Deliverable 3

Diagnostic Report

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Contents

Executive Summary

In response to a request from the Czech government, the European Commission provided support under the Technical Support Instrument to aid institutional, administrative, and structural reforms in the country. This initiative, the 'Sustainable Finance Policy Options' project, primarily benefits the Ministry of Finance. The project aims to provide a thorough overview of the Czech financial market concerning the mobilisation of finance for EU Taxonomy-aligned investments, which is detailed in the 'Deliverable 3: Diagnostic Report.'

The Diagnostic Report serves as a foundation for developing sustainable finance policy options in subsequent deliverables. It identifies critical weaknesses and risks that need to be addressed to enhance the Czech financial market's capability. The report includes elements such as mapping the sustainable finance ecosystem, governance and coordination issues, incentives and opportunities, barriers and bottlenecks, and relevant instruments and tools.

The report is structured into chapters covering background on sustainable finance, diagnosis of the Czech sustainable finance market, and the challenges faced, complemented by several annexes providing detailed sector analysis and regulatory overviews.

The report's methodology involved extensive desk research from various sources, including EU institutions, OECD, and Czech authorities. It also included stakeholder engagement activities, and analytical methods to process data. These activities helped ensure a comprehensive understanding of the challenges and opportunities within the sustainable finance landscape in Czechia.

Stakeholder engagement played a crucial role in the development of the report. Presentations at the Sustainable Finance Platform, workshops at the Ministry of Finance, and consultations with other authorities and major financial sector associations were conducted. Additionally, structured meetings with central government bodies, central bank, development and commercial banks, and companies active in real estate and manufacturing industry further informed the report's findings.

To gauge the awareness and readiness of various stakeholder groups regarding sustainable finance, questionnaire surveys were carried out between February and April 2024. The surveys covered the real economy, financial sector, Central government, and regional and local governments.

High-Emission Intensity of the Czech Economy and Decarbonisation Efforts

Czechia's economy is highly emission-intensive, largely due to its historical reliance on coal and a strong industrial sector. The country's transition to low carbon economy and energy generation is hindered by geographical limitations, a cumbersome approval process for new projects, or a resulting low share of renewable sources in the energy mix.

The government of Czechia is addressing these challenges through strategic documents such as the **National Energy and Climate Plan of the Czech Republic (NECP), the State Energy Policy (SEK), and the Climate Protection Policy (POK).** These plans aim to enhance energy security, competitiveness, and sustainability by 2030 and beyond. Key measures include phasing out coal for energy purposes by 2033, increasing the share of renewable energy sources, and developing nuclear energy. Investments in energy efficiency, modernising transport, and building infrastructure are also highlighted.

Importance of Sustainable Finance Policy

To achieve decarbonisation goals, Czechia needs significant private investments, estimated by the government at €61bn. The governmental sustainable finance policy aims to bridge the gap between the need for increased private investment, financial institutions, and the real economy. This policy seeks to mitigate the

risks posed by the transition to low-emission technologies, such as the stranded assets, while emphasizing the benefits of decarbonisation, like enhanced financial stability and increased foreign investments.

Although Czechia is currently lagging behind countries like Germany, France or the Netherlands in adopting sustainable financial products, there is a growing motivation to enhance the use of green bonds, sustainability-linked loans, and other instruments, including transition finance. Learning from these countries, Czechia can develop its market for sustainable financial products, mobilising private investment in environmentally sustainable projects essential for meeting climate goals.

Sustainable Finance Regulation in EU

The global landscape of sustainable finance has undergone significant advancements, with numerous countries implementing frameworks to enhance sustainable development and tackle environmental challenges. One of the most prominent mechanisms is the adoption of sustainability taxonomies, which classify economic activities based on their sustainability. **The EU has been at the forefront with its comprehensive sustainable finance strategy, underpinned by the European Green Deal**. The EU aims to achieve climate neutrality by 2050, setting the stage for substantial policy initiatives and regulatory frameworks to promote sustainable economic activities.

The Fit for 55 package, EU Taxonomy and the Net-Zero Industry Act are pivotal components of this strategy, focusing on reducing net greenhouse gas emissions by at least 55% by 2030 compared to 1990 level and fostering the development of climate-neutral technologies and climate resilience. The reformed EU Emissions Trading Scheme (EU ETS) and the Carbon Border Adjustment Mechanism (CBAM) are integral to ensuring that the polluters bear the cost of greenhouse gas emissions, thereby generating revenue for green transitions. Additionally, the EU has set ambitious targets for renewable energy and energy efficiency by 2030, and a ban, as of 2035, for new passenger cars and light utility vehicles with above-zero tailpipe emissions being introduced in the internal market.

Sustainable finance in the EU also extends to rigorous reporting and disclosure mandates for financial institutions and large companies. The Sustainable Finance Disclosures Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD) require detailed ESG-related disclosures, aiming to enhance transparency and accountability. The European Financial Reporting Advisory Group (EFRAG) plays a crucial role in developing reporting standards, ensuring that financial market participants provide accurate and comprehensive sustainability information. These initiatives collectively ensure that the financial sector aligns with broader sustainability goals, fostering an environment conducive to sustainable investments and economic resilience.

Policy and Regulatory Overview in Czechia

The Central government in Czechia plays a pivotal role in shaping the national sustainable finance landscape. By establishing clear guidelines for green products, sustainability disclosures, and investments in environmentally sustainable activities, the government incentivizes investment in green projects and ensures transparency and accountability. **The Ministry of Finance (MoF) leads the sustainable finance agenda, evidenced by setting up the Sustainability Policies Department in 2024**. This department formulates strategies, concepts, and legislation while cooperating with key ministries and international organizations to foster finance for sustainable development.

The governance of sustainability in Czechia involves multiple ministries. The Ministry of Environment (MoE) coordinates environmental affairs, the Ministry of Industry and Trade (MoIT) leads energy transition, and the Ministry of Transport (MoT) aligns infrastructure projects with EU sustainability requirements. Despite these efforts, ministries lack coordinated approach, dedicated personnel and a strategic vision of translating sustainability goals and requirements into concrete implementation plans. The Czech National Bank (CNB) also

participates, but its involvement in sustainable finance agenda is limited compared to other central banks. Awareness raising and communication activities or one-stop-shop information sources on sustainability and its funding are missing.

The Czech financial sector and its professional associations actively promote sustainable finance. The Czech Banking Association (CBA) and other industry bodies emphasize the importance of sustainable finance and engage in initiatives to enhance sustainability practices. Sixteen banks have signed a Memorandum for Sustainable Finance, committing to sustainable finance principles and transparent reporting. Despite these commitments, the financial sector believes that the CNB should take a more proactive role in fostering an ESG-friendly environment and aligning with EU supervisory approaches.

Key Challenges in Sustainable Finance in Czechia

A significant challenge in the Czech sustainable finance market is the availability and quality of ESG data. This situation underscores the necessity for collaboration among the State, financial institutions, and non-financial corporations to address these issues and foster sustainable finance in the Czech Republic.

Emerging challenges include the development of innovative financial products, such as state-introduced financial instruments tailored for sustainability projects, the integration of ESG considerations into conventional financial analysis, and the creation of appropriate monitoring and reporting frameworks. Furthermore, there is an urgent need to bridge the gap between policy initiatives and market practices to ensure a cohesive and effective shift towards sustainable finance.

In Czechia, the concept of sustainable finance has earned sporadic and low-profile attention by central, regional and local governments to date. With a few exceptions at the national level, e.g., MoF, Ministry of Regional Development ('MoRD') and MoE, sustainable finance is not a prominent issue on the mainstream policy agenda at all levels of government. Going forward, positive change in such a complex and wide-ranging horizontal topic as sustainable finance cannot take place without **strong political leadership.**

The State is crucial in facilitating transition by establishing regulatory frameworks and offering financial and non-financial incentives to support sustainable practices. Government policies are becoming increasingly supportive of sustainability efforts, aiming to balance economic growth with environmental protection. These measures are intended to encourage both the public and private sectors to align their financial strategies with sustainability objectives. However, there are challenges connected with coordination and alignment of the support with EU Taxonomy to mobilise also private financial institutions capital.

