capacity by 15-20% from FY22 baseline, and to achieve longer term target to double capacity by 2030.
- Has secured SGD800m of green funding to date, comprising SGD450m in sustainability-linked loans and SGD350m in green loans, which represent c.16% of total borrowings.
- New targets in FY23 include plans to introduce green leases in Singapore, and to increase certified green space (by GFA) by 25% from a FY22 baseline.
  Has set long term target to achieve 20% energy reduction in Singapore and Hong Kong SAR by 2030 from a FY19 baseline.

Material S issues

- Has aligned initiatives to sponsor's CSR framework, which also aims to encourage its employees to organise or participate in self-initiated community service projects in their respective markets.
- Gender diversity is high with female representation at 59% for all employees, and 50% for its 20-strong management team; targets to achieve at least 25% of female board representation 2025, and 30% by 2030, vs a-third in FY22.
- The hiring and professional development of its employees is supported by its sponsor's various talent recruitment initiatives (Mapletree Associate, Executive, Internship) and its learning and development programmes.
- Training per employee rose to 35.8 hours on average in FY22 (vs 26.4 hours in FY21), and included at least one hour in the areas of ESG and digital transformation.

Key G metrics and issues

- Managed externally by a wholly-owned subsidiary of its sponsor Mapletree Investments, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets
- Board comprises 12 directors, 7 of whom are independent, with 4 females represented. The CEO is the only executive and non-independent member.
- Management fee structure, with a base fee at 0.5% of its deposited property, performance fee at 3.6% pa of NPI, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, comparable to peers.
- The cumulative remuneration of its key management team including the CEO was <3% of distributable income since it was first disclosed in FY17. Senior management and the board elected to take a 5-10% cut in base salary and retainer fees due to COVID-19.
- Payout ratio has been consistently kept at 100%, above the minimum 90% threshold for tax transparency.
- Has accelerated on acquisitions since FY18, which were DPU-accretive (at 1.4-2.6%) and in line with a rigorous process – a sponsored deal requires a review by the audit committee and unit holders' approval at an EGM if its value exceeds 5% of NAV.
- Divestments in Singapore, China, Japan, and Malaysia since FY15 have delivered >SGG0.1b in gains and capital distributions.
  Its AUM has jumped 2.5x from FY17-22 largely on the back of accretive acquisitions, but leverage has averaged c.38%, and its balance sheet has stayed sound due to well-timed equity fundraising exercises.

[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).

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	Quantitative parameters (Score:50)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**AREIT SP (2021)**
E	Scope 1 GHG emissions	tCO2e	N/A	183	1341	770
	Scope 2 GHG emissions	tCO2e	10502	11838	11003	48764
	Total	tCO2e	10502	12021	12344	49535
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	tCO2e	10502	12021	12344	49535
	GHG intensity	kgCO2e/m2	3.94	3.2	2.37	21.70
	Energy intensity	kWh/sqm	7.8	6.6	6.2	55.79
	Renewable energy generated as % consumption	%	7.65	24	63	6.7
	Water intensity (like-for-like)	m3/m2	0.096	0.093	0.102	0.510
	Share of recycled water use in operations	%	N/A	N/A	N/A	N/A
	Waste recycled	%	N/A	N/A	18.3	4.2
	Cases of environmental non-compliance	number	N/A	N/A	0	N/A
	Green financing as a % of total borrowing	%	5.8	8.3	16.1	19.0
	Green certified properties	number	N/A	3	5	40
S	% of women in workforce	%	58	61	59	60
	% of women in management roles	%	N/A	N/A	N/A	51.5
	Number of accidents	number	0	0	0	22
	Recordable work injury rate	%	1.8	0	0	8
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.25	0.17	0.16	0.09
	Independent directors on the Board	%	54.5	55	58	62.5
	Female directors on the Board	%	27.3	27	33	12.5

** MLT adopts a phased approach to reporting, and continues to expand reporting scope to include portfolio markets.*

Qualitative parameters (Score: 50)

a) is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?
As part of Mapletree Group, the Manager's sustainability management is under the purview of the Sustainability Steering Committee (SSC), which comprises representatives of the sponsor and managers. The SSC constantly manages the overall sustainability performance, sets annual and long term targets.

b) is the senior management salary linked to fulfilling ESG targets?
No - in FY21, only participation in learning and development in ESG is included in Performance Target Bonus ("PTB").

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

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?
Yes, the company plans to introduce green leasing in Singapore in FY23 and submitted for its first GRESB assessment in FY22.

f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?
(1) Increase use of renewable energy by installation of rooftop solar panels, signing on to solar Power Purchase Agreements ("PPA"), and supporting tenants in their installations on properties. (2) Install more EV charging stations at strategic locations to support the increased adoption of EVs. (3) Expand smart toilet project to other assets in our portfolio.

g) Does carbon offset form part of the net zero/carbon neutrality target of the company?
No

Target (Score: 83)		
Particulars	**Target**	**Achieved**
Reduce energy intensity in Singapore, HK, Vietnam, China, Malaysia and Japan portfolios (vs 2021)	1-1.5%	Yes
Achieve energy intensity reduction in Singapore and HK by 2030 (vs 2019)	20%	N/A
Increase solar energy generating capacity across MLT's portfolio (vs 2021)	15%-20%	Yes
Solar energy generating capacity across MLT's portfolio by 2030 (vs 2021)	2x	N/A
Increase certified green space (by GFA) in FY23 (vs 2022) by	25%	N/A
Achieve carbon neutrality for Scope 1 and 2 emissions by 2030	2030	N/A

Impact

NA

Overall score: 58

As per our ESG matrix, Mapletree Logistics Trust (MLT) has an overall score of 58.

ESG score	Weights	Scores	Final Score
Quantitative	50%	50	25
Qualitative	25%	50	13
Target	25%	83	21
Total			**58**

We like MLT's efforts in renewable energy, energy consumption, and female board representation. Nonetheless, we believe that MLT could improve its ESG performance by disclosing progress towards long term targets. MLT's overall ESG score is 58, which makes its ESG rating relatively high among industrial REIT peers and above-average in our view (average ESG rating = 50).

AIMS APAC REIT (AAREIT SP)

thilanw@maybank.com

Risk Rating & Score[1]	17.3 (Low)
Score Momentum[2]	-0.0
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	0

Business Model & Industry Issues

- AAREIT draws on its available pool of funds to invest in industrial real estate, carry out asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- Its redevelopment of six properties in Singapore since FY12 have added 1.9m sf or 22% to its portfolio GFA, and supported growth in both revenue and AUM

Material E issues

- Nearly half of its Singapore portfolio by NLA is BCA Green Mark compliant as of end-Mar 2021. Its Optus Centre in NSW Australia maintained a NABERS Energy Base Building Rating of 5 stars and Water Rating of 3.5 stars in FY21.
- Secured a BCA Green Mark (Gold) award for the 3 Tuas Avenue 2 redevelopment and BCA Green Mark certification for the AEI at 29 Woodlands Industrial Park E1 NorthTech in FY20, in line with its FY19 targets.
- Reporting metrics are limited to the consumption of energy and water for 20 out of 28 properties in its portfolio, which trails the measurements on intensities, and also greenhouse gas (GHG) emissions, which are disclosed by its peers.
- Obtained its first PUB Water Efficient Buildings (WEB), for 10 Changi South Lane after the completion of upgrading works in Dec 2020.

Material S issues

- Each employee received at least 18.0 training hours in FY21, up from 17.4 hours in FY20 (and against 32.4 hours in FY19), again missing its 26-hour minimum target due to Covid-19, which resulted in the inability to reschedule training programmes in 2H20. Will continue to aim for the minimum training hours in FY22.
- Gender diversity is fairly high, with 15 females amongst its 22 employees, and 2 out of 5 in the management team.

Key G metrics and issues

- Previously known as MI-REIT prior to a recapitalisation exercise in 2009, and now externally managed by a wholly-owned subsidiary of its sponsor AIMS Financial Group, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Three of five board members are independent with the CEO the only executive and non-independent member.
- Management fee structure, with a base fee at 0.5% of its deposited property, the performance fee at 0.1% of deposited property if DPU growth >2.5% YoY and 0.2% if >5.0% YoY, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- Does not disclose the cumulative remuneration of its key management team including the CEO.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency.
- Secured a new 12-year master lease with Optus, its largest tenant in FY20, achieving a 17% IRR on its FY14 AUD184m investment.
- Redevelopment projects have resulted in increases to both portfolio GFA and valuations; this rose for 20 Gul Way from SGD41.8m to SGD306.4m upon completion in Sep 2014.
- Was ranked third out of 45 S-REITs and business trusts in the Governance Index for Trusts in FY20 and retained in the SGX Fast Track programme by the SGX RegCo.
- Has maintained a sound balance sheet as leverage has averaged c.35% over the last five years, despite a c.64% growth in its AUM.

[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).

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	Quantitative Parameters (Score: 0)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**EREIT (2021)**
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Scope 2 GHG emissions	tCO2e	N/A	N/A	N/A	15344
	Total	**tCO2e**	0	0	0.0	15344
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	**tCO2e**	0.00	0.00	0.0	15344
	GHG intensity	kgCO2/m2	N/A	N/A	N/A	110.00
	Energy intensity	kWh/sqm	N/A	N/A	N/A	269.00
	Share of renewable energy use in operations	%	N/A	N/A	N/A	5.04
	Water intensity	m3/m2	N/A	N/A	N/A	3.00
	Waste recycled	%	N/A	N/A	N/A	15.59
	Cases of environmental non-compliance	%	N/A	N/A	N/A	0.00
	Green financing as a % of total borrowing	%	N/A	N/A	N/A	N/A
	Green certified properties	#	N/A	2	3	8
S	% of women in workforce	%	78.3	68.2	52.5	69
	% of women in management roles	%	N/A	N/A	N/A	N/A
	Lost-time injury rate	%	N/A	N/A	0.0	2
	Fatality rate	%	N/A	N/A	0.0	2.18
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.21	0.23	0.22	0.56
	Independent directors on the Board	%	60	60	75	40
	Female directors on the Board	%	0	0	0	10

Qualitative Parameters (Score: 50)

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 - Sustainability Council (SC) oversees and manages its sustainability efforts.

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

No

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

No

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

(1) use of Light-Emitting Diode ("LED") lights in the common areas (2) installing solar panels at selected properties

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

N/A

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Zero corruption incidents	0	0
Zero Occupational Health and Safety	0	0

Impact

NA

Overall Score: 25

As per our ESG matrix, Aims Apac REIT (AAREIT SP) has an overall score of 25.

ESG score	Weights	Scores	Final Score
Quantitative	50%	0	0
Qualitative	25%	50	13
Target	25%	50	13
Total			**25**

As per our ESG assessment, AAREIT is in early stages of establishing a framework, internal policies, and tangible mid/long-term ESG targets. However, the REIT has a sustainability council, which oversees and manages its sustainability efforts. AAREIT'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).

ESR-LOGOS REIT (EREIT SP)

jialin.li@maybank.com

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- EREIT draws on its available pool of funds to invest in industrial real estate, carry out asset enhancements and redevelop properties to optimise value for its unitholders. Its activities relating to permissible investments, leverage limits, and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes.
- The manager successfully maintained employee and tenant satisfaction at 78%/81% respectively despite the pandemic, whilst maintaining zero Covid-19 cases or work-related injuries and staying in compliance with social-economic laws and regulations.

Material E issues

- Implemented Environmental Policy and Green Procurement Policy in FY20. The former outlines the manager's sustainability focuses.
- Reduced grid electricity consumption and consumption intensity by 5.5% YoY and 9.7% respectively in FY20.
- Installed rooftop solar panels on 12 properties under ELOG Solar Harvesting Programme. Targets 50% increase target in solar power generation by 2025 (from base year 2019).
- Targets net zero carbon for certain Singapore properties by 2030. 30/32 multi-tenanted buildings were "Water Efficiency Building" certified, up from 22 as of 2019, with water intensity also reduced by 6%.
- Targets GMC for all buildings undergoing AEI from 2019 onwards. Targets for GRESB benchmark through continued submission. Obtained ISO14001:2015 on Environmental Management System certification.
- No incidents of non-compliance with environmental regulations and laws.

Material S issues

- Zero Covid-19 cases or work-related injuries amongst employees by applying strict workplace safety measures.
- Zero material incidents of non-compliance with socio economic laws and regulations.
- Employee satisfaction at 81% with a response rate of 94%.
- Transition to bi-weekly online activities such as workout classes and health talks helped cure social disconnect.
- Manager purchased cash vouchers from F&B tenants to help provide a boost in sales under COVID-19 Care Initiative.
- Grew tenant satisfaction from 69% in 2018 to 78% in 2021.
- 69% of employees are female, including Chairperson Ms. Stefanie Yuen Thio.

Key G metrics and issues

- Sponsor ESR Cayman (~14.4% stake) provides a strong and visible pipeline of assets and support, particularly for the REIT's growth ambitions outside of Singapore.
- Board comprises 8 directors (seven men; one woman), a sole CEO and executive director (Adrian Chui), three independent non-executives and three non-executives.
- Independent Chairman Stephanie Yuen Thio and other independent directors are unrelated to any members of management.
- Remuneration committee comprises 3 non-executive directors, mostly independent except for Mr. Jeffrey Perlman, whom is also Chairman of ESR Cayman.
- Audit Committee is mostly independent, comprising 3 non-executives.
- Management fee structure is in line with peers, with 0.5% base fee of deposited properties, 25% performance fee based on DPU growth (subject to high watermark), 0.5% divestment and 1% acquisition fee.
- Pay-out ratio averaged ~98.2% since listing, consistently above the 90% minimum threshold.

[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).

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	Quantitative Parameters (Score:32)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**MLT SP (2021)**
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	N/A	1341
E	Scope 2 GHG emissions	tCO2e	17,747	16,239	15,344	11003
E	**Total**	tCO2e	17,747	16,239	15,344	12344
E	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
E	**Total**	tCO2e	17747	16239	15344	12344
E	GHG intensity	kgCO2e/m2	141	122	110	2.37
E	Energy intensity (grid electricity consumption)	kWh/sqm	345	298	269	6.2
E	Renewable energy generated as % consumption	%	5.5	4.9	5.0	63
E	Water intensity	m3/m2	3.5	3.2	3.0	0.102
E	Waste recycled	%	15.5	19.2	15.6	N/A
E	Cases of environmental non-compliance	number	0	0	0	18.3
E	Green financing as a % of total borrowing	%	N/A	N/A	N/A	0
E	Green certified properties	number	6	4	8	16.1
S	% of women in workforce	%	68	67	69	59
S	% of women in management roles	%	N/A	N/A	N/A	N/A
S	Number of accidents	number	2	1	2	0
S	Recordable work injury rate	%	N/A	1.17	2.18	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
G	Board salary as % of reported net profit	%	0.7	0.72	0.56	0.16
G	Independent directors on the Board	%	50	50	40	58.3
G	Female directors on the Board	%	10	10	10	33

Qualitative Parameters (Score: 50)

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 -it has a Sustainability Committee led by the CEO, responsible for the execution and monitoring of ESG policies, complementing ESR Group's environmental considerations.

b) is the senior management salary linked to fulfilling ESG targets?
No - as of FY21, sustainability KPIs were not part of the performance appraisals.

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

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?
Yes - in 2021, the company did its first submission of GRESB Real Estate Assessment

e) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?
(1) It implemented a new target on solar energy to achieve its goal of lower carbon emissions. (2) The Manager conducted an environmental risk management assessment in line with Monetary Authority of Singapore's (MAS) guidelines and an assessment of climate-related risks, in line with the TCFD framework. (3) Providing additional e-waste recycling bins on a voluntary basis for tenants and the general public since 2019, and working closely with e-waste vendors.

g) Does carbon offset form part of the net zero/carbon neutrality target of the company?
No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Reduce energy consumption for MTBs in 2023 vs 2019 baseline	5%	13%
Annual reduction of energy intensity for MBTs	1%	14%
Increase solar power generation by 2025 vs 2019 baseline	50%	N/A
Annual reduction of water intensity for MTBs vs 2019 baseline	2%	9%
Obtain Water Efficiency Building (WEB) certifications for MTBs by 2023	100%	93.8%
Obtain new WEB for MTBs per year	10%	25%
No incidents of non-compliance with environmental regulations and laws	Maintain	Maintained

Impact

NA

Overall Score: 53

As per our ESG matrix, ESR-LOGOS REIT (ELOG) has an overall score of 53.

