Financing related to the UN Sustainable Development Goals (SDGs) is a focus for Indonesia. New bonds, loans and the region’s first SDG-linked bond, launched in September 2021, aim to promote environmental protection and accelerate socio-economic development.

Investor priorities, market opportunities, risk management and evolving regulations are fuelling demand for sustainable investing. Investors are increasingly applying environmental, social and governance (ESG) metrics to manage risk and identify value-creation opportunities.

Indonesia’s G20 Presidency in 2022 was a platform for the country to spearhead international progress towards ESG-aligned goals. With a focus on the sustainable energy transition, related priorities included a common-ground taxonomy and standardised reporting to better inform investment decisions.

Indonesian companies are increasingly committing to net-zero targets. The urgent need to manage physical and energy transition risks is another opportunity for value preservation and creation for Indonesian companies, including state-owned enterprises (SOEs).

The Green Taxonomy classifies economic activities in order to guide industries and investors to consider how a green transformation can be achieved. It is currently voluntary, and supply- and demand-side factors are supporting implementation. These include capacity-building for financial institutions and evolving consumer demands.

Improved third-party verification is recognised as essential to tackle so-called greenwashing. This looks set to become increasingly important as ESG regulations and disclosure requirements become more stringent, and more companies are obliged to report on ESG metrics within Indonesia and beyond from 2023 onwards.
CONTENT GUIDE

INTRODUCTION
6  SDG financing
7  Access to finance
8  ESG indices
9  Drivers of sustainable investing
10 ESG investment
11 Research partner: PwC
12 PwC thought leaders

G20 & B20
14 Indonesia – international stage
15 ESG infrastructure finance
16 Energy, sustainability, climate

NET ZERO
18 Public sector incorporation
19 Risks: physical & transition
20 International carbon markets
21 ESG value creation
22 Net zero in Indonesia

SUSTAINABLE FINANCE
24 Indonesia’s Green Taxonomy
25 Sustainable finance ecosystem
26 International standards
27 Sustainability assurance
28 Final word from PwC
ESG and access to finance in Indonesia

Indonesian companies are increasingly committing to net zero targets as a driver to deliver sustained outcomes.

Publication in context

Indonesia’s efforts to leverage sustainable finance, aligned with domestic and international development goals, are ongoing. The country’s G20 Presidency in 2022 was an opportunity for the country to steward international socio-economic discussions, with a focus on the energy transition. Indonesian companies are increasingly committing to net zero targets as a path to deliver sustained outcomes while managing climate risk.

Report structure

Introduction: Outlines why the incorporation of ESG principles into decision making can widen access to finance; analyses the region’s ESG-rated indices; and highlights key drivers of sustainable investing.

G20 & B20: Summarises the focus on sustainable development during Indonesia’s G20 Presidency; highlights discussions regarding ESG-aligned infrastructure finance; and outlines the role of the energy transition in climate action.

Net Zero: Highlights the need to manage physical and transition risk; demonstrates the role of a net-zero strategy in unlocking ESG value; and spotlights the adoption of net-zero policies by Indonesian businesses.

Sustainable Finance: Presents the supply- and demand-side factors driving adoption of Indonesia’s Green Taxonomy; summarises International Sustainability Standards Board (ISSB) efforts to develop a comprehensive disclosure framework; and outlines the role of sustainability assurance in support of credible disclosure amid greenwashing concerns.

About the publication

This ESG Intelligence report evaluates the relationship between ESG and access to finance in Indonesia, with ESG metrics increasingly incorporated into corporate decision-making. The publication also includes case studies from PwC Indonesia, the research partner of Oxford Business Group (OBG) for this report. These case studies feature PwC’s contributions to the B20 dialogue forum, and actions to help our clients build trust and deliver sustained outcomes. Readers will also find enclosed thought leadership interviews from the firm.

This marks the second collaborative analysis undertaken by OBG and PwC Indonesia. The first report, published in 2021, examined the country’s digital transformation, investment landscape and climate sustainability.
INTRODUCTION

6  SDG financing
7  Access to finance
8  ESG indices
9  Drivers of sustainable investing
10 ESG investment
11 Research partner: PwC
12 PwC thought leaders
Indonesia continues to unlock financing for the UN SDGs

In 2015 the UN launched 17 integrated SDGs for 2030 designed to end poverty, protect the planet, and enable peace and prosperity.

The UN launched ASSIST in December 2021 in an effort to leverage existing financing and unlock new financing sources for Indonesia’s SDG achievement. The UN collaborates with the government and with local financial institutions, development partners, associations and non-state actors to develop thematic bonds, blended finance instruments and SDG-linked loans.

In September 2021 Indonesia became the first country in South-east Asia to issue an SDG-related bond. The 12-year bond raised $584m, carried a coupon rate of 1.3% and was issued by the Ministry of Finance, in collaboration with the UN Development Programme for technical aspects, including a feasibility study and securities framework. The bond enables the government to finance social and environmental projects and the proceeds must be allocated for the SDG related projects.

The SIO-GFF is an infrastructure investment platform supported by the Asian Development Bank, with a 20-year loan worth $150m, designed to help Indonesia realise its Paris Agreement and SDG commitments. South-east Asia’s first green finance facility, the SIO-GFF comprises four pillars that focus on commercial financing, concessional funds for de-risking, equity funds and project development.

The Indonesian government launched the world’s first green sukuk in 2018. Proceeds from the green sukuk funded projects to mitigate climate change and other initiatives to advance the UN SDGs.

Sources: ADB, UN
Incorporation of ESG principles can widen access to finance because sustainable investors look beyond financial returns

Sustainable finance & ESG
Sustainable finance involves the incorporation of ESG factors into investment decisions. This may include mitigation of the climate crisis, consumer protection and responsible corporate management practices.

ESG ratings can ease access to finance
Investors, funds and financial institutions are increasingly taking the ESG performance of companies into consideration. Companies that demonstrate transparency and good performance on ESG-related matters can achieve higher ESG ratings and consequently enjoy better access to funding. However, it is important to understand that a company can achieve a strong ESG rating even with weak performance in some factors if it is strong in others so investors need to look beyond ratings at the detail of a company’s performance.

