Task Force on Climate-related Financial Disclosures

Report for the year ending 31 December 2024

หลักทรัพย์จัดการกองทุนกสิกรไทย
开泰基金管理 KASIKORN ASSET MANAGEMENT

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Cover photo by Sam Jotham Sutharson, Burst

Forward

KAsset and Our Approach to Climate Change

Kasikorn Asset Management Co., Ltd. (“KAsset”) is one of the leading domestic asset managers in Thailand. Our asset under management as of December 31, 2024 was USD 46.15 bn (excluding trustee business). As for investment management business, our products and services cover mutual fund, private fund and provident fund area. KAsset also offers a role of a property fund managers and REITs trustee. The Company is a wholly owned subsidiary of Kasikornbank Plc. (“KBank”), one of the largest commercial banks in Thailand. Our investment approach is to invest in companies which generate both financial and sustainable economic value for investors. We strive to integrate Environmental, Social and Governance (“ESG”) and Climate-related issues into our investment analysis, decision-making process and portfolio construction across all asset classes.

KAsset fully recognizes the impact of climate change and the urgent need to accelerate the sustainable transition towards global net-zero emissions as environmental impact could have adverse consequence on investment performance. We strive to evaluate climate risks and opportunities and try to manage risks that consider material to our investments and operational business. Climate change is one of our engagement priority topics with investee companies.

Since we deem transparency and disclosure on climate-related risks is important in order to quantify the potential impact of climate change to financial performance of companies. KAsset has signed up as official supporter of Task Force on Climate-related Financial Disclosures (TCFD) in August 2022 and pursued alignment of our practices in accordance with the recommended framework. This is our third TCFD report and we will continue to refine and enhance disclosure on our activities and progress on climate-related risk management. We are determined to make progress and deliver on our net zero commitment for scope 1 and 2 for our own operation by 2030. As for our overall AUM emissions, we have set net zero target by 2065 which is in line with Thailand’s aspiration or will accelerate the journey when possible.

Scope of Assessment and Limitations in This Report

This is the third year we conducted our climate-related risks and opportunities assessment and formulated relevant strategy and initiatives. As being the asset management company, in addition to our own operation, we focused our assessment on investments portfolios that we managed on behalf of our clients with a total value of USD 46.15 bn as of year end 2024. We have focused on climate-related issues on an aggregated investment portfolio and by asset class. We have utilised data sources from third party service providers in order to enhance our internal assessment and analysis as well as to equip our investment professionals with effective tools.

Key changes from last year reporting are as per below and the numbers in reporting year end 2023 have also been restated accordingly:

1) Green bonds are excluded from scope of emission calculation since the Financed Emissions Standard* does not provide explicit guidance on methods to calculate financed emissions

2) Central Bank bonds with the purpose of monetary operations, not for funding specific projects are excluded from scope of emission calculation

3) For direct investment both equities and corporate bond issuers that are not covered by S&P Truecost, the calculation method has changed from using parent companies as a proxy for emission calculation to using the issuer level's revenue and applicable sectoral emission to increase the accuracy for emission calculation

Although our assessment and disclosures are attempted to best possible reflect overall portfolios characteristics with regards to climate-related issues, given the limited availability of data disclosure at the investee companies and continued evolving on measurement methodologies and our database, our assessment and data sources are based on best effort basis. Our assessment results may be subjected to changes according to evolvement of assessment standard or more information from official sources are updated or available.

We have continued developing climate related tools and database to assess our investments. This will supplement our de-carbonization strategy in the medium to long term to reduce the climate related risks in our portfolios. However, given currently the climate-related information disclosure of investee companies are considered limited as well as the measurement methodology is still evolving, the quantification process on complex financial impact is expected to take sometime to develop. At this stage, our approach will focus more on understanding the materiality of metrics on climate-related issues of investee companies, monitoring and engaging them and consider these as a major part of our risk management strategy.

The assessment is on inherent risk of the investees' current business operations and practices which may not reflect their future-planned mitigation and adaptation actions. Going forward, we will try to collect more information on these actions in order to understand our residual risk better. Our portfolio analysis of physical and transition risks are based on third party data provider, S&P Global, while sovereign debt transition risk has not yet been fully evaluated as the industry models and methodologies are still in infancy and underdeveloped. We will continue to review new methodologies and integrate transition risk into sovereign debt investment decisions when more data and models are available.

It is important to note that the climate-related assessment of KAsset's portfolios' exposure in this TCFD report is for the purpose of addressing the overall climate-related risks and opportunities of our aggregated portfolios in order to prepare for the appropriate strategy. The database and methodology through out this report we have used S&P Global which is the external data provider, unless specified. There are climate-related strategy products that we have developed with global partner which also acts as the Fund advisor, these products may apply different methodology and thus result.

* The Partnership for Carbon Accounting Financials (PCAF)

Our TCFD Report is Structured based on the Four Pillars of TCFD Recommendations as Outlined Below

Governance
A company's governance around climate-related risks & opportunities

Strategy
The actual and potential climate-related risks and opportunities on a company's business, strategy, and financial planning

Risk management
The processes used by a company to identify, assess, and manage climate-related risks and opportunities

Metrics and targets
The metrics and targets used to access and manage relevant climate-related risks and opportunities

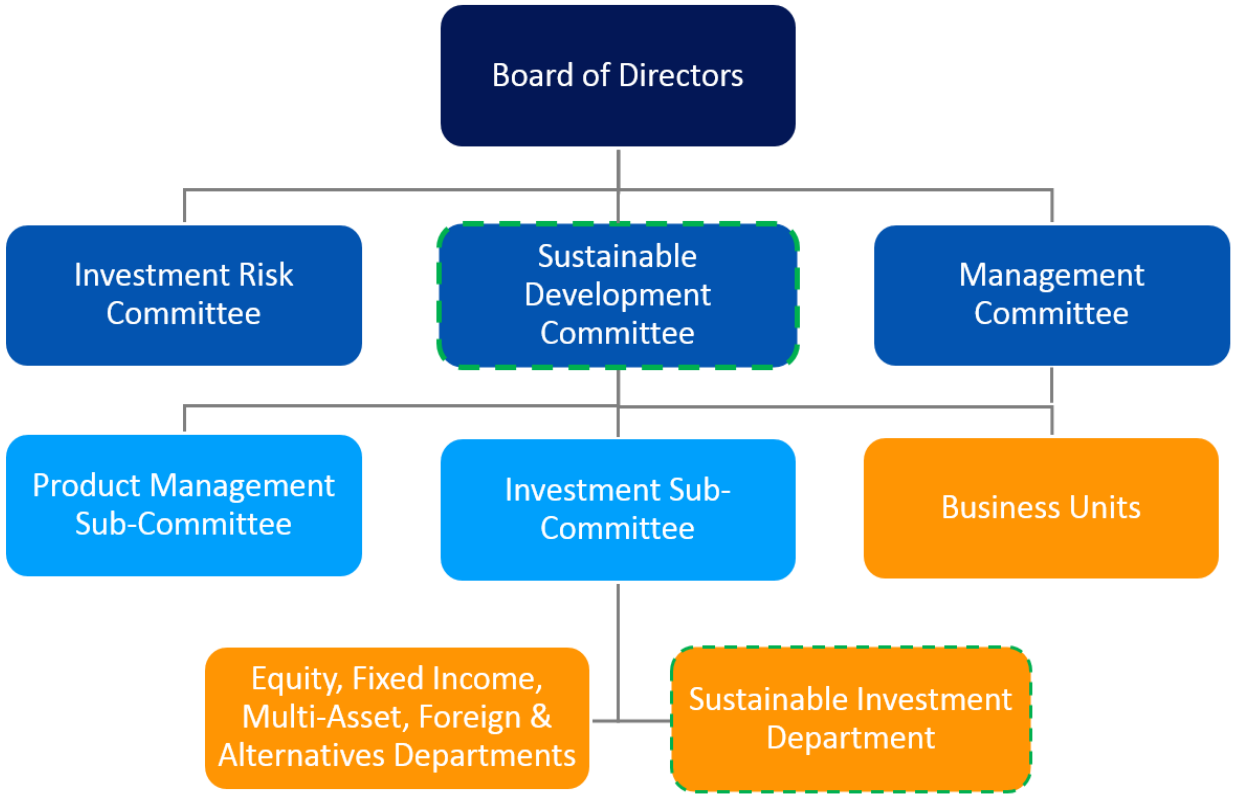
Source: TCFD Recommendations www.fsb-tcfd.org

Photo by: Espen brett, Burst

Governance

Governance

Our Climate-Related Governance Structure are Illustrated in the Below Diagram



Governance

a. Describe the board’s oversight of climate-related risks and opportunities

The Board of Directors has oversight over ESG and climate-related issues which are embedded into our governance structure, strategic planning and business model. The Board is fully accountable for the Company’s sustainability commitment. The Board members consist of senior executives with balanced of backgrounds of experiences which we believe to complement in delivering our climate ambition and strategy. Roles and responsibilities related to climate change of the Board of Directors are summarized below.

Function	Key Roles and Responsibilities
Board of Directors	• Set long-term business goals and strategy for the Company based on sustainable development by taking into consideration of environmental, social, governance (ESG) and climate change dimensions both risks and opportunities in investment management as well as the Company’s own operation in accordance with the international standards • Review and approve policies related to responsible investment which including ESG and climate-related issues • Oversee KAsset governance structure and business processes to align with responsible investment practices and ensure effective risk management • Delegate oversight of ESG and climate-related issues to the Sustainable Development Committee • Hold accountable to the Company’s sustainability commitments

Governance

b. Management's role in assessing and managing climate-related risks and opportunities

Senior executive managements are appointed in all committees related to ESG and climate-related risk governance. The Company has established a Sustainable Development Committee ("SDC") which is directly responsible to drive ESG and climate-related issues for both our business operation and investment management. The SDC comprises of 3 representatives from the Board of Directors, Chief Executive Officer, Managing Director and Chief Investment Officer – Sustainable Investment, who is directly assigned to oversee sustainable investment area.

The Sustainable Development Committee ("SDC")'s roles and responsibilities are summarized below:-

Function	Roles and Responsibilities
Sustainable Development Committee	• Oversee direction and management of ESG and climate-related issues for both business operation and investment management • Review policies related to responsible investment • Review and approve strategic strategy, frameworks, and metrics related to responsible investment which including ESG and climate-related issues • Oversee the investment process to ensure alignment with responsible investment within international standards. The SDC delegates the authority and responsibilities to the Investment Sub-committee to 1) approve and integrate ESG and climate-related issues into the investment process across all asset classes 2) monitor process related to ESG engagements and stewardship activities with investee companies in KAsset investment universe • Delegate the authority and responsibilities to Product Management Sub-committee to oversee integration of sustainability into overall product development process, progress monitoring as well as ESG/SRI labelled products • Review and approve public disclosures related to ESG and climate-related issues, including UN PRI Transparency Reports, TCFD Report and Investment Governance Code (I Code) Report, etc. • Review, support, and promote ESG and climate-related initiatives within the organization including employee trainings related to ESG and responsible investment • Annually review alignment of policy and advocacy initiatives with UN PRI and TCFD commitments • Report and update progress and outcome of ESG and climate-related issues and initiatives to the Board of Directors

Governance

b. Management's role in assessing and managing climate-related risks and opportunities (Cont.)