Non-financial corporations are also key participants in this transformation. By incorporating ESG criteria into their operational and strategic decision-making processes, businesses improve their sustainability credentials, which are increasingly sought after by investors. However, the report highlights several challenges faced by non-financial corporations, such as the need for significant investment in technologies reducing carbon footprint and the complexity of measuring and reporting on sustainability performance.

The figure below comprises the main challenges identified in the Diagnostic Report across five thematic and sectoral pillars.

A. ESG Data, Risk Management and Disclosure	
1.	**Lack of access to public sector data to create benchmarks**. There is overall unavailability of complete, high-quality (verified) data in the required structure, granularity and correspondence with regulatory EU Taxonomy-aligned requirements being provided at least to the financial institutions subject to regulations free of charge from the state, or also to companies with CSRD reporting obligations. Financial institutions in Czechia lack available open data, methodologies and metrics or other forms of information flow from the

	public administration, e.g., from the point of view of interpretation of the EU Taxonomy in permit procedures and climate data for climate risk-related management.
2.	**Diverse Approaches and Documentation.** The adoption of ESG criteria varies significantly across large European banking groups, leading to a lack of uniformity in documentation requirements imposed on clients. Whereas credit risk process is highly standardised by corresponding CNB regulation, this is not the case of ESG risks. Czechia struggles with inconsistency and a lack of clear guidelines. This disparity makes data and documents from clients non-comparable and incompatible (with the exception of the ESG questionnaire), thereby slowing down the financing of sustainable projects and increasing the administrative burden for all parties involved. This is particularly evident in areas such as energy efficiency of buildings and demonstrating the fulfilment of sustainability criteria in agriculture.
3.	**Harmonised, not unified conditions.** In each member state, demonstrating compliance at the project level with EU Taxonomy is done in a unique way. This leads to disparate and often incomparable data, which complicates the situation for both the companies and financial institutions that have to assess projects according to these rules. Mostly, Czech regulation and technical norms do not take EU Taxonomy into account yet, such as building energy performance certificates, biodiversity protection rules and many others. Another layer of complexity is e.g. complying with sustainability standards of the European Investment Bank ('EIB'), which are also not 100% EU Taxonomy aligned, which complicates taking on new EIB framework loans and on-lending facilities.
B.	**Sustainable Finance Products**
1.	**Missing critical mass of sustainable projects meeting standards.** As green bond standards require establishment of mechanisms to verify compliance with the respective environmental criteria, the issuer has to have a robust ESG framework already established within the company to seriously think about deploying green bonds as a source of finance. There also has to be an upfront long-term investment plan in place aligned with the selected standard for efficient use of proceeds. It is to be mentioned the additional cost for setting and monitoring a green bond framework. Again, such cost is lower for companies, who already have well-established sustainability-related plans and reporting in place.
2.	**Slower green transition.** Insufficient volumes of green and sustainability-linked funding could slow the adoption of green technologies and practices. As companies find it challenging to secure financing for their environmental and social initiatives, the overall pace of innovation in these areas may decelerate. This stagnation would make it harder for Czechia to keep up with more advanced markets like the Netherlands and Germany, where sustainability-linked finance is more mature and widespread.
3.	**Decarbonisation strategies for transition finance are missing.** Government policies and national benchmarks for decarbonisation strategies are essential in guiding financial institutions towards sustainable investments. In Czechia, there is an urgent need for the government to establish clear and ambitious short- and long-term decarbonisation targets, which could serve as benchmarks for transition finance. Furthermore, state support in the form of subsidies, tax incentives, and public-private partnerships could significantly boost the volume of transition finance.
4.	**Slower Achievement of Goals in the Social Domain.** Inability to scale up social bond issuance would mean missing an important vehicle for financing social projects. Social bonds are instrumental in addressing pressing issues such as affordable housing, healthcare, education, and social inclusion. By not leveraging this financial tool, Czechia risks slowing down the progress towards achieving critical social objectives, thereby perpetuating existing inequalities and social challenges.
C.	**Public Sector**

1.	**Delayed and limited activity.** Czechia primarily focuses on the transposition of EU legislation in the realm of sustainability but often fails to implement these pieces of law on time and lacks a comprehensive national strategy. The country tends to implement recommended tools, policies, and activities later than its neighbours, such as support for renewable resources, aggregation services, flexibility, and the hydrogen economy. As a result, the private sector lacks a clear understanding of the state's sustainability direction and has to operate without a long-term vision or strategic framework. There is a significant lack of political leadership and support and national coordination regarding sustainable finance.
2.	**Absence of national framework for sustainable finance.** The national framework for managing sustainability and sustainable finance is underdeveloped and understaffed, with inadequate connectivity and coordination across sectors and governmental bodies. This results in siloed approaches and impedes the integration of international best practices, as proactive collaboration is essential for advancing sustainable finance. This is a crucial, cross-cutting issue that cannot be successfully resolved without an appropriate coordination framework.
3.	**Performance-based framework is missing in the public sector.** Czechia faces a challenge of adopting a robust and transparent performance-based framework in strategic planning, subsidy management or tax and legislative measures.
4.	**Investor attractivity of EU Taxonomy-aligned projects.** The funding conditions for infrastructure projects would likely worsen if not EU Taxonomy-aligned, making projects less economically viable. This would result in a higher reliance on traditional, potentially more polluting, sources of energy and infrastructure development, slowing the transition to a low-carbon economy. The opportunity to attract larger investors interested in green and sustainable projects would diminish. Sustainable finance products and alignment with EU Taxonomy offer a level of credibility and appeal to investors looking to support environmentally responsible initiatives. Without this alignment, Czechia could struggle to secure the necessary capital to fund large-scale decarbonization projects.
5.	**Sustainable public procurement as precursor to wider adoption of sustainable finance.** Failing to apply sustainable public procurement practices can lead to several risks and challenges, particularly in the realms of decarbonisation and the adoption of sustainable finance as it is a necessary precursor for effective green budgeting and sovereign green bond issuance. Without a concerted effort to purchase environmentally friendly goods and services, public institutions may inadvertently contribute to higher emissions and perpetuate reliance on non-renewable resources.
6.	**Risk of stranded assets.** Companies active in the oil and gas ('O&G') industry like Net4Gas, ČEPRO or MERO risk becoming stranded assets if they do not propose a clear and actionable transition plan to secure funding. As the global energy landscape shifts towards renewables, the value of fossil fuel-based infrastructure could plummet, leaving them with underutilized or obsolete assets. This scenario underscores the urgency for these companies to align with sustainable finance principles to avoid significant financial losses and ensure long-term viability.
D.	**Non-Financial Enterprises and Sustainable Finance**
1.	**Dual sustainability impact.** The EU Taxonomy, sustainability reporting and other measures have a dual impact on business strategies of real-economy actors. For some enterprises, the EU Taxonomy is perceived as an opportunity in terms of the sustainable orientation of their business, including emerging sustainable finance options. Others view it as a risk or challenge due to increased costs and regulatory burdens.