ESG score	Weights	Scores	Final Score
Quantitative	50%	32	16
Qualitative	25%	50	13
Target	25%	100	25
Total			**53**

ESR has attained an above-average score of 53 based on our aggregated quantitative/qualitative/target-based approach, and we see room for improvements in its ESG metrics, such as GHG emission, "S" and "G" metrics. Further disclosure could be a plus. We also encourage ESR to review and set more ambitious targets given its stellar achievements in FY21.

CapitaLand Int. Comm. Trust (CICT SP)

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Risk Rating & Score[1]	10.2 (Low)
Score Momentum[2]	-0.7
Last Updated	24 Nov 2022
Controversy Score[3] (Updated: 24 Nov 2022)	0

Business Model & Industry Issues

- CICT draws on its available pool of funds to invest in commercial real estate, undertake asset enhancements, and redevelop properties to optimise value for its unit holders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to its permissible investments, leverage limits, and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets know-how on its board is high, with representation by members with international experience, essential given its overseas portfolio will increasingly be a growth platform.
- As the largest owner of shopping centre floor space and office properties in Singapore, it attentively monitors building and environmental efficiency across its 10.6m sf NLA, and has set medium-term 2030 targets on carbon emission, energy and water intensity reductions. These efforts have also been recognised by the Global Real Estate Sustainability Benchmark.
- Its large and diversified portfolio has increased the extent for value-generating redevelopments and AEIs. The repositioning of Funan into an integrated development with retail, office and co-living spaces has broadened the scope of its social initiatives.

Material E issues

- All 21 Singapore properties are BCA Green Mark certified, with 4 certified GOLD and 4 GoldPLUS, which is the minimum target set for new developments, and 12 achieving the highest Platinum certification.
- Long-term targets are aligned to science-based goals in CapitaLand's 2030 Sustainability Master Plan, from a 2008 base year, to reduce by 2030: (a) energy intensity by 35%; (b) carbon emissions intensity by 78%; (c) water intensity by 45%; and to achieve (d) 35% of electricity consumption from renewable sources; and (e) 25% recycling rate.
- Green/ sustainability-linked loans are now c.27% of total borrowings, after it secured an additional SGD2.1b in loan facilities in 1H22.

Material S issues

- Its sponsor allocates up to 3.0% of its annual wage bill towards learning and development programmes for its employees, which is supported by its in-house training hub - CapitaLand Institute of Management and Business.
- Gender diversity is high at CICT, with female representation at 57% amongst all employees (in 2021), 63% at the management level, and the Chairman's seat on the board.
- Funan, which was redeveloped and conceptualised as an integrated development to comprise retail, office and co-living spaces, to offer roof-top urban farming, an indoor rock-climbing facility, and 170 bicycle bays. It will also leverage digital tools to enhance the shopper experience.
- Two of its malls house community libraries and both have gained additional GFA from URA's community and sports facilities scheme.

Key G metrics and issues

- Managed externally by wholly-owned subsidiaries of its sponsor CapitaLand Investment, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – 5 of its 8 members, including the Chairman, are independent, and the CEO is the only executive and non-independent member.
- Revised performance fee from 2.85% of gross revenue to 4.25% of NPI at the 2016 AGM. This, and its base fee at 0.25% of deposited property and acquisition and disposal fee at 1.0% and 0.5% of deal value, is comparable to peers.
- The cumulative remuneration of its key management team including the CEO has never represented >0.6% of the REIT's distributable inc. since first reported in FY16.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency. Management retained 70% of its 1Q20 distributable income in light of a challenging outlook for its retail properties due to Covid-19.
- Has scaled up via DPU-accretive acquisitions from its sponsor's pipeline. The deal process is rigorous; involving a review by the board's audit committee, and if valued >5% of NAV, unit holders' approval at an EGM.
- Its merger with CCT was effective in Nov 2020 as it aimed to create a third largest APAC REIT with SGD22.9b AUM across 10.4m sf of commercial NLA, and serve as its sponsor's primary investment vehicle for commercial real estate in Singapore and other developed markets.
- Generated value from its AEIs at Junction 8 and IMM, and divestments of Rivervale Mall and Sembawang Shopping Centre (192% and 218% over purchase price).
- Maintains one of the strongest balance sheets amongst peers – leverage has fallen steadily from 38.4% at end-2011 to 37.2% at end-2021, but should rise steadily with growth in AUM.

[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).

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	Quantitative Parameters (Score: 32)					
	Particulars	Unit	2019	2020	2021	MPACT SP (2021)
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	321	38.61
	Scope 2 GHG emissions	tCO2e	72058	62148	63885	23064
	Total	**tCO2e**	**72058**	**62148**	**64206**	**23102.61**
	Scope 3 GHG emissions	tCO2e	2388	3376	3214	N/A
	Total	**tCO2e**	**74446**	**65524**	**67420**	**23102.61**
	GHG intensity	kgCO2e/m2	3.28	4.40	4.52	50.00
	Energy Intensity	kWh/sqm	N/A	N/A	N/A	131.03
	Share of renewable energy use in operations	%	0.00	0.07	0.03	3.01
	Water intensity	m3/m2	N/A	N/A	1.248	N/A
	Share of recycled water use in operations	%	42	39.6	40.2	63.00
	Waste recycled	%	N/A	8.7	11	8.00
	Cases of environmental non-compliance	%	0	0	3	0.00
	Number of green certified buildings	number	15	23	23	5.00
S	% of women in workforce	%	59	54	57	54
	% of women in management roles	%	65.4	53.6	63.1	61
	Work-related injury	number	1	7	2	N/A
	Work-related fatality	number	0	0	1	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.14	0.16	0.07	0.27
	Independent directors on the Board	%	62.5	62.5	62.5	58
	Female directors on the Board	%	25	25	37.5	33

Qualitative Parameters (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 part of CapitaLand Investment Limited, it follows the group level 2030 Sustainability Master Plan. At the trust level, it has an Sustainability Committee led by the CEO.

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

Yes - in FY21, sustainability KPIs were part of the Balanced Scorecard framework in Key Management Personnel's performance appraisals.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

(1) Piloting initiatives such as chemical-less water treatment to cooling towers at CapitaGreen and introducing smart trash sorting bins to facilitate recycling efforts. (2) CapitaLand Investment implemented a shadow internal carbon price in 2021 to quantify climate-related risk and opportunities for its new investments. And this was applied as part of the EHS Impact Assessment conducted during CICT's respective due diligence of its three investments in Sydney, Australia.

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 2030 vs 2008 baseline	78%	50%
Reduce energy intensity by 2030 vs 2008 baseline	35%	33%
Increase % of renewable energy use in properties	35%	0.03%
Reduce water consumption intensity (vs 2008)	45%	41%
Improve recycling rate in its day-to-day operations	25%	11%
Portfolio with green rating	100%	100%

Impact

NA

Overall Score: 66

As per our ESG matrix, CapitaLand Integrated Commercial Trust (C38U) has an overall score of 66.

ESG score	Weights	Scores	Final Score
Quantitative	50%	32	16
Qualitative	25%	100	25
Target	25%	100	25
Total			**66**

As per our ESG assessment, CICT has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. CICT's overall ESG score is 66, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Frasers Centrepoint Trust (FCT SP)

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Risk Rating & Score[1]	11 (Low)
Score Momentum[2]	-0.4
Last Updated	24 Nov 2022
Controversy Score[3] (Updated: 24 Nov 2022)	0

Business Model & Industry Issues

- FCT draws on its available pool of funds to invest in retail real estate, undertake asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, even as it remains focused in Singapore.
- Scoring improved from its 3rd GRESB Real Estate Assessment in 2021, as it received 5 stars (out of 5) and a 92 score (out of 100), which is above the 73-mark global peer average, and vs 3 stars and 69 score in FY20.
- Has introduced near to long term sustainability targets in 2020 to align with its sponsor, including achieving BCA Green Mark (Gold) certification for 80% and to green finance the majority of its assets by 2024, as well as to be net zero carbon by 2050.

Material E issues

- Eight out of its nine properties are at least BCA Green Mark Gold certified, with four (Causeway Point, Tiong Bahru Plaza, Century Square, and White Sands) rated Platinum.
- Reduced energy, carbon emissions, and water intensities by 8.3%, 11.0% and 19.1% respectively in FY21, compared to FY19 baseline.
- Signed Letter of Intent to join Singapore's first brownfield Distributed District Cooling (DDC) network in Tampines, to reduce 17% in energy consumption, 18% in carbon emissions and achieve economic savings annually.
- Secured a SGD589m green loan for Waterway Point in FY21, with margin reduction on its second year if BCA Green Mark Gold-Plus certification status is maintained, to bring green facilities to 18% of total borrowings.

Material S issues

- Developed a tenant engagement plan to be implemented at all properties, and completed a tenant satisfaction survey in FY21.
- Learning and development programmes are supported by its in-house facility; an average of 38 training hours was recorded in FY21 (similar to FY20), which was below the 40-hour group-level target, that has been lowered to 30 hours from FY22.
- 89% of its 27 employees have completed training on sustainability via an e-learning module.
- Female representation is high at 59% for all employees and 50% for senior management roles, while this accounts for 17% of board seats.

Key G metrics and issues

- Managed externally by a 100%-owned subsidiary of its sponsor Frasers Property which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and half of its 6 members including the Chairman are independent.
- Management fee structure, with base fee at 0.3% of its deposited property, performance fee at 5.0% pa of NPI, and acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- The cumulative remuneration of its key management team, including the CEO, has represented <2.0% of the REIT's distributable income since it was first reported in FY18.
- Payout ratio for its taxable income has been consistently maintained above the minimum 90% threshold for tax transparency. Management retained 50% of its distributable income during 2Q20 in anticipation of a weaker outlook for the remaining FY due to COVID-19.
- Has grown AUM and deepened its domestic suburban mall footprint via accretive acquisitions – Northpoint 2 and Yew Tee Point (in 2010), Bedok Point (2011), Changi City Point (2014), Waterway Point (2019), and PGIM Real Estate ARF fund (2020).
- Has generated value from its AEIs at Causeway Point, with its occupancy maintained above 97.0% and rental reversion averaging +4.2% from 1Q15-4Q20, and Anchorpoint, which achieved a 14% ROI.
- Joined the FTSE EPRA/ NAREIT Global Real Estate Index Series (Global Developed Index) in Sep 2019 following an increase in free-float.
- Maintains one of the strongest balance sheets amongst peers with its leverage averaging c.30% over the past six years.

[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).

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	Particulars	Unit	2019	2020	2021	MPACT (2021)
	Quantitative parameters (Score:32)					
E	Scope 1 GHG emissions	m tCO2e	N/A	N/A	N/A	39
E	Scope 2 GHG emissions	m tCO2e	15600	15757	25354	23064
E	**Total**	**m tCO2e**	**15600**	**15757**	**25354**	**23103**
E	Scope 3 GHG emissions	m tCO2e	N/A	N/A	N/A	N/A
E	**Total**	**m tCO2e**	**15600**	**15757**	**25354**	**23103**
E	GHG intensity	kgCO2e/m2	84.4	74.90	75.10	50.00
E	Energy intensity	kWh/sqm	201	184	184	131.03
E	Renewable energy use in operations	%	N/A	0.00	0.22	3.01
E	Water intensity	m3/m2	3.13	2.56	2.57	N/A
E	Share of recycled water use in operations	%	N/A	N/A	N/A	63
E	Waste recycled	%	6.0	5.8	10.8	8
E	Cases of environmental non-compliance	number	0	0	2	0
E	Number of green certified buildings	number	3	4	8	5
S	% of women in workforce	%	56	58	59	54
S	% of women in management roles	%	N/A	N/A	N/A	61
S	Lost-time injury rate	%	0	0.7	0.7	N/A
S	Work-related fatality	number	0	0	0	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
G	Board salary as % of reported net profit	%	0.47	0.35	0.25	0.27
G	Independent directors on the Board	%	66.7	50	50	58
G	Female directors on the Board	%	17	17	17	33

Qualitative Parameters (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 part of Frasers Property Group, Frasers Property Retail's Sustainability Steering Committee ("FPR SSC") makes key decisions regarding the sustainability framework and goals for the trust, while the board itself guides, overseas and monitors the ESG factors required to achieve the FCT sustainability objectives.

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

Yes - in FY21, sustainability KPIs were part of the short-term incentive plans ("STI Plans") in Remuneration Policy.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes - FCT received 5 Star rating in the GRESB 2022 Real Estate Assessment.

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

(1) It has installed solar panels at two properties, with the aim of expanding renewable energy capacity over time. (2) Using recycled water for no potable purposes, and investing in water saving fittings. (3) Partnering with Star Hub in their Recycling the Nation's Electronics Waste (RENEW) programme to collect e-waste via recycling bins in its malls.

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

Yes

Target (Score: 100)

Particulars	Target	Achieved
To certify owned and managed assets with third party and relevant green building schemes by 2024	80%	94% by GFA
To finance sustainable asset portfolios with green and sustainable financing by 2024	Majority	18%
To carry out climate risk assessments and implement asset adaptation and mitigation plans by 2024		Yes
To develop a net-zero carbon roadmap and establish progressive carbon targets by FY2021		Yes
To reduce water use intensity by 20% by 2030 (vs 2015) and establish interim targets by FY2021		19.1% (vs 2019)
Achieve safe working environment and achieve zero injuries	Maintain	100%

Impact

NA

Overall score: 66

As per our ESG matrix, Frasers Centrepoint Trust (J69U) has an overall score of 66.

ESG score	Weights	Scores	Final Score
Quantitative	50%	32	16
Qualitative	25%	100	25
Target	25%	100	25
Total			**66**

As per our ESG assessment, FCT has an established framework, internal policies, and tangible mid/long-term targets. However, there is further room for improvement for quantitative scores. FCT's overall ESG score is 66, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Mapletree Pan Asia Comm. Trust (MPACT SP)

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Risk Rating & Score[1]	15.1 (Low)
Score Momentum[2]	0
Last Updated	24 Nov 2022
Controversy Score[3] (Updated: 24 Nov 2022)	0

Business Model & Industry Issues

- MCT draws on its available pool of funds to invest in diversified real estate, undertake asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, even as it remains focused in Singapore.
- Two of its five properties - Mapletree Business City (MBC) and VivoCity - have 4.0m sf and contribute 79% of its total NLA. They are best-in-class assets, and have received the highest BCA Green Mark Platinum certification.
- Management has continued to drive improvement in the operational performance of VivoCity via AEIs, and also actively leveraged the mall's sizeable platform to steer its social and environment initiatives.

Material E issues

- Targets to maintain at least the respective BCA Green Mark certification the all its properties. VivoCity was already Gold certified since FY13, and further achieved the highest Platinum certification in FY20.
- At VivoCity, an upgrade of fan coil units in FY20 resulted in 50k kWh of energy savings with plans for chiller upgrades in FY21 expected to generate an additional 1.16m kWh in energy savings.
- Secured its first SGD670.0m green loan to part-finance the MBC II acquisition in Oct 2019, in addition to establishing a framework guided by Green Loan Principles published by the Loan Market Association and the APAC Loan Market Association to steer future green funding allocations.
- Has set targets to maintain or improve like-for-like energy and water intensity by up to 1% above previous year baseline.

Material S issues

- Conducts monthly workshops for new employees of its tenants at VivoCity to train them on the mall's service culture, build competencies to manage customer feedback and improve shopper loyalty.
- Leveraged malls as platforms to increase visibility of social and philanthropic causes (eg. annual Hair for Hope event at VivoCity organised since 2010 to raise awareness of childhood cancer).
- A new public library added to VivoCity's level 3 under Singapore's Community/ Sports Facility Scheme helped the mall gain bonus GFA to extend its basement I by 24k sf.
- Gender diversity is high, with female representation at 54% amongst all 186 employees in FY21, 72% for the management team, including its CEO, and 4 members on its board.

