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Net Zero - what are the costs for the European Energy Sector and how to identify Opportunities

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Agenda

I. ESG investing ramps up driven by multiple factors

II. ESG Management + Disclosure: A strategic challenge for corporate issuers

III. CBAM – Carbon Boarder Adjustment Mechanism

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I. ESG Investment Drivers are Strengthening

Climate Change, and other evolving environmental / social impacts caused by economic activities	**1,350.58 MtCO2e** total GHG Emissions from Central Europe economies in 2021 (-0.4% YoY), equivalent to 7th largest emitter worldwide; account for 30.4% of European emission (ex. Russia)
Policy and Regulation committing to net-zero and other sustainable goals, on national and global level	About **76%** of global emissions is covered under net-zero targets set by more than 70 countries, including biggest emitters (China, the US, the EU)
ESG Funds and Indices' Outperformance against benchmarks	By a cumulative **9.16%**, S&P 500 ESG Index (from its launch date until the end of 2022) outperformed S&P 500 Index By **5.30%**, S&P Europe 350 ESG outperformed S&P Europe 350 Enhanced Value Index regarding 5YR Annualized Return as of Apr. 2023
Institutional Investors' increasing demands on delivering sustainable return for their clients by leveraging and integrating ESG data	**63%** of respondents to a survey (conducted by S&P Global MI) on head of investment operations in 100 top buy-side firms across Europe, have either integrated all their ESG data sources to create a master source or largely integrated the data with some exceptions.
Mainstreaming and unification of **ESG-related initiatives and frameworks**	**100%** of Top 10 institutional investors in Central European Listed Equities are UNPRI signatories and supportive of TCFD disclosure **-25%** in number of corporate sustainability reporting standards is an indication by European Commission, while it is seeking convergence with ESG reporting framework under ISSB
Corporate Demand of seizing & capitalizing on ESG-related opportunities, while mitigating climate risks	**1.42 Trillion USD** of investment needed for Central Europe energy sector decarbonization (until 2050) **0.9-1 Trillion USD** of total green, social, sustainability, and sustainability-linked bonds (GSSSB) expected to be issued in 2023

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➢ Central European issuers facing institutional investors with ESG sensitivity

Top Investor Analysis

- Top 10 institutional investors (including investment managers, private equity funds, sovereign wealth funds) all own more than 20 billion+ USD of listed equity from Central European issuers, adding up to **515.37 Bn** USD in total.
- **100%** of Top 10 institutional investors are UNPRI signatories + supportive of TCFD disclosure from corporates; All of them have set up net-zero / climate neutral goals (while 70% of them are members of Net Zero Asset Managers initiative), claiming commitment to net-zero aligned portfolios

No	Top Institutional Investors in Central European Issuers' Listed Equities	Country	Holding in Central Europe Issuers ($USD mm)	Support TCFD?	Net-zero Goal / NZAMI Signatory	PRI Signatory
1	The Vanguard Group, Inc.	USA	91,185.82	Yes	Yes/No	Yes
2	Groupe Bruxelles Lambert SA (Investment Management)	Belgium	81,756.14	Yes	Yes/No	Yes
3	Norges Bank Investment Management (Norway)	Norway	80,826.76	Yes	Yes/No	Yes
4	BlackRock Fund Advisors	USA	62,516.24	Yes	Yes/Yes	Yes
5	UBS Asset Management Switzerland AG	Switzerland	42,811.14	Yes	Yes/Yes	Yes
6	DWS Investment GmbH	Germany	39,139.50	Yes	Yes/Yes	Yes
7	Credit Suisse Asset Management (Schweiz) AG	Switzerland	37,424.01	Yes	Yes/Yes	Yes
8	BlackRock Advisors (U.K.), LTD	UK	31185.23	Yes	Yes/Yes	Yes
9	Zürcher Kantonalbank	Switzerland	24,697.72	Yes	Yes/Yes	Yes
10	Capital World Investors (U.S.)	USA	23,828.51	Yes	Yes/Yes	Yes