ESG investing & analysis
Investors are increasingly applying ESG metrics to manage risk and identify value-creation opportunities. While ESG measurements may not be required for financial disclosures, a growing number of organisations are including ESG disclosures in their annual and sustainability reports. Multiple institutions are working to develop international standards and materiality considerations – which can support the incorporation of ESG into the investment process. Chief among these efforts is the ongoing formation of standards by the ISSB (see slide 26).

- Indonesia’s G20 Presidency gave the country an opportunity to spearhead discussions on global economic governance (see slides 13-16).
- Net-zero targets are increasingly being adopted by Indonesia’s public and private sector organisations (see slides 17-22).
- Sustainable finance principles include responsible investment, sustainable business strategy and practice, and coordination and collaboration (see slides 23-28), according to the Financial Services Authority (OJK).

Sources: CFA; G20 Indonesia 2022; Harvard; OJK; PwC
The region’s ESG-rated indices have performed on a par with peer indices

Indonesia’s sustainability-aligned indices performed in line with heavily traded stocks, 2017-23

- Indonesia Stock Exchange (IDX) Composite: Indeks Harga Saham Gabungan (IHSG)
- Sustainable Responsible Investment – Kehati (SRI-KEHATI)
- LQ45

SRI-KEHATI
Launched in June 2009, this index of 25 listed companies was jointly developed and selected by the Indonesian Biodiversity Foundation (KEHATI Foundation) for good performance in SRI.

In December 2021 the IDX and the KEHATI Foundation launched two new ESG-aligned indices: ESG Sector Leaders IDX KEHATI comprises top sector representatives, based on an above-average ESG score; ESG Quality 45 IDX KEHATI measures the top-45 stocks based on ESG and financial indicators.

SRI-KEHATI was affected considerably from early 2020 until mid-2021 by factors including:
- Drop in share price of a multinational consumer goods company
- Decline in financial and infrastructure sector
- Shift in appetite towards technology until mid-2021

SRI-KEHATI began to recover, aligned with broader economic recovery, from the second half of 2021

LQ45
Index of 45 companies, selected from the top 60 by liquidity traded over the past 12 months.

In November 2022 the IDX launched the IDX LQ45 Low Carbon Leaders Index, which contains companies that seek to reduce their carbon intensity by 50% compared to LQ45.

IDX ESG Leaders (IDXESGL)
Launched in December 2020, this index comprises 15-30 constituents from the IDX80 with low ESG risk ratings.

Sources: EY; IDX; Investing; KEHATI; Legal Centric; Morningstar; PwC; Refinitiv; SET

Some of Asia’s ESG-rated indices have delivered higher returns than non-ESG counterparts over recent years

- 4% outperformance of the Singapore Exchange’s ESG Leaders Index compared to Straits Times Index, which tracks the performance of the bourse’s top-30 companies, January-September 2021
- 3.7% outperformance of Malaysia’s FTSE4GOOD, the responsible investment index of the FTSE Group, compared to FTSE Bursa Malaysia Kuala Lumpur Composite Index, January-September 2021
- 2.9% underperformance of Stock Exchange of Thailand (SET) Thailand Sustainability Investment (THSI) index compared to broader SET index, from 2018 to end-September 2021
- 3% outperformance of the SET-THSI compared to the broader SET Index, from December 2020 through to end-May 2021
- 1.7% outperformance of Morningstar’s Asia-Pacific ESG index compared to non-ESG equivalents, full-year 2021

Since the December 2020 launch of the IDXESGL, it:
- Maintained a similar trend line to the LQ45, with a more positive performance, until end-April 2022
- Followed a similar trend line to the SRI-KEHATI, with a lower performance, for the remainder of 2022
There are four key drivers of sustainable investing

**Demand from investors, the market, risks and regulations are driving sustainable investing**

1. **Client & investor demand**
   - Private and institutional investors are increasingly demanding ESG-focused products.
   - Professional investors need to adopt sustainable investment strategies to meet their clients’ needs.

2. **Investment opportunities**
   - Robust financial returns may attract investees to new markets.
   - Some ESG funds and indices have outperformed non-ESG focused counterparts in the years to 2023.

3. **Risk management**
   - ESG concepts help stakeholders to understand, measure, and manage physical and transition risk.
   - For example, brown investees could pose a risk due to the shutdown of stranded assets.

4. **Regulations & standards**
   - Evolving regulations and standards are raising supervisory expectations across sustainability metrics.
   - Voluntary commitments, as well as supervisory initiatives, promote ESG adoption along the value chain.

**What are the UN Principles of Responsible Investment (PRI)?**
The PRI is an independent global proponent of responsible investment. It aims to understand the investment implications of ESG factors, and encourages investors to use responsible investment to enhance returns and better manage risks. The network engages with global policymakers and is supported by the UN.

**UN PRI signatories commit to six principles of ESG incorporation**

1. Incorporate ESG issues into investment analysis and decision-making
2. Be active owners and incorporate ESG issues into policies and practices
3. Seek appropriate ESG disclosure by investees
4. Promote implementation of the principles within the investment ecosystem
5. Collaborate to enhance effectiveness in implementing the principles
6. Report on activities and progresses in implementing principles

**PRI is the most widely adopted responsible investing framework**

- **4902** signatories, end-Mar 2022
- **$121.3trn** assets under management (AUM), end-Mar 2022
- **28%** y-o-y growth in signatories, end-Mar 2022
- **77.3%** growth in AUM, 2017-22

Sources: PRI; PwC
Traditional investors are pushing for the incorporation of ESG considerations into company decision-making

**Balanced approach**

- The years leading to 2023 have seen the emergence of new and innovative approaches to investment.
- Traditional investors are becoming more conscious of their impact on the environment and society, and are pushing for the incorporation of ESG. Traditional philanthropists and donors are growing more reliant on innovative financing or investment schemes in addition to traditional development assistance or philanthropy.
- The incorporation of ESG criteria can help to bridge the gap between finance-focused investors and those who prioritise philanthropic goals. Common goals of traditional investment and philanthropy include the creation of long-term value, the mitigation of investment risk, and the search for measurable environmental and social impacts.