Key G metrics and issues

- Managed externally by wholly-owned subsidiary of its sponsor Mapletree Investments, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – 7 of its 12 members are independent, and the CEO is the only executive and non-independent member.
- Management fee structure, with the base fee at 0.25% of its deposited property, performance fee at 4.0% pa of NPI, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- The cumulative remuneration of its key management team including the CEO, has never represented >2% of the REIT's distributable income since it was first reported in FY17.
- Payout ratio for taxable income has been consistently maintained at 100%, above the minimum 90% threshold for tax transparency. Management retained 60% of its 4Q20 distributable income in light of a challenging outlook for its retail properties due to Covid-19.
- Has generated significant value from AEIs at VivoCity - its fifth (from 1Q-2Q20) involved a changeover of the hypermarket and the conversion in 24k sqft of recovered anchor space, resulted in positive rental uplift and ~40% of annual ROI.
- Acquisitions of MBC Phase 1 for SGD1.78b in FY17, and Phase 2 for SGD1.55b in FY20 were accretive to unitholders, while EFR funding helped improve trading liquidity. MCT joined the FSSTI in Sep 2019 and MSCI Singapore in Nov 2019.
- Maintains one of the strongest balance sheets amongst peers.

[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).

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	Quantitative Parameters (Score:37)					
	Particulars (exc MBC II)	**Unit**	**2019**	**2020**	**2021**	**CICT SP (2021)**
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	38.61	321
	Scope 2 GHG emissions	tCO2e	28,564	21,490	23,064	63885
	Total	**tCO2e**	28,564	21,490	23,103	64206
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	3214
	Total	**tCO2e**	28,564	21,490	23,103	67420
	GHG intensity	kgCO2e/m2	60	50.00	50.00	4.52
	Energy intensity	kWh/sqm	150.4	116.24	131.03	N/A
	Share of renewable energy use in operations	%	N/A	3.0	3.0	0.03
	Water intensity	m3/m2	N/A	N/A	N/A	1.25
	Share of recycled water use in operations	%	56	70	63	40.20
	Waste recycled	%	N/A	N/A	8	11
	Cases of non-compliance	number	N/A	0	0	3
	Number of green certified buildings	number	5	5	5	23
S	% of women in workforce	%	54	54	54	57
	% of women in management roles	%	67	65	61	63.1
	Work-related injury rate	%	2.5	N/A	N/A	N/A
	Work-related fatality	number	0	0	0	1
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.3	0.26	0.27	0.07
	Independent directors on the Board	%	58.3	58.3	58.3	62.5
	Female directors on the Board	%	33	33	33	37.5

* The reporting scope includes 5 portfolio properties (VivoCity, MBC, mTower, Mapletree Anson, BOAHF) in Singapore.

Qualitative Parameters (Score: 67)

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

As part of Mapletree Group, the Manager's sustainability management is under the purview of the Sustainability Steering Committee (SSC), which comprises representatives of the sponsor and managers. The SSC constantly manages the overall sustainability performance, sets annual and long term targets.

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

No - in FY21, the variable bonus amount was assessed based on the achievement of financial KPIs such as NPI Yield, DPU and NAV.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes - MPACT Maintained GRESB Three Star rating for 2nd year of participation.

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

(1) Real-time monitoring of water consumption via a dedicated online platform enables quicker rectification as building technicians will be promptly notified should there be deviations to usual water consumption levels.(2) Installation of rainwater sensors that automatically switch off irrigation systems during heavy downpours. (3) Staircase light replacement, installation of EV charging points and solar lights at certain properties.

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

Yes

Target (Score: 100)

Particulars	**Target**	**Achieved**
Maintain or improve landlord's like-for-like energy intensity (vs 2020 baseline)	To 1%	13%
BCA Green Mark certifications for all MCT properties	Maintain	Yes
Maintain or improve landlord's like-for-like water consumption (vs 2020 baseline)	Within ±1%	33%
Minimize incidence of non-compliance with anti-corruption laws and regulations	0	0
Minimize incidence of non-compliance with relevant laws and regulations	0	0
Minimize incidence resulting in employee permanent disability or fatality	0	0
Relevant Building & Safety trainings for eligible staff members	100%	100%

Impact

NA

Overall Score: 60

As per our ESG matrix, Mapletree Pan Asia Commercial Trust (MPACT) has an overall score of 60.

ESG score	**Weights**	**Scores**	**Final Score**
Quantitative	50%	37	18
Qualitative	25%	67	25
Target	25%	100	25
Total			**60**

As per our ESG assessment, MPACT has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its metrics, especially for the acquired MNACT portfolio. MPACT's overall ESG score is 60, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Suntec REIT (SUN SP)

thilanw@maybank.com

Risk Rating & Score[1]	13 (Low)
Score Momentum[2]	+1.0
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	0

Business Model & Industry Issues

- SUN draws on its available pool of funds to invest in commercial real estate, undertake asset enhancements, and redevelop properties to optimise value for its unit holders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- Has made efforts to improve the scope of reporting and formalisation of targets since its inaugural sustainability report in FY17, including engaging an independent external consultant in FY19 to help determine and finalise material ESG matters presented to and then approved by the board.
- Achieved the Global Real Estate Sustainability Benchmark's highest 5-star rating in its inaugural participation in FY20.

Material E issues

- Four Singapore properties maintained their BCA Green Mark certifications in FY21; Suntec City Mall and Suntec Singapore both rated Gold, and ORQ and MBFC Platinum. Its Australian assets improved/maintained their environmental and energy ratings certifications.
- In FY21 adopted the market-based approach to account for Scope 2 emissions, to better articulate the impact of renewable energy consumption on its carbon emissions.
- The use of carbon credits to offset emissions due to energy consumption at the common areas was implemented at 177 Pacific Highway and 477 Collins in FY21.
- Maintained an explicit 2024 target to reduce energy intensity by 3.0% and to maintain water intensity, both from a 2019 baseline.
- Secured maiden AUD450m green loan facility in FY20 to finance or refinance eligible assets based on a green finance framework.

Material S issues

- Achieved average training per employee of 32 hours in FY21 (vs 55/35/36 hours in FY18/FY19/FY20), and ahead of its target of 26 hours, despite unavailability of large-scale in-person trainings during the pandemic.
- Gender diversity is high, with female representation at 70% for all employees in FY21 (vs 74%/65% in FY19/FY20), 60% at the management level (in FY19-21), and the Chairman's seat on the board.
- Set up end-of-trip facilities at 177 Pacific Highway to provide amenities for cyclists travelling to work.
- Suntec City has (since FY16) supported The Purple Parade, Singapore's largest movement for inclusion and people with disabilities.

Key G metrics and issues

- Externally managed by subsidiaries of ARA, since late 2021 a part of the ESR group, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is fairly high – 4 of its 8 members are independent.
- Management fee structure, with the base fee at <=0.3% of its deposited property, performance fee at 4.5% pa of NPI, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- Does not disclose the cumulative remuneration of its key management team including the CEO.
- Payout ratio for taxable income has been consistently maintained at above the minimum 90% threshold for tax transparency.
- Has scaled up via DPU-accretive acquisitions from its sponsor's pipeline. The deal process is rigorous; involving a review by the board's audit committee, and if valued >5% of NAV, unit holders' approval at an EGM.
- The Suntec City AEI at SGD410m over four phases from 2012-15 resulted in a 14% increase in NLA and SGD848m or 18% increase in valuation at end-2016.
- Diversified into the UK, a new geography, in FY20 with the acquisition of Nova properties, a quality well-sited asset at a favourable valuation of 4.6% NPI yield versus comparable yields of 4.0-4.2%, based on recent market transactions.
- Ranked 38 out of 44 S-REITs in the independent 2021 Governance Index For Trusts Index, with lower governance and business risks scores versus peers.
- Leverage averaged c.37% from FY06-21, but has risen to c.43% after the Nova acquisition, which is the highest among peers.

[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).

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	Quantitative Parameters (Score: 53)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**MPACT (2021)**
E	Scope 1 GHG emissions	tCO2e	893	653	1250	38.61
	Scope 2 GHG emissions	tCO2e	69,882	57030	57,632	23064
	Total	**tCO2e**	70775	57683	58882	23102.61
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	**tCO2e**	70775	57683	58882	23102.61
	GHG intensity	kgCO2/m2	125.1	95.80	84.90	50.00
	Energy intensity	kWh/sqm	274.2	217.8	206.7	131.03
	Share of renewable energy use in operations	%	N/A	0.42	4.53	3.01
	Water intensity	m3/m2	1.6	1	0.9	N/A
	Share of recycled water use in operations	%	N/A	N/A	28.9	63.00
	Recyclable waste	%	9.4	11.2	15.9	8.00
	Cases of non-compliance	%	0	0	0	0.00
	Number of green certified buildings	number	6	8	10	5.00
S	% of women in workforce	%	74	65	70	54
	% of women in management roles	%	N/A	N/A	N/A	61
	Work-related injury	number	0	0	0	N/A
	Work-related fatality	number	N/A	N/A	N/A	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.22	0.5	0.27	0.27
	Independent directors on the Board	%	50	50	50	58
	Female directors on the Board	%	25	25	25	33

Qualitative Parameters (Score: 67)

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 - Suntec REIT has a Sustainability Working Committee that is responsible for the sustainability report's disclosures, performance targets and systems, and driving responsible business practices.

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

Yes - in FY21, performance of the ESG targets was included in the remuneration package of employees.

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

No

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

(1) Automated electricity meters and energy efficient LED lighting fixtures across its portfolio (2) the building management system at Southgate Complex will be upgraded and this will incorporate the latest chiller energy optimisation system to optimise performance and reduce energy usage. (3) Water efficient fittings were installed in the washrooms of Suntec City office towers, expected to achieve an estimated 5.0% savings in monthly water consumption.

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

Yes - A total of 1,272 credits were purchased in FY21.

Target (Score: 100)

Particulars	**Target**	**Achieved**
Reduce the energy intensity in 2024 from FY2019 baseline	3%	On track
Maintain water intensity in FY 2024 from FY 2019 levels	0%	On tack
Maintain environmental and energy efficiency ratings of Suntec REIT's properties	Maintain	Achieved
0 validated cases of non-compliance with relevant regulations and voluntary codes concerning health and safety across all properties	0	0
0 cases of reportable work-related injuries for employees	0	0

Impact

NA

Overall Score: 72

As per our ESG matrix, Suntec REIT (SUN SP) has an overall score of 68.

ESG score	**Weights**	**Scores**	**Final Score**
Quantitative	50%	53	26
Qualitative	25%	67	17
Target	25%	100	25
Total			**72**

As per our ESG assessment, SUN SP has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. SUN's overall ESG score is 72, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Sasseur REIT (SASSR SP)

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Risk Rating & Score[1]	16.2 (Low)
Score Momentum[2]	-2.7
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	0

Business Model & Industry Issues

- SASSR draws on its available pool of funds to invest in retail real estate, undertake asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with strong representation by members with professional experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- While it is a relatively young REIT that has delivered well operationally, its asset recycling profile remains unproven, and there is room for improvement in terms of ESG reporting and also setting longer term goals.

Material E issues

- While striving to minimise its environmental footprint, there remains limited details that measure its performance, given the relatively short listing history.
- Missed energy intensity reduction target of 1% YoY in FY21, as it rose c.18% YoY from stronger operations and AEI, after falling c.16% YoY in FY20, with mall operations suspended for 44-49 days at the start of the pandemic in Jan 2020. It is targeting to reduce intensity by 1% YoY in FY22.
- Similarly, water intensity jumped c.109% YoY in FY21, after falling c.172% YoY in FY20, with a target towards reducing intensity by 1% YoY in FY22
- It has shared examples of energy and water saving initiatives in the annual report, which follow its standard operating procedure guidelines, and that are implemented by its property management team.

Material S issues

- Employee incentives and profit-sharing through its Business Partnership Programme helped to deliver a 6% YoY growth in rental income and 9% YoY in EBITDA, against a 23% YoY decline in sales in FY20.
- Each employee received on average 3.11 hours of training in FY21, vs 4.10 hours in FY20, and 3.56 hours in FY19.
- Gender diversity is high, with female representation at 62% of 384 employees, 63% at the middle management, and 77% at the senior management level.

Key G metrics and issues

- Managed externally by subsidiaries of its sponsor Sasseur, which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and 4 of its 6 members are independent.
- Management fee structure, with a base fee at 10.0% of its annual distributable income, performance fee at 25.0% of the difference in YoY DPU change, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to its retail sector peers.
- The remuneration bands of its CEO and key management are not disclosed in its annual report.
- Its entrusted management agreement (EMA) model, which is supported by minimum fixed and variable rents, as well as performance sharing residual income contribution, aligns the interests of REIT manager and unitholders.
- Payout ratio for its taxable income has been consistently maintained at 100%, above the minimum 90% threshold for tax transparency. Management retained 80% of its distributable income during 2Q20 in light of a challenging outlook for its retail properties for the remaining FY due to Covid-19.
- Its balance sheet remains conservative with low gearing and sizeable SGD825m debt headroom.
- It was ranked 20th of 45 REITs and business trusts in the Singapore Governance and Transparency Index in 2021, vs 17th in 2020.

[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).

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	Quantitative Parameters (Score: 5)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**MUST SP (2021)**
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	N/A	1,903.70
	Scope 2 GHG emissions	tCO2e	N/A	N/A	N/A	17998
	Total	**tCO2e**	N/A	N/A	N/A	19901.7
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	**tCO2e**	N/A	N/A	N/A	19901.7
	GHG intensity	kgCO2/m2	N/A	N/A	N/A	34.99
	Energy intensity	kWh/sqm	126.6	105	125	118.96
	Share of renewable energy use in operations	%	N/A	N/A	N/A	N/A
	Water intensity	m3/m2	0.77	0.64	1.34	0.38
	Share of recycled water use in operations	%	N/A	N/A	N/A	N/A
	Recyclable waste	%	N/A	N/A	N/A	51.44
	Cases of non-compliance	%	0	0	0	0.00
	Share of green certified buildings	%	N/A	N/A	N/A	90.00
S	% of women in workforce	%	75.6	65.7	61.7	73.7
	% of women in management roles	%	64.0	67	77	50
	Lost-time injury rate	%	N/A	N/A	N/A	0
	Fatality rate	%	N/A	N/A	N/A	N/A
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.93	1	0.79	0.63
	Independent directors on the Board	%	50.0	66.7	66.7	57
	Female directors on the Board	%	12.5	16.7	16.7	29

Qualitative Parameters (Score: 50)

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 - Sustainability Steering Committee supports the Board by developing Sasseur REIT's sustainability objectives and strategies as well as monitoring and driving sustainability performance and responsible business practices.

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

No

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

Yes, Sasseur has embarked on a journey to integrate TCFD framework in its risk management.

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

No

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

(1) An in-house energy saving team within the Entrusted Manager's Property Management Department was set up to monitor and review energy consumption. (2) Within the outlets, the Entrusted Manager checks on energy consumption every 2 hours through inspections and recording of equipment operating data to ensure optimal operating conditions and every 4 hours inspects all the power-distribution rooms.

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

No

Target (Score: 50)

Particulars	**Target**	**Achieved**
Zero socioeconomic and environmental noncompliance	0	0
Reduce energy intensity by 1% from FY2020	1%	-19%
Reduce water intensity by 1% from FY2020	1%	-109%
Aim to achieve carbon neutrality by 2050	2050	N/A

Impact

NA

Overall Score: 28

As per our ESG matrix, Sasseur REIT (SASSR) has an overall score of 28.

