

A high-angle, aerial photograph of terraced rice fields in a lush green landscape. The terraces are carved into the hillsides, creating a series of concentric, wavy lines that follow the contours of the land. The water in the fields reflects the surrounding greenery, creating a vibrant, textured pattern.

Singapore's ESG agenda opens up investment opportunities

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Introduction

In recent years, Asian governments have introduced policies to support environmental, social and governance (ESG) practices, and nowhere more so than in Singapore. The country has taken significant strides towards becoming a champion for sustainable development. Advancements have also been made to position Singapore as an international green finance hub and a regional centre for ESG-based investment opportunities.

Against this backdrop, many Singapore-listed corporations have started to prioritise their transition to more ESG-friendly operations. These shifts have been driven by new regulations and guidance, new revenue or cost opportunities, and growing public awareness of sustainability issues.



At UOB Asset Management (UOBAM), we embed sustainability as a core component in our research and investment process. We recognise that the opportunities for ESG investing have evolved, from choosing between either profitable or sustainable companies, to an environment where companies are profitable because they are sustainable.

Given the structural and regulatory tailwinds provided by ESG trends, we have identified a number of sectors in Singapore that are current and future beneficiaries. We drill down into these sectors to look at specific case studies of sustainable companies. These also serve as useful examples of UOBAM's ESG-based stock selection process, which we have recently augmented using Artificial Intelligence (AI) and Machine Learning (ML) tools and techniques.

Key takeaways

1 ESG is the new social capital

Increasingly, ESG has become a social capital for companies to thrive, as ESG considerations are translating into various financial implications, including the cost of capital and consumer demand.

2 Higher regional standards for management of ESG-related financial products

As more ESG-related financial products are being introduced, ESG Funds are also under greater regulatory scrutiny to enhance transparency, minimise the risk of greenwashing and safeguard investors' interest.

3 Stakeholders are being held to higher standards

The region is raising the bar for government agencies, government-linked investment companies and private sector companies to incorporate ESG considerations in their investment decision-making process.

4 The sustainable transition in Singapore will have far-reaching implications

Policy actions are giving rise to transition risks and opportunities with many Singapore companies striving to be more sustainably positioned. Those that succeed offer investors the potential for long term and consistent returns.



Regional regulatory landscape

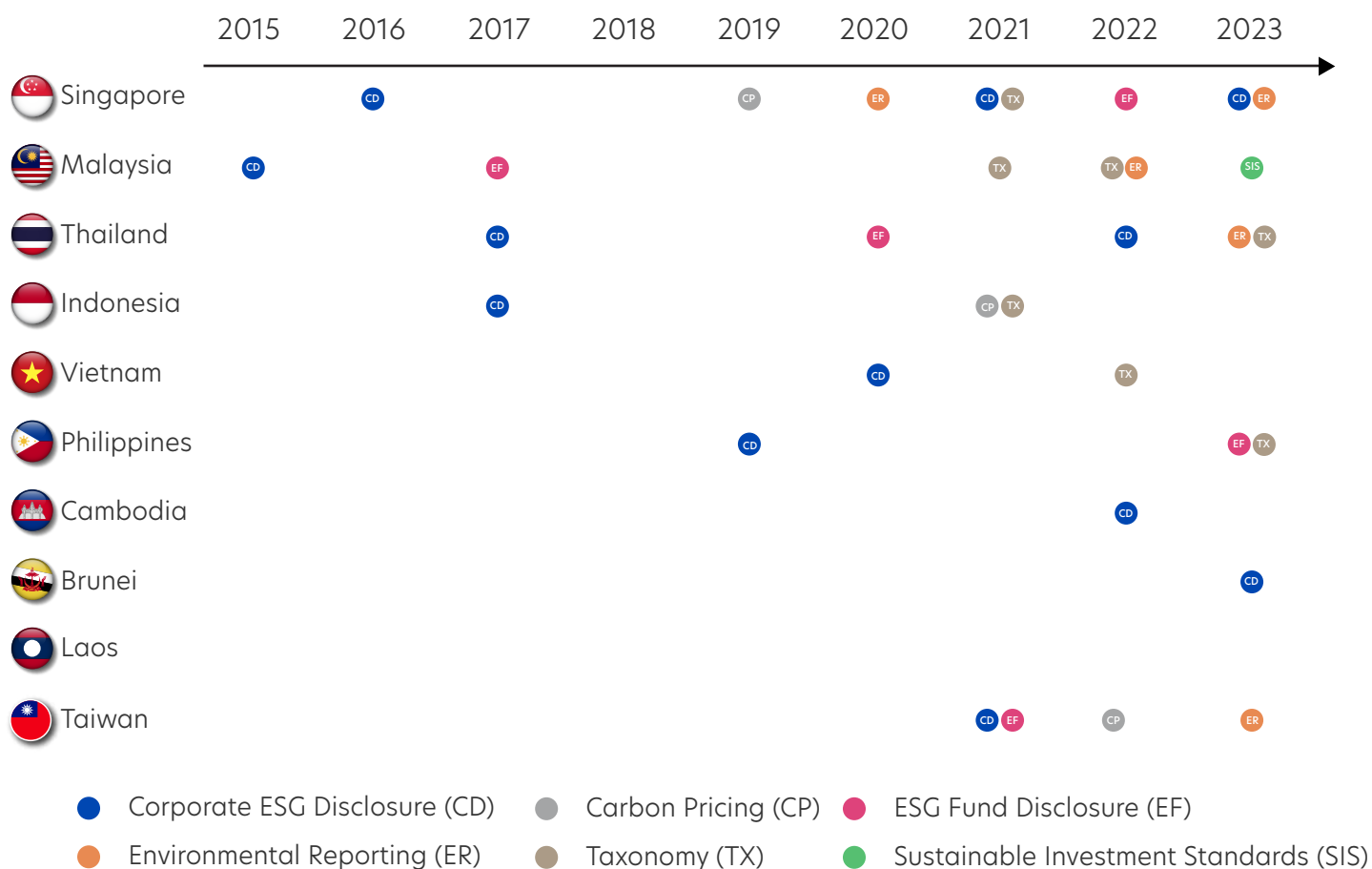
ASEAN policymakers leapfrog into a more sustainable future