2.	**Missing awareness of benefits.** Additionally, there is often a lack of awareness and understanding among businesses about the long-term benefits and financial returns of sustainable finance. Many companies are hesitant to allocate resources towards sustainability initiatives due to perceived risks and uncertainties.
3.	**Evolving regulation.** Moreover, the complexity and evolving nature of sustainability regulations create a challenging environment for businesses to navigate. Keeping up with regulatory changes and ensuring compliance can be resource-intensive and may require specialized knowledge and expertise that many companies currently lack.
E.	**Motivating the Private Sector to Invest in Sustainable Activities**
1.	**Fragmented support.** State support for the development of renewable energy sources (RES), energy efficiency, and clean mobility is divided among various programmes and funds, each with its own specific conditions, schedules for calls, evaluation criteria, and separate application channels. This complex system also has its blind spots. There is no single coordinating body (apart from the collective government) to oversee sustainability-related programmes.
2.	**Obstacles in access to finance.** Solar power projects in Czechia encounter financing challenges because banks are unable to assume the market risk associated with electricity prices. Although the Modernization Fund offers investment subsidies, these are insufficient to mitigate the market risk for financing banks, which would be more willing to grant a loan if a Power Purchase Agreement (PPA) or Contract for Difference (CfD) were in place. Additionally, the aid intensity is inadequate to bridge the gap in price expectations between producers and electricity off-takers in PPAs, due to the limited natural conditions in Czechia. CfDs are also not a one-size-fits-all solution, as they assume sufficient market capacity, which is currently lacking for wind projects.
3.	**Limited funding of affordable housing.** Without sustainable finance, the primary source of funding for affordable housing projects would likely remain conventional loans and government subsidies. This can lead to financial instability and limited availability of funds in grant programmes. Traditional grant schemes are insufficient to meet the high demand for affordable housing, resulting in a significant shortfall in the number of housing units available to low- and middle-income families.
4.	**Reluctance in Using Commercial Banks as Financial Intermediaries.** EIB, National development financial institutions in the EU mainly function as providers of green credit lines, global guarantees and counter-guarantees, leaving the work with individual clients to the private sector. Such a system is more efficient, cheaper and faster than the prevailing model in Czechia, where each individual applicant must apply for support from a state institution. The “fund of funds” model involves entrusting the implementation role to private financial institutions which have a long-term relationship with their clients and robust channels of communication.

In conclusion, the Diagnostic Report focuses on significant challenges in the current system of financial support for sustainable activities in Czechia. The fragmented state support, obstacles in access to finance, limited or inefficient funding of areas like renewable sources, and reluctance to use commercial banks as financial intermediaries all contribute to missed opportunities.

Based on this report, the project will proceed with the development of **Deliverable 4: Sustainable Finance Policy Options**. This deliverable will include a comprehensive set of recommendations and a detailed roadmap for implementing sustainable finance practices in Czechia. The objective is to create a more integrated and efficient system that can better meet the demand for sustainable investments and support the development of renewable energy, energy efficiency or social infrastructure projects. The roadmap will outline specific actions and timelines to guide policymakers and stakeholders in achieving these goals.

1 Introduction

1.1 Project Background

The Czech government requested support from the European Commission ('**Commission**' or '**EC**') under Regulation (EU) 2021/240, establishing a Technical Support Instrument ('**TSI**'), with the objective to **contribute to institutional, administrative, and growth-sustaining structural reforms in Czechia, by way of a specific TSI project titled 'Sustainable Finance Policy Options',** (REFORM/2021/OP/0006 Lot 1, TSIC-RoC-19846 or hereinafter just '**Assignment**'), the main beneficiary being the Ministry of Finance ('**MoF**').

This deliverable under the Assignment, titled 'Deliverable 3: Diagnostic Report' ('**Diagnostic Report**' or '**Report**'), is meant 'to give a comprehensive overview of the Czech financial market with regard to the mobilisation of finance for EU Taxonomy-aligned investments and products, relative to the European Union's sustainable finance regulatory framework and related initiatives and supplied recent summary report of this framework'. **The Report** was developed based on the results of 'Deliverable 2: Good practices report from other national sustainable finance strategies'[1] (the **'Good Practices Report').**

The Diagnostic Report serves as a starting point for the development of policy options in the coming deliverable of the Assignment titled 'Deliverable 4: Report on public policy options on sustainable finance, action plan and roadmap for implementation' (**'Public Policy Options Report'**).

The Diagnostic Report aims at **identifying the key weak links and risks that need to be addressed to enhance the capability of the Czech financial market and to mobilise finance while simultaneously giving a clear picture in quantitative terms of the finance gap to be addressed. The Diagnostic Report** includes the following five key elements:

- mapping the sustainable finance ecosystem;
- governance and coordination issues;
- incentives, opportunities, and awareness;
- barriers and bottlenecks; and
- instruments and tools.

Methodology of the Report

The approach to the Report development included:

- Desk research of relevant sources and publications of EU institutions, OECD, EIB, EBRD, Czech authorities, associations of Czech financial market, non-financial corporations, academic and other sources as cited throughout the report;
- Stakeholder engagement activities;
- Analytical, induction and deduction methods to process the data and findings from the above sources.

The stakeholder engagement activities within the delivery of this Report included:

- Presentations at sessions of the MoF Sustainable Finance Platform (Central Government Section, Private Sector and Self-Governments Section) at the MoF premises;

[1] This report was complemented in June-July 2024 by TAIEX workshops, i.e., two peer-to-peer workshops with experts from the good practices Member States identified in Deliverable 2, presumably from France and the Netherlands. The workshops were aimed at exchange of practice between Czech, French and Dutch authorities and was not attended by the Consultant.

- Four half-day awareness and alignment workshops on sustainable finance and ESG, held at the MoF premises and organised for target stakeholder groups;
  - Three hybrid consultation workshops with ESG commissions of the financial sector associations;
  - Structured, two-hour meetings with 11 Central Government bodies, the National Development Bank, Czech Banking Association, Czech Insurers Association, ESG rating agencies, commercial banks, companies active in real estate and manufacturing;
  - Other face-to-face meetings, videoconferences, and calls with relevant stakeholders.

As part of the Assignment, questionnaire surveys were carried out between February and April of 2024 to gain insight into the current awareness and readiness of four stakeholder groups in Czechia, listed below, regarding sustainable finance and ESG topics. The process and detailed results of the surveys are presented in Annex 6 for each stakeholder group as follows:

- **Real Economy** (sample size 103), covering private sector companies, including companies with the state holdings, unless exclusively owned by the state;
- **Financial Sector** (sample size 18), covering financial institutions, such as banks, leasing companies, insurance companies, pension companies and payment institutions, including the National Development Bank;
- **Central Government** (sample size 17), covering ministries and other Central governmental bodies and selected key institutions and legal entities solely owned by the State; and
- **Regional and Local Governments** (sample size 19), covering regions, cities and municipalities as territorial self-government bodies of Czechia.

Report Structure

This Diagnostic Report is broken down into the following four chapters:

- Chapter 1: Introduction
- Chapter 2: Background on Sustainable Finance
- Chapter 3: Diagnosis of the Czech Sustainable Finance Market
- Chapter 4: Barriers and Bottlenecks (Challenges)

Furthermore, this Diagnostic Report is complemented with the following annexes:

- Annex 1: List of 36 analysed NACE sectors;
- Annex 2: Description of the TIMES-CZ model (version v02+);
- Annex 3: Terms and Definitions;
- Annex 4: Detailed Survey's Findings;
- Annex 5: Meetings conducted during development of the report.

The Diagnostic Report reflects the status of the EU and national law and policies as applicable on 31 August 2024.

1.2 Emission-intensive Nature of the Czech Economy

Czechia belongs to the most GHG-intensive economies in the European Union, which will make the transition to carbon neutral economy ultimately more costly. The character of the Czech economy is a result of historical dependence on coal, a strong orientation towards heavy industry in the previous century and limited

possibilities for the development of renewable energy sources. **Changing this situation requires fundamental reforms in energy policy, including improving the legislative process and increasing investment in low-emission technologies.**

According to data from the Czech Statistical Office ('CZSO')[2], electricity production from fossil fuels accounted for 51% of total production in 2023. Average CO□ emissions per inhabitant in Czechia reached 11.4 tonnes, which is significantly above the EU average of 7.3 tonnes[3], which makes Czechia one of the largest producers of CO□ emissions per inhabitant in the EU. This emission intensity is also supported by the high share of industry on GDP, which in 2022 reached 36%[4].

However, **the transition to renewable energy sources in Czechia also faces significant obstacles that include geographic, legislative and economic factors.** The geographical conditions are not ideal for the development of solar energy, as the average annual number of hours of sunlight in Czechia is around 1,700 hours[5]. As solar energy faces challenges associated with high seasonal variability. The absence of access to the seashore limits the efficiency and economic profitability of renewable energy generation.