Investment Sub-Committee' s roles and responsibilities related to ESG and climate related issues are summarized as per below:-

Team/Function	Key Roles and Responsibilities
Investment Sub-Committee	• Review and apply responsible investment approach by integrating ESG and climate change dimensions into the investment process and decision making for respective asset classes including investee securities evaluation, financial modeling and portfolio construction where relevant • Review ESG and climate assessment of KAsset investment universe at least on an annual basis or when necessary in a timely manner • Review and approve list of investee companies to be included in the "Watch List", and potentially divested from KAsset's investment universe due to ESG-related concerns • Oversee the process in which proxy voting is appropriately conducted in line with international ESG engagement and Stewardship expectations • Coordinate with Product Management Sub-committee, and Investment teams to implement climate strategies, targets, and action plans for specific asset classes to achieve climate-related targets

Governance

b. Management's role in assessing and managing climate-related risks and opportunities (Cont.)

Roles and responsibilities of Investment Risk Committee, Product Management Sub-Committee and Risk Management Department related to climate-related risks and opportunities are as per below:-

Function	Roles and Responsibilities
Investment Risk Committee	• Review ESG and climate change risk management policy • Identify, monitor and assess current and potential ESG and climate-related risks that could have a material impact on KAsset's overall performance both at Company and portfolio levels. • Approve securities to be included in or excluded from KAsset investable universe by taking into consideration of ESG and climate-related issues • Oversee risk management process with regards to ESG and climate change aspects
Product Management Sub-Committee	• Review and approve to integrate responsible investment guidelines which including ESG and climate-related issues in the product management process covering designing, developing, approving, and monitoring of investment products, including ESG/SRI-labelled products
Risk Management Department	• Assess, review and propose ESG and climate change risk management policy covering identifying relevant risks, scope of assessment, and risk frameworks for approval from Investment Risk Committee and the Board of Directors respectively • Assess, review and propose KAsset's relevant risk appetite to Investment Risk Committee at least annually or when necessary • Assess, monitor, and report risks in line with the identified risks frameworks as well as legal and regulatory obligations • Report and update the risk assessment of ESG and Climate-related issues to Investment Risk Committee

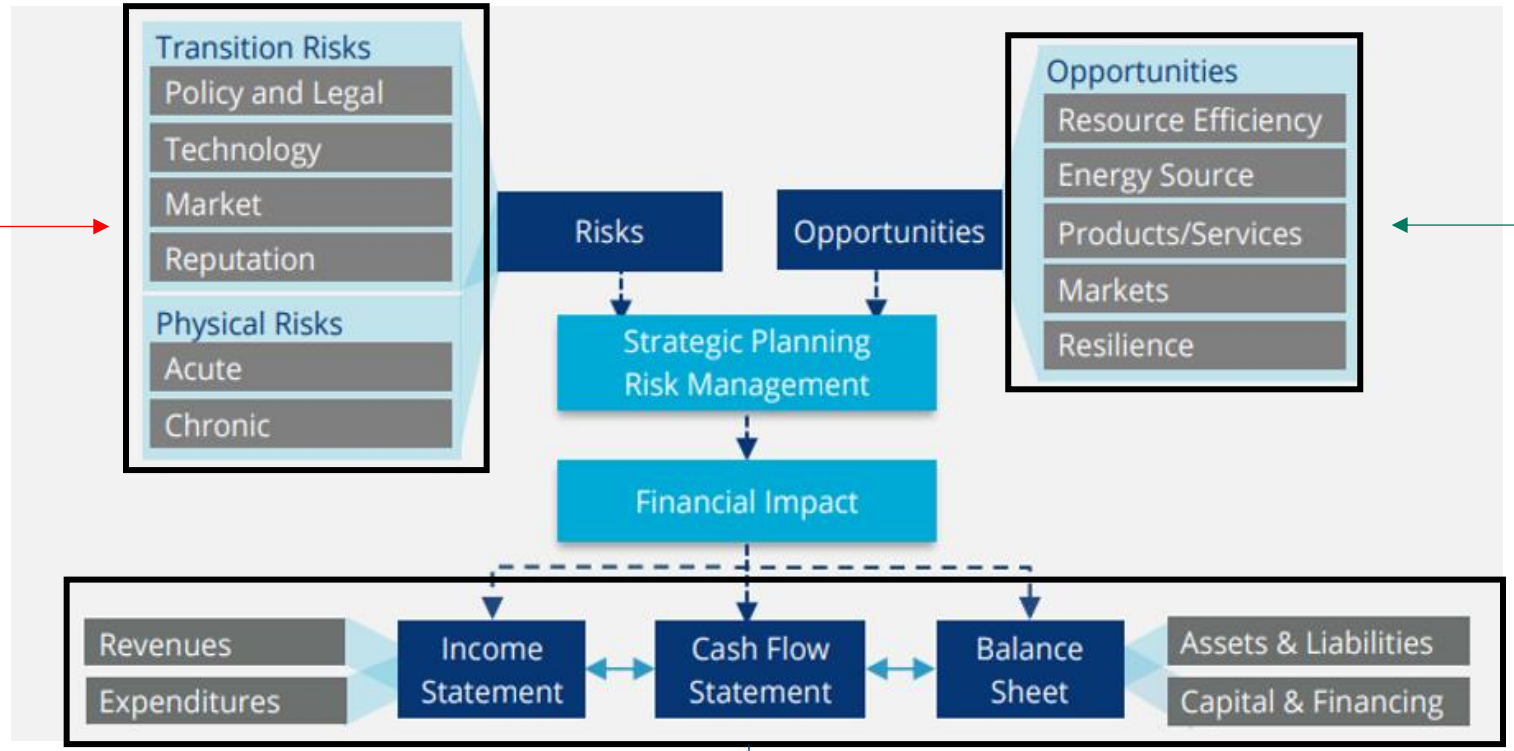
Photo by: LEANDRO BIANCHINI, Burst

Strategy

Strategy

Climate-Related Risks, Opportunities and Financial Impact Considerations on Business and Investee Companies

Risks to Investee



Opportunities for Investee

Financial Impact to Investee

Financial Impact to Fund Performance

Financial impact to KAsset

Source: https://www.fsb-tcfd.org

Identification of Relevant Transition Risks and Opportunities Drivers

In line with the Task Force for Climate Related Financial Disclosure (TCFD), Climate related risks and opportunities are summarised below:-

Transition Risks

Risks that are associated with the transition to a lower-carbon economy that have to address mitigation and adaption requirement to climate change

1. **Policy and Legal Risks**:
   Policy actions would increase pricing of GHG emissions, enhanced emissions-reporting obligations, and regulations promoting energy efficiency. Legal risks encompass increased climate related litigations which often due to failures of organisations/investees to mitigate impacts of climate change
2. **Technology Risks**:
   Costs and disruptions associated with new technology development and deployment towards low carbon demand which caused the displacement of old systems
3. **Market Risks**:
   Shifts in supply and demand for high carbon products/commoditiests, and services as consumer preferences change.
4. **Reputational Risks**:
   Growing expectations for low carbon, climate resilient action from stakeholders and shifts in consumer preferences. Implication for (social) licence to operate and access to (and cost of) capital

Physical Risks

Risks resulting from climate change that can be classified in 2 types:

1. **Acute Physical Risks**: Event-driven risks such as increased severity of extreme weather events (e.g., cyclones, hurricanes, floods).
2. **Chronic Physical Risks**: Longer-term shifts in climate patterns such as sustained higher temperatures that may cause sea level rise or frequent and prolonged heat waves.

Climate-Related Opportunities

1. **Resource Efficiency**:
   Achieving cost savings and productivity enhancements through improved energy efficiency, reduced water consumption, and minimized waste production.
2. **Energy Source**:
   Exploiting opportunities arising from the transition to lower- emission energy sources and the adoption of renewable energy, which can result in reduced operational costs and increased energy security.
3. **Products and Services**:
   Facilitating the development and expansion of low-emission goods and services, fostering innovation in new products to meet climate-related market demands, and diversifying into climate-resilient offerings.
4. **Markets**:
   Gaining access to new markets or benefiting from public-sector incentives for low-carbon goods and services, and capitalizing on evolving market demands and preferences.
5. **Resilience**:
   Enhancing the organization's resilience to climate impacts through adaptive strategies, thereby improving overall business continuity and stability, and investing in resilient infrastructure and systems.

Strategy

Summary of climate-related risks and opportunities KAsset has identified over the short, medium, and long term

Time Horizon	Risks	Opportunities
Short Term (< 5 yrs)	• Focus more on transition risk than physical risk as companies need to respond to climate change through the mitigations and adaptations due to the following factors:- - Increased regulatory requirement - Reputation - Technology changes - Shift in market demand	• During the transition period, companies that can offer low-carbon emission alternative products (e.g. energy resources, transports) may benefit from being the early mover • In the early stage of transition, investee companies which can effectively respond to climate change are likely to benefit from governments incentives or subsidies to support the transition path
Medium Term (5-10 yrs)	• Transition risk is still in focus for medium term time horizon similar to short-term time horizon. However, we expect the development of transition risk identified in short term time horizon to accelerate in the medium term • Physical risk is expected to increase its severity and occurrence and will be closely monitored and effectively incorporated in our investment risk assessment	• Technology advancement will be key for potential rapid shifts for products and consumer preferences • Tighter laws and regulations enforcement will benefit companies who have been prepared and ready for transition
Long Term (10-30 yrs)	• The level of risks depend on degree of success on investee companies' transition on net zero path and transition strategies of investee companies • Physical risk could turn more severe and increase in terms of frequency leading to business disruptions.	• Opportunities from massive shift of consumer preferences and market demand towards low carbon products

Strategy

A. The climate-related risks and opportunities KAsset has identified over the short, medium, and long term

- As being in the asset management industry, climate related risks have both impact on our business and investment portfolios under our management.
- For the **short to medium term** (<10 years)**,** we would give more focus on transition risks and opportunities as the growing need for investee companies to mitigate climate change impact and increase ability to adapt which are expected to incur additional cost as well as opportunities. As for investment products, there is a risk of shifting in market demand for alternative products and increasing regulatory oversight such as policy implementation and practices regarding climate issues.
- Over the **long term** (10-30 years), we reckon physical risk will be material and could be both acute and chronic if investee companies and countries fail to achieve the net zero target path as planned. The opportunities are those who can provide the alternative low-carbon emission products or energy source with efficiency as well as adapted businesses and services to accommodate shifts in market and clients demand.
- **Transition risks:** We have assessed climate related transition risks to investee companies that we invest directly mainly through listed equity and corporate bonds, which comprise around 32 % of our total AUM by value. We use carbon price as a way to quantify risks mainly related to regulatory change, which is expected to be implementing in Thailand and other investee countries in the near term, as a measure to assess transition risk impact. The assessment based on future carbon price scenarios estimated by S&P Global Market Intelligence which based on OECD and IEA. Although, we see carbon pricing is likely to start low in Thailand, and at a higher rate in other countries that have adopted carbon pricing for some time (such as the EU ETS), the carbon pricing might be increasing rapidly than expected if regulator(s) is stricter (see our analysis on page 19)

Strategy

A. The climate-related risks and opportunities KAsset has identified over the short, medium, and long term (Cont.)

As for our **sovereign bonds investment (excluding central bank bonds for monetary operations)** which accounts for 18% of our total AUM by value where mostly (82%) are Thai government or government-related agencies, although transition risks may occur on a country level, currently there is one main example of an international scheme that could affect countries regarding carbon price payments through the EU Carbon Border Adjustment Mechanism (CBAM) starting in full effect in 2026 (required purchase of CBAM certificate). We will await more comprehensive information before making an assessment on CBAM on countries, although the overall assessment would be an opportunity for countries with lower carbon profiles where export costs are lower under CBAM and a risk for countries with high carbon profiles where export costs increase under CBAM.