2016 saw pivotal events such as the establishment of the United Nations Sustainable Development Goals (UN SDG) and the implementation of the Paris Agreement, a legally binding international treaty on climate change adopted at the UN Climate Change Conference (COP21).

Since then, ASEAN countries have stepped up their efforts to operationalise their ESG commitments via a series of structural and regulatory policies. Figure 1 charts the region's ESG regulatory journey.

Notably, most countries start gradually, with a primary focus on enhancing corporate ESG disclosures. The availability of data for informed decision-making forms the foundation for other initiatives, such as the launching of ESG-related financial products. This in turn attracts more policies designed to regulate fund and asset management practices.

Fig 1: ESG regulation development timeline by country



Timeline by policy announcement

Malaysia led the way in Asia by introducing mandatory sustainability reporting for all publicly listed companies in 2015. This was closely followed by Singapore, Thailand and Indonesia in 2016 - 2017 and subsequently by the other ASEAN countries and Taiwan.

Similarly, environmental reporting guidelines have been issued by Singapore, Malaysia, Thailand, and Taiwan regulators over the past three years. The guidelines provide a framework for financial institutions / asset managers to enhance the resilience of their portfolios by setting out sound environmental risk management practices, such as the application of Task Force on Climate-Related Financial Disclosures (TCFD).

Policies are becoming wider and deeper

After nine years of ESG policy action, how comprehensive are current policies? Figure 2 is UOBAM's assessment of key regulations in place across the region.

Figure 2: UOBAM's House View on Policy Granularity

	Corporate ESG Disclosure	Mandatory Carbon Pricing Scheme	Environmental Reporting Requirements	ESG Fund Disclosure	Taxonomy
Singapore					
Malaysia					
Thailand					
Indonesia					
Vietnam					
Philippines					
Cambodia					
Brunei					
Laos					
Taiwan					
Least granular					Most granular

Source: UOBAM

We note that today, Taiwan's corporate ESG disclosure regulations stand out as some of the most advanced in the region, requiring both mandatory metrics and independent assurance. Under rules issued by Taiwan's Securities and Futures Bureau (SFB) and Financial Supervisory Commission (FSC), businesses in specific fields are required to issue annual ESG reports, and to conduct mandatory accounting, reporting and verification of their greenhouse gas emission records.

Malaysia also has a robust reporting framework in place, encompassing a series of guidelines and disclosure metrics. Bursa Malaysia's Sustainability Reporting Guide includes a detailed materiality assessment toolkit to help companies to report on their operating environment, business objectives and how these impact on sustainability matters.