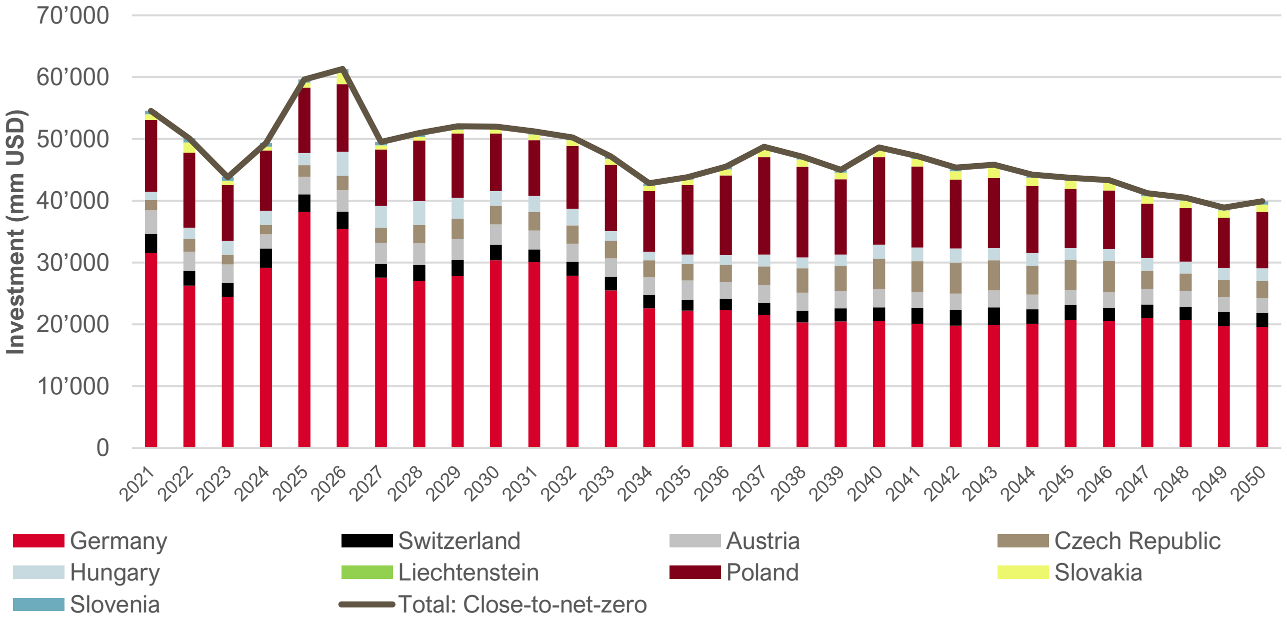
Source: BDCorporate, S&P Global

➢ Central Europe's energy sector faces investment gap for decarbonization

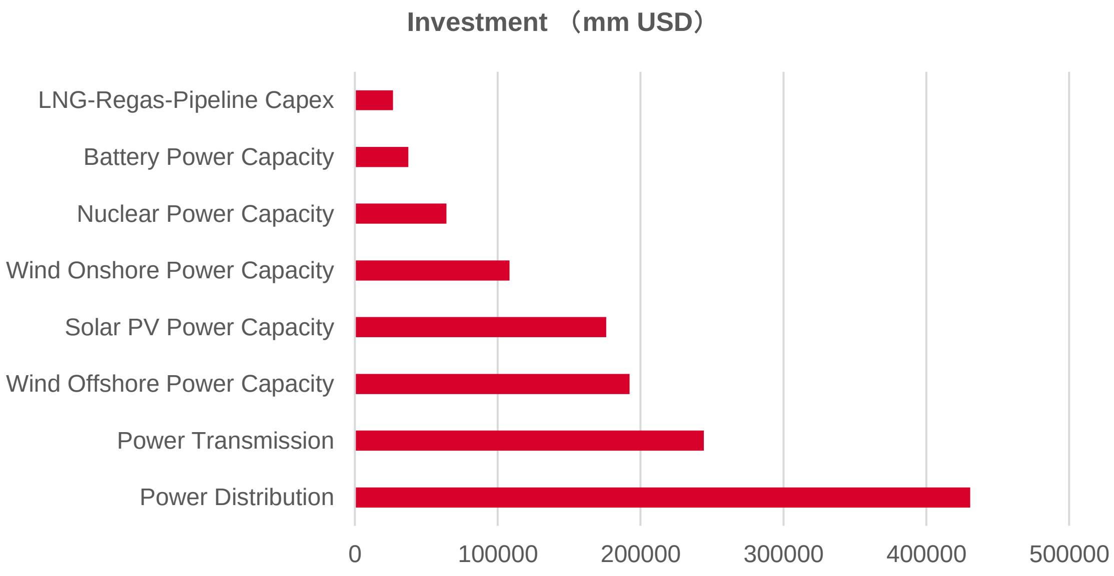
Total investment of 1.42 Trillion USD is needed (2021-2050) to align with a Close-to-Net-Zero Scenario

Investment Requirements Per Countries	
✓ Germany:	USD 733.15 billion (approx. 24.4 billion USD per year on average)
✓ Poland:	USD 323.41 billion (approx.10.8 billion USD per year on average)
✓ Czech Republic:	USD 96.17 billion (approx. 3.2 billion USD per year on average)
✓ Austria:	USD 86.64 billion (approx. 2.9 billion USD per year on average)
✓ Switzerland:	USD 70.60 billion (approx. 2.4 billion USD per year on average)
✓ Hungary:	USD 66.39 billion (approx. 2.2 billion USD per year on average)
✓ Slovakia:	USD 32.09 billion (approx. 1.1 billion USD per year on average)
✓ Slovenia:	USD 15.00 billion (approx. 0.5 billion USD per year on average)

Top Investment Requirements per sub-sector until 2050	
1. Power Distribution:	USD 430.8 billion
2. Power Transmission:	USD 244.3 billion
3. Wind Offshore Power Capacity	USD 192.2 billion
4. Solar PV Power Capacity	USD 175.9 billion
5. Wind Onshore Power Capacity	USD 108.2 billion
6. Nuclear Power Capacity	USD 64.1 billion
7. Battery Power Capacity	USD 37.5 billion
8. LNG-Regas-Pipeline Capex	USD 26.7 billion