Another significant obstacle in development of renewable sources of energy is the complex and lengthy approval process for new projects. According to the World Bank, the average approval process for the construction of new renewable sources in Czechia in the case of wind farms takes up to eight years, which is significantly longer than in other EU countries[6]. **This legislative framework resulting in such complex assessment hinders the development of the renewable energy sector and discourages potential investors.**

1.3 Challenges Associated with the Energy Transition

Given the high emissions of greenhouse gases per inhabitant, high energy intensity of the economy and high share of fossil fuels in primary energy sources, **it is necessary for Czechia to significantly accelerate its transformation towards a low-emission economy. If this process was not accelerated, Czechia would be at risk of losing its economic competitiveness on the European market**, which could have negative effects on GDP growth, employment and on the stability of the financial market.

Compared to Poland and Germany, Czechia had largely similar starting conditions in terms of the share of coal in the energy mix two decades ago, but it faces different challenges, opportunities and geographic determinants. Poland, like Czechia, is heavily dependent on coal, which accounts for approximately 70% of its energy mix[7]. However, Poland is investing heavily in new energy sources, including construction of nuclear power plants and wind farms on the Baltic Sea, which should reduce its reliance on coal and greenhouse gas emissions. On the other hand, Germany, which has also long relied on coal, has taken significant steps towards the development of renewable resources in the last two decades, while phasing out both from coal and nuclear-powered energy generation at the same time. In 2020, renewables accounted for around 40% of the German energy mix[8], in 2024

[2] https://csu.gov.cz/energetika?pocet=10&start=0&skupiny=39&razeni=-datumVydani

[3] https://www.statista.com/statistics/986392/co2-emissions-per-cap-by-country-eu/

[4] https://data.oecd.org/czech-republic.htm

[5] http://www.isofenenergy.cz/slunecni-zareni-v-cr.aspx, https://www.weatheronline.co.uk/weather/maps/city?FMM=1&FYY=2000&LMM=12&LYY=2024&WMO=11518&CONT=euro&REGION=0001&LAND=CZ&ART=SOS&R=0&NOREGION=1&LEVEL=162&LANG=en&MOD=tab

[6] https://databank.worldbank.org/source/world-development-indicators

[7] https://www.iea.org/countries/poland

[8] https://www.iea.org/countries/germany

the amount accounting to almost 65%[9], and this also due to favourable conditions for the development of wind and solar energy. The development of other sectors is linked to the production of renewable energy, such as battery storage and other flexibility tools, or the development of clean mobility uptake.

Adverse entry conditions are not an insurmountable obstacle but require quick and decisive action. **Sustainable finance provides catalytic effect to the energy transition in Czechia. The transition should be comprehensive and shall include the modernisation of industry, development of renewable sources, increasing energy efficiency and adaptation to new economic conditions.** Such an approach can ensure Czechia's long-term competitiveness and stability in a changing global environment.

The processes of energy and industrial transitions in Czechia are also significantly influenced by the growing lack of qualified labour in industry. This shortage is particularly evident in technical fields, such as engineering and IT, which are key to the implementation of the enabling technologies and procedures necessary for the transition to low-carbon economy. According to data from the CZSO and the Confederation of Industry of the Czech Republic, industry in Czechia is facing a long-term shortage of workers, with a shortage of more than 300,000 qualified professionals in 2023[10].

1.4 State Energy Policy, Climate Protection Policy and National Energy and Climate Plan of the Czech Republic

The government of the Czech Republic is currently discussing three strategic documents, the 2021 – 2030 National Energy and Climate Plan of the Czech Republic ('NECP')[11], the State Energy Policy ('SEK')[12], and the Climate Protection Policy ('POK')[13], which are to set the transition trajectory of the Czech Republic until 2030 and beyond.

The draft update of the 2021 - 2030 NECP includes Czechia's goals in all five dimensions of the energy union. The key goal is to reduce greenhouse gas emissions in line with the commitments resulting from the Fit for 55 package and to contribute to the achievement, by the EU as a whole, of climate neutrality by 2050. The share of fossil fuels in primary energy consumption is to fall to 50% by 2030 and to 0% by 2050. The share of RES in final energy consumption is to increase to 30% by 2030.

The plan includes other important changes, such as the complete end of the use of coal for electricity and heat generation by 2033, the development of nuclear power to increase its share of energy consumption, and the introduction of small and medium-sized modular reactors (SMRs) around the mid-2030s. A significant role will also be played by carbon storage and utilisation technologies, which are expected to reach a volume of roughly 7 Mt CO□ by 2050.

The plan also includes the development of renewable energy sources, where the installed capacity of photovoltaic power plants is expected to increase to 10.1 GW and wind power plants to 1.5 GW by 2030. The plan also envisages the use of biomethane and hydrogen, including the replacement of part of the hydrogen produced by fossil fuels in industry with low-emission hydrogen and renewables.

[9] https://www.ise.fraunhofer.de/en/press-media/press-releases/2024/german-net-power-generation-in-first-half-2024-record-generation-of-green-power-generation-from-fossil-fuels-continues-decline.html

[10] https://www.spcr.cz/en

[11] https://www.mpo.gov.cz/assets/en/energy/strategic-and-conceptual-documents/2020/1/Executive-summary-of-the-National-Energy-and-Climate-Plan-of-the-CZ.docx

[12] https://www.mpo.gov.cz/dokument12265.html

[13] https://www.mzp.cz/en/climate_protection_policy

In terms of energy efficiency, Czechia is aiming for a decrease in final energy consumption from 1048 PJ (data from 2022) to 852 PJ in 2030, which represents a significant reduction. Achieving this goal, however, remains a challenge. The scenario of energy infrastructure development and market integration shows the need to adapt the electricity network to the increase in electricity consumption and ensure greater flexibility and energy accumulation.

The plan aims to create a predictable investment environment, simplify permitting processes, and ensure effective communication with all stakeholders. Decarbonisation will bring not only costs, but also benefits, such as greater resilience and a high-quality environment.

Investment needs by 2030 reach €114bn of which €61bn should come from private sources. This represents a challenge for sustainable finance mobilisation in the Czech Republic necessitating concerted effort of stakeholders both in public and private sector.

1.5 The Need for Private Financing of Decarbonisation and the Policy of Sustainable Financing

To achieve the above-mentioned goals, NECP, POK and SEK count on extensive investments in decarbonisation. Due to the high carbon intensity of the Czech economy, the private investment needed to meet the decarbonisation targets is significant. Approximately €61bn should be provided by private investors, i.e., large and small companies, banks, investment funds or households. **The governmental sustainable finance policy should represent a clear link between the need to increase private investments in sustainability, the activities of financial institutions and the real economy.** It should facilitate the financing of decarbonisation and other sustainable activities and work to motivate the real economy to make these investments happen.

The energy and economic transition represent a significant risk for the financial market in Czechia, but also an opportunity. **The risks stem primarily from a sudden change in the value of assets associated with fossil fuels, which can lead to so-called stranded assets**, i.e., property value dropping sharply or becoming unsaleable. Banks, insurance companies and investment funds, but also the state, which all have significant shares in their portfolios in sectors connected with the production or distribution of fossil fuels, face increased sustainability-related risk and pressure to reassess their investment strategies.

Conversely, sustainable finance policy can help to bolster the positive effects of decarbonisation and the achievement of sustainability goals on the financial market. The transition to low-emission technologies will reduce the systemic risks associated with climate change and ensure greater stability of the financial sector. This is important not only to protect investments, but also to maintain investor confidence and ensure long-term economic growth. If Czechia manages to successfully adapt to low-emission economy, it can become a more attractive destination for foreign investments, which will strengthen its position in the global economy.

Green bonds, ESG ratings and other products focused on sustainable development are gaining popularity. However, Czechia lags behind Germany, the Netherlands or France in the speed of adoption of these instruments. As demonstrated in the Good Practices Report, robust demand for sustainable finance in these countries underscores a growing global interest in environmentally focused financial instruments.

Sustainable financing products, such as green and sustainability-linked bonds, green loans and mortgages, and sustainability-driven investment products can play a key role in filling the investment gap calculated within the NECP and POK. The market impact can be amplified by providing suitable financial instruments implemented by the National Development Bank and the state funds in cooperation with the commercial financial institutions.