Meanwhile in Singapore, only listed companies in select sectors are currently required to provide mandatory climate reporting. However, under new proposals, this will be extended to all listed companies, business trusts and Real Estate Investment Trusts (REITs) by FY2025, and to large non-listed companies by FY2027. Singapore regulators say they will review whether to extend this to smaller non-listed companies by FY2030.



Impact on stakeholders

Figure 3: Key ESG policies by stakeholder



Source: UOBAM

Corporates: Responding to the demand for purpose and profit

The pressure for greater transparency and improved supply chain practices does not solely come from regulatory requirements. Customer demand and market competition is also affecting corporate practices. By playing an increasingly important role in the global supply chain, Asian companies also face demand from their EU and US customers for enhanced ESG disclosures and improved business practices.

In addition, large investors are employing proprietary methods for assessing companies with ESG factors become a key criteria. Some analysts even view ESG as a modern social license for corporations to thrive. Few would dispute that the call from governments, employees and customers to incorporate sustainability into existing business practices is getting ever louder.

This has many financial implications, including the cost of capital and consumer demand. Looking ahead, companies able to demonstrate embedded ESG practices and higher ESG disclosures are likely to stand out both in term of their social and financial capital.

Carbon tax is a good example of an initiative that governments are using to hold companies accountable for their environmental externalities, and also helps steer consumers away from carbon intensive businesses. Singapore led the way by introducing carbon taxes in 2019. Currently, the carbon tax level is set at S\$5/tCO₂e in 2023, but will be raised in large steps over the next few years to reach around S\$50-80/tCO₂e by 2030. While Singapore remains the only country in ASEAN to impose a carbon tax, Indonesia and Taiwan have announced their plans to do so by 2025.

Asset Managers: Opportunities to leverage corporate transformations

Given the changing corporate landscape, the ability to identify a company's ESG status translates into the potential for positive long-term returns, and has become a key area of interest for investors.

To date, sustainability assets amount to over US\$2.8 trillion and there are close to 7,500 funds investing in ESG-focused portfolios. In Asia (including Japan), the number of funds are growing steadily, and make up 10 percent of the global total that is dominated by Europe.

Figure 4: Global sustainable fund statistics

	Flows (2Q 2023) US\$ billion	Assets US\$ billion	Funds Number
Europe	20.0	2,368	5,490
US	-0.6	313	656
Asia ex Japan	1.9	67	529
Japan	-1.9	25	236
Other	-1.5	61	515
Total	18	2,834	7,426

Source: Morningstar Manager Research/ UOBAM

Not surprisingly, the number of policies that have emerged in Asia directed specifically at ESG investment practices have also grown. At the fund level, several Asian regulators including Singapore, Malaysia, and Taiwan, are focused on preventing greenwashing and enhancing transparency.

Singapore in particular adopts a relatively stringent criteria - schemes that only use negative screening or ESG integration is not considered as having an ESG investment focus.

However, ASEAN regulations still lag those in the EU. For example, the EU's Sustainable Finance Disclosure Regulation (SFDR) requires all funds registered in Europe to classify themselves as Article 6, 8 or 9 funds based on their ESG characteristics. Currently in Singapore and elsewhere in Asia, regulations adhere to a binary distinction, with funds classified generally as either ESG or non-ESG.

Asset owners: A higher bar when investing



The ESG-focused investment practices of asset owners are also being held to higher standards as they are seen to have a key role in driving their countries' decarbonisation and sustainability agenda.

For instance, the Monetary Authority of Singapore (MAS) introduced Environmental Risk Management Guidelines for Insurers in 2020 encouraging insurers to establish robust processes for monitoring and managing the impact of environmental risks on individual investments and portfolios.

The Malaysian government has also recently launched its Sustainable Investing Standards (SIS) framework which is designed to help government-linked investment companies adopt sustainable investment practices. This includes the integration of sustainability considerations into their investment strategies, whether for internally or externally managed portfolios.

This policy shift raises the bar for asset owners by emphasising the importance of ESG factors as an integral component of the investment due diligence process. Looking ahead, it is reasonable to anticipate more Asian and ASEAN countries following suit.



Singapore industries on the ESG frontline

Singapore Green Plan

Along with ESG regulatory developments, the Singapore Green Plan 2030 outlines actions plans to support Singapore's decarbonisation efforts and develop the Sustainable Finance Market.