ESG score	Weights	Scores	Final Score
Quantitative	50%	5	3
Qualitative	25%	50	13
Target	25%	50	13
Total			**28**

As per our ESG assessment, Sasseur's ESG journey are in early stages. While there is dedicated sustainability committee, disclosures and measurable targets are lacking. SASSR's overall ESG score is 28, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Keppel REIT (KREIT SP)

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Risk Rating & Score[1]	11 (Low)
Score Momentum[2]	-5.7
Last Updated	24 Nov 2022
Controversy Score[3] (Updated: 24 Nov 2022)	0

Business Model & Industry Issues

- KREIT draws on its available funds to invest in commercial real estate, undertake asset enhancements, and redevelop properties to optimise value for its unit holders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Activities relating to permissible investments, leverage limits and annual reporting requirements are closely regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, essential in our view, as its overseas portfolio is increasingly a growth platform.
- Made efforts to improve the scope of reporting and formalisation of targets with the formation of its sustainability committee in 2017. Is the only office S-REIT with all SG assets certified with the highest Platinum status of the BCA's Green Mark Scheme.
- Was upgraded in MSCI ESG to A rating in 2021, and maintained its Green Star status and A rating for public disclosure in the Global Real Estate Sustainability Benchmark. Retained its Prime status in ISS-oekom's ESG corporate rating, and remains a constituent in the two key iEdge SG ESG Indices (the iEdge SG ESG Transparency Index and iEdge SG ESG Leaders Index).

Material E issues

- 9 of 11 properties are green-certified with all 4 in Singapore rated BCA Green Mark Platinum and majority in Australia having at least 5 Stars in the NABERS Energy rating.
- Targeting green certification for all buildings by FY23, with T Tower in FY22, and Blue & William upon its completion.
- Commenced Scope 3 emissions screening in FY21 to assess carbon footprint and reduction opportunities, while expanding reporting categories.
- Introduced new targets in FY21 to halve Scope 1 and 2 emissions by 2030 from 2019 levels, reduce water and energy usage by 5% and 10% respectively, while increasing renewable energy usage by 40%.
- Secured SGD520m of green loan facilities in FY21, bringing green loans to 39% of total borrowings, with target to achieve 50% sustainability-focused funding by FY25.

Material S issues

- Leverages sponsor's centralised human capital platform to support its talent management, leadership renewal and training and development initiatives eg. Keppel Leadership Institute (launched in 2015), Keppel Young Leaders and Advanced Leaders Programme (with INSEAD).
- Average training hours per full-time employee jumped to 28 hours in FY21, from 13.2 in FY20 and vs 33.5 in 2019, and compares to 22.1 in 2018 and 27.8 in 2017.
- Gender diversity is high, with female representation at 75% of all 24 employees (in FY21), 50% at the management level, and the Chairman's seat on the board. Target to maintain c.30% female board representation.
- Dedicated 630 hours with Keppel Capital to community outreach activities in FY21 (vs 790 hours in FY20 and 1,380 hours in FY19 due to Covid movement restrictions), as this had risen from 1,200 hours in 2018 and >700 hours in 2017.

Key G metrics and issues

- Managed by Keppel Capital, the asset management arm of its sponsor Keppel Corp, which supports its growth via a pipeline of assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and 4 of its 7 members are independent.
- Management fee structure, with the base fee at 0.5% of its deposited property, performance fee at 3.0% pa of NPI, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to peers.
- The cumulative remuneration of its key management team including the CEO has never represented >3.0% of the REIT's distributable income since its IPO.
- Payout ratio for taxable income has been consistently maintained at 100%, above the minimum 90% threshold for tax transparency.
- Has scaled up via DPU-accretive acquisitions from its sponsor's pipeline. The deal process is rigorous; involving a review by the board's audit committee, and if valued >5% of NAV, unit holders' approval at an EGM.
- Has generated significant value from its divestment of Bugis Junction Towers in 2019 - its lowest yielding asset with minimal rental upside potential given its long 6.2-year WALE - at 243.2% above its 2006 purchase price, with the property delivering 19.4% pa asset-level returns during a 13-year holding period.
- Gearing improved in 2008 after rights issuance but rose from acquisitions since 2011, with look-through leverage (including off-balance sheet debt) higher at c.40%.
- Ranked 15th out of 45 S-REITs and business trusts in the Governance Index for Trusts 2021, which assesses governance and business risks.

[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).

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	Quantitative Parameters (Score:47)					
	Particulars	Unit	2019	2020	2021	CICT SP (2021)
E	Scope 1 GHG emissions	m tCO2e	1637	1295	1591	321
	Scope 2 GHG emissions	m tCO2e	19598	17271	17053	63885
	Total	**m tCO2e**	**21235**	**18566**	**18644**	**64206**
	Scope 3 GHG emissions	m tCO2e	N/A	523	17106	3214
	Total	**m tCO2e**	**21235**	**19089**	**35750**	**67420**
	GHG intensity	kgCO2e/m2	270	230.00	170.00	4.52
	Energy intensity	kWh/sqm	580.6	519.4	413.9	N/A
	Renewable energy use in operations	%	N/A	N/A	14.67	0.03
	Water intensity	m3/m2	3.66	2.38	1.47	1.25
	Share of recycled water use in operations	%	N/A	N/A	13	40.2
	Waste recycled	%	N/A	N/A	22	11
	Cases of environmental non-compliance	number	N/A	N/A	N/A	3
	Number of green certified buildings	number	N/A	N/A	9	23
S	% of women in workforce	%	76	74	75	57
	% of women in management roles	%	40	50	40	63.1
	Work-related injury	number	N/A	N/A	0	2
	Work-related fatality	number	0	0	0	1
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.39	0.35	0.35	0.07
	Independent directors on the Board	%	57.1	62.5	57.1	62.5
	Female directors on the Board	%	28.6	28.6	28.6	37.5

Qualitative Parameters (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 - The Manager's approach to sustainability is aligned with the sustainability management framework of the Keppel Group and the Manager takes reference from the Group's policies where relevant. The Board of Directors reviews Keppel REIT's material ESG factors and monitors performance, targets, and inputs from the management team and its engagement with key stakeholders

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

Yes - in FY21, sustainability efforts were part of the four scorecard areas in corporate and individual performances.

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

No - 4 Star GRESB rating in 2021

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

(1) The Manager also aims to track tenants' energy consumption, starting with the Singapore properties, to find opportunities for improvement of environmental performance. (2) Pinnacle Office Park completed its installation of 480 solar panels to supplement its electricity needs with renewable energy in 2021. (3) Ocean Financial Centre's rooftop solar panel system supplemented its electricity needs with about 84,000 kWh of renewable energy in 2021.

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 and 2 emissions by 2030 from 2019 levels	50%	12%
Reduction of energy usage by 2030 from 2019 levels	By 10%	2%
Increase portfolio's renewable energy usage by 2030	To 40%	15%
Reduction of water usage by 2030 from 2019 levels	5%	44%
All properties to be green-certified by 2023	100%	82%
Maintain a certain level of female Board representation	~30%	29%
Maintain zero cases of violation of laws, regulations or voluntary codes concerning tenant health and safety	0	0
Impact		
NA		
Overall Score: 74		
As per our ESG matrix, Keppel REIT (K71U) has an overall score of 74.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	47	24
Qualitative	25%	100	25
Target	25%	100	25
Total			**74**

As per our ESG assessment, Keppel REIT has an established framework, internal policies, and tangible mid/long-term targets. However, it needs to sustain improving trend for metrics disclosed for the first time. Keppel REIT's overall ESG score is 74, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Prime US REIT (PRIME SP)

thilanw@maybank.com

Risk Rating & Score[1]	18.5 (Low)
Score Momentum[2]	-0.0
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	0

Business Model & Industry Issues

- PRIME draws on its available pool of funds to invest in US commercial real estate, carry out asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, essential in our view, given its US growth portfolio.
- Acquisitions since its IPO in 2019 have added to its AUM, while extending its WALE to >4 years, which helps support DPU visibility.
- Like peers, we see scope for opportunities to be included in the Global Real Estate Benchmark.

Material E issues

- 12 of 14 properties were certified green by either Leadership in Energy and Environmental Design (LEED) or Energy Star, or both, with plans underway to certify One Town Center in FY22.
- Will report on climate-related progress and management in line with TCFD recommendations, on a phased approach as required by SGX/MAS, starting from FY22.
- Reported consumption performance for environmental metrics, but has not set near-term or longer-term targets to reduce water, energy or GHG emission intensities.
- Green or sustainability-linked loans do not currently figure in its overall debt profile.

Material S issues

- Gender diversity is high, with females comprising 3 of its 5 employees, including the CEO's position, as well as 3 of its 8-member board.
- Average training hours per employee fell to 11.0 hours in FY21 (vs 13.1 hours in FY20).
- Many properties house facilities which provide tenants with access to equipment to support their health and wellness (eg. fitness centres, onsite cardio rooms, aerobics and yoga studios, daily group exercises).

Key G metrics and issues

- Externally managed by a subsidiary of its sponsor KBS, Keppel Capital, SPH and AT Holdings, which support its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and 5 of its 8 members are independent.
- Management fee structure, with a base fee at 10.0% of its annual distributable income, performance fee at 25.0% of the difference in YoY DPU change, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to its US office peers.
- The cumulative remuneration of its CEO and deputy CEO, has represented <3% of distributable income since this was first reported in FY20.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency.
- It placed 29th out of 45 in the Governance Index for Trust in FY21, from 10th in FY20.
- Joined the FTSE EPRA Nareit Global Developed Index from Sep 2021, which should further boost its trading liquidity.
- Has maintained a sound balance sheet despite growth in AUM, with an average leverage of c.35% from FY19-21, and below the 50% regulatory limit.

[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).

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	Quantitative Parameters (Score: 32)					
	Particulars	Unit	2019	2020	2021	MUST SP (2021)
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	N/A	1903.7
	Scope 2 GHG emissions	tCO2e	N/A	24410	18761	17998
	Total	**tCO2e**	N/A	24410	18761	19901.7
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	**tCO2e**	N/A	24410	18761	19901.7
	GHG intensity	kgCO2/m2	N/A	N/A	N/A	34.99
	Energy intensity	kWh/sqm	N/A	N/A	N/A	118.96
	Share of renewable energy use in operations	%	N/A	N/A	N/A	N/A
	Water intensity	m3/m2	N/A	N/A	N/A	0.38
	Share of recycled water use in operations	%	N/A	N/A	N/A	N/A
	Recyclable waste	%	N/A	N/A	N/A	51.44
	Cases of non-compliance	%	N/A	N/A	N/A	0.00
	Share of green certified buildings	%	N/A	N/A	85.7	90.00
S	% of women in workforce	%	N/A	60.0	60.0	73.7
	% of women in management roles	%	N/A	N/A	N/A	50
	Lost-time injury rate	%	0	0	0	0
	Fatality rate	%	0	0	0	N/A
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.68	0.67	0.44	0.63
	Independent directors on the Board	%	50.0	55.6	62.5	57
	Female directors on the Board	%	37.5	33.3	37.5	29

Qualitative Parameters (Score: 83)

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

No - the Manager's Board of Directors takes ownership for PRIME's sustainability strategy with the help from Property Management Services provider Lincoln Property Company ("LPC") in implementing ESG +T Initiatives.

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

No

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

Yes

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

Yes Prime is expanding tenant engagement around ESG initiatives to support their corporate ESG goals

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

(1) environmentally friendly amenities to minimize its carbon footprint and environmental impact: including the installation of bicycle racks, recycling programmes, automatic lighting sensors, water conservation features and weather-proofing window panels. (2) 222 Main participated in the Blue Sky programme with Rocky Mountain Power, which aims to reduce carbon footprint associated with energy usage. (3) Evaluation of real estate technology solutions and green leases supported by LPC expertise

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

No

Target (Score: 0)

Particulars	Target	Achieved
Maintain 0 workplace injuries and fatalities	0	0

Impact

NA

Overall Score: 28

As per our ESG matrix, Prime US REIT (Prime) has an overall score of 28.

ESG score	Weights	Scores	Final Score
Quantitative	50%	26	16
Qualitative	25%	50	13
Target	25%	0	0
Total			**28**

As per our ESG assessment, Prime's ESG initiatives are relatively nascent. Policy setting, quantifiable targets and associated disclosures are still evolving. Prime's overall ESG score is 28, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Manulife US REIT (MUST SP)

thilanw@maybank.com

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	02 Dec 2022
Controversy Score[3] (Updated: 02 Dec 2022)	na

Business Model & Industry Issues

- MUST draws on its available pool of funds to invest in US commercial real estate, carry out asset enhancements, and redevelop properties to optimise value for its unitholders. It is susceptible to sustainability-focused investors with strong preference for investing in companies that meet specific ESG criteria, given its incessant need for additional capital.
- Its activities relating to permissible investments, leverage limits and annual reporting requirements are regulated by the MAS under Singapore's code on collective investment schemes. Independence, real estate and capital markets experience on its board is high, with representation by members with international experience, essential in our view, given its US growth portfolio.
- Acquisitions since its IPO in 2016 have added to its AUM, while extending its WALE to >5 years, the highest amongst peers, which helps support DPU visibility.
- Maintained a 5 star rating in the Global Real Estate Benchmark, and recorded a 93 score to outperform its peers across three aspects of ESG, and was also placed 5th out of 13 listed US office REITs. Achieved an upgrade in its MSCI ESG Ratings to 'AA' in FY21 and was ranked in the top 2% of companies globally in Sustainalytics ESG Risk Ratings.

Material E issues

- About 90% of its portfolio was certified green by either Leadership in Energy and Environmental Design (LEED), Energy Star, or both.
- Announced in FY20 an alignment to its sponsor's target to achieve net zero, and to achieve a 100% green-certified portfolio by 2030.
- Targets to achieve 38% reduction in GHG intensity by 2035, and 80% reduction by 2050, as well as a 33% reduction in energy intensity by 2035, and 49% reduction by 2050.
- Recent refinancing activity has helped to increase the proportion of green and sustainability-linked loans to c.45% of its total borrowings, the highest among S-REITs.
- ESG considerations are integrated into the various stages of the acquisition process of potential deals.

Material S issues

- Engages with unitholders and investment community with the organisation of thought leadership events branded as the Green Dot Series, which saw the launch of inaugural 'MUST Go Green' in FY21 to raise ESG awareness.
- Introduced plan for all MUST employees to be eligible for Manulife's Global Share Ownership Plan from Jul 2019, which saw a strong c.38% participation rate.
- Allocates a minimum SGD2k pa per employee to attend relevant programmes. Training hours per employee rose to 50 hours in FY21 (from 35.5 hours in FY20, and 35.2 hours in FY19).
- Gender diversity is high among employees, with female representation at >70%, but lower, at a-third at the management level, with the recent retirement of CEO

Key G metrics and issues

- Externally managed by a 100% subsidiary of its sponsor The Manufacturers Life Insurance Company (Manulife), which supports its growth via a pipeline of property assets from its development activities, and access to capital markets.
- Board independence is high – it does not comprise any members with executive functions, and 4 of its 7 members are independent.
- Management fee structure, with a base fee at 10.0% of its annual distributable income, performance fee at 25.0% of the difference in YoY DPU change, as well as acquisition and disposal fee at 1.0% and 0.5% deal value, is comparable to its US office peers.
- The cumulative remuneration of its key management team including the CEO, has represented <4.4% of distributable income since this was first reported in FY18.
- Payout ratio for taxable income has been consistently maintained above the minimum 90% threshold for tax transparency.
- Part of the SGX Fast Track Programme for the 4th year, but fell in rank to 13th place out of 45 in the Governance Index for Trust in FY22, from 4th in FY20.
- Joined the FTSE EPRA Nareit Global Developed Index in Dec 2019 given its higher trading liquidity, which resulted from a USD142.7m EFR to fund the acquisition of the Capitol property.
- Has maintained a sound balance sheet despite a 2.5x growth in AUM, with an average leverage of c.38% from FY16-21, and below the 50% regulatory limit.
- Maintained an 'A' rating for public disclosure in second submission to GRESB in 2021, to rank 2nd out of 10 peers with a 93 score.

[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).