Certain countries GDP would be negatively impacted if they cannot produce the low carbon products demanded by other countries. Again, there is limited visibility on these potential market trends, as well as the % of GDP by that comprises of low carbon products, so we have not yet made an assessment of the risk to sovereign bonds. We will also seek to review methodologies on transition risk impacts to sovereign debt, however we view that at the moment these methodologies need time to mature before they are implemented.

- **Physical risk**: Physical risk has an impact to listed equities and corporate bonds, as well as sovereign bonds (our analysis included only direct investment). We used analysis from S&P Global Market Intelligence for physical risk assessment. Two scenarios utilized for analysis based on IPCC Shared Socioeconomic Pathway (SSP) and Representative Concentration Pathway (RCP) which are RCP 2.6 and RCP 8.5 in 2030 and 2050 and Shared Socioeconomic Pathway (SSP) AR6 scenarios which is SSP1-2.6 (low emission scenario – below 2°C by 2100) and SSP5-8.5 (high emission scenario – reach 4.4°C by 2100) in 2030 and 2050 time-horizon to assess climate risks. From this, the projected risks in short to medium term (by 2030) are seen to be limited as the impacts are likely to happen in the longer term (2050 onwards) - see analysis on page 21-28.

Transition Risk Assessment to Our Corporate Bonds and Listed Equities

We use carbon pricing scenarios* as a tool to assess transition risk for investees in our portfolios

Screening-level transition climate risk assessment for 11 out of 11 GICS sectors.

11

Sectors

Climate Scenarios

3

Scenarios

2

Time Horizons

- Medium-term (2030)
- Long-term (2050)

Scenarios

High: Represents the implementation of policies that are considered sufficient to reduce GHG emissions in line with the goal of limiting climate change to 2°C above pre-industrial levels by 2100 (the Paris Agreement).

Medium: Assumes that policies will be implemented to GHG emissions and limit climate change to 2°C in the L-T, but with action delayed in the S-T.

Low: Represents the full implementation of country Nationally Determined Contributions under the Paris Agreement (Likely 3°C up)

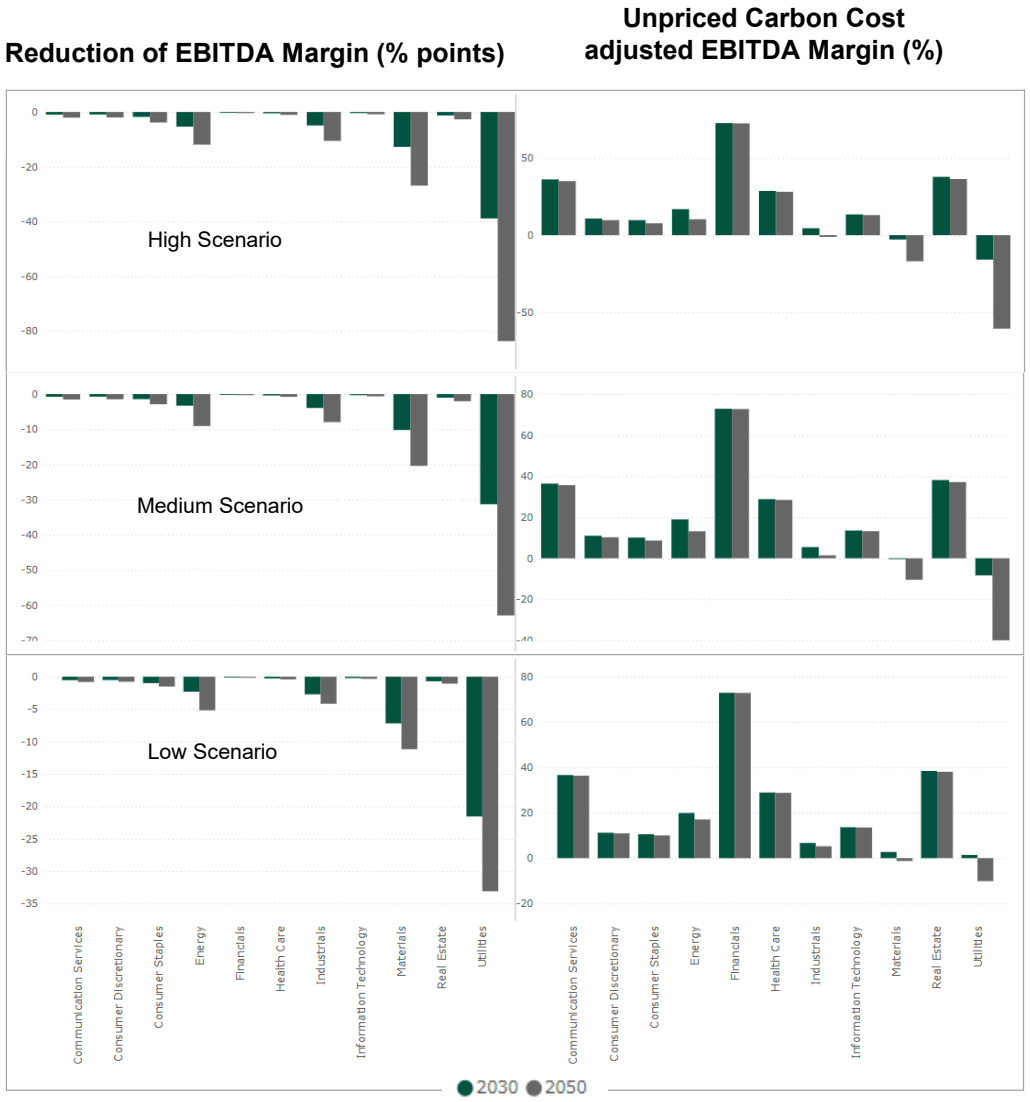
* Using Trucost Carbon Earnings at Risk Data Methodology - Climate Impact Analytics by S&P Global Market Intelligence

Scenario Analysis for Carbon Pricing on Aggregated Portfolio (Equity+Bond)

We used analysis and tools from S&P Global Market Intelligence to assess the carbon pricing scenarios of our investees. We estimated the impact of carbon price on corporate bonds and listed equities' total portfolio exposure by calculating the implied reduction of EBITDA margin due to unpriced carbon cost as a % point change and the % of EBITDA margin after adjusted by unpriced carbon cost under the correspondent scenarios and time horizons. Unpriced carbon cost is additional costs from the price that is currently paid due to potential future pricing or tax hikes under a specific scenario.

Increasing carbon prices will have direct financial impacts on businesses due to regulations that impose higher costs on greenhouse gas emissions from their operations. Additionally, companies will encounter indirect financial risks as suppliers adjust their prices upwards to recover the additional regulatory costs, passing on these expenses at least partially to their customers.

The results showed that our **utilities** exposure are most affected by carbon pricing for all 3 scenarios and both 2030 and 2050 time horizon followed by **material, energy and Industrials** sectors. We will then prioritize our engagement and monitoring in these particular sectors of investee companies to understand how they address and plan for the transition.



Trucost Carbon Earnings at Risk Data Methodology*

- Analysis based on investees (Corporate bonds and equities) Scope 1 and Scope 2 emissions which obtained from Trucost' s database
- Utilizes both public and Trucost proprietary financial and environmental data sources
- Companies' geographical emissions breakdown are derived from public reporting to the Carbon Disclosure Project (CDP). For those companies do not report to CDP, Truecost uses the geographical breakdown of company's revenues as proxy for emission's distribution
- Current carbon prices are based on country specific available sources which associated with emissions trading schemes, carbon taxes and fossil fuel taxes adopted across countries and sectors
- The future carbon prices are based on scenarios by the International Energy Agency (IEA). However for Thailand where the future carbon price are not yet available, the model assumed "Other emerging market and developing economies shown in the table and estimated by S&P Global Market Intelligence based on IEA.
- Financial data comes from a variety of sources such as Trucost and S&P Global Market Intelligence: For EBITDA and revenue, 3-year trailing averages are taken in order to smooth potential irregularities in financial performance
- Trucost's standard 464 sectors have been mapped to the OECD's sector classification for carbon pricing:
  1. Agriculture and Fisheries
  2. Commercial and Residential Real Estate
  3. Electricity
  4. Industry
  5. International Aviation
  6. Offroad Transport
  7. Road Transport

Table of future carbon prices by country group and Scenario

USD 2023 per tonne of CO2

High	**2025**	**2030**	**2040**	**2050**
Advanced economies with net zero emissions pledges	108	140	205	250
Emerging market and developing economies with NZE pledges	55	90	160	200
Selected emerging market and developing economies (without NZE pledges)	13	25	85	180
Other emerging market and developing economies	8	15	35	55
Sub-Sahara and other countries without NZE policies / pledges	8	15	35	55

USD 2023 per tonne of CO2

Medium	**2025**	**2030**	**2040**	**2050**
Advanced economies with net zero emissions pledges	104	135	175	200
Emerging market and developing economies with NZE pledges	25	40	110	160
Selected emerging market and developing economies (without NZE pledges)	0	0	17	47
Other emerging market and developing economies	0	0	17	47
Sub-Sahara and other countries without NZE policies / pledges	0	0	0	0

USD 2023 per tonne of CO2

Low	**2025**	**2030**	**2040**	**2050**
Advanced economies with net zero emissions pledges	75	97	115	126
Emerging market and developing economies with NZE pledges	18	29	72	101
Selected emerging market and developing economies (without NZE pledges)	0	0	7	24
Other emerging market and developing economies	0	0	7	24
Sub-Sahara and other countries without NZE policies / pledges	0	0	0	0
Country/Region specific				
Canada	*100*	*130*	*150*	*155*
Chile, Colombia	*7*	*13*	*21*	*29*
China	*17*	*28*	*43*	*53*
European Union	*92*	*120*	*129*	*135*
Korea	*33*	*42*	*67*	*89*