Source: Envisage Database, S&P Global



Source: Envisage Database, S&P Global

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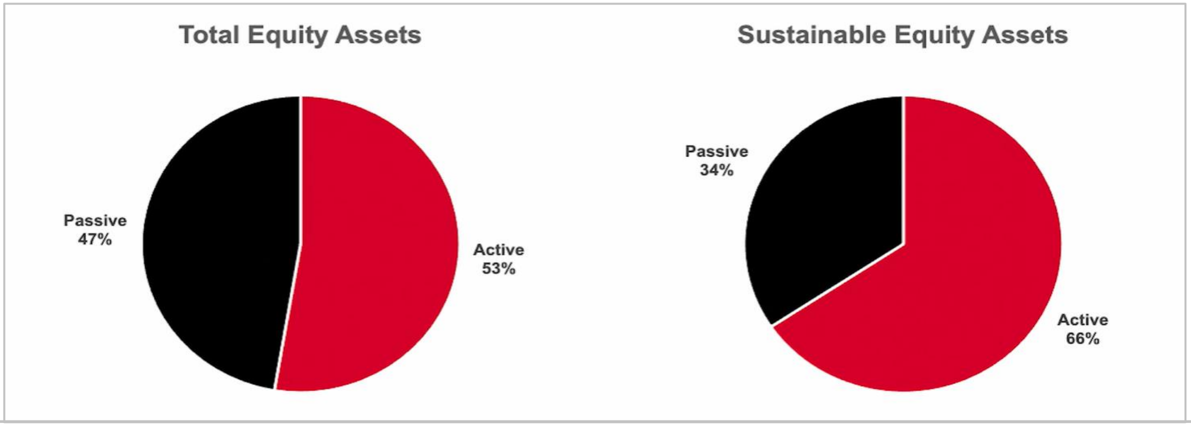
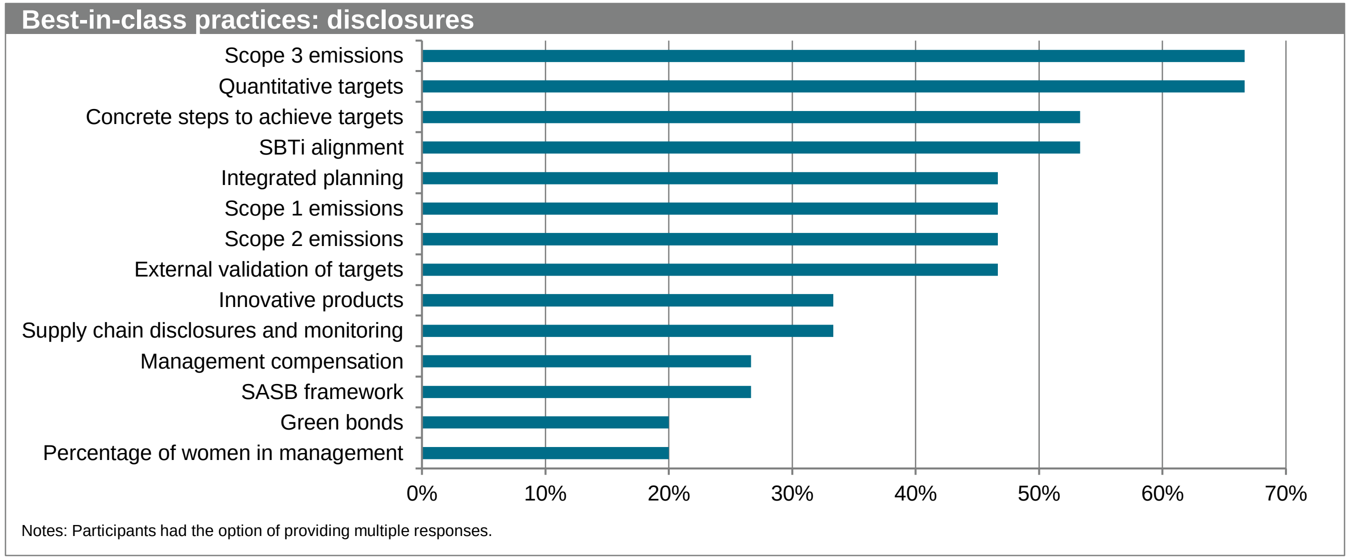
II. ESG Management – a strategic challenge, not just a compliance issue…