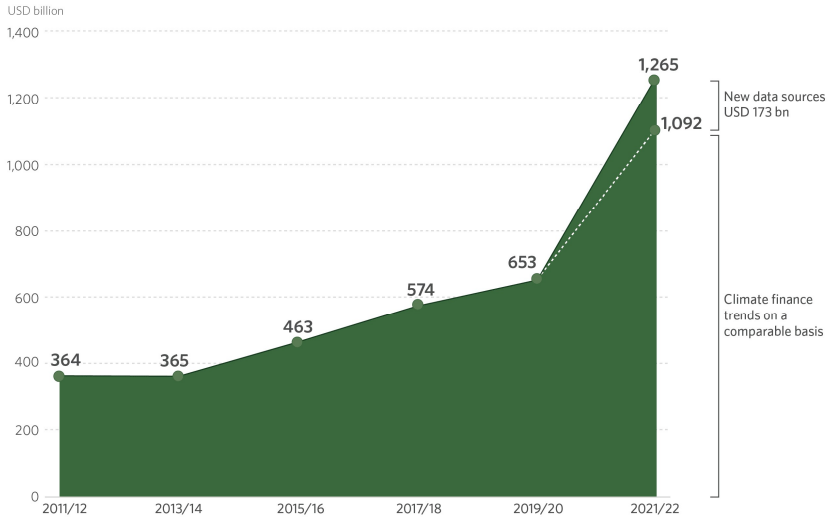
2 Background on Sustainable Finance

2.1 Sustainable Finance Globally

The sustainable finance category uses the environmental ('E'), social ('S') and governance ('G') concept as its defining factor to improve performance profiles of capital allocations. The rise of ESG reflects common sense that risk and opportunities which cannot be measured cannot be managed either. Consequently, market shifts combined with pressure from the international political community[14] over time have **led to the development of specific policy and regulatory frameworks. The global sustainable finance landscape has witnessed significant developments with countries worldwide implementing various frameworks to promote sustainable development and address environmental challenges**.[15] Such frameworks define sustainable investments, link sustainability factors to the investment decision-making process and access to funds, provide rules for sustainability reporting and governance, define qualities of new financial tools, and, finally, create the conditions of a level-playing field by introducing strict rules on greenwashing[16].

Globally, financial flows in climate related finance reached around USD 1.3 trillion annually in 2021/2022, a substantial increase from USD 653bn in 2019/2020[17]. **In total, the value of the sustainable finance market reached USD 5.8 trillion in 2022**[18] (Figure 1). This surge in climate finance reflects a growing commitment to addressing environmental challenges and promoting sustainable development worldwide.

Figure 1: Global Climate Finance in 2011 to 2022, Biennial Averages



[14] It was in particular triggered and driven by the results of the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) held in Paris in the late 2015 (COP21) and the adoption of the Paris Agreement. https://unfccc.int/process-and-meetings/the-paris-agreement.

[15] For more information, see PwC Global Investor Survey 2023 at https://www.pwc.com/gx/en/issues/c-suite-insights/global-investor-survey.html. and PwC's 27th Annual Global CEO Survey at https://www.pwc.com/gx/en/ceo-survey/2024/download/27th-ceo-survey.pdf.

[16] The recent study of the European Securities and Markets Authority (ESMA) entitled 'Final Report on Greenwashing' at https://www.esma.europa.eu/document/final-report-greenwashing.

[17] https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/.

[18] For more information on this report (State of Finance for Nature report), se https://unctad.org/system/files/official-document/wir2023_overview_en.pdf.

Source: Climate Policy Initiative

One of the key ESG measurement mechanisms is sustainability taxonomies, which are comprised of classification systems that sort out economic activities or investments with the use of technical sustainability characteristics[19]**.** This type of classification system also implicitly defines the second group of economic activities and investments that are not sustainable. Compared to other ESG frameworks and standards, sustainability taxonomies **are the most granular classification tool, containing detailed technical rules for determining the extent and scope of sustainability**. They serve to objectively identify sustainable economic activities and investments and are aimed at preventing greenwashing market practices. ESG taxonomies are relatively new but are quickly gaining a reputation as a must-have "guide" for anyone involved in investing and capital allocation. Worldwide, the EU Taxonomy remains most relevant, but versions have also been developed for different countries, including Chinese, British and Canadian versions[20].

To develop new innovative budget tools for evaluating and enforcing the **compliance of public budgets (expenditures and revenues) with green and climate goals,** a multi-sectoral platform for research and analysis was established in 2017 at **the OECD level, known as the Paris Collaborative on Green Budgeting ('PCGB')**. The PCGB's premise assumes that **effective integration of environmental dimensions into fiscal frameworks** (including annual budgets, assessment of tax and expenditure policies, and long-term sustainability analysis) **will help governments become more accountable in terms of their environmental commitments and support them in their transformations towards sustainable and resilient societies**[21].

2.2 EU Sustainability Policy in Relation to Sustainable Finance

The EU has made considerable progress in implementing its sustainable finance agenda over the last five years following the **European Green Deal**[22] and **Fit For 55 package**[23]. The EU adopted provisions on **EU Taxonomy, sustainability disclosure and reporting,** which affected the sustainable finance landscape greatly. Also, the prudential measures regarding **capital requirements and risk management** should increase the financial sector's resilience to sustainability risk[24]. Together, these elements ensure that the financial sector increasingly accounts for sustainability factors.

European Green Deal

The fundamental direction of the EU until 2050 is defined in the **European Green Deal from December 2019**[25] (**'EGD'**), which represents a long-term EU growth strategy consisting of **a set of policy initiatives aimed at setting the EU on the path to green transition with the ultimate goal of reaching climate neutrality by 2050**

[19] On the latest developments in sustainability taxonomies worldwide, see https://www.wbcsd.org/resources/harnessing-taxonomies-to-help-deliver-sustainable-development/.

[20] Within the framework of the International Platform for Sustainable Finance (IPSF), a Taxonomy working group was established, the result of which was the publication of the first report of this working group in November 2021, labelled Common Ground Taxonomy (CGT).

[21] The PCGB considers 'green budgeting' to be "a process in which policy-making tools help to achieve an environmental goal." For more information, see https://www.oecd.org/environment/green-budgeting/.

[22] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

[23] https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55/

[24] For more information, see https://www.consilium.europa.eu/en/press/press-releases/2024/05/30/basel-iii-reforms-new-eu-rules-to-increase-banks-resilience-to-economic-shocks/. .

[25] Communication from the Commission to the European Parliament, the European Council, the European Economic and Social Committee and the Committee of the Regions from 11 December 2019, 'The European Green Deal', COM/2019/640 final; see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN.

(see Figure 2). Also, the EGD seeks to transform the EU into a fair and prosperous society, with a modern, resource-efficient, and competitive economy where economic growth is decoupled from resource use[26]. Additionally, it facilitates the transition of the EU into a fair and prosperous society with a **modern and competitive economy**. The EGD promotes cohesive use of all policy-making tools, including regulation and standardisation, investment and innovation, national reforms, dialogue with social partners and international cooperation. **Its four key pillars (climate, environment, technology and society) are tied to the ESG concept** where the 'E' stands for the climate and environmental pillars, the 'S' and 'G' for the social pillar, and technology enables the transition.

Figure 2: European Green Deal Structure

Source: European Commission

Within the EU, **the implementation of the EGD was complemented by the adoption of the European legal framework for climate change**[27] (the **'European Climate Law'**)[28]. It sets a legally binding target of Net Zero GHG emissions in the EU by 2050. At the same time, it also includes measures to monitor progress and adapts its actions based on existing systems such as the management process with respect to national energy and climate plans (**'NECPs'**), regular reports from the European Environment Agency[29] (**'EEA'**), and the latest scientific knowledge on climate change and its impacts.

[26] There are ten main elements of the EU Green Deal are: climate action; clean energy; sustainable industry; buildings and renovations; sustainable mobility; eliminating pollution; farm to fork; preserving biodiversity; research and development; and preventing unfair competition from carbon leakage.

[27] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) N401/2009 and (EU) 2018/1999 ('European Climate Law'), see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32021R1119.

[28] For more information, see https://eur-lex.europa.eu/EN/legal-content/summary/european-climate-law.html.

[29] https://www.eea.europa.eu/en.