<table>
<thead>
<tr>
<th>Investment spectrum</th>
<th>Traditional investment</th>
<th>Responsible investment</th>
<th>Sustainable investment</th>
<th>Impact investment (return first)</th>
<th>Impact investment (impact first)</th>
<th>Venture philanthropy</th>
<th>Traditional philanthropy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Limited or no ESG incorporation</td>
<td>ESG incorporation to meet investor requirements &amp; ESG regulations</td>
<td>ESG incorporation to create long-term value by mitigating risks &amp; identifying growth opportunities</td>
<td>Investment designed to have measurable social &amp; environmental impacts</td>
<td>Investment designed to have meaningful social &amp; environmental impacts</td>
<td>Venture investment focused on addressing societal environmental issues</td>
<td>Grants focused on addressing societal environmental issues</td>
</tr>
<tr>
<td>Financial &amp; social return expectation</td>
<td>Financial return only</td>
<td>Financial return prioritised</td>
<td>Financial return focused on long-term value creation</td>
<td>Social return &amp; adequate market rate of financial return</td>
<td>Social return &amp; submarket financial return</td>
<td>Social environmental return prioritised</td>
<td>Social environmental return only</td>
</tr>
</tbody>
</table>

**Sources**

OECD; PwC
Research partner: PwC Indonesia

OBG’s research partner for this publication, PwC Indonesia, aims to help clients build trust and deliver sustained outcomes.

In 2020 PwC made a science-based commitment to reach net-zero greenhouse gas (GHG) emissions globally by 2030, including in Indonesia

- Halve emissions
  - Switch to 100% renewable electricity in all PwC firms worldwide
  - Drive energy efficiency improvements in all offices
  - Reshape client service model to balance remote and on-site work
  - Engage with suppliers to tackle their climate impact
  - Reduce air travel, which accounts for 85% of PwC’s emissions

- Work with clients
  - Advance non-financial reporting so stakeholders understand their organisation’s climate impact
  - Embed implications of ESG factors into work for clients

- Public policy discussions
  - Advance thinking on structural reforms across economies

Sources: PwC
Which factors are driving the uptake of ESG-aligned practices in Indonesia?

RINTIS: We have seen a sharp rise in demand for ESG-related services in Indonesia. Many businesses are still trying to understand headwinds associated with the criteria, and their potential impact on business and finances.

Beyond this, companies are looking to quickly identify related opportunities to increase profitability and generate new revenue streams in the market, with various opportunities and incentives present in different segments.

Investors and shareholders outside Indonesia – particularly those in more developed markets – are increasingly requesting that local companies incorporate ESG into their business strategies and operations. It is expected that evolving government regulations will continue to shape Indonesia’s business environment.

How are attitudes towards ESG evolving in the country?

MUNUSAMY: ESG remains a fairly new discussion topic in certain market segments, with businesses having a limited understanding of the next steps. In such cases, conversations tend to be compliance-oriented, wherein businesses want to ensure compliance with government regulations or other stakeholder expectations and requirements – both within and outside Indonesia.

Companies in Indonesia are nonetheless increasingly encouraged to have strategic conversations about ESG to understand the factors that drive ESG value creation in their respective industries and markets. There is a particular focus on decarbonisation efforts – with progress being made in renewable energy, electric vehicles and the carbon market – alongside a greater interest in biodiversity.

What was the significance of Indonesia’s G20 presidency in placing the country on the international stage and advancing ESG-related goals?

RINTIS: Hosting the G20 was a significant milestone for Indonesia, helping the country solidify its position and status as an emerging leader on the global stage.

Indonesia has shown that it is not just looking to participate, but instead to take the lead on a number of critical geopolitical issues – including ESG – at the G20 level. Indonesia will be heavily affected by climate change, and the country’s focus on related issues during its G20 presidency served as a clear recognition that economic growth without necessary climate action is not an option.

In which ways did the B20 forum provide a platform for domestic businesses looking to help reshape global policy discussions?

MUNUSAMY: Indonesian businesses were at the helm of task forces and working groups as part of the B20 – the official dialogue forum for the international business community – during 2022. The country’s leadership in these platforms was instrumental in supporting the government’s drive to centre the concerns of the global South in B20 policy papers and G20 discussions.

One important outcome was the call for enhanced global cooperation to support developing countries in mitigating climate change.

Another standout result from Indonesia’s participation in the B20 was the request to double the amount of annual financial transfers being sent from developed to developing countries, with equal participation by public and private sector entities.

“Investors and shareholders are increasingly requesting that local companies incorporate ESG into their business strategies.”
G20 & B20

14 Indonesia – international stage
15 ESG infrastructure finance
16 Energy, sustainability, climate
Indonesia’s G20 Presidency prioritised inclusive, sustainable economic development

**Indonesia’s G20 Presidency - 2022**
Collective action and inclusive collaboration between advanced and emerging economies are at the core of the G20. In particular, the gaps widened by Covid-19 across society, health, education and trade require coordinated action. To this end, Indonesia’s G20 Presidency, culminating in the G20 Leaders’ Summit in Bali in mid-November 2022, focused on three pillars.

Indonesia promoted stronger global health resilience and aimed to encourage a more inclusive, equitable and crisis-responsive global health system. Closer cooperation to ensure equality of global health standards and access to Covid-19 vaccines was another focal point. Discussions addressed pandemic preparedness and transformative post-pandemic infrastructure, across forums including the Health Working Group, and the Joint Finance and Health Task Force.

This pillar aims to secure common prosperity in the digital era, with digitalisation recognised as paramount to a stronger, more inclusive and collaborative global economic order. Digital-focused discussions addressed the promotion of sustainable and inclusive economic development through micro-, small and medium-sized enterprise (MSME) participation, entrepreneurship and revitalising the role of women in the workplace. Forums included the B20, the official dialogue forum for the global business community.