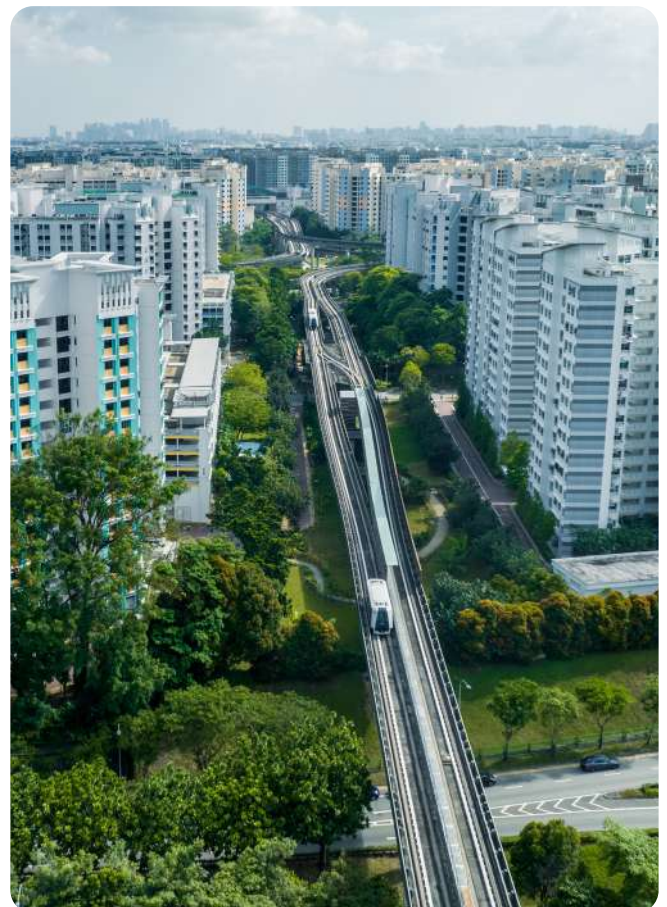
These moves towards sustainable transition in Singapore will have far-reaching implications, with rewards and risks in equal measure. We would expect carbon intensive sectors such as energy and utilities to be transformed, but broader parts of the economy could also be impacted. There are therefore widespread opportunities for companies to leverage policy support in a couple of ways:

Pure-play companies are leading the transformation in Singapore and are therefore likely to benefit in the medium to long-term. They may include companies involved in:

- the development and implementation of energy efficient technology and products,
- climate change adaptation infrastructure,
- the production, transmission and distribution of renewable energy sources,
- the reshaping of transportation,
- emergence of sustainable land management and food systems,
- carbon capture and storage, and
- hydrogen technology.

Non-pure play companies that are embracing sustainability transformations are also well-positioned to benefit from the Singapore Green Plan. Singapore's taxonomy already classifies economic activities into distinct groups of green, amber and red.

For now, we foresee a majority of companies to have business activities within the amber or red categories, but this is set to change over time. Companies across a range of industries are starting to account for climate transition and the impact of physical risks. At the same time they are developing new strategies and changes in business models to incorporate ESG factors.



Singapore's power sector: the transition to hydrogen and carbon capture



Singapore's power sector targets net-zero emissions by 2050. To meet the target, Singapore is diversifying the electricity supply with clean electricity and renewable energy imports from regional countries. In addition, the Low-Carbon Energy Research Funding Initiative has awarded S\$55 million to 12 proposals covering hydrogen as well as carbon capture, utilisation, and storage (CCUS).

The policy push to increase clean energy supply given ongoing local energy demand is expected to benefit not just the companies generating them, but the entire value-chain of renewable technology. Hydrogen, along with carbon capture and storage, are growing fields of interest. In Singapore, such energy and utilities companies are particularly attractive given the presence of harder-to-decarbonise sectors and limited land for renewable expansion capacity.

Case Study: Sembcorp Industries¹

Sembcorp industries is an energy and urban solutions provider committed to, in their words, "transforming from brown to green". It is growing its renewable energy capacity and has set its net-zero targets for 2050.

The company has promised no new investments in coal-fired energy assets and instead is poised to benefit from a transition to green hydrogen, clean energy generation and grid stabilisation projects.