The EU sustainable finance framework envisaged in the EGD was introduced by the EC **as the EU Strategy for Financing the Transition to Sustainable Economy on 6 July 2021**[30] (**'EU Sustainable Finance Strategy'**). The EU Sustainable Finance Strategy builds upon the foundations laid by the **2018 EU Sustainable Finance Action Plan**[31]. This continuity emphasises that the strategy is part of ongoing targeted efforts supported by relevant new legislation rather than a sudden, standalone initiative. **It aims at creating an enabling environment for sustainable finance in the EU and is based on four pillars, namely: (1) EU Taxonomy, (2) a framework for non-financial reporting by companies and financial institutions, (3) investment instruments, including benchmarks, standards, and brands, and (4) ESG ratings.** Almost all key legislation has already been adopted and published.

The EU Platform on Sustainable Finance ('PoSF') released a report titled 'Monitoring Capital Flows to sustainable investments – Intermediate Report' in early April 2024 (**'Sustainable Capital Flows Report'**).[32] It **proposes an architecture to measure the effective contribution of finance towards the objectives of the EGD**. The report focuses on the following two types of capital flows, namely **capital expenditures in real economy entities** and **flows in and out of financial markets**[33].

Fit For 55

The **Fit For 55 package** sets groundbreaking proposals for revising and updating all relevant policy instruments and legislation regarding the EGD Net Zero target, introduces new initiatives to ensure additional GHG reductions by 2030 in line with the European Climate Law, was published in July 2021. The objectives of the Fit for 55 Package have been boosted in the meantime by the affordable, secure and sustainable energy for Europe initiative "REPowerEU" of May 2022, announced as a response to the effects of Russia's invasion of Ukraine[34], as well as by the EGD Industrial Plan, which aims to promote climate-neutral technologies in Europe, greater EU self-sufficiency and security in the area of critical and strategic raw materials, and further by electricity market reform. Based on the final version of the package, net GHG emissions in the EU are expected to be reduced by 57% by 2030 compared to 1990 levels.

The Fit for 55 Package sets out all relevant, legally binding climate targets that apply to key economic sectors. It includes, *inter alia*, targets for reducing GHG emissions across a wide range of sectors, a target to increase the volume of natural absorption (carbon sinks), and an updated EU Emissions Trading Scheme[35] (**'EU ETS**') via an amendment to the existing directive on EU ETS[36] (**'EU ETS Directive'). The so-called EU ETS 2**

[30] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions from 6 July 2021 'Strategy for Financing the Transition to Sustainable Economy', COM/2021/390 final, see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0390.

[31] Action Plan: Financing Sustainable Growth, see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097

[32] https://finance.ec.europa.eu/document/download/5dfafa22-ebdf-43d8-88bb-f48c44ecd28e_en?filename=240404-sf-platform-report-monitoring-capital-flows_en.pdf.

[33] The first type sheds light on progress towards filling the investment gap and the second type represents an important source of capital in support of real economy investments.

[34] https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2022:230:FIN.

[35] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC (consolidated text), see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02003L0087-20230605.

[36] Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system. For more information, see https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en.

addresses the CO2 emissions from fuel combustion in buildings, road transport and additional sectors (mainly small industry not covered by the existing EU ETS)[37] and introduces a social-support source of finance for citizens and small businesses through the new Social Climate Fund[38] (**'SCF'**). To ensure a level playing field for European businesses, a carbon cross-border adjustment mechanism is being introduced at the borders of the EU, based on which an ETS-equivalent carbon price will be paid in the target sectors and for imported goods in the future[39] (**'CBAM'**). Also, the EU has updated its targets and rules for energy from renewable sources[40] (**'RED'**), energy efficiency in general (**'EED'**)[41], in buildings[42] (**'EPBD'**), methane reductions (**'MERR'**) and an amendment to the existing regulation on land use, land-use change and forestry (the **'LULUCF Regulation'**)[43]. In addition, as of 2035, new passenger cars and new light utility vehicles introduced in the EU market will have to have zero tailpipe emissions[44] (**'Car&Vans CO2 Regulation'**). The goal is also to strengthen charging infrastructure and the use of alternative fuels in road, ship, and air transport[45] (**'AFIR'**).

Impact of Fit For 55

Carbon pricing and an annual emissions cap will ensure that polluters pay for carbon and generate revenue for Member States to invest in the green transition. This will be done in particular through the revised EU ETS, which will gradually extend carbon pricing to new economic sectors, notably transport, heating fuels and shipping. With this reform, Member States are now required to spend 100% of their emissions-trading revenues on climate and energy-related projects and on the social dimension of the transition.

[37] Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system. https://eur-lex.europa.eu/eli/dir/2023/959/oj.

[38] Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060, see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R0955.

[39] Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism, see https://eur-lex.europa.eu/eli/reg/2023/956/oj. For more information, see https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en and https://trade.ec.europa.eu/access-to-markets/en/news/carbon-border-adjustment-mechanism-cbam.

[40] Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, see https://eur-lex.europa.eu/eli/dir/2023/2413/oj.

[41] Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955 (recast), see https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=OJ:JOL_2023_231_R_0001. The EED contains not only provision on the application of 'energy poverty', but also on 'the energy efficiency principle' (Article 3) and integration of energy efficiency measures in public procurement (Article 7 and Annex IV).

[42] The Council announced on 12 April 2024 that it has formally adopted the revised EPBD, with new rules aimed at reducing energy use and emissions from buildings across the EU, including targets for all new buildings to be zero missions by 2030, and to phase out the use of fossil fuels in building heating systems by 2040. For more information, see https://ec.europa.eu/commission/presscorner/detail/en/qanda_24_1966.

[43] Regulation (EU) 2023/839 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/841 as regards the scope, simplifying the reporting and compliance rules, and setting out the targets of the Member States for 2030, and Regulation (EU) 2018/1999 as regards improvement in monitoring, reporting, tracking of progress and review, see https://eur-lex.europa.eu/eli/reg/2023/839/oj.

[44] Regulation (EU) 2023/851 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2019/631 as regards strengthening the CO2 emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's increased climate ambition, see https://eur-lex.europa.eu/eli/reg/2023/851.

[45] Regulation (EU) 2023/1804 of the European Parliament and of the Council of 13 September 2023 on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU

The newly created Social Climate Fund (SCF) will allocate €65bn from the EU budget and a total of more than €86bn[46] **to support citizens and small businesses that are most vulnerable in the ecological transition.** Additionally, the new carbon offset mechanism at the border will ensure that the carbon price is paid in affected sectors for imported products.

In the revised **directive on renewable energy sources, the EU has set a binding target to achieve a minimum share of 42.5% of energy from renewable sources in the gross final consumption of energy by 2030, compared to the current target of 32%.** This means that the share of renewable energy in the EU should increase significantly by 2030. Member States will each have specific obligations to meet, in line with the revised **Effort Sharing Regulation ('ESR'),** which focuses on key sectors that account **for 60% of the EU's total emissions.**

As regards the Energy Efficiency Directive, an agreement has been reached on a new target at the EU level to increase energy efficiency by 11.7% by 2030. Member States will have to achieve annual savings of 1.49% on average in the period 2024–2030. The public sector is to lead by example, with an annual savings target of 1.9%.

The changes indicated above will generally lead to an increased 'carbon price' and other price-formative changes across value chains in the EU economy, including in Czechia. **Rising carbon price is creating necessity to strengthen transition finance options in Czechia supporting soft landing for businesses with fossil-fuelled business in the high carbon-priced reality.**

EU Taxonomy

EU Taxonomy provides for conditions for meeting the status of 'an environmentally sustainable economic activity', which is defined as **an investment that simultaneously meets all four overarching conditions across the full range of its constituent economic activities:**

1. Making a substantial contribution to at least one environmental objective[47];
2. Doing no significant harm to any of the other five environmental objectives;
3. Complying with minimum safeguards; and,
4. Complying with the technical screening criteria set out in the Taxonomy delegated acts.