Amid the need for new strategies to accelerate the transition towards sustainable energy use, this pillar recognises that G20 economies play an important role in enabling optimal energy sustainability and providing a platform for the substantial investment required. Topics included securing energy accessibility, increasing smart and clean energy technology, and promoting energy financing. Forums included the Energy Transition Working Group and the Climate Sustainability Working Group.

**COP27**
The summit took place in Sharm El Sheik, Egypt from November 6 to 18, 2022. Key aims: enhancing global climate action through lowering emissions; scaling up adaptation efforts; and enhancing sustainable finance flows. COP27 also launched the Forest and Climate Leaders’ Partnership, which aims to halt forest loss and land degradation by 2030.

**ASEAN 2023 Chair**
Indonesia’s ASEAN 2023 Chairmanship is set to address the theme: ASEAN Matters: Epicentrum of Growth. ASEAN 2022 dialogues in Cambodia focused on working together towards inclusive economic recovery, and building a resilient and sustainable ASEAN in the post-COVID-19 era.

**APEC 2022**
The theme of Asia-Pacific Economic Cooperation (APEC) 2022, hosted by Thailand, was Open. Connect. Balance. These pillars seek to facilitate open trade and investment, restore connectivity across the economy, and integrate inclusivity and sustainability within economic goals.

Sources: APEC, ARISE+ Indonesia, COP27, Fulcrum, G20
ESG-aligned infrastructure finance was another component of G20 discussions

The Finance Track created space for discussions on economic, financial, monetary and tax issues – including infrastructure investment. Participants were the minister of finance and the governor of the central bank of each G20 member.

The Infrastructure Working Group (IWG) estimated global annual demand for infrastructure investment, with emerging markets comprising the largest share, according to PwC in 2022.

IWG suggests policies to improve preparation, financing and management of quality infrastructure investment. It aims to achieve inclusive, sustainable and resilient basic infrastructure services for all by tackling the infrastructure investment gap.

Four key items on the agenda:
- Scale up sustainable infrastructure investment by leveraging private sector participation
- Enhance social inclusion and address subnational disparities
- Increase digital and infrastructure technology investments
- Advance transformative post-Covid-19 infrastructure

B20 Finance & Infrastructure Task Force
Theme: Building coalitions to enable greener and smarter infrastructure development at scale.
Formulated four policy recommendations, for discussion before submission to G20 Leaders’ Summit:

- Improve access to affordable and suitable sources of financing for infrastructure
- Accelerate the development and adoption of digital and smart infrastructure
- Improve global financial services regulation to achieve better balance between growth, productivity and stability
- Drive collaboration between countries to accelerate a just transition towards a net-zero world

Sources: G20; PwC

PwC Indonesia was knowledge partner for this task force.
The G20 and the B20 explored the role of the energy transition in climate action

Energy Transition Working Group
Focused on energy security, access and efficiency, and the transition to lower-carbon energy systems – including investment and innovation in cleaner and more efficient technologies.

Environment & Climate Sustainability Working Group
Pursued new, inclusive and resilient models to accelerate the energy transition, green economy and environmental sustainability. Aims included emissions reduction and adaptation, combating biodiversity loss, improving air quality and enhancing energy efficiency of buildings.

80%
of global energy demand derives from G20 countries

Indonesia
has committed to net zero by 2060

B20 Energy, Sustainability & Climate Task Force
Consisted of eight co-chairs from the global energy industry and 150 executives from G20 countries. Made three policy recommendations:

1. Accelerate the transition to sustainable energy use by reducing carbon intensity of energy use
2. Ensure a just, orderly and affordable transition to sustainable energy use across advanced and emerging economies
3. Address energy poverty by increasing public access to clean and modern energy consumption

B20 Energy, Sustainability & Climate Task Force

Seven ESG-related questions energy company boards may wish to ask their CEOs

1. What is your strategy for accelerating progress towards net zero?
   Develop a decarbonisation plan with actionable steps to achieve net-zero operations, set a realistic timeline and examine scope-3 emissions.

2. How can you tap into the company’s DNA to develop new products and services?
   By applying people, products and technology to big-picture energy transition.

3. Can you buy, sell and partner your way to low-carbon success?
   ESG-related mergers and acquisitions are driving energy, utilities and resources deals. Other paths include: splitting lower- and higher-emission business units; using capital to diversify; and forming partnerships.

4. Do you know who the company’s competitors will be in five years? In 10 years?
   The race to net zero will attract competitors from other energy and utilities sectors, as well as from fast-moving and innovative new entrants.

5. Can you meet investors’ long-term expectations?
   Investors increasingly expect to see non-financial ESG metrics fully integrated into corporate reporting, with transparent reporting, measurable progress towards aggressive goals and comprehensive strategy.

6. What will our future customers want?
   Customers will need energy to power their homes, transport and daily life. However, preferences – including the proportion of the shift away from fossil fuels – remain somewhat unpredictable.

7. Will you be able to get the people you need?
   There is an opportunity to attract talent to join a journey towards net zero – which will require considerable technological, scientific and engineering expertise.

Sources: European Commission, IEA, PwC, UNEP

At the G20 Leaders’ Summit, Indonesia announced a $20bn Just Energy Transition Partnership. The G7 plus Denmark and Norway will provide a combined $10bn in concessionary finance towards Indonesia’s efforts to cap power sector emissions.

PwC Indonesia was the lead knowledge partner for this task force.
NET ZERO

18 Public sector incorporation
19 Risks: physical & transition
20 International carbon markets
21 ESG value creation
22 Net zero in Indonesia
Adoption of net zero policies by the government is increasing globally

**Net zero**
Lowering GHG emissions to as close to zero as possible by transitioning towards renewable sources of energy, with remaining emissions to be removed from the atmosphere.

**At the G20 Leaders’ Summit 2021 in Rome**
Leaders of the world’s 20-biggest economies committed to reach net zero by or around mid-century.