NZE: Net Zero Emissions
Advanced economies with net zero emissions pledges: OECD countries except Mexico.
Emerging market and developing economies with net zero emissions pledges: China, India, Indonesia, Brazil and South Africa
Selected emerging market and developing economies (without net zero emissions pledges): North Africa, Middle East, Russia and Southeast Asia (excluding Indonesia)

Source: IEA, 2023; Sustainable1 Analysis

Source: * Trucost Carbon Earnings at Risk Data Methodology - S&P Global Sustainable1

Physical Risk

Physical risks relevant to our portfolio based on risk categories as outlined below which can be both acute (events driven) and chronic (associated shift with L-T shift in climate patterns)

Climate-Related Risks	Potential Financial Impact to Investee Companies
Floods (Fluvial, Pluvial, Coastal) Storms	• Companies' operations may experience business and supply chain interruptions as well as increased costs due to risk-related damages. These can lead to declines in the value of assets which directly affecting the companies' financial performance and thus their respective valuation. • Real estate properties and infrastructure located in coastal or flood-prone areas could face damage or asset degradation due to inundation, erosion, or increased frequency and severity of storms. This can lead to a decline in property value and potential losses for investors holding these assets. • Properties in high-risk coastal areas might experience higher insurance costs as insurers adjust their premiums to account for increased risks associated with rising sea levels and more frequent extreme weather events.
Water stress	• Companies in various industries rely on water for their operations, such as manufacturing and energy production. For those companies that are heavily reliant on water for their production processes, water stress could lead to business and supply chain disruptions, increased operation costs and declined profitability or financial performance.
Extreme heat	• Infrastructures assets such as water supply systems, transportation network, and utilities can face challenges during extreme heat. Higher demand for cooling can strain and potentially leading to blackouts. Water scarcity can impact industries reliant on water resources and disrupt supply chains.
Wildfire	• Wildfire is considered acute physical risk, which is event-driven and result from the growing intensity and frequency of extreme weather conditions. Utility companies, particularly those operating power lines and substations in forested regions, are at risk as wildfires can cause extensive damage to infrastructure. Also, they can cause the wildfire leading to liabilities claims from communities who got impacted.
Drought	• Drought is considered chronic physical risk as it can have significant and lasting impacts on water availability, agriculture, hydro electricity generation etc.

Physical Risk Assessment and Scenario Analysis for Our Listed Equities and Corporate Bonds

We have assessed the physical risks to investee companies which mostly are based in Thailand. We will then use this assessment to engage with investees on their adaptation actions to reduce physical risks.

11
Business sectors in Thailand

- Utilities
- Materials
- Energy
- Consumer Staples
- Industrials
- Real Estate
- Information Technology
- Financials
- Health care
- Consumer Discretionary
- Communication Services

2
Timeframes

2030

2050

9 Climate Hazards in Thailand

Acute
Event-driven

Chronic
Long-term shifts

- Water stress
- Extreme heat
- Extreme cold
- Tropical cyclone
- River flood
- Pluvial flood
- Coastal flood
- Drought
- Wildfire

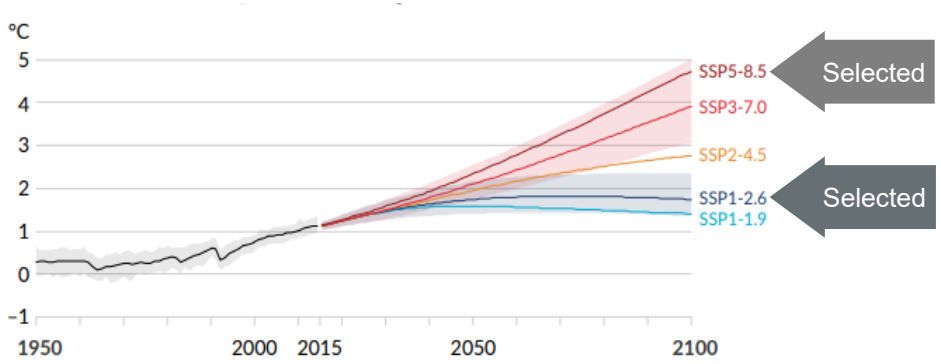
Two scenarios utilized for analysis based on IPCC Shared Socioeconomic Pathway (SSP) and Representative Conentration Pathway (RCP scenarios) and offering annualized decadal averages for all hazards from the 2020s to the 2090s

- **SSP1-2.6:** a low emissions scenario that stays below 2°C warming by 2100, aligned to current commitments under the Paris Agreement.
- **SSP5-8.5:** a high emissions scenario, which follows a 'business as usual' trajectory, assuming no additional climate policy and seeing CO_2 emissions triple by 2100. The selection of this scenario follows TCFD guidance to assess **stressed exposure** to physical climate change risks.

By using two scenarios, we can understand a broader range of potential risks to investees.

	IPCC AR6 Scenario	Best estimate temperature by 2100
Selected	**SSP1-2.6**	**1.3-2.4**°C
	SSP2-4.5	2.1-3.5°C
	SSP3-7.0	2.8-4.6°C
Selected	**SSP5-8.5**	**3.3-5.7°C**

Global surface temperature change under SSP scenarios



Source: IPCC ARG WGI Summary For Policymakers

Data as of December 31, 2024, the analysis using S&P Global Sustainable1 - from Climate and Impact Analytics, S&P Global Market Intelligence

Summary of Physical Risk and Financial Impact Assessment of Investee Companies (Listed Equities and Corporate Bonds)

- We applied database and tools from S&P Global Market Intelligence to analyse physical risks and financial impact of investee companies in our portfolios, where Thai companies accounts for majority of exposure under analysis.

- **Physical risks:**

  - From our assessment, water stress, extreme heat, pluvial flood and drought are the top hazards that potentially have impact to our investee companies across all scenarios (high, low) and time horizons (2030 and 2050). However, physical risks from extreme heat will be more pronounced in 2050 than in 2030 while water stress will likely to pose risks from 2030 onwards across all sectors and scenarios.
  - Financial sector is projected to be the most resilience across scenarios and timeframe for all hazards

- **Financial impacts from physical risks:**

  - Financial impact is quantified as the projected financial costs associated with changing climate hazard exposure and expressed as a % of The asset value
  - Company level financial impact composite represents the weighted average of the asset level financial cost metric for all known assets owned by the Company and its subsidiaries (based on assumed asset value). Financial impact composite represents the additional financial cost for company's all known assets' underlying value.
  - Highest composite financial impact under 2030&2050 time horizon are projected to be in materials, communication services and energy sectors. However, if looking at risk from each hazard, materials sector and energy are prone to water stress hazard and Information Technology are prone to extreme heat. More detailed analysis are in the page 24-28.

Sector	Low Scenario	High Scenario
Materials	Water stress	Water stress
Energy	Water stress	Water stress
Communication Services	Extreme heat	Extreme heat

Data as of December 31, 2024, the analysis using S&P Global Sustainable1 - from Climate and Impact Analytics, S&P Global Market Intelligence

Physical Risk Heatmaps by Each Hazard - Low Scenario

Under low scenario, water stress, extreme heat, pluvial flood and drought are the highest risk hazards whereas extreme heat will likely be pronounced in 2050

Physical Risk Heatmaps by Each Hazard - High Scenario

For 2030 time horizon, under the high scenario, water stress, extreme heat, pluvial flood and drought are still the highest risk hazards whereas extreme heat and drought will likely be more pronounced in 2050

Data as of December 31, 2024, the analysis using S&P Global Sustainable1 - from Climate and Impact Analytics, S&P Global Market Intelligence

Financial Impact by Each Hazard - Low Scenario

Year: 2030 | 2050 — Scenario: High | Low | Medium

GICS Sector Name	Composite	Coastal Flood	Drought	Extreme Heat	Fluvial Flood	Pluvial Flood	Tropical Cyclone	Water Stress	Wildfire
Communication Services	4.30	0.00	0.59	2.22	0.01	0.19	0.00	1.27	0.01
Consumer Discretionary	1.78	0.00	0.00	1.58	0.01	0.18	-0.01	0.00	0.02
Consumer Staples	2.69	0.00	0.01	2.19	0.14	0.17	0.01	0.15	0.03
Energy	3.51	0.00	0.15	0.48	0.01	0.15	-0.01	2.73	0.01
Financials	2.02	0.00	0.02	1.76	0.01	0.19	0.00	0.00	0.02
Health Care	1.62	0.00	0.00	1.38	0.01	0.20	0.00	0.00	0.02
Industrials	0.50	0.00	0.02	0.38	0.00	0.09	0.00	0.00	0.00
Information Technology	2.12	0.00	0.04	1.82	0.02	0.21	0.01	0.00	0.03
Materials	4.43	0.00	0.09	0.65	0.02	0.16	-0.02	3.50	0.05
Real Estate	1.52	0.00	0.03	0.92	0.01	0.14	0.00	0.38	0.03
Utilities	2.56	0.00	0.16	0.45	0.01	0.16	0.00	1.77	0.02

Under low scenario, highest financial impact composite under 2030 time horizon are projected to be **materials sector** (4.4% of asset value) while **water stress risk contributed the majority** (3.5%)

Year: 2030 | 2050 — Scenario: High | Low | Medium

GICS Sector Name	Composite	Coastal Flood	Drought	Extreme Heat	Fluvial Flood	Pluvial Flood	Tropical Cyclone	Water Stress	Wildfire
Communication Services	4.63	0.00	0.82	2.70	0.01	0.23	0.00	0.84	0.02
Consumer Discretionary	2.16	0.01	0.00	1.91	0.01	0.22	-0.01	0.00	0.03
Consumer Staples	3.22	0.01	0.01	2.65	0.14	0.21	0.01	0.15	0.04
Energy	3.65	0.00	0.20	0.57	0.01	0.18	-0.02	2.68	0.02
Financials	2.47	0.01	0.03	2.14	0.02	0.23	0.00	0.00	0.04
Health Care	1.97	0.00	0.00	1.67	0.01	0.24	0.00	0.00	0.04
Industrials	0.61	0.00	0.03	0.46	0.00	0.11	0.00	0.00	0.01
Information Technology	2.60	0.00	0.07	2.21	0.03	0.25	0.00	0.00	0.03
Materials	6.23	0.00	0.13	0.77	0.02	0.19	-0.03	5.09	0.06
Real Estate	1.78	0.00	0.05	1.11	0.01	0.18	0.00	0.40	0.04
Utilities	2.77	0.00	0.23	0.55	0.02	0.19	0.00	1.77	0.03

Under low scenario, highest financial impact composite under 2050 time horizon are projected to be **materials sector** (6.2% of asset value) while **water stress risk contributed the majority** (5.1%)