In its 1H2023 results released, the company's net profit from its renewable energy segment increased by 54 percent from the previous year to S\$117 million. This was driven by acquisitions in China and India, the installation of new energy storage systems and higher electricity prices for solar operations in Singapore.

During this period, Sembcorp Industries added 2.1GW of renewable capacity through acquisitions and organic growth in key markets, bringing the group's total renewable capacity (including capacity under development) to 11.9GW.

Overall, its sustainable solutions segment has grown by 24 percent over the past two years. This is expected to accelerate to 40 percent in 2023, reflecting the first annual contribution from renewable energy acquisitions in 2022, and its positive outlook on meeting its new renewable capacity target.

Singapore's chemical and transport sector: future powered by renewable energy

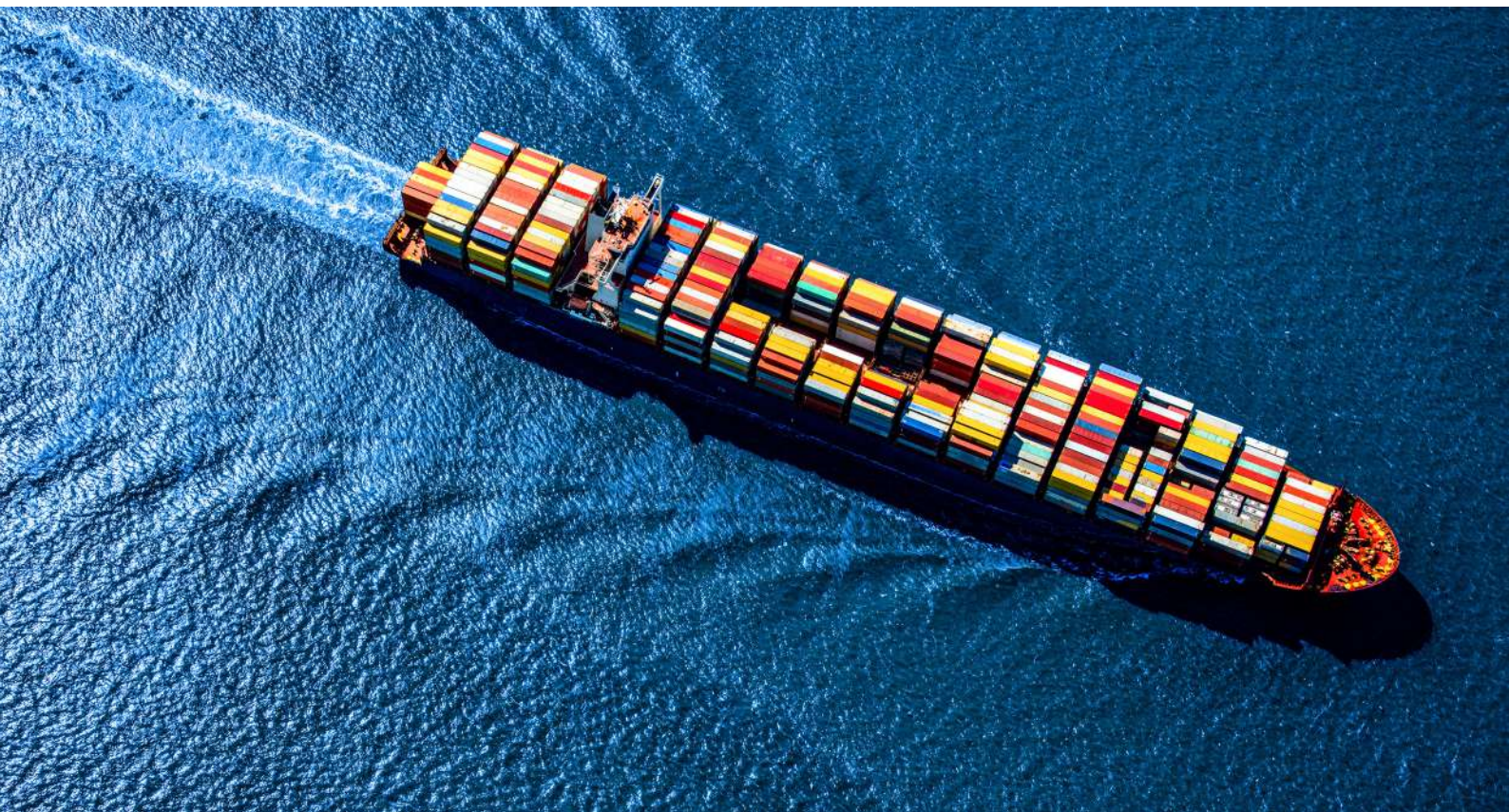
Over the past few decades, Singapore has established itself as a global leader in the energy and chemicals sector, made possible by its strategic location, and its refining and chemicals manufacturing capabilities. Currently, this industry ranks in the Top 10 globally², and contributes to 3 percent of Singapore's Gross Domestic Product (GDP), with over 27,000 people employed in 2020³.