**Road to net zero**
- Targeted completion of transition to net-zero emissions
- Countries began raising their Nationally Determined Contribution (NDC) targets to enhance climate action
- Signatories started drafting climate action plans referred to as NDCs. Originally these were only sufficient to limit global warming to 3°C.
- 196 countries adopted the Paris Agreement to limit global warming to a maximum of 1.5°C above preindustrial levels

**Race to net zero in numbers, 2022**
- 76% global emissions coverage
- 70+ countries have set net zero targets, including large polluters such as China, the US and the EU
- 1200 companies adopted science-based targets

**Indonesia submitted an enhanced NDC in September 2022**
- UNCONDITIONAL COMMITMENT
- CONDITIONAL ON INTERNATIONAL ASSISTANCE FOR FINANCE, TECHNOLOGY TRANSFER AND CAPACITY-BUILDING
- GHG emissions reduction against a 2030 business-as-usual scenario (%)
- Indonesia raised its GHG emissions reduction targets from 29% unconditional and 41% conditional on international support

**Low Carbon Development Indonesia - 2019**
A plan integrated by the National Development Planning Agency (Bappenas) into the National Medium-Term Development Plan (RPJMN) 2020-24. Comprises a set of policies and interventions to provide incentives for businesses and investors to shift towards a green economy.

**Sources**
ICCTF; LCDI; Mongabay; UN; UNFCCC
Managing physical and transition risk as identified by TCFD presents an opportunity for ESG value creation

Risk & opportunity

- Inaction towards climate change may lead to value erosion for economies and businesses across the world.
- The Task Force on Climate-related Financial Disclosures (TCFD) identifies two broad types of risk related to climate change: physical and transition risk. Physical risk equates to negative economic impacts that result directly from climate change phenomena. Transition risk is a consequence of strategic changes aimed at reducing negative climate impacts, relative to market and industry.
- Strategic management of these risks can offer positive financial impacts, including new revenue streams from green business models and cost reduction across the value chain.

<table>
<thead>
<tr>
<th>Physical risk</th>
<th>Transition risk</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute physical risk:</strong> Short-lived extreme weather impacts; disruptions to operations, transport and supply chains, among others; damage to physical assets and impact on insurance liabilities</td>
<td><strong>Policy &amp; legal risk:</strong> Compliance costs; stranded assets; restrictions and limitations on carbon-intensive assets; asset depreciation</td>
<td><strong>Resource efficiency:</strong> Use of more efficient modes of transport; efficient buildings; reduced water usage; recycling</td>
</tr>
<tr>
<td><strong>Chronic physical risk:</strong> Impacts due to slow, insidious change, such as increasing temperature or water stress; degradation or limitations on resource availability, including labour and natural resources</td>
<td><strong>Market &amp; economic risk:</strong> Company or securities valuations; asset impairment; viability of certain business models; credit ratings implications</td>
<td><strong>Energy sources:</strong> Integration of lower-emission sources of energy; use of supportive policy incentives; adoption of new technologies; participation in carbon markets</td>
</tr>
<tr>
<td><strong>Technology risk:</strong> Write-offs for investments in disrupted technologies; required investment in new technologies; process change costs to accommodate new technologies</td>
<td><strong>Technology risk:</strong> Write-offs for investments in disrupted technologies; required investment in new technologies; process change costs to accommodate new technologies</td>
<td><strong>Products and services:</strong> Development of low-emission goods and services; climate adaptation and risk solutions; research and development, and innovation</td>
</tr>
<tr>
<td><strong>Reputational risk:</strong> Damage to brand value or reputation resulting in lost revenue and additional expenditure, including corporate affairs and litigation</td>
<td><strong>Reputational risk:</strong> Damage to brand value or reputation resulting in lost revenue and additional expenditure, including corporate affairs and litigation</td>
<td><strong>Market opportunities:</strong> Exploring new markets or types of assets in order to diversify activities</td>
</tr>
</tbody>
</table>

Potential financial impacts:

- Physical damage to assets
- Production disruption
- Supply chain disruption
- Changes in input prices
- Changes in demand for products and services
- Cost reduction
- Indirect tax savings
- New revenue streams

Sources: OJK; PwC; TCFD
Cross-border carbon markets can help address the global climate crisis

An international carbon price could aid the transition to net zero

Carbon pricing is a cost applied to CO₂ and other GHG emissions. It can be implemented via taxation or through emissions trading, to reduce emissions. In June 2021 the IMF introduced a framework for an international carbon price floor (ICPF) that would set a price for emissions and peg it to each economy's development stage to incentivise adoption.

Maximum cost of ICPF implementation is 0.6% of global GDP, 2021-30

Emissions
ICPF could reduce emissions by up to 12.3%

Cost
ICPF could return a carbon dividend to households in regions that collected revenue

Just transition
Revenues generated by ICPF could be used to support disadvantaged groups

Challenges
International agreements that can help navigate complex political landscapes offer a development opportunity

Foreign purchase of Indonesian offsets can support climate action

- So-called carbon offsets can help compensate for unavoidable additional CO₂ emissions arising from industrial or other human activities.
- A cross-border market would allow advanced economies, for example, to buy carbon offset credits from resource-rich economies such as Indonesia. These credits can support the development of nature-based solutions and carbon capture technologies.
- Could help achieve the Paris Agreement and NDCs, while also creating jobs, increasing government targets and revenue, and raising export values.

Indonesian regulations are framing the carbon market ecosystem

- The October-2021 Harmonisation of Tax Regulations outlined a carbon tax. After delays to its planned April 2022 implementation amid global economic uncertainty, it may be postponed until 2025.
- Ministry of Environment and Forestry (KLHK) Regulation No. 21/2022 on the Procedure for the Implementation of Carbon Economic Value (CEV) elaborates on Presidential Regulation No. 98/2021, concerning CEV implementation towards NDC targets. According to Article 70 of Regulation No. 98/2021, international carbon trading must be registered in the National Registry System for Climate Change Control – under penalty of administrative sanctions.
- Regulation No. 21/2022 includes mechanisms for domestic and international carbon trading, voluntary carbon markets and results-based payment. International carbon trading requirements include KLHK authorisation and alignment with a subsector’s NDC targets.
- Minister of Energy and Mineral Resources Regulation No. 16/2022, concerning procedures for CEV implementation in power plants, issued power plant carbon trading rules effective December 2022. It applied a GHG emissions ceiling for state-owned power provider, Perusahaan Listrik Negara, from 24 January 2023.