ESG Investors are practicing active ownership more than ever

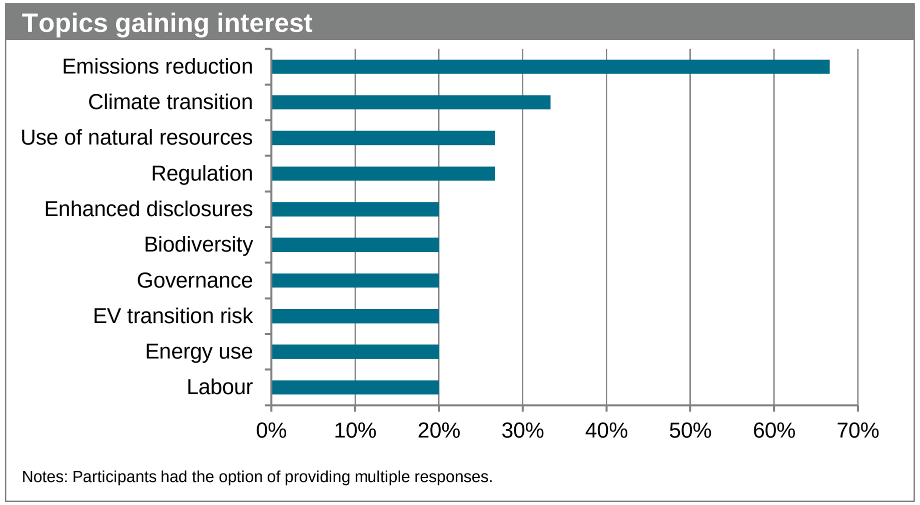




Disclosure best practices

Source: S&P Global Market Intelligence

Material Areas within ESG investment gaining interest



ESG management becoming a strategic frontier, where both risks and opportunities could arise for corporate issuers

- Set up forward-looking **sustainable business strategies** and **ESG KPIs** to work against
- Optimize **investor outreach strategy**, to cope with shareholders' ESG expectations
- Establish accessible **channel for ESG engagement** to receive in-time input and alert
- Prepare for integration of **ESG factors in voting agenda analysis** and pre-voting communication, to prevent dissent votes due to ESG issues

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➢ … while our role is to help you avoid receiving letters from sustainable equity investors like these:

- Be prepared for ESG and climate-related discussions with your investors.

- Investors are asking you to respond to climate risk-related issues and articulate your climate strategy.

Questions for corporate issuers:

- What could be the impact on share ownership?
- Where do you stand in relation to our peers?
- How can you respond to avoid investor dissent?
- What are the specific risk factors in your strategy that cause regulatory, reputational or financial risk?

[Company name & address]

[Date]

Dear [Audit Committee Chair],

Investor expectations: 1.5C-aligned accounting disclosures

We wrote to you last November as a group of long-term investors and members of the Institutional Investor Group on Climate Change (IIGCC) to draw your attention to investor expectations for Paris-aligned accounts[1]. We are writing again now to understand why the Board was unable to make the requested disclosures, and what steps you will take to address this omission in the forthcoming audited accounts.

In our last letter, we set out the five disclosures we expected to see as part of your 2020 audited financial statements. We specifically asked for an affirmation that the Board was reflecting both [company]'s promised action to reduce greenhouse gas emissions and global decarbonisation aimed at limiting temperature increases to 1.5C in critical accounting assumptions and judgements. Where the Board chose not to adjust its accounting assumptions, we asked for an explanation and sensitivity analysis in the Notes to provide visibility into what a Paris-aligned pathway would mean for [company]'s financial position.

When we wrote, we also drew your attention to guidance published by the International Accounting Standards Board and the International Audit and Assurance Standards Board, as well as the Financial Reporting Council, for including material climate risks into financial statements and associated audits[2]. Where investors representing over $100 trillion in assets under management call for disclosures for how a net zero pathway will impact companies' financial position, they become material under the standards[3 4].

Having now reviewed your 2020 Financial Statements in some detail, we are keen to understand why the Audit Committee has felt unable to provide the requested disclosures. Overall, we lack the required visibility to give us confidence that the economic impacts from climate change and associated policy action are being properly accounted for. We have little understanding of how [company]'s financial position might be impacted be accelerating decarbonisation associated with a 1.5C pathway.