Financial Impact by Each Hazard - High Scenario

Year: 2030 | 2050 — Scenario: High | Low | Medium

GICS Sector Name	Composite	Coastal Flood	Drought	Extreme Heat	Fluvial Flood	Pluvial Flood	Tropical Cyclone	Water Stress	Wildfire
Communication Services	4.52	0.00	0.68	2.32	0.01	0.20	0.00	1.27	0.01
Consumer Discretionary	1.93	0.00	0.00	1.71	0.01	0.19	-0.01	0.00	0.03
Consumer Staples	2.85	0.00	0.01	2.33	0.14	0.19	0.01	0.15	0.04
Energy	3.66	0.00	0.17	0.52	0.01	0.16	-0.02	2.80	0.02
Financials	2.13	0.00	0.03	1.85	0.01	0.20	0.00	0.00	0.03
Health Care	1.70	0.00	0.00	1.45	0.01	0.22	0.00	0.00	0.03
Industrials	0.53	0.00	0.03	0.40	0.00	0.10	0.00	0.00	0.01
Information Technology	2.30	0.00	0.05	1.97	0.03	0.22	0.00	0.00	0.03
Materials	4.52	0.00	0.10	0.71	0.02	0.17	-0.03	3.50	0.05
Real Estate	1.59	0.00	0.04	0.97	0.01	0.16	0.00	0.39	0.03
Utilities	2.63	0.00	0.19	0.48	0.01	0.16	0.00	1.77	0.03

Under high scenario, highest financial impact composite under 2030 time horizon are projected to be **materials** (4.5% of asset value) while **water stress risk contributed the majority** (3.5%) and **communication services** (4.5% of asset value) while **extreme heat risk contributed the majority** (2.3%)

Year: 2030 | 2050 — Scenario: High | Low | Medium

GICS Sector Name	Composite	Coastal Flood	Drought	Extreme Heat	Fluvial Flood	Pluvial Flood	Tropical Cyclone	Water Stress	Wildfire
Communication Services	6.79	0.00	1.41	4.06	0.02	0.36	0.00	0.92	0.03
Consumer Discretionary	3.40	0.01	0.00	3.01	0.01	0.34	-0.02	0.00	0.05
Consumer Staples	4.55	0.01	0.01	3.83	0.15	0.33	0.00	0.15	0.07
Energy	4.24	0.01	0.35	0.87	0.01	0.28	-0.02	2.72	0.03
Financials	3.73	0.01	0.05	3.23	0.02	0.36	0.00	0.00	0.06
Health Care	3.01	0.00	0.00	2.56	0.01	0.38	0.00	0.00	0.07
Industrials	0.94	0.00	0.04	0.70	0.00	0.17	0.00	0.00	0.03
Information Technology	3.89	0.00	0.16	3.24	0.05	0.38	0.00	0.00	0.06
Materials	6.85	0.01	0.22	1.17	0.03	0.29	-0.05	5.09	0.10
Real Estate	2.54	0.00	0.09	1.71	0.02	0.27	0.00	0.40	0.06
Utilities	3.36	0.00	0.40	0.83	0.02	0.29	0.00	1.77	0.04

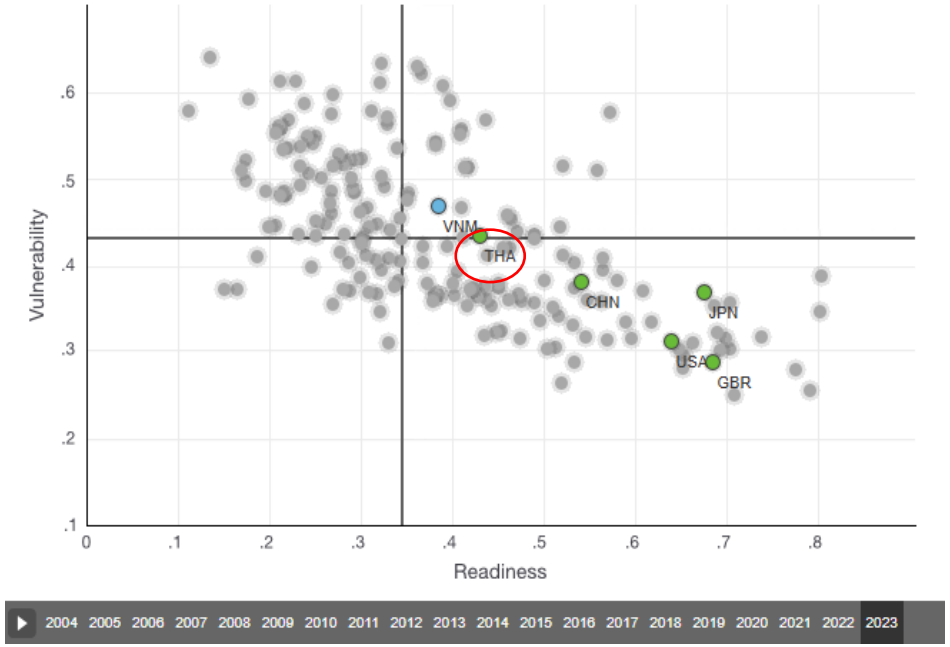
Under high scenario, highest financial impact composite under 2050 time horizon are projected to be materials (6.9% of asset value) while **water stress risk contributed the majority** (5.1%)

Assessment of Thailand's Vulnerability and Readiness to Climate Change and Other Global Challenges

- Given our exposure are mainly in Thailand. We have looked at ND-GAIN country index as overview assessment of Thailand's vulnerability and readiness to negative effects of climate change and other global challenges.
- **The ND-GAIN Country Index** summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. It aims to help governments, businesses and communities better prioritize investments for a more efficient response to the immediate global challenges ahead.
- A country's ND-GAIN index score is composed of a vulnerability and readiness scores.
    - **Vulnerability** measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. Considering 6 life-supporting sectors which are:-
      food, water, health, ecosystem service, human habitat and infrastructure.
    - **Readiness** measures a country's ability to leverage investment and convert them to adaptation actions. Considering 3 components which are Economic readiness, Governance readiness and Social readiness
- Thailand is ranked 75/187 most ready country and ranked 103/187 for most vulnerable country
- The low vulnerability score and high readiness score of Thailand places it in the lower-right quadrant of ND-GAIN matrix means Thailand is well positioned to adapt. Though less vulnerable, it still face some adaptation challenges.

Thailand's ND-GAIN Index

Country	Income group	Score
Thailand	Upper middle	49.9 Rank 80/187



*Rank in 2023, Year 2023 is the most recent assessment available

Source: ND-GAIN, Notre Dame Global Adaptation Initiative

Strategy

B. The impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning

- In the beginning stage, majority of our climate related strategy is done through our ESG integration process where climate risks and opportunities assessment is one of the key factors to conformed investment decision making for our investment portfolios. We believe that the asset manager role to help a transition to a lower carbon economy can be through our investee companies. By doing so, we emphasize more effective stewardship activities such as company engagements and proxy voting.

- We aim to expand our climate-related product solution and increase climate information disclosure at the product level for clients and their awareness with regard to the likely impact of climate change.

- In September 2023, we have established a Sustainable Development Committee to better manage and drive ESG and climate-related risks and opportunities more effectively.

- We have been in the process to develop tools to evaluate investee companies on ESG and Climate risk and opportunities for both issuers level and portfolio level. We are still exploring to quantify impact of climate-related risks on our investee's financials, and how the investee financials would affect investment performance. In order to integrate climate-related risks and opportunities into our investment strategy we look at materiality metrics of climate risks and decide what to integrate it into our investment strategy. The two key metrics we consider to develop to integrate into our overall investment strategy are:

  1. Economic emissions intensity**:** tCO2e/million USD in AUM
  2. Portfolio temperature alignment: We noted that as the methodology to assess Implied Temperature Rise (ITR) is still evolving and there are many different model assumptions among external providers and could create different results, our objective at this stage is to the metric can help us form necessary decisions/actions to manage a portfolio towards our climate target. It could help setting up engagement strategy with the investee companies on their respective alignment path towards net zero target and leverage the data in order to better understand on rationale and outcome.

Strategy

B. The impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning (cont.)

- As an asset manager, we will continuously adapting our portfolio to client needs (for example, if more clients are requesting climate themed products, then we will consider to develop more climate themed products) and direction of the market (both climate related and non-climate related impacts to investee financial performance). As climate change is usually a gradual trend, we believe we can adapt our investment strategies and products quickly enough to avoid most climate-related risks in our AUM.

- Given climate change has become a part of our investment risk management, we have been exploring the appropriate framework to plan our decarbonisation strategy for our investment portfolios and also our own operations to achieve net zero for Scope 1 and 2 by 2030 and net zero for AUM emission at least by 2065 in line with Thailand's commitment or accelerating the path when possible.

- KAsset financial projection and budget planning has factored in revenue sensitivity from client inflows according to potential shift in product demand and capital expenditure or expenses for research and study including developing tools and enhance investment professional skills to assess climate risks and opportunities of our investee companies at portfolio management levels as well as our own operation.

ESG Integration Process at KAsset

Major part of our climate-related strategy is done through our ESG integration process

Environmental

KAsset aims to support a sustainable and low carbon economy transition. We measure and assess our investee companies on their ability to control direct and indirect environmental impact as well as seek new opportunities that may arise. Our main area of focus are such as:-

- Greenhouse gas emissions
- Pollution
- Waste management
- Energy efficiency
- Climate risk
- Biodiversity

Social

We focus on how companies managing their human capital, establish their social goals and measuring social impact, considerations area are such as:-

- Child Labor
- Discrimination in respect of employment and occupation
- Diversity, equity and inclusion
- Human rights
- Employee health and safety
- Community responsibility
- Responsible production and consumption

Governance

Our approach to corporate governance and proxy voting are based on corporate governance principles listed below:-

- Integrity
- Transparency
- Independence
- Responsibility
- Accountability
- Fairness

Exclusionary guideline: Companies that involves in businesses that consider high carbon emission such as coal mining, coal-based electricity, fossil fuel will be closely monitored the development of the company' strategies to achieve a transition toward a low or net-zero carbon emission target.

Stewardship Activities

Climate-related Issues are also embedded in our stewardship activities

Prioritization of engagement topics

Engagement topics may vary upon circumstances/incidents and materiality of business that each company operates in. However, we have identified priority on ESG engagement topics that considered as common among investee companies across sectors but potentially have high impact on most of investee companies' performance:-

1. Climate Change and natural sustainability
2. Human capital
3. Company strategy, purpose and resilience
4. Board quality

Proxy Voting

We believe that proxy voting is an integral aspect of investment management and help navigating long term interests and business direction of our investee companies. Our internal proxy voting policy is also embedded guideline on ESG and climate change perspective. Given most of our direct investments are in Thailand, the practice of shareholder proposals for specific topics such as ESG or climate issues are not yet common, we expect to see the positive progress in terms of practice in the future. Our proxy voting policy is reviewed on a regular basis to ensure that KAsset votes proxies prudently and in the best interest of its clients as well as to incorporate the latest issues deem appropriate.