International cooperation is key to implement ICPF effectively

Achieve a just transition

Ensure internationally consistent implementation

Manage a major economic structural transition

Address innovation & additional policies to change behaviour

Global GDP contraction across four ICPF scenarios (%)

Sources: Arma Law; Bloomberg Tax; CME Group; D-Insights; ICDX Group; ITR; PwC; WEF
A net zero strategy can help a business to unlock ESG value

**ESG strategy**
Define a sustainability strategy that reflects company and board ESG vision

**Net zero strategy**
Develop an emissions-reduction strategy, which may include net zero targets

**Reporting strategy**
Identify key stakeholder requirements, regulatory frameworks and database needed for comprehensive reporting, among others

**ESG ratings**
ESG performance of listed companies will be rated on the stock exchange; unlisted organisations can obtain a rating on a voluntary basis

**Sustainability reporting**
Sustainability reporting and/or disclosure of ESG performance

**Dissemination**
Shareholders and stakeholders are expected to gain confidence as a result of organisation actions to seize ESG opportunities, and manage and mitigate risk

**Transparency and disclosure can help address the challenge of scope-3 emissions**
Scope-3 emissions include all indirect emissions along an organisation’s value chain – or those emissions that cannot be classified as scope 1 or scope 2. Scope 3 often accounts for the largest share of a company’s carbon footprint, at more than 70% of total emissions.

**Description**
An emissions-reduction strategy that identifies critical sources of GHG emissions and develops a path towards net zero targets

**Action items**
Map GHG emissions across scopes 1, 2 and 3, in line with materiality assessment; develop science-based targets to reduce emissions and achieve net zero

**Measuring**
Requires third parties, including suppliers and providers, to disclose and update related information annually

**Reducing**

- **Supplier engagement:** Incentivise third parties to demonstrate reductions in scope 1 and 2 emissions
- **Operational policies:** Reduce business travel and employee commuting
- **Procurement policies:** Include requirements in tenders to disclose scope 1 and 2 info and commit to emissions reduction

Sources: Businesswise, PwC
Incorporation of net zero policies is growing across Indonesia’s business ecosystem

Indonesian SOEs will only use electric vehicles by 2025, aligned with national goal of net zero emissions by 2060

3500 buses from state-run bus operators Perusahaan Umum Pengangkutan Penumpang Djakarta and DAMRI will be fully electrified, although no timeline was available as of October 2022

State-owned energy corporation Pertamina supports the government’s goal of net zero by 2060

Gojek Tokopedia (GoTo) Group aims to achieve net zero emissions by 2030

So-called Three Zeroes sustainability pledges include environmental and social targets

Zero emissions
Assessing environmental impact through comprehensive carbon accounting, and carbon reduction through operational efficiency and environmentally friendly alternatives

Zero waste
Reducing waste by accelerating repurposing, recycling and waste processing via upstream and downstream providers

Zero barriers
Increasing socio-economic mobility for drivers and merchants through income opportunity diversification, training and capacity building

Pillars of Pertamina’s net zero strategy

Decarbonisation of business activities

Green business development

Annual carbon emissions reduction target (m tonnes of CO₂ equivalent)

-3

-11

-27

Capex required ($ bn)

2022-25

2026-30

2031-60

~0.5

~2-2.5

~20-25

Carbon commitment challenge

Companies in Indonesia have the faculty to comply with the NDC or international and/or science-based targets. Indonesia’s NDC targets, and related objectives, are not always fully aligned with international goals. For instance, the NDC provides for a 2010-30 GHG emissions reduction of 31.9% or 43.2%, respectively, unconditionally and conditional on international aid. Meanwhile, the Paris Agreement requires a 45% GHG emissions reduction over the same period to limit warming to 1.5°C, according to the UN. As of August 2022 and aligned with UN Intergovernmental Panel on Climate Change recommendations, over 120 countries had committed to net zero by 2050. Indonesia targets net zero by 2060, if not sooner.

Sources: Bloomberg; GoTo; Government of Canada; Pertamina; UN; UNFCCC; University of Oxford
SUSTAINABLE FINANCE

24 Indonesia’s Green Taxonomy
25 Sustainable finance ecosystem
26 International standards
27 Sustainability assurance
28 Final word from PwC
Indonesia’s Green Taxonomy aims to help financial institutions identify sustainable activities

**Indonesia Green Taxonomy 1.0, launched in January 2022, expands OJK Regulation No. 51/2017 on Sustainable Finance Implementation**

OJK identifies 11 green financing activities and one MSME financing activity

<table>
<thead>
<tr>
<th>Green Financing Activities</th>
<th>Plus Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable energy</td>
<td>Does no significant harm</td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>Aligns with the environmental objectives of the taxonomy</td>
</tr>
<tr>
<td>Pollution prevention &amp; control</td>
<td>Applies minimum safeguard</td>
</tr>
<tr>
<td>Sustainable natural resources &amp; land use</td>
<td>Offers a positive impact to the environment</td>
</tr>
<tr>
<td>Terrestrial &amp; aquatic biodiversity conservation</td>
<td>Does no significant harm</td>
</tr>
<tr>
<td>Sustainable water &amp; wastewater management</td>
<td>environmentally harmful activities</td>
</tr>
<tr>
<td>Climate change adaptation</td>
<td>Enabling early adoption by bloc members, while also paving the way for more ambitious standards in the long term</td>
</tr>
<tr>
<td>Eco-efficient products</td>
<td>Applies a traffic-light system to classify into three categories</td>
</tr>
<tr>
<td>Green building</td>
<td>Could expand in the years ahead, for example through mandatory disclosure for taxonomy-relevant investment portfolios</td>
</tr>
<tr>
<td>Other environmentally friendly business activities</td>
<td></td>
</tr>
</tbody>
</table>