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Quantitative Parameters (Score: 47)						
	Particulars	Unit	2019	2020	2021	MPACT (2021)
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	1,903.70	38.61
	Scope 2 GHG emissions	tCO2e	22055.3	21950.7	17,998	23064
	Total	**tCO2e**	22055.3	21950.7	19,901.7	23102.61
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	**tCO2e**	22,055.30	21,950.70	19,901.7	23102.61
	GHG intensity	kgCO2/m2	62.4	38.8	35.0	50.00
	Energy intensity	kWh/sqm	165.1	126.2	119.0	131.03
	Share of renewable energy use in operations	%	N/A	N/A	N/A	3.01
	Water intensity	m3/m2	0.54	0.34	0.38	N/A
	Share of recycled water use in operations	%	N/A	N/A	N/A	63.00
	Recyclable waste	%	N/A	N/A	51.4	8.00
	Cases of non-compliance	%	0	0	0	0.00
	Share of green certified buildings	%	N/A	86.5	90	
S	% of women in workforce	%	81.3	70.6	73.7	54
	% of women in management roles	%	N/A	50	50	61
	Lost-time injury rate	%	N/A	0	0	N/A
	Fatality rate	%	N/A	N/A	N/A	0
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	0.51	0.56	0.63	0.27
	Independent directors on the Board	%	57.1	57.1	57.1	58
	Female directors on the Board	%	14.3	28.6	28.6	33

Qualitative Parameters (Score: 83)

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 - Sustainability Steering Committee, together with guidance from Board of Directors.

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

Yes - All staff pay linked to sustainability performance since 2020

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

Yes

d) Does the company do green leasing or has plans to start green leasing or participate in GRESB real estate assessment?

Yes

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

(1) Use of building analytics to improve access to real time utility data, predict energy demand, and run Heating, Ventilation, and Air Conditioning (HVAC) operations efficiently, 20.2% reduction in energy consumption at Exchange (2) Reduction of peak energy use with smart energy storage at Michelson, which predicts optimal battery discharge time, achieving over USD110,000 in energy savings

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

No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Maintain 5 Star for GRESB Real Estate Assessment	Maintain	Achieved
Achieve 38.0% reduction in GHG intensity by 2035, and 80.0% reduction by 2050	38%	26.4%
33.0% reduction in energy intensity by 2035 and 49.0% reduction by 2050	33%	20.8%
Achieve 100.0% green certified portfolio by 2030	100%	90%
Aim to achieve carbon neutrality by 2050	2050	N/A

Impact

NA

Overall Score: 70

As per our ESG matrix, Manulife US REIT (MUST) has an overall score of 70.

ESG score	Weights	Scores	Final Score
Quantitative	50%	47	24
Qualitative	25%	83	21
Target	25%	100	25
Total			**70**

As per our ESG assessment, MUST has an established framework, internal policies, and tangible mid/long-term targets. Having a strong sponsor, MUST has made reasonable advances in ESG disclosures. MUST's overall ESG score is 70, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

PropNex Ltd (PROP SP)

ericong@maybank.com

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- As Singapore's largest real estate agency, PropNex fulfils an important role within the real estate sector by facilitating the buying, selling, renting and leasing of property in the country.
- PropNex provides gainful employment to thousands of employees and salespersons. Notably, the Group's salesforce grew to 10,796 as at 1 Jan 2022 from 8,918 (+21% YoY) a year ago.
- Being a service-oriented company working closely with customers, PropNex needs to closely abide by the Personal Data Protection Act, ensuring the security of its customers' private data.
- Like other real estate practitioners, PropNex also adheres to the regulatory framework of the Estate Agents Act as guided by the Council for Estate Agencies (CEA) - a government agency under the Ministry of National Development (MND).

Material E issues

- The Group has logged its electrical consumption captured at various corporate premises at HDB Hub, Branch Office and General Magnetic Building. Tabulations were based on utility bills from the electricity supplier.
- All electricity is purchased from the national grid and is produced almost entirely by the combustion of natural gas, which is classified as Scope 2 emissions.
- A total 490,251kWh of electricity was used, which translates to 104.74 CO2e.
- No incident of non-compliance with environmental laws and regulations were identified within the reporting year.

Material S issues

- Technology in the real estate realm has disrupted and transformed how business is conducted, and will continue to play a pivotal role in the way corporations conduct their business.
- One of the Group's key strategies is to enhance its digital capabilities by improving its salespersons' productivity by providing relevant and reliable technological support.
- For example, Propnex leverages online alternatives such as webinars/social media to substitute face to face meetups and physical seminars due to the COVID-19 situation.

Key G metrics and issues

- The board has five directors, including the Executive Chairman and CEO, one Executive Director and three independent Non-Executive Directors.
- The nominating, audit and remuneration committees are chaired by independent directors.
- The board spearheads its sustainability agenda, including determining the material ESG factors that the Group focuses on.
- Executive Chairman/CEO, Ismail Gafoore and Executive Director, Kelvin Fong own about 55.6% and 8.7% stakes in the company respectively.
- Key management/ directors' compensation accounted for about 23%/1.4% of total employee compensation in 2021.
- The external auditor is KPMG LLP.
- There were no non-compliant incidents with relevant laws and regulations that resulted in significant fines or legal actions against Propnex.
- There were also no letter of complaints against the Group from Personal Data Protection Commission (PDPC) concerning breaches of customer privacy and losses of customer data. It had no incidents of corruption in 2021.

[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).

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	Quantitative Parameters (Score: 36)					
	Particulars	Unit	2019	2020	2021	APAC Realty (APAC SP, FY21)
E	Scope 1 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Scope 2 GHG emissions	tCO2e	141.22	112.31	104.74	N/A
	Total	**tCO2e**	**141.22**	**112.31**	**104.74**	N/A
	Scope 3 GHG emissions	tCO2e	N/A	N/A	N/A	N/A
	Total	**tCO2e**	**N/A**	**N/A**	**N/A**	472.7
	Carbon emission intensity	t/SGDm	0.3	0.2	0.1	0.02
	Electricity consumption	m kWh	0.66	0.53	0.49	1.15
	Energy intensity	kWh/sqft	N/A	N/A	N/A	1.32
	NPE (New Plastic Economy) investments	SGD m	N/A	N/A	N/A	N/A
	Cases of environmental non-compliance	number	0	0	0	0
S	% of women in workforce	%	N/A	N/A	N/A	64.7%
	% of women in management roles	%	22.2%	22.2%	22.2%	18.2%
	No. of consumer empowerment seminars	number	9	131	82	N/A
	Employee turnover	%	23.7%	7.8%	17.6%	N/A
	Monetary contribution to local community	SGDm	0.53	0.75	2.12	0.3
G	CEO/MD salary as % of reported net profit	%	4.5%	3.2%	1.7%	5.9%
	Board salary as % of reported net profit	%	13.3%	7.8%	5.1%	4.2%
	Independent directors on the Board	%	50%	60%	60%	60%
	Female directors on the Board	%	0%	0%	0%	0%
	Shareholder payout	%	65%	70%	77%	75.5%

Qualitative Parameters (Score: 50)

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. The Sustainability Steering Committee will assist the Board in integrating ESG considerations into the group's strategic formulation, as well as monitor, manage and report on its ESG performance.

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

No. But it will undertake further initiatives to promote environmental sustainability.

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

Yes

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

No

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

The group will continue to explore and consider various initiatives such reducing the spaces and effectively using energy efficient appliances, motion sensors for lights etc.

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

No

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Maintain zero letter of complaints from authorities concerning breaches of customer privacy/data	0	0
Maintain zero non-compliant with environmental laws and regulations	0	0
Maintain zero non-compliant with socio-economic laws and regulations	0	0
Number of consumer empowerment seminars/webinars held	50	82
Make monetary contribution to local charity beneficiaries	SGD0.5m	SGD2.1m

Impact

NA

Overall Score: 55

As per our ESG matrix, Propnex Ltd (PROP SP) has an overall score of 55.

ESG score	Weights	Scores	Final Score
Quantitative	50%	36	18
Qualitative	25%	50	13
Target	25%	100	25
Total			**55**

As per our ESG assessment, Propnex has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY. Its overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

4.8 Transport

- **The transportation industry is heavily reliant on fossil fuels and accounts for about one-fifth of global GHG emissions.**
- **In their decarbonisation journey, the companies are investing in greener fleet to achieve higher operational efficiencies, adopting low-carbon technology such as sustainable fuels, and sourcing high-quality carbon offsets.**
- **Despite the rising opex, we believe the sector will continue to reap the economic benefits of full reopening, especially if China further relaxes its Covid restrictions.**

Critical ESG issues in the sector

The transportation sector is heavily reliant on fossil fuels and accounts for about one-fifth of global GHG emissions. Despite being one of the sectors most heavily affected by the pandemic, the transition to a post-COVID world shows a likelihood of increased emissions due to growing demands and the limited uptake of alternative fuel and energy sources. As an international mobility operators, SIA and CD play a notable role in delivering clean, low carbon transport solutions, with the ultimate aim of reaching net zero carbon emissions by 2050. To achieve this ambitious goal, both companies are applying multiple levers in their decarbonisation journey, which include investing in a greener fleet to achieve higher operational efficiencies, adopting low-carbon technology such as sustainable fuels, and sourcing for high quality carbon offsets.

Mitigation Outlook

For SIA, operating a young fleet of new generation aircraft is the most effective and immediate way to reduce carbon emissions. We note that its fleet has an average age of around six years and three months, compared to an industry average of more than 15 years. This primarily comprises models such as Airbus' A350 and A320 Family and Boeing's 787 Family and 737-8s, which are on average about 25% more fuel efficient than the older generation aircraft that they replace on similar missions. Meanwhile, CD has also accelerated its fleet electrification as battery technologies have matured and EV charging stations are more readily available. In 2021, CD significantly increased its fleet of eco-friendly vehicles with close to 70% being hybrid, electric or CNG taxis across key geographies (Singapore: 65%; Australia: 73% and China: 71%). With every EV that CD adds to its fleet, the group produces 50% less GHG emissions compared to its internal combustion engine counterpart in its lifetime.

Sector Outlook

With further easing of border controls in parts of East Asia, SIA expects forward sales to remain buoyant in the coming months leading up to the Lunar New Year period in 2023. But cargo demand should be relatively muted given the anticipated impact of uncertain economic outlook on consumer demand, and fewer production orders as importers work on reducing high inventories. On the other hand, CD's public transport services and taxi businesses have benefitted from the increased mobility and uptick in activity levels as many countries have already eased restrictions and are "living with COVID". In our view, the biggest challenge for the Transport sector in general, are rising inflationary pressures, such as staff and fuel costs, as well as potential global recession, which could curtail travel demand.

Fig 36: Transport Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
ComfortDelGro	Buy	1.24	2,688	Low	16.8	1

Source: Sustainalytics, Factset, Maybank IBG Research

ComfortDelGro (CD SP)

ericong@maybank.com

Risk Rating & Score[1]	19.8 (Low)
Score Momentum[2]	+1.5
Last Updated	15 April 2021
Controversy Score[3] (Updated: 23 Feb 2021)	2 (Moderate)

Business Model & Industry Issues

- CDG is most exposed to environmental risks as public transport and taxi business drive the bulk of the revenue. That said, CDG is on track with its medium-term and long-term environmental goals.
- Overall, public transport still plays an important role in reducing use of private vehicles, which in turn helps cities to reduce air pollution and carbon emission.
- Its global operations expose it to corporate governance and business ethics risks. CDG has put in place processes to ensure impartiality, checks and balances.
- On social aspects, CDG has a history of helping its taxi drivers during crises. CDG cut rental rates and passed on government grants during both SARS and Covid-19.
- CDG displays no exceptional risks for a global land transport operator for ESG and is in line with other land transport peers in tackling environment issues by phasing out diesel vehicles and replacing them with hybrid/electric vehicles.
- Sustainable finance is a growing opportunity as CDG continues with its greener fleet replacement programme.

Material E issues

- Aims to reduce its 2023 greenhouse gas emissions by 20% and 50% by 2030 from 2015 levels through fleet replacement programme. It is on track to achieve its 2023 target, given almost 9% reduction in emission in 2021.
- In Singapore, 100% of its diesel taxi fleet will be replaced by hybrids by 2023. By 2030, CDG will increase hybrids for all other vehicles.
- Significant shift towards hybrid/electric vehicles since 2017. As of Dec 2021, 65% of fleet in Singapore (2020: 57%) are hybrid/electric, while that of UK & Ireland is 55% (2020: 47%) and Australia is 73% (2020: 67%).
- Bulk of its electricity consumption comes from its train operations, depots/workshops. Implemented measures such as energy-efficient train designs / new stations & buildings, solar panels at depots to reduce power consumption.
- 50% of its buildings in Singapore will be Green Mark certified by 2023 and aim of 100% by 2030.
- Looking at opportunities for sustainable financing to further improve financial resilience and funding mix.

Material S issues

- In 2021, it reported five road fatalities (SG: 2, UK/Ireland: 2, China: 1 and AU: 0) in terms of passenger safety.
- Partnered with the National Taxi Association to provide digital training for taxi drivers and started training drivers to handle autonomous vehicles.
- In 2021, it saw higher workplace injuries in Singapore but managed to keep injury rates below national averages.
- Females account 14.3% of the Group. 43% of employees are over the age of 50.
- In 2021, 98% of buses are wheelchair accessible in Singapore, 82% in the UK, while that of Australia is 64%.
- History of supporting their drivers through crisis, evidently through rental waivers and passing on government grants to drivers during SARS & COVID-19.

Key G metrics and issues

- The board has 10 directors, of which one is the executive officer (MD/CEO), the remaining are non-executive & independent directors (including the chairman). 30% are female directors.
- The nomination, audit, investment and remuneration committees are chaired by independent directors.
- Key management/directors' compensation accounted for 0.3%/0.1% of total employee compensation in 2021.
- Governance risks: the group's auditor - Deloitte & Touche LLP – has not been changed since listing in 2003.
- Regulatory risks. The group's strategy calls for overseas expansion. Its wide global footprint may exposure the group to regulatory, bribery and corruption and compliance risks.
- CDG has in place a whistleblowing programme where cases are investigated through the chairperson of the audit and risk committee and the Group Chief Internal Audit Officer.
- There have been no corruption cases reported for the past three years.

[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).

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	Quantitative Parameters (Score: 56)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**SBS SP (2021)**
E	Scope 1 GHG emissions	m tCO2e	0.97	0.76	0.75	0.36
	Scope 2 GHG emissions	m tCO2e	0.21	0.18	0.19	0.17
	Total	**m tCO2e**	**1.18**	**0.94**	**0.94**	**0.53**
	Scope 3 GHG emissions	m tCO2e	0.62	0.48	0.55	N/A
	Total	**m tCO2e**	**1.80**	**1.42**	**1.49**	**0.53**
	GHG intensity (Scope 1 and 2)	tCO2e/m revenue	301	290	265	404
	CNG+Bio-blend as % of total consumption	%	4.0%	5.2%	18.1%	N/A
	Water Consumption	m3	3,823	1,876	2,621	1,218
	Share of renewable electricity generated	%	4%	4%	5%	0.6%
	Hazardous waste 3R rate	%	49%	55%	60%	46.5%
	Air quality emissions (SOx)	kg/km	N/A	N/A	1,508.3	N/A
	% of waste diverted/waste generated	%	26%	40.8%	45.4%	N/A
	% of hybrid/EV taxis in Singapore	%	39%	57.1%	65%	2%
S	% of women in workforce	%	14.4%	14.6%	14.3%	9.6%
	% of women in management roles	%	27.2%	30.2%	21.9%	17.7%
	Workplace injury rate per 100k employees	number	457.4	455.1	714.0	580.9
	Vehicle collisions rate (per mil mile)	number	0.31	0.36	0.28	0.10
	Road fatalities (passenger safety)	number	2	0	5	2
G	MD/CEO salary as % of reported net profit	%	0.9%	2.6%	1.7%	1.3%
	Board salary as % of reported net profit	%	0.6%	2.1%	1.2%	1.2%
	Independent directors on the Board	%	82%	82%	82%	80%
	Female directors on the Board	%	27%	27%	27%	30%

Qualitative Parameters (Score: 80)

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. The committee is chaired by Jessica Cheam, and aims to champion and provide oversight on CD's sustainability effort.