The definition of the 'do no significant harm' (**'DNSH'**) principle in meeting one or more of the EU Environmental Objectives is set out in general terms in Article 17 of the EU Taxonomy Regulation[48]. It seeks **to ensure that investments promoting sustainability in one specific area do not generate negative impacts elsewhere**. However, **the DNSH principle may apply differently across different types of EU funds in the 2021–2027 programming period**, i.e., there may be different specific criteria for fulfilling this principle in relation to the Recovery and Resilience Facility (RRF) on the one hand and to EU funds under the Multiannual Financial Framework for the 2021–2027 programming period on the other hand. One of the main reasons is that the EU Taxonomy accompanying Delegated Acts were not issued at the time the respective EU funding programmes were developed.

[46] Based on the mandatory 25% contribution of the Member States to their Social Climate Plans.

[47] These include Climate change mitigation, Climate change adaptation, Sustainable use and protection of water and marine resources, Transition to a circular economy, Pollution prevention and control and Protection and restoration of biodiversity and ecosystems.

[48] Also, the definition and application of DNSH varies between the EU Taxonomy Regulation and the Sustainable Finance Disclosure Regulation (SFDR).

To support the implementation of the EU Taxonomy, the Commission developed some tools and documents which can be found on the EU Taxonomy Navigator website[49].

As cited in the **Market Practices Compendium**[50] the EU sustainable finance framework serves as a common platform for banks and their clients in managing climate transition risks. The EU Taxonomy and EBA Pillar 3 policy framework[51] allow banks to enhance their lending strategies through assessing clients' transition readiness and providing them new finance offerings targeting sustainable objectives. The EU Taxonomy criteria are also starting to be implemented by investors in their decision making as they set their own targets to reduce GHG emissions in investment products.

Net-Zero Industry Act

One of the four pillars of the EGD is to help companies become world leaders in the field of clean products and technologies. The EU-level response to this challenge is showcased through the new regulatory framework which has established measures for strengthening Europe's net-zero technology products manufacturing ecosystem, known as the 'Net-Zero Industry Act'[52] (**'NZIA'**). The NZIA aims at boosting the industrial deployment of net-zero technologies needed to achieve the EU's climate goals using the strength of the single market to reinforce Europe's leadership in industrial green technologies[53].

The NZIA focuses on easing conditions for investing in green technologies by simplifying permit-granting procedures and supporting strategic projects. It also proposes tease market access for strategic technology products, enhance the skills of the European workforce in these sectors (notably through the launching of net-zero industry academies) and create a platform to coordinate EU action in this area. To foster innovation, the NZIA proposes the creation of favourable regulatory frameworks for developing, testing, and validating innovative technologies, known as regulatory sandboxes[54].

2.3 Sustainability Reporting and Disclosure

Key binding regulations on non-financial reporting of the financial sector and regulated entities in relation to sustainability have already been adopted[55]. **A fundamental milestone regarding finance sector reporting was the adoption of the Regulation on Sustainability-Related Disclosures in the Financial Services Sector, also known as the Sustainable Finance Disclosures Regulation** ('**SFDR**')[56], supplemented by[57] (**'SFDR**

[49] https://ec.europa.eu/sustainable-finance-Taxonomy/.

[50] https://finance.ec.europa.eu/system/files/2024-01/240129-sf-platform-report-market-practices-compendium-report_en.pdf

[51] https://www.eba.europa.eu/regulation-and-policy/transparency-and-pillar-3.

[52] Regulation (EU) 2024/1735 of the European Parliament and of the Council of 13 June 2024 on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem and amending Regulation (EU) 2018/1724; see https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401735 .For more information on NZIA, see https://single-market-economy.ec.europa.eu/industry/sustainability/net-zero-industry-act_en.

[53] It provides *inter alia* for a single list of net-zero technologies, with criteria for selecting strategic projects in those technologies that will contribute to decarbonisation.

[54] On 6 February 2024, the Council and the European Parliament reached a provisional deal on the net-zero industry act. For more information, see https://www.consilium.europa.eu/en/infographics/net-zero-industry-act/.

[55] https://finance.ec.europa.eu/sustainable-finance/disclosures/sustainability-related-disclosure-financial-services-sector_en.

[56] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R2088.

[57] Commission Delegated Regulation (EU) 2023/363 of 31 October 2022 amending and correcting the regulatory technical standards laid down in Delegated Regulation (EU) 2022/1288 as regards the content and presentation of information in relation to disclosures in pre-

RTS'). The SFDR provides for a wide-ranging framework applicable to financial market participants, including banks, insurers, and asset managers.

Reporting in Financial Sector

The EU has undertaken a concerted effort to integrate sustainability principles into the financial sector through a series of regulations and directives. Complementing the applicable sustainable finance laws across the EU economy, the SFDR is a mandatory regulation exclusively serving the financial sector. It represents a significant shift towards transparency in ESG aspects of EU financial markets by mandating obliged financial institutions to disclose granular sustainability information. Also, the SFDR requires financial market participants to disclose how they integrate sustainability risks, including potential harm, and opportunities into their investment decision-making processes. In addition, **a key new aspect is the obligation of banks under the Disclosures Delegated Act to report on the Green Asset Ratio**[58] (**'GAR'**) **in their FY2024 disclosures**. This means that banks will need to provide quantifiable evidence that demonstrates the extent to which the portfolio meets EU Taxonomy requirements.

The EU framework for sustainable finance was mainly developed as a response to urgent calls from the private sector for unifying the interpretation of sustainability and harmonizing the conditions and rules for fulfilling sustainability strategies. This comprehensive framework aims to provide a clear and consistent approach for financial institutions and investors to integrate sustainability considerations into their decision-making processes.

As of Q3 2023, 53% of UCITS (Undertakings for Collective Investment in Transferable Securities) fund assets were managed by funds promoting environmental and/or social characteristics (Article 8), and a further 3.4% were managed by Article 9 funds[59]**.**

The **EU enacted legislation on the integration of ESG risks, factors, and preferences into capital market regulations**. The legislative package placed obligations on various financial entities to incorporate sustainability factors into their operations and align their organisational objectives with broader sustainability goals.

Also, **the EU adopted the amendments to the Capital Requirements Directive** (**'CRD VI'**)[60] and the respective Capital Requirements Regulation (**'CRR III'**)[61] **for the EU banking sector integrating the Basel III standards into the EU law.** Banks are required under CRD VI and CRR III to prepare and implement prudential plans focused on managing ESG risks which will be reviewed by competent supervisory authorities[62].

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contractual documents and periodic reports for financial products investing in environmentally sustainable economic activities. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32023R0363.

[58] The GAR refers to the proportion of a credit institution's assets that finance and are invested in EU Taxonomy-aligned economic activities as a proportion of the total covered assets.

[59] Monitoring Capital Flows to sustainable Investments Intermediate report, Platform on Sustainable Finance, April 2024

[60] Directive (EU) 2024/1619 of the European Parliament and of the Council of 31 May 2024 amending Directive 2013/36/EU as regards supervisory powers, sanctions, third-country branches, and environmental, social and governance risks`, see https://eur-lex.europa.eu/eli/dir/2024/1619/oj.

[61] Regulation (EU) 2024/1623 of the European Parliament and of the Council of 31 May 2024 amending Regulation (EU) N575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor; see https://eur-lex.europa.eu/eli/reg/2024/1623/oj.

[62] Competent authorities should assess through their relevant supervisory activities the extent to which institutions face ESG risks and have accompanying management policies and operational actions reflected in the targets and milestones set out in their prudential plans that are consistent with their disclosed sustainability commitments in the context of the process of adjustment towards climate neutrality by 2050.

Various European regulatory authorities, such as European Banking Association ('**EBA**'), the European Securities and Markets Authority[63] (**'ESMA'**), the European Insurance and Occupational Pensions Authority (**EIOPA**), the European Systemic Risk Board[64] (**'ESRB'**), and European Central Bank ('**ECB**') play crucial roles in setting standards for financial institutions. The EBA develops technical standards covering prudential regulation, recovery and resolution planning, and reporting requirements to ensure consistent application of EU law[65].