Green Taxonomy 1.0 classifies sustainable finance and investment

- Guides the private sector to consider compliance with ESG standards that can otherwise become barriers to access sustainable finance
- Covers 919 subsectors in line with the Indonesian Standard for Industrial Classifications (KBLI)
- Applies a traffic-light system to classify into three categories
- Could expand in the years ahead, for example through mandatory disclosure for taxonomy-relevant investment portfolios

**ASEAN Taxonomy has a two-tier structure**

Enabling early adoption by bloc members, while also paving the way for more ambitious standards in the long term

- Foundation Framework
  - Applicable for all sectors and economic activities regardless of the country’s economic landscape, thereby interoperable across the bloc

- Plus Standards
  - With metrics and benchmarks for named, targeted sectors, thereby interoperable only among ASEAN members with a specific transition path

**Number of subsectors in each category**

- 15 categories: Does no significant harm
- 422 categories: Applies minimum safeguard
- 482 categories: Offers a positive impact to the environment

**Indonesia’s Green Taxonomy 1.0**

- Is aligned with the ASEAN Taxonomy’s Foundation Framework in applying a traffic-light system.
- Is considered a non-binary system that can be used as a transition guide to a low-carbon economy.
- Became mandatory in January 2022.

**Sources**: [ASEAN](https://www.asean.org), [Climate Policy Initiative](https://climatepolicyinitiative.org), [EU](https://ec.europa.eu), [IFC](https://www.ifc.org), [OJK](https://www.ojk.go.id), [PRI](https://www.privest.org), [PwC](https://www.pwc.com)
Supply- and demand-side factors are driving implementation of Indonesia’s Green Taxonomy

Sustainable finance roadmap

Prior to the launch of the Green Taxonomy, the OJK developed the Sustainable Finance Roadmap Phase II (2021-25) to accelerate the sustainable transformation of the financial services sector. The roadmap prioritises action in seven key areas: policy-making, products, market infrastructure, national coordination, nongovernment support, human resources and awareness building.

OJK efforts to expand regulations and incentives look set to continue to drive supply and demand for sustainable finance. The authority is expected to integrate ESG into risk management further by introducing more rigorous reporting requirements, developing key performance indicators and building human resource capacity.

Opportunities for industry-specific certification to signal company’s ESG commitment and actions within local context include:

- KLHK GHG Emissions Reduction Certification
- Company Performance and Management Rating Assessment Programme
- Ministry of Agriculture’s Indonesia Sustainable Palm Oil certification

Sources: International Financial Law Review; OJK; PwC
ISSB proposes a comprehensive global framework for sustainability disclosure

<table>
<thead>
<tr>
<th>ISSB FUNCTIONS</th>
<th>ISSB PROPOSED TWO DRAFT STANDARDS - MARCH 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop global baseline of sustainability disclosure standards</td>
<td>IFRS S1: General Requirements for Disclosure of Sustainability-Related Information</td>
</tr>
<tr>
<td>Help companies provide comprehensive sustainability information for global capital markets</td>
<td>IFRS S2: Climate-related Disclosures</td>
</tr>
<tr>
<td>Focus on meeting the information needs of investors</td>
<td></td>
</tr>
<tr>
<td>Facilitate compatibility with requirements that are jurisdiction-specific or aimed at a broader group of stakeholders</td>
<td></td>
</tr>
<tr>
<td>ISSB adopts a single-materiality reporting approach, which accounts for how sustainable factors influence a firm’s financial value</td>
<td></td>
</tr>
</tbody>
</table>

### ISSB FUNCTIONS

- **Develop global baseline of sustainability disclosure standards**
- **Help companies provide comprehensive sustainability information for global capital markets**
- **Focus on meeting the information needs of investors**
- **Facilitate compatibility with requirements that are jurisdiction-specific or aimed at a broader group of stakeholders**
- **ISSB adopts a single-materiality reporting approach, which accounts for how sustainable factors influence a firm’s financial value**

### ISSB PROPOSED TWO DRAFT STANDARDS - MARCH 2022

- **IFRS S1: General Requirements for Disclosure of Sustainability-Related Information**
  - Building on TCFD recommendations; incorporating industry-based disclosure requirements from the Sustainability Accounting Standards Board (SASB)
  - Began reviewing public feedback in September 2022, with a view to issuing the standards in early 2023

- **IFRS S2: Climate-related Disclosures**
  - Focus on meeting the information needs of investors
  - ISSB adopts a single-materiality reporting approach, which accounts for how sustainable factors influence a firm’s financial value

### CASE STUDY

**PwC evaluation suggests that sustainability reporting in Asia Pacific is evolving**

- While the ISSB develops a global baseline, PwC and the National University of Singapore Centre for Governance and Sustainability analysed sustainability reporting elements
- Across 2021 sustainability reports from the region’s 650 largest listed companies
- Suggests that sustainability reporting requirements in the region increased in the years leading to 2023
- The majority of companies disclose material topics related to climate risk; adopt SDG and GRI frameworks, followed by TCFD; but retained room for improvement with regards to rates of assurance (i.e., for building trust)

### Frameworks based on UN SDGs and Global Reporting Initiative (GRI) are the most widely used in Indonesia, 2021

Of the top-100 companies by IDX market capitalisation, 55 published sustainability reports with disclosures related to climate in FY2020 or FY2021, according to a July 2022 report from GRI ASEAN

<table>
<thead>
<tr>
<th>Framework</th>
<th>Proportion of companies that apply named framework (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI</td>
<td>93%</td>
</tr>
<tr>
<td>IRRC*</td>
<td>4%</td>
</tr>
<tr>
<td>SASB</td>
<td>16%</td>
</tr>
<tr>
<td>SDG</td>
<td>93%</td>
</tr>
<tr>
<td>TCFD</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Prop. of comp. that apply named framework (%)**