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

No

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

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

The group's key strategies to enable a climate-friendly and sustainable transport system are to electrify its fleet, improve efficiency, and transit to clean, renewable energy.

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

Yes, to offset hard-to-abate emissions

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Reduce GHG emissions intensity by 20% in 2023 (from 2015 level)	20%	17%
100% hybrid vehicles for taxi fleet by 2023	100%	70%
Increase solar photovoltaic (PV) output to 4 MWP by 2023	4	4.15
Target 50% of all office buildings in SG to be Eco-office certified by 2023	50%	62%
Target zero passenger/workplace fatalities	0	0
Target at least 30% female representation in the Board	30%	27%
Target 100% of all public buses are wheelchair accessible	100%	80%

Impact

NA

Overall Score: 73

As per our ESG matrix, ComfortDelgro (CD SP) has an overall score of 73.

ESG score	Weights	Scores	Final Score
Quantitative	50%	56	28
Qualitative	25%	80	20
Target	25%	100	25
Total			**73**

As per our ESG assessment, CD displays a relatively high degree with transparency in its disclosures. Its overall breadth of quantitative disclosures are strong, including detailed qualitative targets that are trackable and measurable. CD's overall ESG score is 73, which makes its ESG rating well above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

4.9 Technology Manufacturing

- **Manufacturers face multiple ESG risks, especially on the environmental side with GHG emissions and water consumption as well as catching up on the standards on qualitative measures for ESG reporting.**
- **The majority of them have now put more resources and focus onto ESG and have started to find means to measure their GHG emissions. They have also implemented measures to lower their water consumption and GHG emissions. They are also trying to set clear and quantifiable ESG targets for the future.**
- **The sector is poised to face headwinds in 2023, especially with a recession looming in Europe and the US. However, Singapore-listed players should continue to benefit from the global diversification away from China.**

Critical ESG issues in the sector

The Singapore technology sector have underperformed greatly with an average score of 51/100 across the five players under our coverage. Majority of them do not track their scope 3 and even scope 2 emissions. Energy consumption per unit of sales also seems to be trending upwards despite energy saving solutions being implemented. It is still a relative male-dominated industry with the majority of the board members on the board of these companies are male. In addition, the majority of them also do not set a net zero/carbon neutral target and lastly, most of them currently do not have concrete targets set to reduce their GHG emissions or water usage.

Mitigation Outlook

Some of the tech companies are identifying solutions to measure their scope 2 and scope 3 emissions and they are also in the process of implementing and setting more measurable goals achievable by a given timeframe. More of these companies have also started or starting to embark on the journey of net zero carbon targets and are committed to reducing its greenhouse gas emissions intensity. Lastly, majority of them are also trying to reduce their water consumption intensity of which progress have been achieved by a few players. Most importantly, more focus and resources is now placed on ESG criteria and reporting and this will likely only to increase in the near future. We are also noticing more female board members on these companies.

Sector Outlook

The Singapore tech sector should face some headwinds in 2023, with Europe and US entering into a recession, which might cause a slowdown, particularly in the semi-con space. However, diversification from China from global players should help to mitigate this impact as Singapore companies remain one of the main beneficiaries of this trend with many of them having factories in Malaysia or Vietnam with a lower cost base as well. In addition, they have also been gaining market share with their China competitors. As a result, we do believe that the outlook is quite murky and have a NEUTRAL view on the sector for now. Our top picks remain UMS and Venture Corporation

Fig 37: Technology Manufacturing Sector ESG Risk

Stock	Rec	Share Price	Market Cap (SGD M)	Risk Category	Risk Rating	Controversy Score
Venture	Buy	17.29	5,007	Low	11	0
AEM Holdings	Hold	3.70	1,153	Medium	20.9	0
Aztech Global	Hold	0.79	611	N/A	N/A	0
UMS Holdings	Buy	1.25	838	Low	18.1	0
Frencken Group Ltd	Sell	0.98	418	High	32.6	0
Valuetronics	Hold	0.51	1,259	N/A	N/A	0

Source: Sustainalytics, Factset, Maybank IBG Research

Venture (VMS SP)

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Risk Rating & Score[1]	10(Low)
Score Momentum[2]	-0.7
Last Updated	19 May 2021
Controversy Score[3]	0 - No Reported Incident

Business Model & Industry Issues

- Venture's business in electronics manufacturing exposes it to risks including labour (fair employment, labour exploitation),
- Conflict of interest, and environmental within the organisation and along the supply chain. Venture has not faced any significant fines, non-monetary sanctions or reports regarding these key exposures in 2021.
- Venture sees economic performance as a key material factor of sustainability. This is in turn driven by constant empowering of employees, pursuit for excellence with customers, and commitment towards environmental and social responsibility.
  Venture is consistently recognised by suppliers for its solid execution, e.g. through awards. Venture also has policies in place such as ban on conflict minerals, anti-bribery and corruption, and whistle-blower protection.

Material E issues

- Venture's environmental exposure is mainly through power, water and materials. Venture has had zero significant fines or non-monetary sanctions related to environmental laws in 2021.
- All of its operational sites are also certified to ISO14001 for Environmental Management Systems.
- Carbon emissions intensity decreased 0.4% in 2021.
- To manage and mitigate emissions of harmful substances, Venture complies with the Restriction of Hazardous Substances (RoHS) directive, and only uses RoHS-certified equipment.
  All operational sites have management systems to prevent pollution from hazardous effluents, air impurities wastewater discharge and noise.

Material S issues

- As at 31 Dec-21, Venture employed over 12,000 employees. 42% of the workforce is male, and 58% are female.
- Venture is an equal-opportunities employer. There remain high risks for worker exploitation by third-party suppliers. Venture bans all forms of labour exploitation, and has put in place safeguards against this.
- In 2021, male/female employees had an average of 51.1/45.2 hours of training (target: 40 hours). Topics span across technical and non-technical skills.
- Zero reported incidents of significant non-compliance with health or safety laws and regulations in 2021. Venture has revised their Conflict Minerals Policy to the current Responsible Minerals Policy, as aligned to the OECD.
  Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas, and the Responsible Business Alliance standards on responsible minerals.

Key G metrics and issues

- The board consists of nine directors, including founder Mr Wong Ngit Liong as chairman (Mr Wong relinquished CEO position at end FY21. All other directors are non-executive, and 7 out of 9 of the directors are independent.
- The audit, nominating and remuneration committees are chaired by independent directors.
- Professional background of independent directors includes accounting, engineering and technology.
- Key management (incl. directors) compensation accounted for 6.1% of total employee compensation in 2020. (2019: 5.7%).
- Auditors are Deloitte & Touche LLP, appointed in 2015.
- Venture has zero-tolerance towards fraud and corruption, and has policies on anti-bribery and corruption and whistle-blower protection. There are no public legal cases regarding corruption/ termination of contracts, business partners or suppliers relating to corruption in 2021.
- Venture's IT department regularly improves infrastructure and systems to safeguard confidential information. In 2019, there was a data compartmentalisation project to segregate confidential data and a test was done to find potential vulnerabilities. In 2020-21, there were no substantiated complaints concerning breaches of customer privacy or loss of customer data.
- In recognition of its execution excellence, Venture frequently won awards from customers. In 2021, Venture won a Ramp Performance Award for outstanding support of customer needs. At the Securities Investors Association Singapore Diversity Awards, Venture was recognised for board diversity.
  Implemented ISO27001 Information Security Management at the corporate level (received in Jan '21), and aiming to achieve this for key global sites.

[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).

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Quantitative Parameters (Score: 44)						
	Particulars	Unit	2019	2020	2021	FRKN SP (2021)
E	Scope 1 emissions	tCO2e	66,080	65,192	68,061	NA
	Scope 2 emissions	tCO2e	NA	NA	NA	NA
	Total	**tCO2e**	**66,080**	**65,192**	**68,061**	**NA**
	Scope 3 emissions (operational)	tCO2e	NA	NA	NA	NA
	Total	**tCO2e**	**66,080**	**65,192**	**68,061**	**NA**
	GHG intensity (Scope 1 and 2)	kg CO2e/emp	23.7	28.5	28.4	NA
	Energy consumption	kWh/unit of sales	39.2	47.2	47.7	4.4%
	Water consumption	m2/unit of sales	0.23	0.28	0.26	0.11%
	Recycled waste generated	metric tonnes	NA	NA	NA	17
S	% of women in workforce	%	51.1%	50.0%	55.1%	34.0%
	Average training hours per female executive	%	178	126.43	51.1	6.3
	Economic value generated and distributed	SGD'000	363,381	297,404	312,322	71,924
	New employees hired by gender (women)	%	47.9%	46.5%	54.0%	NA
	Total training hours	%	1826585	1220496	437922	11499
	Key operations assessed for risks related to corruption	%	100%	100%	100%	100%
	MD/CEO salary as % of reported net profit	%	2.39%	2.77%	2.41%	2.98%
G	Estimated board salary as % of reported net profit	%	0.24%	0.29%	0.27%	1.70%
	Independent directors on the Board	%	88%	89%	75%	60%
	Female directors on the Board	%	25%	33%	38%	0%
	% of women in workforce	%	51.1%	50.0%	55.1%	34.0%

Qualitative Parameters (Score: 83)

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. The board of directors has oversight of the governance structure relevant to Venture's EESG performance and guides their sustainability strategy through the Sustainability Steering Committee, which comprises senior leaders from across their operations that meet annually to review their sustainability plans.

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

Yes. The BSC KPIs are accessed on an annual basis during management review meetings

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

Yes

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

No

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

Venture complies with the Restriction of Hazardous Substances directive in all of its facilities and uses only RoHScertified materials in its operations. At its Penang site, it conducts daily inspections for main pipe supply leakage, urinal water supply and flush systems. The Penang site continues to conduct monthly water consumption review, and it uses auto-taps and reduced diameter flexible hoses with pressurised nozzles in all toilets.

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

Yes

Target (Score: 50)		
Particulars	**Target**	**Achieved**
Reduce GHG Emissions	NA	NA
Reduce water usage	NA	NA
Zero cases of corruption	0.0	0.0
Maintain zero fatalities across all sites	0.0	0.0
Impact		
NA		
Overall Score: 55		
As per our ESG matrix, Venture Corporation (VMS SP) has an overall score of 55		

ESG score	Weights	Scores	Final Score
Quantitative	50%	44	22
Qualitative	25%	83	21
Target	25%	50	13
Total			**55**

As per our ESG assessment, VMS SP has an established framework, internal policies but needs to make headway in improving its quantitative "E" metrics as well as including more tangible targets. VMS SP's overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

AEM Holdings (AEM SP)

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Risk Rating & Score[1]	23.1 (Medium)
Score Momentum[2]	na
Last Updated	11 November 2020
Controversy Score[3]	0 - No Reported Incident

Business Model & Industry Issues

- As an equipment maker, AEM is inherently exposed to environmental, workplace safety, and socio-economic risks. AEM has had zero incidences of environmental non-compliance, as well as zero substantiated cases of corruption and legal compliance issues in 2021.
- From an environmental and social perspective, AEM screens all of its suppliers. AEM constantly strives to be more efficient with electricity usage, and ensures employees are well trained and remunerated fairly.
- AEM is recognised for good transparency with shareholders, while still being able to balance business requirements (e.g. respecting non-disclosure agreements).
- AEM has several new products in the pipeline and it is engaging customers for more. In our view, this is the key for economic sustainability, as well as for development of its own employees.

Material E issues

- AEM's environmental exposure is through energy, water and inputs (fabricated parts and electronics).
- AEM adheres to all National Environment Agency laws and regulations and has not had incidences of environmental non-compliance over the past 10 years.
- Emissions intensity ratio rose to 0.0014318MT/SGD'000 in 2021 (FY19: 0.007588), due to the consolidation of CEI.
- AEM screens suppliers for negative environmental and social impacts, including pollution, biodiversity loss, global warming, incidences of child labour, breaches of customer privacy, and more. All suppliers were found to have no negative environmental or social impacts.

Material S issues

- AEM adheres to minimum wage laws of the countries it operates in. There is no difference in pay between male and female employees at the entry-level across all countries with minimum wage laws.
- Workforce diversity. AEM is an equal-opportunities employer. Management are hired from local communities and consists of various nationalities. >90% of management are local across AEM's footprint globally.
- Workplace safety. AEM trains its employees on health and safety work practices. In 2018, there was 1 minor injury.
- In 2021, average training per employee was 18.4 hours, to equip staff with skills across technical, project management and software domains (FY20: 7.8 hours).
- Females comprise 34% of the total work force in FY21, higher than 24% in FY20, due to the inclusion of CEI.
- Turnover rate rose to 23% vs. 10% in FY20.

Key G metrics and issues

- The board has seven directors, of which one is the executive chairman, four are independent directors (57%), and three are non-independent, non-executive. All the directors are male.
- The audit & risk management, remuneration, and nominating committees are chaired by independent directors. The strategy committee, which works with management on long-term strategic planning, is chaired by the executive chairman.
- Key management compensation (comprising the Board and senior management) accounted for 7.1% of staff costs in 20211 (2020: 13.6%).
- In 2019, AEM won "Most Transparent Company Award, Technology" and was runner up for the "Singapore Corporate Governance Award" by SIAS. AEM regularly updates on its sales guidance and orders received and it's active in engaging with the investment community.
- Zero substantiated cases of corruption or legal compliance issues in 2021. There was one case of whistleblowing in 2020, but upon investigation, it was concluded to be unsubstantiated.
- AEM was granted two patents in 2019, and the staff involved were rewarded. AEM views its considerable engineering development revenue as a positive sign of customer satisfaction and relationship.

[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).

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	Quantitative Parameters (Score: 44)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**UMSH SP (2021)**
E	Scope 1 GHG emissions	tC02e	NA	NA	15	NA
	Scope 2 GHG emissions	tC02e	3344	3938	8082	NA
	Total	**tC02e**	**3344**	**3938**	**8097**	**NA**
	Scope 3 GHG emissions	tC02e	NA	NA	NA	NA
	Total	**tC02e**	**3344**	**3938**	**8097**	**NA**
	GHG intensity (Scope 1 and 2)	KgCO2e/emp	0.010	0.008	0.014	NA
	Energy consumption	kWh/unit of sales	0.02	0.01	0.02	0.13
	Water consumption	M2/unit of sales	0.04	0.03	0.09	0.0011
	Recycled waste generated	Metric tonnes	NA	NA	50	50
S	% of women in workforce	%	21	22	35	NA
	Economic value generated and distributed	SGD'000	54778	86207	89181	53100
	Proportion of training hours by gender (women)	%	20	20	48	NA
	New employees hired by gender (women)	%	23	24	34	NA
	Direct training hours	%	22	31	71	NA
	Key operations assessed for risks related to corruption	%	100	100	100	100
G	MD/CEO salary as % of reported net profit	%	3.87	3.23	1.34	0.04
	Board salary as % of reported net profit	%	1.09	0.60	1.06	0.05
	Independent directors on the Board	%	67	57	57	60
	Female directors on the Board	%	0	0	14	20

Qualitative Parameters (Score: 50)

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, the group has established a Sustainability Steering Committee comprising a senior management team to support the board, which determines the overall direction of sustainability strategies. It is aided by the audit and risk management committee which evaluates and incorporates sustainability issues as part of the group's strategic formulation. It also approves, manages and monitors ESG factors material to the business.

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

No

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

Yes

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

No

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

The Group is replacing its air-conditioning ducting from cassette to inverter type and has programmed its air-conditioners and lights to switch off automatically after office hours. It has also engaged a third-party recycler to recycle waste generated from manufacturing and operations.

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

No

Target (Score: 66.7)		
Particulars	**Target**	**Achieved**
Maintain economic value generation of at least 5%	5%	3%
Low turnover rate	2%	0.9%
Maintain 100% of employees receiving regular performance reviews	100	100
Carbon neutrality/net zero	NA	NA

Impact

NA

Overall Score: 51

As per our ESG matrix, AEM (AEM SP) has an overall score of 51.