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[1]These expectations were published in this report: Investor Expectations for Paris-aligned Accounts – IIGCC
[2] See: IFRS - Educational material: the effects of climate-related matters on financial statements prepared applying IFRS Standards, IAASB Issues Staff Audit Practice Alert on Climate-Related Risks | IFAC, Summary-FINAL.pdf (frc.org.uk)
[3] A statement calling for Paris-aligned accounts was released by the Principles for Responsible Investment (PRI), the UN Environment Programme Finance Initiative (UNEP FI), the Net-Zero Asset Owner Alliance initiative, IIGCC, Investor Group on Climate Change (IGCC), the Asia Investor Group on Climate Change (AIGCC), and the UK's Pensions and Lifetime Savings Association on 24th September 2020: https://www.unpri.org/accounting-for-climate-change/public-letter-investment-groupings/6432.article
[4] The latest IASB guidance noted above reiterates that materiality depends on investor expectations: *"Information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that primary users of financial statements (hereafter, investors) make on the basis of those financial statements, which provide financial information about a specific company. For example, information about how management has considered climate-related matters in preparing a company's financial statements may be material with respect to the most significant judgements and estimates that management has made."*

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We attach a more detailed review of your 2020 financial statements and auditor report by Carbon Tracker, setting out gaps against our expectations. [OPTION: add company specific commentary on key areas of concern]

We understand that [company] faces challenges in navigating a transition to a net zero business model. However, the longer the Board delays making the net zero accounting adjustments, the longer it will delay the needed shift in capital towards a low carbon business model. Any misallocation of capital today increases the risk of larger impairments – and associated destruction of shareholder capital – in the future.

[Company] is not alone in omitting reference to climate factors in its financial statements. Carbon Tracker recently published a report "Flying Blind" that details the widespread failure of companies and their auditors to cover material climate risks[5]. In response to this market wide problem, our request for accounting disclosures is being added to the CA100+ benchmark as an 'alignment assessment' indicator, so will also form part of that engagement process.

As we did with our last letter, we are copying in [company's] auditor to emphasise our expectation that they alert shareholders where the accounts are not consistent with a 1.5C outcome[6]. Where they believe there to be material mis-statements according to the accounting standards, or a failure to meet the statutory auditor requirement, this should be highlighted in their Opinion on the accounts. We hope the Audit Committee will reinforce these messages.

Against the above backdrop, from next voting season you should increasingly expect to see investors vote against Audit Committee directors' reappointment, where high-risk companies fail to meet the expectations we have set out in the IIGCC November 2020 paper and underlined again here. We also expect to see these expectations increasingly reflected in investor voting policies on the reappointment of auditors. We would, therefore, be grateful if you could share this letter with the other members of the Audit Committee.

We would, of course, welcome further dialogue with you on the matters raised here. If you would find this helpful, please contact [add name and contact of investor lead].

Yours sincerely,

Cc

Audit committee directors: [add]

[Lead audit partner]

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[5]Their report is based on an analysis of the financial statements published by 107 global listed high-carbon companies: Flying blind: The glaring absence of climate risks in financial reporting - Carbon Tracker Initiative
[6] See auditor expectations in Investor Expectations for Paris-aligned Accounts – IIGCC

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➢ … also being aware that GSSSB sees a strong pipeline in 2023

GSSSB: Green, Social, Sustainability, Sustainability-linked Bonds, a strategic financing instrument and opportunity area for issuers to seize