However, Singapore's oil refineries face mounting pressure to transition to cleaner energy from both a cost and revenue perspective. In 2019, the country became the first in Southeast Asia to implement a Carbon Pricing Scheme. The scheme covers companies with direct emissions exceeding 25,000 tCO₂e of greenhouse gases (GHG) annually. In addition to rising operating costs, the demand for diesel is falling due to increased local adoption of electric vehicles, in line with the "Energy Reset" pillar of the Singapore Green Plan 2030 to promote cleaner energy vehicles.

Given these challenges, the government views this period as an opportunity to shift the energy and chemicals sector towards sustainability without eroding its leadership position. Some emerging areas include renewable fuels and related solutions. In particular, there is a focus on renewable fuels for industries that are harder to electrify, such as airlines and shipping.

Notably, Neste, a leading renewable solutions provider, has expanded its production capacity in Singapore. Singapore Airlines (SIA) and Scoot flights out of Changi Airport have conducted a one-year trial with Neste and ExxonMobil to use sustainable aviation fuel made from cooking oil and animal fats.

As of today, renewable fuels only contribute to less than 5 percent of the global renewable capacity that also includes hydropower, solar, wind, etc. However, we would expect renewable fuels to play an important role in energy transition over the near term. This is because they are compatible with existing infrastructure, can be more easily stored, and are technically ready-for use for certain industries. For example, airplanes are still difficult to electrify. During this transition phase, we expect sustainable aviation fuels to have huge potential.



² Source: EDB Singapore

³ Source: Ministry of Trade and Industry Singapore

Singapore's real estate sector: green buildings becoming the standard

Singapore has set a target to green 80 percent of its buildings, calculated by gross floor area, by 2030⁴. The government has revised its Green Mark label by setting higher energy efficiency standards, emphasising a range of other sustainability outcomes and raising public sector building requirements for under GreenGov.SG. Going forward, all new buildings must meet GM Platinum SLE standards and existing buildings are already undergoing major retrofitting to meet these standards.

As a result of these policy incentives, local real estate developers and managers are increasingly greening their buildings through low carbon technology solutions and building retrofits for improved energy efficiency and lower operational costs. At the same time, there is increasing attention paid to the “embodied carbon” contained in building materials, with several concrete manufacturers ramping up their adoption of negative carbon concrete technologies.

The country has also launched its “Built Environment Transformation Gross Floor Area Incentive Scheme” for new developments that achieve Green Mark Platinum SLE certification plus other requirements. The Singapore Green Building Council (SGBC) has also launched the Singapore Built Environment Embodied Carbon Pledge to help unify and amplify action within the construction industry.

Case Study: Pan United

Pan United is Singapore's largest concrete and cement company, with operations in four Asian countries. It is currently a global leader in low carbon concrete and has received commissions for many construction projects in Singapore including the new Downtown and Thomson East-Coast MRT lines.

One of its largest projects to date is the up-and-coming Tuas Mega Port. The company's potential to capture mega-infrastructure projects has grown since it aligns well with Singapore's green plan and is a signatory of Singapore's embodied carbon pledge.



⁴ Source: Singapore Green Plan



UOBAM's AI-augmented sustainability capabilities

AI-Augmented ESG research and analysis

Asian ESG-themed investing has grown significantly in the past decade, but its development is often hindered by a lack of consistent ESG metrics. The key problems are:

- Third-party data providers offer limited coverage of Asian, and in particular ASEAN securities, with information deficits especially on smaller and newly listed companies. This impacts the ability to identify sustainability leaders of the future.
- Disclosure requirements currently vary across Asian regulators. The differences hinder an accurate comparison of companies against peers on the basis of defined benchmarks.
- Global standards cannot be universally applied to local contexts, and it is sometimes necessary to compensate for cultural nuances. For example, many Asian companies are family-owned, a structure penalised by most ESG ratings providers.