ESG score	Weights	Scores	Final Score
Quantitative	50%	44	22
Qualitative	25%	50	13
Target	25%	67	17
Total			**51**

As per our ESG assessment, AEM has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics. AEM's overall ESG score is 51, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Aztech Global (AZTECH SP)

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Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- Based on stakeholders' feedback, governance, economic performance, product compliance and customer privacy and satisfaction are the most important factors to both Aztech and stakeholders. Waste management, water conservation and energy efficiency are among factors that are less material.
- Risks exposure include: i) socioeconomic: employees' wellbeing and equal opportunities; ii) governance: conflicts of interest; and iii) environmental: fines for non-compliance of environmental laws and regulations.
- In 2021, Aztech did not incur any significant fines related to environmental laws, and there were no reported incidences of discrimination, whistleblowing, bribery or corruption.
- Human capital is a key input in driving Aztech' capabilities vs. competitors. Aztech believes in talent management to nurture employees, provide equal opportunities, and recognise and reward achievements to boost retention.

Material E issues

- Aztech' environmental exposure is through energy, water and inputs. In 2021, Aztech did not incur any significant fines for non-compliance with environmental laws and regulations
- Aztech will be focusing on improving energy consumption efficiency through equipment maintenance and use of energy efficient equipment and technology to cut their carbon footprint. In addition, they have been inculcating electricity conservation through the adoption of energy efficient practices including use of natural light and reminder posters to promote electricity conservation.
- At their dormitories in Dongguan, heat energy generated by the air-conditioner system was recycled to power the central hot water systems. They have also completed the conversion of all air-conditioners with energy efficient inverter systems during the year to conserve energy.

Material S issues

- Aztech' workforce is 1178 strong globally as at end-2021. Aztech is an equal-opportunity employer and values talent retention. Outstanding employees are rewarded for achievements.
- Total training hours achieved for FY2021 amounted to 13,855 hours, while average training hours per employee was 12hours, meeting their FY2021 target amidst an increase in business activities.
- In FY2021, there were 3 minor work injury accidents at their Dongguan operation site, down from 7 in FY2020. The rate of injury fell from 0.18 per 100 workers in FY2020 to 0.078 per 100 workers in FY2021. Investigations on the 3 work-related incidents were carried out with each incident evaluated and corrective actions taken to mitigate recurrence of such accidents.
- In 2021, there were no reports of discrimination or exploitative labour practices.

Key G metrics and issues

- The board has six directors, of which one is the founder, executive chairman and CEO (Michael Mun), and four are independent, non-executive (67%). One is an executive director who is also the COO. (Jeremy Mun).
- The audit, nominating, and remuneration committees are chaired by independent directors.
- Workshops on business ethics, anti-bribery compliance and enterprise risk management are held to educate employees on good corporate governance. Guidance is also provided for common ethical issues such as conflicts of interest and confidential information.
- In 2021, Aztech did not receive any whistleblowing report regarding the company, and there were no cases of bribery or corruption.

[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).

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	Quantitative Parameters (Score: 44)					
	Particulars	Unit	2019	2020	2021	Venture (2021)
E	Scope 1 emissions	tCO2e	NA	NA	NA	68,061
	Scope 2 emissions	tCO2e	NA	NA	NA	NA
	Total	**tCO2e**	**NA**	**NA**	**NA**	**68,061**
	Scope 3 emissions (operational)	tCO2e	NA	NA	NA	NA
	Total	**tCO2e**	**NA**	**NA**	**NA**	**68,061**
	GHG intensity (Scope 1 and 2)	kg CO2e/emp	NA	NA	NA	28.400
	Energy consumption	kWh/unit of sales	NA	32.21	27.08	47.70
	Water consumption	m2/unit of sales	NA	297.60	216.30	0.26
	Recycled waste generated	metric tonnes	NA	NA	NA	NA
S	% of women in workforce	%	NA	41.0%	49.0%	55.1%
	Economic value generated and distributed	SGD'000	47	56	74	312,322
	Average training hours per female executive	%	NA	NA	NA	51.1
	New employees hired by gender (women)	%	NA	36.0%	47.0%	54.0%
	Total training hours	%	0	16362	13855	437922
	Key operations assessed for risks related to corruption	%	100%	100%	100%	100%
G	MD/CEO salary as % of reported net profit	%	NA	4%	3.9%	2.41%
	Board salary as % of reported net profit	%	NA	0.11%	0.29%	0.27%
	Independent directors on the Board	%	60%	60%	67%	75%
	Female directors on the Board	%	0%	0%	17%	38%

Qualitative Parameters (Score: 67)

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?

No

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

No

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?

At all dormitories in Dongguan, heat energy generated by the air-conditioner system is recycled to power the central hot water systems. To prevent and mitigate impact of waste water discharge at its Malaysian facility in Johor, a centralised septic tank system and sewage control was built to remove impurities and waste substances prior to the discharge of water into the public drainage system.

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

Yes. Aztech has joined a growing list of signatories to achieve net-zero carbon emissions by 2040.

Target (Score: 67)		
Particulars	**Target**	**Achieved**
Net zero carbon by 2040	2040	NA
Improve energy consumption intensity by revenue	10.00%	15.90%
Hire its management team from local communities	80%	96%

Impact

NA

Overall Score: 55

As per our ESG matrix, Aztech Global (Aztech SP) has an overall score of 55.

ESG score	Weights	Scores	Final Score
Quantitative	50%	44	22
Qualitative	25%	67	17
Target	25%	67	17
Total			**55**

As per our ESG assessment, Aztech has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics YoY, especially on the carbon emissions. Their overall ESG score is 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

UMS Holdings (UMSH SP)

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Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

Business Model & Industry Issues

- Based on stakeholders' feedback, governance, economic performance, product compliance and customer privacy and satisfaction are the most important factors to both UMS and stakeholders. Waste management, water conservation and energy efficiency are among factors that are less material.
- Risks exposure include: i) socioeconomic: employees' wellbeing and equal opportunities; ii) governance: conflicts of interest; and iii) environmental: fines for non-compliance of environmental laws and regulations.
- In 2020, UMS did not incur any significant fines related to environmental laws, and there were no reported incidences of discrimination, whistleblowing, bribery or corruption.
- Human capital is a key input in driving UMS' capabilities vs. competitors. UMS believes in talent management to nurture employees, provide equal opportunities, and recognise and reward achievements to boost retention.

Material E issues

- UMS' environmental exposure is through energy, water and inputs. In 2021, UMS did not incur any significant fines for non-compliance with environmental laws and regulations.
- For its manufacturing process, UMS' target for energy intensity is ≤0.13 KWH/revenue. In 2020/21, UMS' performance was 0.1558/0.1306 respectively.
- UMS has taken steps to control water flow in its special process lines, and have switched to NEWater from PUB water. It has a water intensity target of ≤0.0012 m3/revenue. In 2020/21, UMS' performance were 0.0014/0.0011 respectively.
- Hazardous waste largely consists of chemicals and oily water removed from production processes. These are disposed of in compliance with regulations. Where possible all retrieved metal chip and scraps, as well as packaging are recycled.

  Most delivery trucks are incompliance with EURO V standard.

Material S issues

- UMS' workforce is 592 strong across Singapore and Malaysia as at end-2021. UMS is an equal-opportunity employer and values talent retention. Outstanding employees are rewarded for achievements.
- UMS adopts a localisation strategy for overseas operations to ensure on-the-ground teams have a good grasp of local socio-political and cultural sensitivities. In 2021, locals accounted for 46% of employees based in Malaysia and 50% of managerial positions. 25% of managerial employees are female.
- In 2021, there were no reports of discrimination or exploitative labour practices.

Key G metrics and issues

- The board has five directors, of which one is the founder, executive chairman and CEO (Andy Luong), and three are independent, non-executive (60%). One is an executive director who is also UMS' financial controller (Stanley Loh).
- The audit, nominating, and remuneration committees are chaired by independent directors.
- Workshops on business ethics, anti-bribery compliance and enterprise risk management are held to educate employees on good corporate governance. Guidance is also provided for common ethical issues such as conflicts of interest and confidential information.
- In 2021, UMS did not receive any whistleblowing report regarding the company, and there were no cases of bribery or corruption.
- In 2021, key management personnel accounted for 31% (FY20: 21%).

  In 2012, UMS adopted a policy to declare dividends every quarter. The form and frequency depends on UMS' economic performance and financial position, as well as current and future needs.

[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).

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	Quantitative Parameters (Score: 38)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**AEM SP (2021)**
E	Scope 1 GHG emissions	tC02e	NA	NA	NA	15
	Scope 2 GHG emissions	tC02e	NA	NA	NA	8082
	Total	**tC02e**	**NA**	**NA**	**NA**	**8097**
	Scope 3 GHG emissions	tC02e	NA	NA	NA	NA
	Total	**tC02e**	**NA**	**NA**	**NA**	**8097**
	GHG intensity (Scope 1 and 2)	KgCO2e/emp	NA	NA	NA	0.014
	Energy consumption	kWh/unit of sales	0.02	0.01	0.13	0.02
	Water consumption	M2/unit of sales	0.04	0.03	0.0011	0.09
	Recycled waste generated	Metric tonnes	NA	NA	50	50
S	% of women in workforce	%	NA	NA	NA	35.0%
	Economic value generated and distributed	SGD'000	33,600	36,500	53,100	89,181
	New employees hired by gender (women)	%	NA	NA	NA	34.0%
	Total training hours	%	NA	NA	NA	71%
	Key operations assessed for risks related to corruption	%	100	100	100	100
G	MD/CEO salary as % of reported net profit	%	5.95%	7.52%	13.39%	0.04%
	Board salary as % of reported net profit	%	2.89%	2.63%	1.84%	0.05%
	Independent directors on the Board	%	60%	60%	60%	57%
	Female directors on the Board	%	20%	20%	20%	14%

Qualitative Parameters (Score: 50)

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, the UMS board, supported by the Risk Advisory Committee and Safety Subcommittee, looks at sustainability issues as part of its strategic formulation, determines the material Environmental, Social and Governance factors, and oversees the management and monitoring of these factors.

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

Yes. The BSC KPIs include maintaining rigorous corporate governance standards and minimizing risks

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

No

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

No

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

In every office, in every manufacturing process, efforts to reduce energy consumption are being practiced and are producing results. UMS works only with government-licensed waste collection vendors to ensure that disposal processes are in compliance with government regulation. Most of its delivery trucks are in compliance with the EURO V standard, which helps to reduce the emission of CO2 and other gases.

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

No

Target (Score: 66.7)		
Particulars	**Target**	**Achieved**
Energy Intensity (KWH/Revenue)	0.13	0.1306
Water Intensity (m2/Revenue) < than	0.0012	0.0011
Briefings to present quarterly and FY results	100%	100%
Carbon neutrality/net zero	NA	NA

Impact

NA

Overall Score: 48

As per our ESG matrix, UMS Holdings (UMSH SP) has an overall score of 48.

ESG score	Weights	Scores	Final Score
Quantitative	50%	38	19
Qualitative	25%	50	13
Target	25%	67	17
Total			**48**

As per our ESG assessment, UMSH SP has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics as well as qualitative parameters. UMS's overall ESG score is 48, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Frencken Group Ltd (FRKN SP)

Risk Rating & Score[1]	na
Score Momentum[2]	na
Last Updated	na
Controversy Score[3]	na

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Business Model & Industry Issues

- The nature of Frencken's business in the electronics and automotive manufacturing supply chains exposes it to risks including environmental, workplace safety, and conflict of interest. Frencken has not faced any fines or non-monetary sanctions pertaining environmental nor socioeconomic laws and regulations in 2021.
- From an environment perspective, Frencken's Eco-PVD offering can be seen as a more environmentally friendly approach for automotive coating. While Frencken does not use recycled materials currently, it may do so in the future subject to customers' requirements.
- From a governance and socioeconomic perspective, Frencken is adopting industry best practices, including those set by customers, as these facilitate smooth business.

Material E issues

- Environmental risks - Frencken's production process involves non-renewable materials and waste generation. Non-compliance of rules and laws may severely impact the environment of local communities.
- In 2021, Frencken had zero fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations.
- Areas for potential improvement include i) increased use of recycled materials, contingent on customer approval; ii) increased efficiency of water and electric usage.
- Opportunities - Frencken's proprietary eco-PVD coating technology is more environmentally friendly than traditional PVD methods. Frencken is optimistic of long term prospects for this offering

Material S issues

- Employee health and safety risks. Frencken benchmarks its occupational safety and health practices against industry best practices. E.g. the Bangi (Malaysia) plant is in compliance with Agilent Supplier Environmental, Health and Safety and Social Responsibility guidelines.
- Employee safety remains of paramount importance for Frencken with proper mitigation measures implemented.
- In 2021, Frencken's injury rate was 0%. (2019: 0.15%). Employees underwent an average of 1.2-17 hours of training in 2021 across technical, occupational health and safety and strategic topics.
- Male employees account for 66% of the workforce.
- Socioeconomic risks. To ensure smooth business operations, Frencken: i) adheres to all applicable laws and regulations; and ii) upholds strong ethical standards. This safeguards trust with stakeholders and avoids liability due to non-compliance.

Key G metrics and issues

- Board consists of six directors, of whom one is an executive director (CEO), one is a non-executive, non-independent chairman, and four are independent (67%). All directors are male.
- The nominating, audit and remuneration committees are chaired by independent directors.
- Chairman Mr. Gooi Soon Chai's deemed stake in the company is c.22%.
- Three independent directors have served more than nine years from date of appointments. Frencken states that their independence is not in any way affected by their length of service.
- Professional background of independent directors includes law, accounting, consultancy and electronics engineering.
- Key management/ directors' compensation accounted for 3.4%/1.4% of total employee compensation in 2021. (2019: 3.8%/ 1.3%).
- Auditor is Deloitte & Touche LLP which was appointed in 2014.
- Former non-independent non-executive chairman Mr. Larry Low resigned in 2016 and pared his stake from 8.14% to 4.74% in 2018. Mr. Low is the father of fugitive Jho Low. However, this development has no impact to the governance nor operations of the company as current management and board are independent of Mr. Low

[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).

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	Quantitative Parameters (Score: 21)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**Venture SG (2021)**
E	Scope 1 GHG emissions	tC02e	NA	NA	NA	68061
	Scope 2 GHG emissions	tC02e	NA	NA	NA	NA
	Total	**tC02e**	**NA**	**NA**	**NA**	**68061**
	Scope 3 GHG emissions	tC02e	NA	NA	NA	NA
	Total	**tC02e**	**NA**	**NA**	**NA**	**68061**
	GHG intensity (Scope 1 and 2)	KgCO2e/emp	NA	NA	NA	28.4
	Energy consumption	kWh/unit of sales	NA	6.6	4.4	47.7
	Water consumption	M2/unit of sales	NA	0.10	0.11	0.26
	Recycled waste generated	Metric tonnes	NA	NA	17	NA
S	% of women in workforce	%	35.5	65.8	34	55.1
	Economic value generated and distributed	SGD'000	59353	58929	71924	312322
	Average training hours by gender (women)	Number	14	14	6.3	51.1
	New employees hired by gender (women)	%	NA	NA	NA	54
	Total training hours	%	4000	4800	11499	437922
	Key operations assessed for risks related to corruption	%	100	100	100	100
G	MD/CEO salary as % of reported net profit	%	4.72	6.44	2.98	2.41
	Board salary as % of reported net profit	%	2.29	2.25	1.70	0.27
	Independent directors on the Board	%	67	67	60	75
	Female directors on the Board	%	0	0	0	38

Qualitative Parameters (Score: 67)

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, Frencken added Ethical Sustainable Profitable Growth to the tag line, signalling the start of its Sustainability Journey called "Frencken*Sustain*Life" (FSL). FSL is its Environment Social Governance programme, managed by its board and key management team, which will prioritizes returns to its stakeholders.*

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

Yes. The BSC KPI's are accessed on an annual basis during management review meetings

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

Yes

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

No

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

For new shipments, Frencken reuses cartons and plastic pallets returned by customers. In this way, it aligns with customers' efforts in reducing plastic and paper waste to landfills. To reduce its carbon footprint and build greater business sustainability, solar energy panels have been installed at their factories in Chuzhou (China), Selangor (Malaysia) and Thailand.