Strategy

c. The resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

Company operation

- Study and prepare for the potential impact from climate change on operational business according to time horizon including budget provisioning
- Exercise business continuity practice by incorporating climate impact to cope with business change or disruption

Investment

- Integration through investment process:
  - We are assessing our portfolio climate risks exposure and resilience as the insight for our fund managers and analysts a guidance to assess investee companies and approach for engagements. We consider factors that are material to our investee financial returns and identify high risk investees and engage them according to priorities.
  - Encourage investee companies to provide climate related disclosure and strategy in order for better understanding and assessment
  - Develop tools and investment capability to assess climate-related risks and opportunities
- Scenario analysis
  - We did analysis on impact of carbon price impact on corporate bonds and listed equity investees for their unpriced carbon cost on % EBITDA margin across three scenarios*. The results show that Utilities sector are most affected followed by material and energy sectors and the impact is increasing over the time horizon (see analysis on page 19)
- Portfolio Temperature Alignment**
  - The temperature alignment of our aggregated corporate bonds and listed equity investments ** was at 3.79°C. However, the temperature alignment of our aggregated Thai listed equities portfolio was at 2.87°C which is slightly higher than with SET50 Index at 2.80°C and SET100 Index at 2.54°C.
  - The result shows that approx. 26% of our aggregated corporate bonds and listed equities portfolio weight was aligned to 2°C or less (see analysis on page 34).
- From our overall assessment, utilities, materials and energy sectors are our priorities to monitor their de-carbonization plans which consider important for our strategy on lowering AUM emission path.

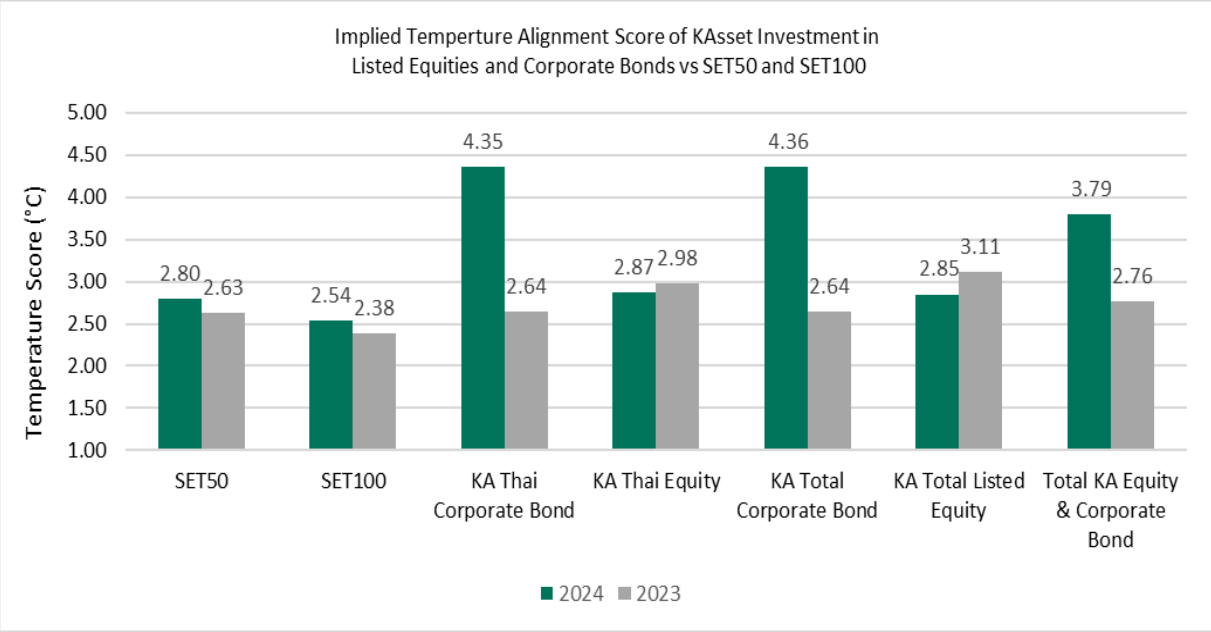
* Scenario definitions are defined in page 19
** Total Portfolio weighted average for both corporate bonds and listed equity investment as of December 31, 2024

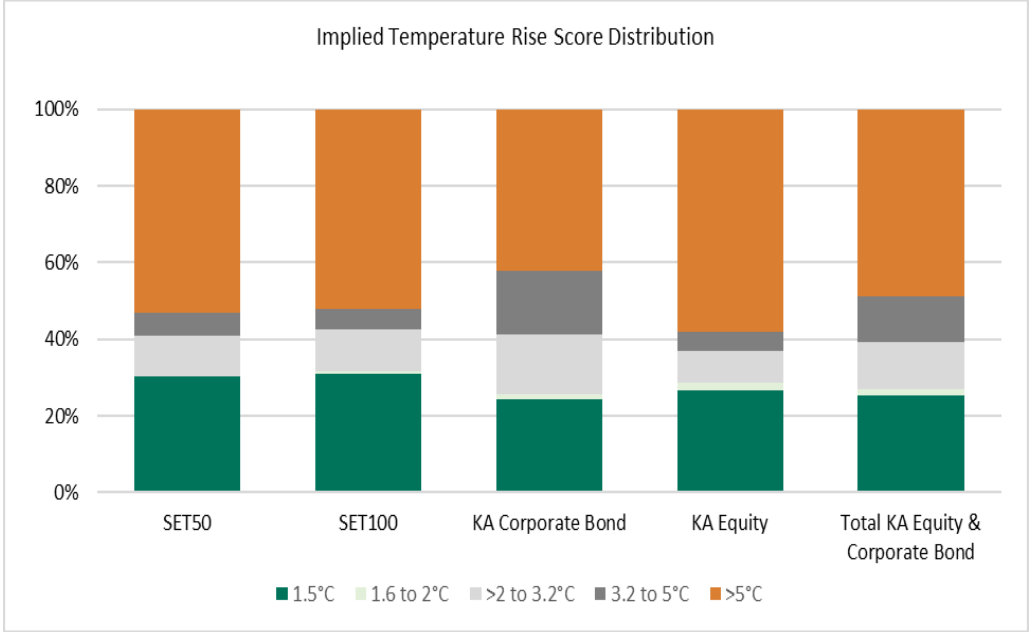
Portfolio Temperature Alignment

To measure the alignment of our portfolio investment towards net zero target AUM emissions goal

We utilized data from S&P Global Market Intelligence for Implied Temperature Rise (ITR) score* which is based on investee GHG historical emissions, targets and their alignment against a 2°C benchmark and analysed by S&P Trucost methodology where companies' emission data are not available, estimation will be applied based on the S&P Trucost assumptions and methodology. Our aggregated listed equities and corporate bonds portfolio alignment was at 3.79°C, higher than SET50 and SET100 Indexes which were at 2.80°C and 2.54°C respectively. The aggregated portfolio ITR in 2024 was higher than 2023 was partly due to corporate bond investment portfolio that had exposure tilted towards certain utilities and energy names which have relatively higher carbon emission over the allocated carbon budget which we will keep closely monitoring on their de-carbonisation strategies.

As for implied temperature rise score attribution, only 26% weight of our aggregated portfolio for both bonds and equities are aligned to 2°C or less, while over 49% weight exposure are >5°C. We will continue to monitor our portfolio temperature alignment and combined with the findings from risk assessment and scenario analysis, we have identified key sectors such as utilities and energy where we need to monitor our investee's de-carbonization plan.

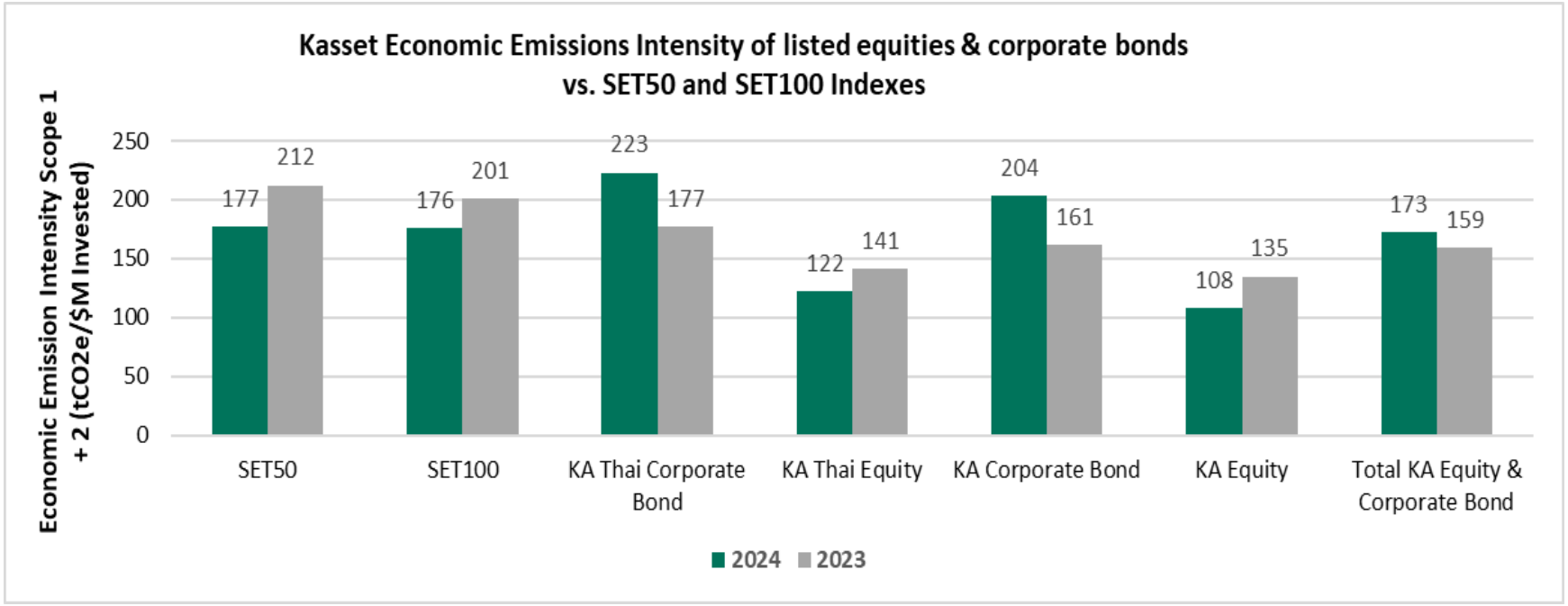




* Source : Trucost Paris Alignment, Climate and Impact Analytics, S&P Global Market Intelligence

Economic Emission Intensity of Listed Equities & Corporate Bonds vs. SET50 and SET100 indexes