UOBAM applies a proprietary AI-Augmentation framework across the firm. This framework is highly relevant for sustainable investing, and even more so for Asian sustainability investing.

One example of this is the approach used for managing the **United Sustainable Asia Top-50 (SAT-50) Fund**. The SAT-50 invests in up to 50 top corporations in Asia that are selected on the basis of their strong ESG performance and fundamentals, and thereby offer long-term growth and returns potential.

Human Intelligence

The SAT-50 leverages UOBAM's network of dedicated regional ESG resources. Besides tapping available third-party data, these investment professionals also conduct ground-up research and manually score securities across multiple countries and sectors in collaboration with the Singapore Sustainability Office.

The process begins with the completion of a preliminary ESG scorecard, followed by adjustments to ensure the manual score is consistent with scores generated by the ESG Analyser. Through their personal understanding, regional ESG resources are able to effectively engage companies on ESG themes, localised ESG issues and ESG controversies. This enhances the overall scoring methodology. ESG resources encourage improvements in ESG disclosure and monitor companies' sustainability progress.

Artificial Intelligence

The SAT-50 adopts UOBAM's ESG Analyser, which incorporates AL-ML models. This is integrated with the firm's Materiality Map of key ESG issues to generate three research models: ESG News, ESG Scores, and ESG Reports. The use of AI models provides consistency in assessments, reduces data bias and creates more robust ESG profiles.

The scoring process is complemented by an AI-ML controversy news system. This enables real-time tracking of controversies and informs assessment of ESG impact. By feeding raw news into this Natural Language Processing (NLP) model, controversy scores are generated and incorporated into the ESG score.

AI-Augmentation

Finally, an ESG Intelligence Manager facilitates a two-way transfer of ESG research from regional offices to a central platform for storage and regional exchange.

The use of the ESG-enhanced AI-Augmentation framework enables SAT50 to benefit in four ways:

1 Improved scope of coverage and engagement

ESG coverage has increased significantly through manual scoring conducted by dedicated ESG resources.

UOBAM's dedicated ESG resources leverage manual assessments and local knowledge to conduct engagement, drive improvement in ESG practices and boost shareholder value.

2 Performance

We believe that the ESG enhancements to the research and idea generation process can contribute to a more resilient performance.

For example, an internal analysis found a positive relationship between UOBAM's Analyser-enhanced ESG ratings and market performance.

3 Efficiency, data storage and knowledge exchange

The use of technology has enabled UOBAM to increase ESG analytical efficiency and consistency compared to a traditional manual process.

ESG data and analysis results are stored centrally for easy input and access by all regional offices.

4 Region-wide sustainable solutions

The firm's efforts to develop a structured process for ESG incorporation across asset classes, sectors and geographies has laid the foundation for innovative solutions.

In Singapore, UOBAM also introduced the United Smart Sustainable Singapore Bond Fund, which aligns with the country's national sustainability agenda.

UOBAM's active ownership approach

To complement incorporation of ESG analyses into our investment process, we also have in place an Active Ownership Approach. This approach serves to facilitate dialogue, engagement, and proxy voting for companies included or to be included in our portfolios. We leverage our regional footprint and the ESG regional team's on-the-ground expertise to execute meaningful dialogue and engagement with companies. This helps drive the strategic investment decisions we make to achieve sustainable and profitable investments. These actions also help fulfil UOBAM's fiduciary duty as an investment manager to act in the best long-term interests of our clients.



Examples of UOBAM's ESG Solutions

UOBAM's approach to sustainability creates the opportunity for UOBAM to deeply understand the ESG investment landscape in Asia. Leveraging our structured process for ESG incorporation across asset classes, sectors and geographies, we have launched several innovative solutions, including the following:



[United Sustainable Asia Top-50 Fund](#)

Invest for profit and purpose with Asia's Top 50 sustainable corporations who are shaping the region.



[United Smart Sustainable Singapore Bond Fund](#)

Begin your sustainable investing journey with the United Smart Sustainable Singapore Bond Fund that provides stable income and capital appreciation while shaping a sustainable Singapore for future generations.



[UOB APAC Green REIT ETF](#)

Invest in sustainable development of the REITs sector. The UOB APAC Green REIT ETF is the world's first APAC Green Real Estate Investment Trusts (REITs) ETF.

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