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

No

Target (Score: 66.7)		
Particulars	**Target**	**Achieved**
Less than 0.20% of water consumption per sale value	0.20%	0.11%
Less than 7% of electricity consumption per sale value	7.00%	4.38%
Briefings to present quarterly and FY results	100%	100%
Carbon neutrality/net zero	NA	NA

Impact

NA

Overall Score: 44

As per our ESG matrix, Frencken Group (FRKN SP) has an overall score of 44.

ESG score	Weights	Scores	Final Score
Quantitative	50%	21	11
Qualitative	25%	67	17
Target	25%	67	17
Total			**44**

As per our ESG assessment, FRKN has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its quantitative "E" metrics, especially on GHG emissions. FRKN's overall ESG score is 44, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

5. 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.

6. Appendix 2: ASEAN-6 policies and target updates

Fig 38: ASEAN-6: NDC Targets and Energy / Environmental Policy Updates

Country	Timeframe	Intended Nationally Determined Contributions (INDC) Target	Energy policies and measures
Indonesia	2020 to 2030	**Unconditional:** 29% greenhouse gas emissions reduction by 2030. **Conditional:** Up to 41% of emissions reduction by 2030. BAU scenarios of emission projection started in 2010 with projected emissions of approximately 2,869 $GtCO_2e$ in 2030. Net Zero Emission in 2060	1. Shares of new and renewable energy in the primary energy supply: at least 23% by 2025, and at least 31% by 2030. 2. Mitigation actions and emissions reduction compared to BAU (unconditional; conditional). i) Implementation of clean coal technology in power plants (75%; 100%) ii) Renewable energy in electricity production (7.4GW; 132TWh) 3. Implementation of biofuels in transportation (Mandatory B30) (90%; 100%). 4. Additional gas distribution lines (100%; 100%). 5. Additional compressed-natural gas fuel stations (SPBG) (100%; 100%). 6. PLN (State-owned Utility company) targets 51.6% energy from renewable sources by 2030, targeting to shutdown diesel-based power plant by 2031 and coal-based power plants by 2057. 7. 0% luxury tax for electric vehicles.
Malaysia	2021 to 2030	**Unconditional:** Reduce the greenhouse gas emissions intensity of GDP by 45% by 2030 relative to the emissions intensity of GDP in 2005. There are no longer any conditions relating to foreign financial or technical assistance.	1. Five-Fuel Policy (2001) 2. National Policy on the Environment (2002) 3. National Strategic Plan for Solid Waste Management (2005) 4. National Biofuel Policy (2006) 5. National Energy Policy (2008) 6. National Green Technology Policy (2009) 7. National Policy on Climate Change (2009) 8. New Economic Model, Government Transformation Programme and Economic Transformation Programme (2010) 9. Renewable Energy Policy and Action Plan (2010) 10. Second National Physical Plan (2010) 11. Low Carbon Cities Framework (2011) 12. National Automotive Policy (2014) 13. 12^{th} Malaysia Plan (2021-2025) 14. Malaysia Renewable Energy Roadmap (MyRER) (2021) 15. National Energy Policy (NEP) (2022-2040)
Philippines	By 2030	Undertake GHG (CO_2e) emissions reduction and avoidance of 75%, of which 2.72% is unconditional and 72.29% is conditional relative to the BAU scenario for 2020-2030 for the sectors of agriculture, wastes, industry, transport, and energy.	1. Ecological Solid Waste Management Act of 2000 2. Biofuels Act of 2006 3. Renewable Energy Act of 2008 4. Climate Change Act of 2009 (RA 9729, RA 10174) and requisite policies 5. National Framework on Climate Change 2010-2022 6. National Climate Change Action Plan (NCCAP) of 2011-2028 7. Philippine Development Plan 2017-2022 8. Philippine Energy Plan 2018-2040 9. Philippine National Security Policy 2017-2022 10. National Climate Risk Management Framework of 2019 11. Sustainable Finance Policy Framework of 2020
Singapore	2021 to 2030	Singapore will raise its climate ambition to achieve net zero emissions by or around mid-century, with specific net-zero year to be confirmed at a later date. Reduce the emissions intensity by 36% from 2005 levels by 2030. Stabilise emissions with the aim of peaking around 2030. Reduce the amount of waste-to-landfill per capita per day by 30% by 2030, with minimum charge of SGD5 cts per disposable carrier bag implemented at larger supermarkets in mid-2023.	1. National Climate Change Strategy 2012 2. Energy Conservation Act 2012, Cap. 92C 3. Sustainable Singapore Blueprint 2015 4. Carbon Pricing Act 2018 a. Carbon tax rate will be raised to $25/tCO2e in 2024 and 2025, with long term target of $50-80/tCO2e by 2030 5. Resource sustainability Act 2019 6. Environmental Protection and Management Act, Cap. 94A 7. Environmental Public Health Act, Cap 95 8. Resource Sustainability Act 2019 (No. 29 of 2019) 9. Singapore Green Plan 2030 a. Increase solar energy deployment by five-fold to at least 2 GWp, which can meet around 3% of our 2030 projected electricity demand and generate enough electricity to power more than 350,000 households a year b. By 2030, it is estimated that renewable energy could potentially contribute up to 8% of Singapore's peak electricity demand. c. Green 80% of Singapore's buildings (by Gross Floor Area) by 2030. Best-in-class green buildings to see an 80% improvement in energy efficiency (over 2005 levels) by 2030. 10. The International Maritime Organization's target to reduce greenhouse gas (GHG) emissions from international shipping by at least 50% by 2050 compared to 2008 levels, and to phase out such GHG emissions in this century a. Maritime Singapore Decarburization Blueprint 2050 11. All new car and taxi registrations to be of cleaner-energy models

			from 2030 and target 60,000 charging points nationwide by 2030, including 40,000 in public carparks and 20,000 in - private premises a. MOT and LTA will introduce legislation on EV charging in 2022. b. LTA to launch charging points tendering for HDB carparks in 2022. 12. The International Civil Aviation Organization's goals of 2% annual fuel efficiency improvement by 2050 and carbon neutral growth from 2020. 13. Singapore Sustainable Air Hub Blueprint 2023 14. Energy (Resilience Measures and miscellaneous Amendments) Act 2021 15. Long-Term Low-Emissions Strategy (LEDS) 2022 16. Eco Stewardship Programme (ESP) Toolkit to guide school sector to achieve a two-thirds reduction of net carbon emissions. 17. Diversify electricity supply with low-carbon electricity imports by 2030 a. Lao PDR-Thailand-Malaysia-Singapore Power Integration Project
Thailand	2021 to 2030	**Unconditional:** Reduce greenhouse gas emissions by 20% from the projected business-as-usual (BAU) level by 2030 (BAU 2030: approx. 555 $MtCO_2e$). **Conditional:** Reduce greenhouse gas emissions by 25% from the projected business-as-usual (BAU) level by 2030	1. Power Development Plan B.E. 2558–2579 (2015-2036) 2. Thailand Smart Grid Development Master Plan B.E. 2558-2579 (2015-2036) 3. Alternative Energy Development Plan B.E. 2558–2579 (2015-2036) 4. Energy Efficiency Plan B.E. 2558-2579 (2015-2036) 5. Environmentally Sustainable Transport System Plan B.E. 2556–2573 (2013-2030) 6. Climate Change Master Plan B.E. 2558-2593 (2015-2050) 7. National Industrial Development Master Plan B.E. 2555–2574 (2012-2031) 8. Waste Management Roadmap 9. National energy targets: i) Achieve a 20% share of power generation from renewable sources in 2036 ii) Achieve a 30% share of renewable energy in total final energy consumption in 2036 iii) Reduce the country's energy intensity by 30% below the 2010 level in 2036 10. Power Development Plan B.E. 2561–2580 (2018-2037) 11. Carbon Credit; Carbon Neutral (CN) in 2050 and Net Zero emissions (NZ) in 2065 12. Low Carbon Society; Zero Emission Vehicle target at least 30% of total production in 2030
Vietnam	2021 to 2030	**Unconditional:** Reduce national GHG emissions by 43.5% compared to BAU by 2030. Total GHG emission peaks in 2035 and reaches neutrality by 2050.	1. Resolution 55-NQ/TW (Feb 2020) about national energy development into 2030 and vision into 2045 2. Decision 896/QĐ-TTg (Jul 2022) about national climate change strategy into 2050 3. Measures: - Reduce methane emission by 30% by 2030 and 40% by 2050 compared with 2020 level. - Monitor GHG emission reduction of factories emitting larger than 3,000 tCO2e since 2022, 2,000 tCO2e since 2030, 500 tCO2e since 2040, and 200 tCO2e since 2050. Develop and implement emission quota framework since 2026. - Develop renewable energy to contribute at least 33% of total electricity generation by 2030 and 55% by 2050.

Source: Maybank IBG Research (compilation)

7. Appendix 3: Singapore coverage universe classified by ESG2.0 scoring

Singapore coverage universe

Stock	Ticker	Mkt Cap SGDbn	Rec	Price LCY	TP LCY	PER (x) 2022E	2023E	ROE (%) 2023E	Yield (%) 2023E	MIBG ESG Score (Total)	Quant Score	QualScore	Targets Score	Sust. Risk Score	Sust. Momentum
Singtel	ST SP	43.6	Buy	2.64	3.15	17.14	15.00	8.26	4.44	85	88	83	80	18.2	0.0
Genting SG	GENS SP	10.8	Hold	0.89	0.88	28.71	16.48	4.36	2.25	80	60	100	100	19.8	-1.4
DBS	DBS SP	86.7	Buy	33.50	42.69	10.81	9.31	14.41	4.48	78	67	100	80	20.2	0.3
ComfortDelGro	CD SP	2.7	Buy	1.24	1.60	17.97	16.10	7.39	4.92	78	80	80	72	16.8	-0.2
Manulife US	MUST SP	0.9	Buy	0.37	0.85	7.45	7.30	7.38	14.52	76	53	100	100	N/A	N/A
UOB	UOB SP	51.5	Buy	30.56	33.77	10.91	9.86	10.97	4.25	74	83	50	80	20.3	0.7
Keppel REIT	KREIT SP	3.4	Buy	0.90	1.25	15.79	16.07	3.31	6.67	74	47	100	100	11	-5.7
OCBC	OCBC SP	55.0	Buy	12.18	14.70	8.70	8.12	11.41	4.93	70	78	50	75	27.1	-4.5
CapitaLand Ascott Trust	CLAS SP	3.4	Buy	0.99	1.40	27.50	23.02	4.01	5.35	69	39	100	100	N/A	N/A
Suntec REIT	SUN SP	4.0	Buy	1.39	1.85	17.82	19.04	4.69	6.47	68	53	67	100	13	1.0
CapitaLand Ascendas REIT	CAREIT SP	11.6	Buy	2.76	3.50	18.28	17.69	6.56	5.76	67	42	83	100	12.1	0.5
CICT	CICT SP	13.3	Buy	2.01	2.55	17.33	16.34	5.49	5.67	66	32	100	100	10.2	-0.7
Frasers Ct.pt.	FCT SP	3.5	Buy	2.03	2.80	16.50	15.86	5.04	6.06	66	32	100	100	11	-0.4
CDREIT	CDREIT SP	1.5	Buy	1.22	1.40	21.79	17.18	4.45	4.51	65	47	67	100	16.2	1.4
Capitaland Investments	CLI SP	18.4	Buy	3.54	4.30	23.14	17.97	6.81	3.11	63	26	100	100	14.9	0.0
Mapletree Pan Asia	MPACT SP	8.7	Buy	1.67	2.25	18.35	17.77	7.79	5.45	60	37	67	100	15.1	0.0
Mapletree Log.	MLT SP	7.7	Buy	1.61	2.15	19.40	19.40	5.26	5.34	58	50	50	83	13.1	-2.4
ST Engineering	STE SP	10.5	Buy	3.36	4.30	18.46	16.80	22.98	4.43	58	39	83	80	30.9	0.0
SGX	SGX SP	9.7	Buy	9.08	10.65	20.40	18.46	30.13	3.52	56	39	67	80	20.2	2.3
Mapletree Ind.	MINT SP	6.0	Buy	2.20	3.00	16.42	15.94	-	6.05	56	20	83	100	13.4	0.1
StarHub	STH SP	1.9	Buy	1.07	1.33	16.21	12.89	19.71	4.67	55	18	83	100	25.3	0.0
Netlink NBN	NETLINK SP	3.2	Buy	0.82	1.02	32.60	32.60	3.80	6.50	55	28	83	80	27	-1.1
Venture	VMS SP	5.0	Buy	17.29	20.20	13.73	12.57	13.17	4.34	55	44	83	50	11	1.0
Aztech Global	AZTECH SP	0.6	Hold	0.79	0.79	7.05	6.03	27.41	4.30	55	44	67	67	N/A	N/A
HRnetGroup Ltd	HRNET SP	0.8	Buy	0.80	1.07	11.94	11.27	17.92	5.25	55	44	33	100	N/A	N/A
PropNex Ltd	PROP SP	0.6	Buy	1.63	1.95	11.16	11.73	43.04	6.75	55	36	50	100	N/A	N/A
Grab Holdings	GRAB US	14.8	Hold	2.94	3.40	-	-		0.00	55	39	100	100	23.5	N/A
Wilmar	WIL SP	25.9	Hold	4.05	4.27	8.69	11.45	10.67	6.06	54	33	50	100	34.6	0.9
ESR REIT	EREIT SP	2.5	Buy	0.37	0.55	13.21	13.21	6.94	8.11	53	32	50	100	19.3	-0.2
Sembcorp Industries	SCI SP	5.8	Buy	3.23	4.00	7.32	9.58	19.41	2.48	53	22	67	100	33.5	-0.3
Raffles Med	RFMD SP	2.6	Buy	1.37	1.60	22.10	21.75	12.71	2.26	52	38	52	80	30.1	4.6
Civmec Ltd	CVL SP	0.3	Buy	0.58	0.94	6.21	5.65	13.99	4.83	52	46	16	100	N/A	N/A
AEM	AEM SP	1.2	Hold	3.70	3.43	8.81	9.74	28.65	2.84	51	44	50	67	20.9	-2.2
Q&M Dental	QNM SP	0.3	Hold	0.33	0.40	17.11	16.25	18.27	3.08	51	50	64	40	N/A	N/A

Source: Maybank IBG Research, Factset, Sustainalytics

Singapore coverage universe (…continued)

Stock	Ticker	Mkt Cap SGDbn	Rec	Price LCY	TP LCY	PER (x) 2022E	2023E	ROE (%) 2023E	Yield (%) 2023E	MIBG ESG Score (Total)	Quant Score	QualScore	Targets Score	Sust. Risk Score	Sust. Momentum
UMS	UMSH SP	0.8	Buy	1.25	1.34	7.86	7.44	32.23	4.80	48	38	50	67	18.1	-7.5
Frencken	FRKN SP	0.4	Sell	0.98	1.02	8.38	8.10	12.47	3.57	44	21	67	67	32.6	-4.4
Frasers Hospitality Trust	FHT SP	0.8	Hold	0.44	0.55	20.95	12.94	2.32	4.55	43	24	83	40	12.8	-1.4
Far East Hosp.	FEHT SP	1.2	Buy	0.61	0.80	22.59	19.06	3.59	4.92	43	35	33	67	12.3	-2.6
Sea Ltd	SE US	41.24	Buy	58.52	98.00	-	-	-32.62	0.00	37	58	33	0	N/A	N/A
Prime US	Prime SP	0.8	NR	0.47	-	7.50	7.48	7.59	14.64	34	26	83	0	18.5	0.0
Sasseur REIT	SASSR SP	1.0	Buy	0.78	1.08	9.87	9.40	7.44	9.36	32	5	67	50	16.2	-2.7
AAREIT	AAREIT SP	0.9	NR	1.21	-	11.57	12.03	-	7.31	30	11	50	50	17.3	0.0

Source: Maybank IBG Research, Factset, Sustainalytics

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