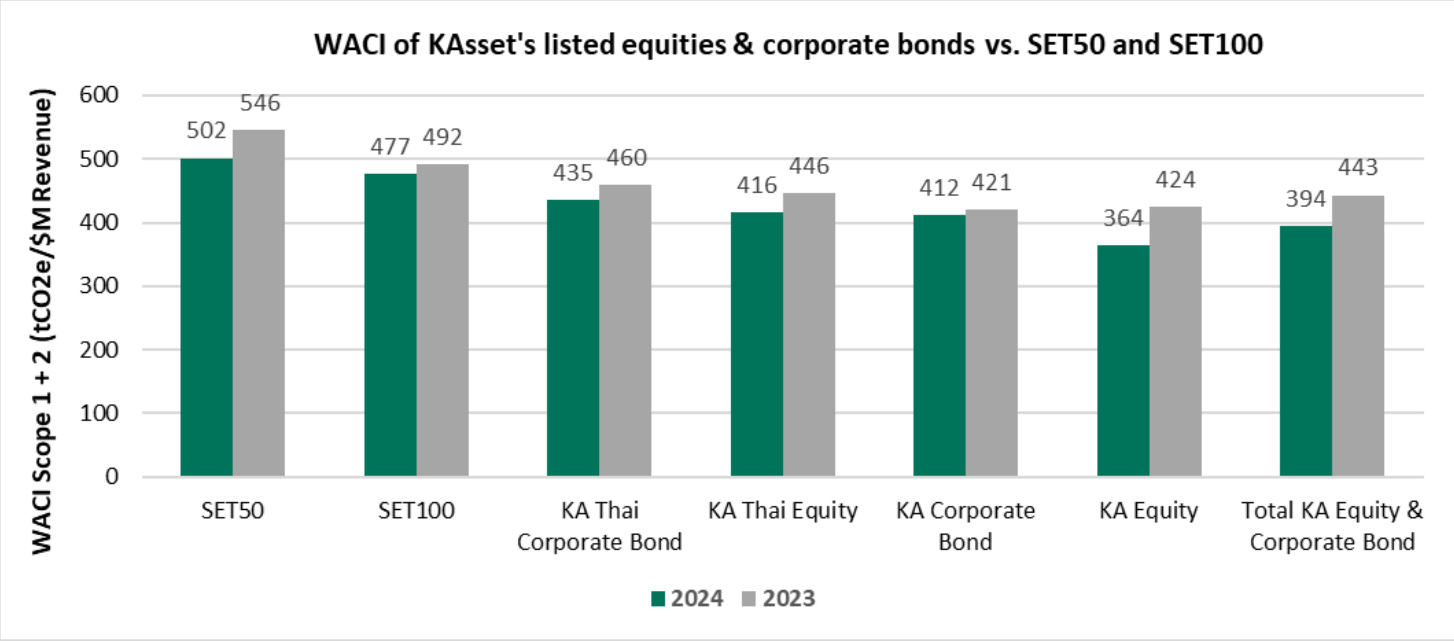
As for the Economic Emission Intensity (EEI), or the amount of emissions per value invested, in 2024 KAsset' s equity portfolio had lower EEI than in 2023 which was the same trend as the index benchmark. However, the bond portfolio's EEI in 2024 was higher than last year due to the higher exposure in few companies in utilities and energy sectors. This has caused the EEI of aggregated portfolio of bonds and equities in 2024 slightly higher than 2023.



Weighted Average Carbon Intensity (WACI) of Listed Equities & Corporate Bonds vs. SET50 and SET100 Indexes

We have conducted an analysis of the Weighted Average Carbon Intensity (WACI) which uses revenue to normalize emissions for our various aggregated portfolios. We also analyzed WACI for SET50 and SET100 Indexes for reference since the majority of our investment in listed equities and corporate bonds are in Thailand. The SET50 exhibited the highest WACI at 502 tCO2e per million USD of revenue, closely followed by the SET100 with a WACI of 477 tCO2e per million USD of revenue whereas KAsset's total equity and corporate bonds, had a lower WACI, standing at approximately 394 tCO2e per million USD of revenue.

Furthermore, when examining KAsset's investments in Thai listed equities and Thai corporate bonds individually, they displayed similar WACI values. Specifically, the Thai listed equities had a WACI of 416 tCO2e per million USD of revenue, while the Thai corporate bonds exhibited a WACI of 412 tCO2e per million USD of revenue.



Risk Management

Photo by: Matthew Henry, Burst

Risk Management

a. The organization's processes for identifying and assessing climate-related risks

- Climate-related risks and opportunities are assessed by our investment professional team which being first identified by sector level and drill down to investee company level according to materiality.
- Both transition and physical risks are assessed according to time horizon in order to take into account for investment consideration.
- Risk team helps monitoring the related indicators. Climate risk is included within overall risk management framework.
- Continue developing portfolio and risk management tools and capabilities to be able to assess climate-related risks and opportunities more effectively

b. Describe the organization's processes for managing climate-related risks

- Our climate risk governance starts from Board oversight level and delegates to all related committees such as Sustainable Development Committee, Investment Risk Management Committee and Sub Investment Committee etc
- Climate-related risks are integrated into both company strategy planning and investment strategy for portfolio under management
- Three line of defense 1) investment team 2) risk management and compliance teams 3) audit team

c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

- ESG and Climate Change Risk policy is set as a guidance/framework for overall organization risk management. ESG and Climate-related risks can add on impact from other existing risks such as investment risk, regulatory risk, operation risk etc.
- Risk management is responsible for monitoring climate risk related indicators and portfolio exposure
- Sustainable Development Committee is responsible for overseeing climate related issues for both company operation and investment portfolios and may delegate to sub investment committee for investment portfolios.

Photo by: Şahin Sezer Dinçer, Burst

Metrics and Targets

Metrics

a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process

Company operation

Our Scope 1, 2 and 3 emissions are calculated in line with GHG Protocol Corporate Accounting and Reporting Standard. Our net zero target are applied only Scope 1 and Scope 2 as there is limited information disclosure and appropriate methodology for scope 3 currently. We will continue monitor and update the progress.

Investment management

Currently, we evaluate climate related risks and opportunities based on investee companies' materiality metrics and their scope 1 and 2 emissions. We are currently studying the appropriate tools, metrics and methodology to evaluate investee companies on climate risks and opportunities for both issuers and portfolio level more effectively and to quantify impact of climate-related risks on our investee's financials, and how it would affect investment performance.

Emissions calculation metrics

Key Metrics	Units
Assets Under Management (AUM)	Million USD
Assets Under Management (AUM) Emissions	tCO2e
Total GHG Emissions	tCO2e
Economic Emission Intensity	tCO2e/million USD Invested (EVIC Based or Total debt + Total Equity for bonds)
Weighted Average Carbon Intensity	tCO2e/million USD Investee Revenue
PCAF data quality score	1-5 (High to Low)
Temperature Alignment	Implied temperature rise refers to the projected increase in global temperatures based on current and future greenhouse gas emissions before pre-industrial level by 2100

Greenhouse Gas Related Metrics for KAsset Scope 1, 2 and 3 for Own Operation Including Methodologies and Standards Used in Our Assessment

Key Metrics	Definition
Direct GHG Emissions (Scope 1 – tCO2e)	Direct emission from fuel usage in KAsset's vehicle fleet
Indirect GHG Emissions (Scope 2 – tCO2e)	Indirect emissions from power plants that supplied electricity to the grid. Electricity purchased from grid by KAsset for use in office operations
Other relevant direct GHG Emissions (Scope 3 – tCO2e)	Indirect emissions from suppliers and vendors related to KAsset's annual spending. KAsset does not have any downstream emissions, apart from Category 15 Investments, as we do not sell any physical products to customers.
Tonnes CO_2 Equivalent (tCO2e)	This metric combines the mass of CO_2 as well as the other six greenhouse gases (CH_4, N_2O, HFCs, PFCs, SF_6, NF_3).

Methodologies and Standards for Greenhouse Gas Quantification

1. Kasikornbank Environmental/Climate Data Tool
2. IPCC Guidelines for National Greenhouse Gas Inventories
3. Thailand Greenhouse Gas Management Organization: The National Guideline Carbon Footprint for organization
4. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Metrics

b. Disclose Scope1, 2, 3 GHG emissions and the related risks

The total GHG emissions by scope within KAsset boundary are as follows:-

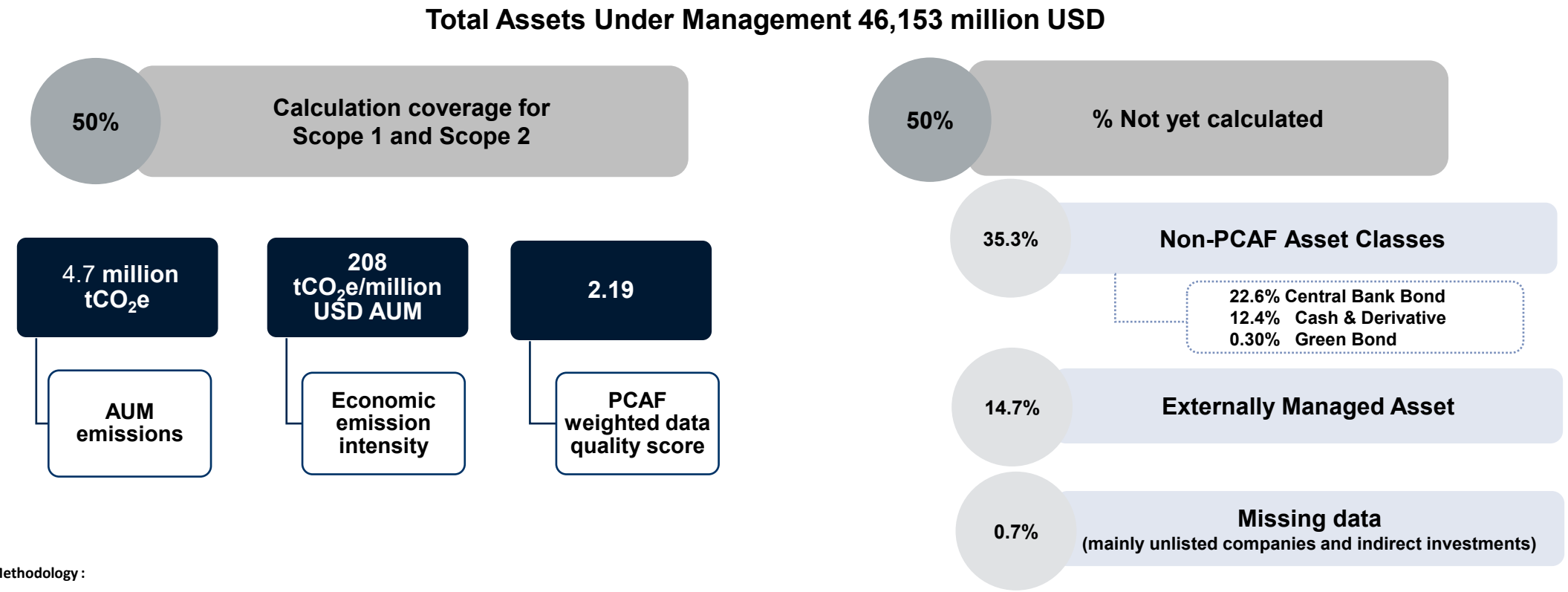
GHG Categories	GHG Categories Name	Unit	CY 2024 as based year 01 Jan - 31 Dec 2024	CY 2023 as based year 01 Jan - 31 Dec 2023
Scope 1				
	Fleet	tCO2e	17	20
Scope 2				
	Purchased Electricity (location based)	tCO2e	112	110
	Purchased Electricity (Market based)	tCO2e	0	0
Total Scope 1 & 2 (Market based only)		**tCO2e**	**17**	**20**
Total Scope 1 & 2 (Market based only) emission intensity		**tCO2e/ FTE**	**0.05**	**0.05**
	Full Time Employee (FTE)	FTE	328	372
Scope 3				
Category1	Purchased Goods & Services	tCO2e	797	1273
Category2	Capital Goods	tCO2e	747	112
Category3	Fuel and Energy-related activities (Not incl. in Scope 1 & 2)	tCO2e	35	38
Category4	Upstream Transportation and Distribution	tCO2e	38	38
Category 5	Waste Generated in Operations	tCO2e	3	16
Category6	Business Travel	tCO2e	131	181
Category7	Employee Commuting	tCO2e	244	318
Category8	Upstream Leased Assets	tCO2e	11	11
Category13	Downstream Leased Assets	tCO2e	12	12
Category 15	Investments	tCO2e	21	22
Total Scope 3		**tCO2e**	**2,039**	**2,022**

***** Scope 2 market based was offset by Purchasing Renewable Energy Certificates (RECs) 230 MWh Solar source vintage (Electricity Usage).