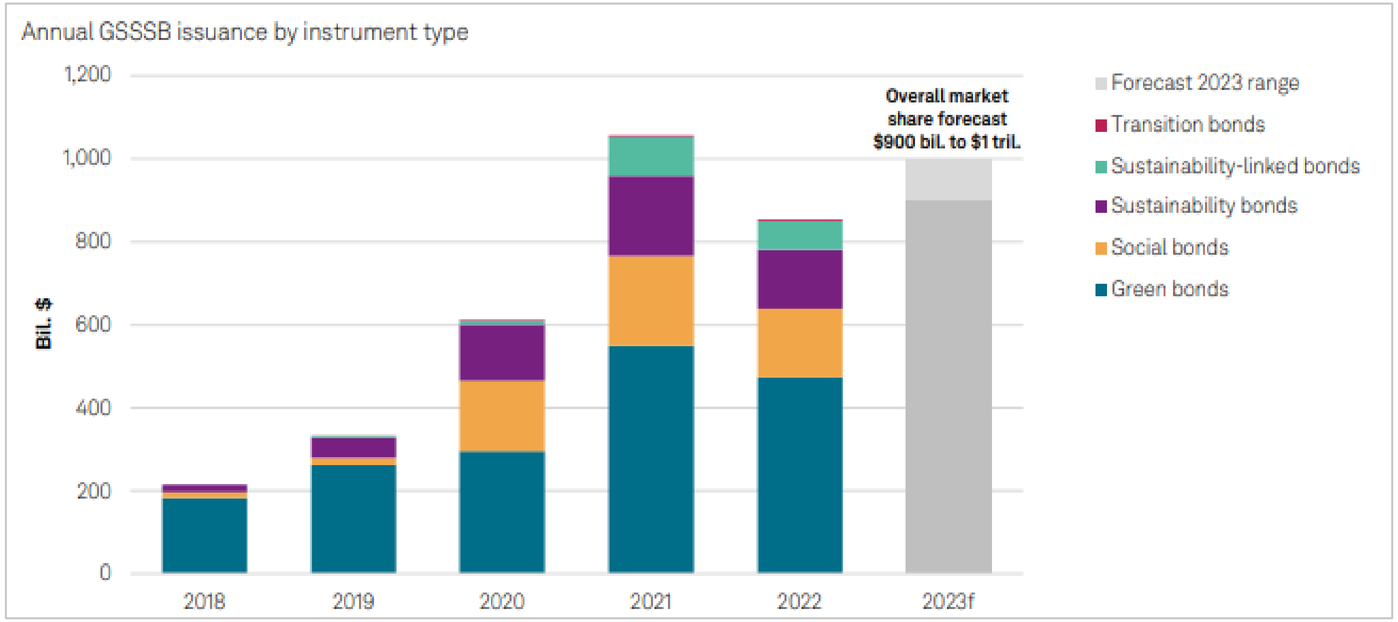
Key Insights on Global GSSSB Issuance

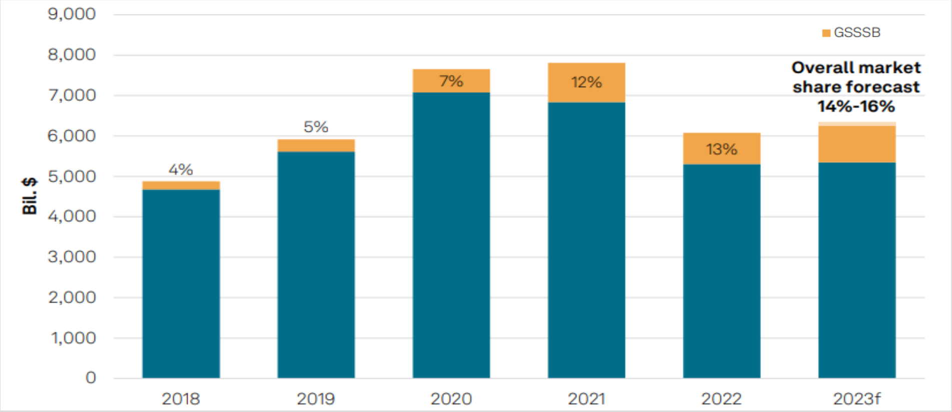
S&P Global expectation:

- 2023, global GSSSB issuance will **return to growth**
- Expected issuance reaching **$900 billion to $1 trillion** (**nearing 2021**: $1.06 Trillion)
- **EMEA will retain the leading share of issuance** (48%)
- **Middle East about to take** up **3-4%** in total issuance

In 2023:

- ➢ **GSSSB** to continue increasing its share of global bond market
- ➢ **Expected growth of 5%-17% in GSSSB**, driven by the need to meet investment needs in climate adaptation and resilience
- ➢ Green bonds will continue to dominate the GSSSB market