*International Integrated Reporting Council
**Top-100 companies by market capitalisation listed on the IDX

### Sources

- GRI: Institute of Chartered Accountants in England and Wales
- IIRC: PwC
- SASB
- SDG
- TCFD

---

**INTERNATIONAL INTEGRATED REPORTING COUNCIL (IIRC)**

The creation of the International Sustainability Standards Board (ISSB) was announced at COP26

Ministers of finance and central bank governors from 40+ jurisdictions, across six continents, publicly welcomed the establishment of the ISSB

To develop internationally consistent, high-quality and reliable standards for the disclosure of sustainability-related information as part of the International Financial Reporting Standards (IFRS) Foundation

The creation of the International Sustainability Standards Board (ISSB) was announced at COP26

Ministers of finance and central bank governors from 40+ jurisdictions, across six continents, publicly welcomed the establishment of the ISSB

To develop internationally consistent, high-quality and reliable standards for the disclosure of sustainability-related information as part of the International Financial Reporting Standards (IFRS) Foundation
Sustainability assurance is becoming increasingly important for credible disclosure

Assurance can support ESG implementation

Understanding ESG

ESG strategy development

Implementation

Awareness raising
Capacity-building
ESG initiatives
Structure, processes, culture, infrastructure

Monitoring & evaluation

ESG measurement
Non-financial reporting & assurance

Assurance contributes to ESG strategy and reporting

ESG strategy

Business concept & implementation

Execution, operations & reporting

Includes non-financial reporting and assurance. This requires the definition and implementation of appropriate non-financial key performance indicators to address stakeholder interest. Can be supported through:

- Knowledge-sharing sessions on sustainability disclosure
- Sustainability data-collection template

Assessments of corporate sustainability frameworks

Investors have more confidence in assured data

“I place more trust in the ESG information if it has been assured”*

79% agree

With ESG on the rise as a critical component of investment decision-making, sustainability assurance bridges the gap for credible disclosure and reporting. Third-party verification also helps to mitigate so-called greenwashing.

“I is important that reported ESG information has been independently assured”*

74% agree

*PwC Global Investor Survey 2021 (325 respondents)

CASE STUDY: PwC provided sustainability assurance services for the Indonesian green sukuk

The firm provided limited assurance services regarding the process for project evaluation and selection, as well as information regarding the green project funding allocation, provided by the Ministry for the 2019 Green Sukuk - Allocation and Impact Report.

Government’s first Islamic green debt instrument targeted five areas: renewable energy, energy efficiency, disaster risk reduction, waste to energy and sustainable transport
Julian Smith, Investment Director, PwC Indonesia
Yuliana Sudjonno, Assurance Partner, PwC Indonesia

How can Indonesian businesses facilitate access to sustainable finance?

**SMITH:** Businesses first need to understand what their ESG strategies and targets are, as well as how they contribute to and advance their corporate strategies. Once these necessary elements are in place, businesses can then begin to link their activities to their environmental goals.

For example, a company may first consider the advantages offered by circularity, in addition to the emissions- and cost-reduction benefits that are offered by green solutions along the value chain. The organisation can then integrate these financially feasible solutions into their business plan, and, at this point, the business may be able to gain access to sustainability-linked financing.

In what ways do you expect Indonesia’s evolving Green Taxonomy to influence investors’ focus in the years to come?

**SUDJONNO:** Indonesia’s Green Taxonomy classification system is intended to provide the foundation for all stakeholders that are engaged in sustainable economic activities. The taxonomy provides general guidance for sustainable investing. It is important that investors, financial institutions and other users of the classification carefully assess their activities, as different companies within the same industry may be exposed to varying degrees of risk based on their existing sustainability and ESG investments.

The taxonomy also informs financial institutions about activities designated as sustainable compared to those that contribute less to climate action or environmental protection goals. With the green transition expected in the years ahead, it is anticipated that sustainable initiatives will see greater investment.

What role does a company’s ESG strategy play when it comes to mitigating the risks associated with operations?

**SMITH:** Having an ESG strategy with an appropriate level of ambition and number of targets is critical to driving ESG-related initiatives.

An ESG strategy helps to keep a company up to date on the material risks it may face, and it can be supplemented by additional strategies for priority areas such as emissions reductions and human rights.

Without an appropriate ESG strategy in place, related initiatives may be a reactive response to market conditions and trends, instead of a structured approach to mitigating and managing risks that utilises the available opportunities in the market.

Which changes in demand related to sustainability assurance services are expected in the coming years, both in Indonesia and beyond?

**SUDJONNO:** There are increasing concerns and allegations across markets about greenwashing, or misreporting or misrepresenting sustainability targets.

Businesses may look to auditors in their efforts to mitigate any potential greenwashing risks by providing sustainability assurance and verifying their ESG disclosures, a process that involves the assessment and verification of an organisation’s ESG risks and related data along the value chain.

Meanwhile, efforts by the International Sustainability Standards Board to develop a disclosure framework – expected for issuance later in 2023 – are expected to promote a more consistent approach to sustainability reporting in the coming years.
The report was first published by Oxford Business Group.

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, PwC, its members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

The documents, or information obtained from PwC, must not be made available or copied, in whole or in part, to any other persons/parties without our prior written permission which we may, at our discretion, grant, withhold or grant subject to conditions (including conditions as to legal responsibility or absence thereof).

PwC Indonesia is comprised of KAP Tanudiredja, Wibisa, Rintis & Rekan, PT PricewaterhouseCoopers Indonesia Advisory, PT Prima Wahana Caraka, PT PricewaterhouseCoopers Consulting Indonesia, and PwC Legal Indonesia, each of which is a separate legal entity and all of which together constitute the Indonesia member firm of the PwC global network, which is collectively referred to as PwC Indonesia.

© 2023 PwC. All rights reserved.
PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see http://www.pwc.com/structure for further details.