- **Scope 3 (excluding AUM emissions) contributes the largest emissions** where the top 3 significant sources of emissions are capital goods, purchased goods and services and employee commuting which is in line with industry norms.
- The lower emission of Scope 3 – cat 1 in 2024 vs 2023 due to the lower overall operating expenses while higher number cat 2 in 2024 was due to replacement of computer/laptops.

Assets Under Management Emissions

Of the total AUM value USD 46.15 bn, our emission calculation coverage is 50% as the remaining 50% of AUM are externally managed asset and non-PCAF asset classes such as central bank bonds, deposits, derivatives and green bonds. Our total AUM emission is 4.7 million tCO_2e with economic emission intensity of 208 tCO_2e/million per USD AUM. The weighted data quality score is 2.19



Methodology :

- Asset Under Management (AUM) calculation is as of December 31, 2024
- Data for emissions covers only Scope 1 and 2
- Financed emissions methodology follows PCAF Global GHG Standard Part A
- As per PCAF guidelines, the calculated emissions covers only assets that generate emissions
- AUM emissions reporting follows IFRS S2 Appendix B61—Asset Management
- The exposure to central bank bonds are not within the scope of the PCAF accounting standard Country emissions
- for sovereign bonds from Trucost Territorial emissions exclude LULUCF (data quality score 2)
- Green bonds are excluded due to the absence of a PCAF method for calculating emissions associated with green bonds
- Investee companies financial data as of FY2024 or latest available were extracted from S&P Global Global Market Intelligence
- Investee companies Scope 1 and 2 data were extracted from S&P Global Market Intelligence
- If investee company data is not available, emissions were calculated based on company revenue multiplied by Trucost's EEIO direct emission factors (data quality score 4)

Details of AUM Emissions Metrics Breakdown by Asset Class and Sectors

Asset	Calculated AUM ($M)			Financed Emissions Scope 1 + 2 (tCO2e)			Scope 3 Emissions (tCO2e)			Weight data quality score (Score 1 = High to 5 = Low)			WACI Scope 1 + 2 (tCO2e/$M Revenue)			Economic Emission Intensity Scope 1 + 2 (tCO2e/$M Invested)		
	2024	2023	%Chg.	2024	2023	%Chg.	2024	2023	%Chg.	2024	2023	%Chg.	2024	2023	%Chg.	2024	2023	%Chg.
Corporate Bonds	9,056	10,023	-10%	1,907,682	1,617,279	18%	5,810,619	3,758,337	55%	2.57	2.11	-22%	412	421	-2%	204	161	26%
Listed Equities	5,342	6,141	-13%	580,529	827,532	-30%	2,121,712	2,245,847	-6%	1.89	1.82	-4%	364	424	-14%	108	135	-20%
*Sovereign Bonds	8,307	7,152	16%	2,236,680	1,986,028	13%	-	-		2.00	2.00		-	-		269	278	-3%
Total	**22,705**	**23,315**	**-3%**	**4,724,891**	**4,430,839**	**7%**	**7,932,332**	**6,004,184**	**32%**	**2.19**	**2.00**	**-9%**	**394**	**422**	**-7%**	**208**	**190**	**10%**

Corporate issuer (Equities + Bonds) as of YE2024

GICS Sector Name	Calculated AUM ($M)	Financed Emissions Scope 1 + 2 (tCO2e)	Scope 3 Emissions (tCO2e)	weight data quality score	WACI Scope 1 + 2 (tCO2e/$M Revenue)	Economic Emission Intensity Scope 1 + 2 (tCO2e/$M Invested)
Communication Services	773	30,451	12,555	1.37	114	39
Consumer Discretionary	720	33,786	337,882	1.69	86	47
Consumer Staples	2,612	351,322	628,603	1.73	171	134
Energy	889	452,282	4,498,402	2.13	602	509
Financials	4,307	9,754	880,497	2.58	9	2
Health Care	280	4,201	4,355	1.36	57	15
Industrials	680	46,350	60,290	3.51	223	68
Information Technology	305	6,149	19,059	1.77	39	20
Materials	787	644,890	1,017,816	2.90	847	820
Real Estate	2,068	44,897	411,738	3.09	119	22
Utilities	976	864,128	61,135	1.73	3491	885
Total	**14,398**	**2,488,211**	**7,932,332**	**2.32**	**394**	**173**

Aggregated Listed Equities and Corporate Bonds Breakdown by Scope (as of YE2024)

	Scope 1 (tCO2e)	Scope 2 (tCO2e)	Scope 3 (tCO2e)
Absolute Emission	2,145,956	342,287	7,932,442
AUM Calculated	14,398	14,398	14,398
Carbon Intensity (tCO2e/$M AUM)	149	24	551

Basis of Calculation

- GHG data are used data sourced from S&P Global Market Intelligence based on recent data but mostly are FY2023. Companies without reported GHG Scope 1 or 2 or 3 are estimated by S&P Trucost methodology
- Companies that are not classified by GICS are using mapping sector for proxies
- AUM data as of December 31, 2024.
- Investee companies financial data is as of actual FY2024 or latest available from Trucost Financial
- All calculation are PCAF aligned
- Data Quality Score followed Trucost disclosure flag according to S&P Trucost PCAF aligned documentation
- For multiple data quality score given by S&P Trucost, the worst of Scope 1 & Scope 2 was taken as data quality score
- The currency conversion rate used is 1 USD = 34.08 THB
- GHG data of Y2023 was restated using the current calculation methodology for percentage change YoY comparison
- Sovereign bonds exclude central bank bonds for monetary operation

Metrics and Targets

c. Describe targets used by the organization to manage climate-related risks and opportunities and performance against targets

Emission Target:

Plans	Actions
Scope 1: Fleet	Replace fuel vehicles with EV vehicles to eliminate tailpipe emissions.
Scope 2: Purchased electricity	To consider purchasing Renewable Electricity Certification (REC)
Target net zero for Scope 1 +2 by 2030	In line with Kasikornbank target
Scope 3:	No target set but will continue to monitor emissions and make reductions where possible
Target Net Zero for AUM emission by 2065	In line with Thailand National Target or accelerating this journey where possible

Photo by: Sarah Pflug, Burst

Appendix

Definition of Assets Under Management GHG Metrics

Key Metrics	Units	Definition	Equation
Assets Under Management (AUM)	Million USD	This includes our entire portfolio, including direct investments where KAsset invests in an investee on behalf of the client, as well indirect investments where KAsset invests in a fund managed by a third-party manager.	$\sum_{i=1}^{X} \text{Market value of investment}_i$
Assets Under Management (AUM) emissions	tCO_2e	Scope 1+2 emissions of investees, allocated to KAsset based on the amount of investment by KAsset divided by total value of the investee country or company. The emissions are reported separately from Scope 1, 2 and 3, as the investments are our client's money. This means investee emissions are our client's Scope 3, not KAsset's. For KAsset's emissions from KAsset's investments please see page 44, Scope 3 Category 15 Investments. Attribution factor: Listed companies using EVIC Based Corporate bonds using total debt + total equity	**Listed equity and corporate bonds** $\text{Attribution factor} = \frac{\text{Market value of investment in investee (USD)}}{\text{Enterprice Value including cash (USD)}}$ $\text{Financed emissions} = \sum_{C=1}^{X} \text{Attribution factor}_C \times \text{investee emissions}_C$ **Sovereign debt** $\text{Attribution factor} = \frac{\text{Market value of investment in investee (USD)}}{\text{PPP} - \text{adjusted GDP (international USD)}}$ $\text{Financed emissions} = \sum_{C=1}^{X} \text{Attribution factor}_C \times \text{Sovereign emissions}_C$
Economic Emission intensity	tCO2e/million USD Invested	Total emissions divided by AUM that were included in calculation of emissions, excluding AUM that does not fall under PCAF, AUM of indirect investment, AUM where data was missing from investees.	$\textbf{Economic Emissions Intensity} = \frac{\text{Total AUM emissions}}{\text{Total AUM value} - \text{AUM of non} - \text{PCAF asset classes} - \text{AUM where investee data is missing} - \text{AUM of Indirect Investment}}$
Weighted Average Carbon Intensity	tCO2e/million USD Investee Revenue	Total investee company emissions (listed equity and corporate bonds only) per investee revenue, weighted by value of investment.	$\sum_{C=1}^{X} \frac{\text{current value of investment}_C}{\text{current portfolio value}} \times \frac{\text{investee Scope 1 and 2}_C}{\text{issuers USD million revenue}_C}$
PCAF data quality score	N/A	PCAF score is a score from 1 (highest quality) to 5 (lowest quality) that varies from asset class to asset class. Our sovereign debt investments are all Scored 1 as we have access to each country's emissions. Our listed equity and corporate bonds are scored as either 2 (investee GHG data was provided by Refinitiv) or 4 (investee GHG estimated based on revenue and sectoral GHG emissions sourced from USEEIO V2.0).	$\textbf{PCAFdata quality score} = \frac{\sum_{i=1}^{X} \text{Market value of investment}_i \times \text{Data quality score}_i}{\sum_{i=1}^{X} \text{Market value of investment included in calculation of AUM emissions}_i}$
Implied Temperature Rise	Degrees Celsius	Represents the alignment of corporate investees (not relevant for sovereign investees) to 2 degree Celsius pathway based on the company's targets and S&P Truecost estimates. This metric is derived from S&P Global Market Intelligence	Refer to Truecost Paris Alignment Methodology from S&P Global Market Intelligence