(Bil. US$)	Green bond	Social bond	Sustainability bond	Sustainability-linked bond	Transition bond
2018	182.51	14.29	17.80	0.00	0.00
2019	261.53	18.01	48.06	4.46	1.05
2020	294.96	169.90	135.62	8.79	2.43
2021	548.71	217.56	191.70	94.38	4.26
2022	473.06	164.95	141.55	70.45	3.50

Source: S&P Global Ratings

III. In context of CBAM and beyond, "carbon earnings at risk" matter

CBAM Implementation Timeline

Dec 13th, 2022
The European Council and the European Parliament reached a political agreement on the implementation of the new CBAM

Initially Cover 5 Industrial Sectors
- *Iron & Steel*
- *Cement*
- *Fertilizers*
- *Aluminum*
- *Electricity Generation*

Oct 1st, 2023-Dec 31st, 2025
Transitional Period of CBAM

Importers in these 5 sectors report their embedded GHG Emissions, not yet have to pay financial adjustments

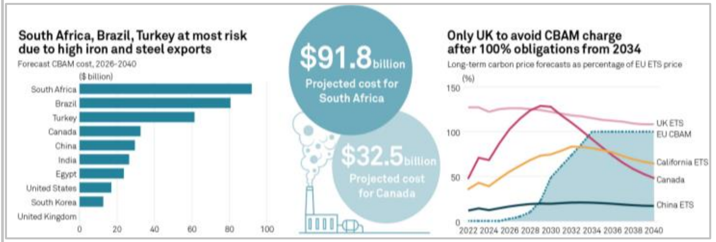
Jan 1st, 2026
Full implementation stage of CBAM starts

***EU Commission assess whether & when to extend scope to sectors; CBAM fully phase in by 2034*:**
- *Organic Chemicals & Polymers*
- *Hydrogen*
- *Plastic*
- *All other sectors that cease to benefit from free allowance under EU ETS*

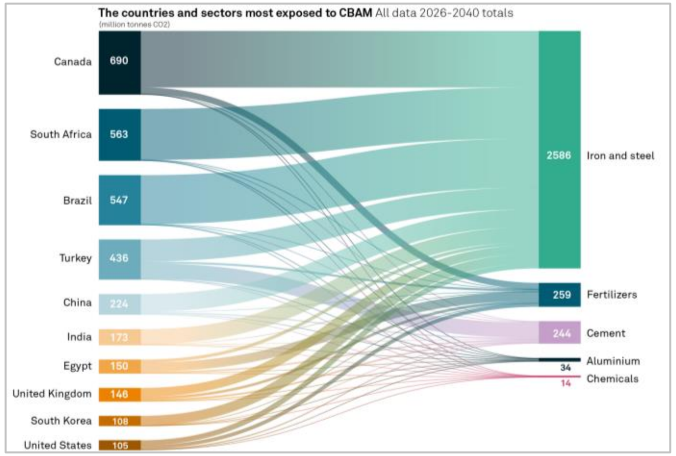
EU ETS free allowance fully phase out by 2034
(in parallel with CBAM)

Phasing in from 2026, CBAM will **levy a carbon tax on imports of selected emission intensive material** and products into the EU.

CBAM aims to rem**ove the gap between the EU Emissions Trading Scheme (ETS) carbon price and the export country of origin's carbon price,** i.e., to align the CO2 price of imported goods with the price of CO2 allowances that European companies must purchase for their products under the EU ETS.



The extent of additional cost incurred varies significantly based on **emission intensity** of production, with Iron & Steel by far the biggest sector targeted, making **low-emission production** more attractive.



Source: S&P Global Commodity Insights

- Investors are gauging and assessing company-level disclosure to current and future carbon pricing scenario, where CBAM plays an important role.
- Investors attach importance to their portfolios' carbon earnings at risk, so should corporate issuers