Corporate Sustainability Reporting Directive

For many large companies, the obligation of non-financial accounting is already applicable under the CSRD[66] , which, *inter alia*, also amends the EU Accounting Directive[67] (**'Accounting Directive'**). The CSRD was published in December 2022. **Member States had 18 months from the date of its entry into force to incorporate it fully into national legislation**[68]**, i.e., until 6 July 2024**[69]**.**

The CSRD requires extensive and detailed disclosures about how sustainability issues affect a company's business ('outside-in'), as well as the impact of its activities on society and the environment ('inside-out'). All of this information will also require independent assurance[70]. CSRD disclosure relates to:

- Companies already covered by the current sustainability reporting obligation (NFRD) must report for the first time in 2025 on the 2024 fiscal year.
- Companies not previously subject to the requirements of the NFRD, but now covered by the expanded scope of the CSRD, must report for the first time in 2026 on fiscal year 2025.
- Listed SMEs, small and non-complex financial institutions, and captive insurance companies must report on fiscal year 2026 for the first time in 2027.
- Companies outside the EU that generate sales of more than €150 million in the EU and have at least one subsidiary or branch within the EU must report on the 2028 financial year in accordance with the CSRD requirements for the first time in 2029.

[63] https://www.esma.europa.eu/.

[64] https://www.esrb.europa.eu/home/html/index.en.html.

[65] https://www.eba.europa.eu/about-us/legal-and-policy-framework/eba-regulation-and-institutional-framework.

[66] Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) N537/2014, Directive 2004/109/EC, Directive 2006/43/EC, and Directive 2013/34/EU, as regards corporate sustainability reporting. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32022L2464.

[67] Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on annual accounts financial statements, consolidated financial statements and related reports of certain forms of enterprises, on the amendment of Directive 2006/43/EC of the European Parliament and of the Council and on the repeal of Council Directives 78/660/EEC and 83/349/EEC, as amended

[68] For the entities subject to the Non-financial Reporting Directive from 2014 (**'NFRD'**), this duty of the Member States was already in place by the end of 2023.

[69] More detailed information on sustainability reporting in the EU is available at this link: https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en.

[70] Independent assurance is required over CSRD reporting beginning the first year it is applicable. The requirements begin with limited assurance and expand to reasonable assurance later (not specified). The nature, timing, and extent of assurance procedures will vary based on several factors, including: (i) which set of reporting standards are followed; (ii) whether the parent plans to report at a consolidated or subsidiary level; (iii) the timing of when reporting is required; and (iv) whether the statutory auditor is engaged to perform the sustainability attestation.

Moreover, key performance indicators of environmentally sustainable economic activities on operating and capital expenses and revenues as defined by **Disclosures Delegated Act**[71] (**'EU Taxonomy KPIs'**) will be eventually factored into the parameters by which firms will be evaluated and will determine their access to capital and financial services as well as their success in supplier-customer relationships. **Consequently, the EU Taxonomy KPIs**[72] **sustainability statements are likely to be increasingly important, not only for the lower cost of financing of private and public sector investment projects, but also for the general access of companies to capital and their ESG ratings**[73].

The European Financial Reporting Advisory Group (**'EFRAG'**)[74] plays an important role in the progress of sustainable finance framework in the EU. **It was appointed as a technical adviser to the EC on developing a draft ESRS under the CSRD, including digital formats.** EFRAG ensures that the ESRS reporting standards are developed through a transparent and inclusive process involving various stakeholders. This helps to build consensus and ensure that the standards are robust and widely accepted. In addition to supporting the CSRD, EFRAG has been developing implementation guides. As of the date of this report, **the first three documents on material assessment (double materiality), value chains and a list of ESRS data points have been finalised.** These guides cover various aspects of sustainability reporting, including data collection, reporting methodologies and best practices for ensuring accuracy and completeness.

2.4 Policy and Regulatory Overview in Czechia

National Governance Structure

The Czech central authorities' structure is defined by the so called 'Competency Law'[75], which does not directly entrust coordination of sustainability agenda to any specific authority. **Nevertheless, the MoE is entrusted with overall coordination among all ministries and other central state bodies of environmental affairs, as per §19(3) of the Competency Law**[76]**.**

Besides , **the Czech Government resolved in mid-2022 that the leading role in sustainable finance would belong to the MoF**[77]. As a result, a new Department of Sustainability Policies[78] was set up on 1 January 2024. To date, the only major legislative change in the national legislation directly connected with sustainable finance was the 2023 amendment to Act No. 563/1991 Coll, on accounting, as amended[79].

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[71] https://finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/implementing-and-delegated-acts/taxonomy-regulation_en

[72] https://ec.europa.eu/sustainable-finance-taxonomy/wizard

[73] For more information on the ESG ratings in the EU, see Section 2.2 above.

[74] Since its establishment in 2001, EFRAG has consistently served the public interest in the EU by advocating for transparent corporate reporting practices. The new mandate regarding sustainable finance was a logical option due to its experience and technical expertise in financial reporting. https://www.efrag.org/en/sustainability-reporting.

[75] Act No. 2/1969 Coll., on the establishment of ministries and other central bodies of the Czech Socialist Republic, as amended.

[76] ibid.

[77] In the meantime, the MoF created its Platform on Sustainable Finance in July 2023 as the primary coordination mechanism, competence centre and contact point for the theme in Czechia. For more information, see Section 2.3 below.

[78] This new section is composed of two sub-sections, namely 6901 Sustainable Finance and 6902 Sustainability Analyses.

[79] This amendment (via Act No. 349/2023 Coll., amending certain laws in connection with the consolidation of public budgets) transposed the CSRD requirements for the first group of obliged companies, i.e., for the companies that have been already subject to the NFRD requirements before the CSRD came into effect.

Individual ministries are to some level engaging with sustainability and ESG criteria within their operational scopes. The Ministry of Transport ('MoT'), for instance, is mostly concerned by EU ETS and their impact on the cost of infrastructure and how to provide necessary sustainability related information to subjects such as Správa železnic or Ředitelství silnic a dálnic so they are aligned with EU requirement. In the future, they see a potential in green bonds to finance new infrastructure, such as railways.

The Ministry of Regional Development ('MoRD') included sustainability as one of their nine pillars of the new Czech Public Procurement Strategy[80]. They believe that public administration can positively influence the market by being an example in sustainable purchases, and they set out the minimum environmental and social standards for public procurement.

However, the ministries are lacking dedicated personnel and a strategic vision for sustainability matters, let alone financing sustainability. The ministries commonly cited the lack of national vision with clearly divided responsibilities for individual ministries as the largest obstacle. This lack of coordination is especially problematic as many sustainability-related topics are split among several ministries.

While there is a move towards integrating sustainability into the agenda of central government bodies, the lack of a coherent and unified approach underscores the need for a more structured and centralised governance framework to effectively address and manage sustainability and ESG criteria across all sectors.

MoF Sustainability Policies Department

The Sustainability Policies Department – 69[81] **of the MoF was established in January 2024. It is responsible for formulating strategies, concepts, legislation, and methodologies pertaining to EU and national policies within the context of the EGD and the sustainable finance agenda**. This involves closely cooperating with key ministries, including the MoE and MoIT, while also assessing fiscal impacts. It also coordinates the development of ESG approaches, identifying public investment opportunities for financing sustainability, and ensures the establishment of national frameworks for financing sustainable projects and investments. The department contributes to fulfilling Czechia's international commitments related to the EGD and sustainable finance agenda. It cooperates with international financial and non-financial organisations, e.g., the OECD, EIB, EBRD, International Monetary Fund, World Bank, and the UN in terms of green transition and sustainable financing.

The department is entrusted with advancing sustainable finance initiatives through various activities, coordinating, on the Czech side, negotiations on the EU framework for sustainable finance and related technical criteria, negotiating EU legislation and regulation, collaborating with other Member States, formulating sector-specific rules and regulations, promoting the development of the ESG approach and engaging in targeted communication and educational activities to increase awareness and ensure feedback on existing and expected EU-level regulations[82].

Czech National Bank

The primary law governing the Czech National Bank ('**CNB**') is **Act No. 6/1993 Coll. on the Czech National Bank**, as amended. This act establishes the CNB as the central bank of the Czech Republic, responsible for **financial market supervision**, acting as a **resolution authority**, maintaining **price stability**, and

[80] https://www.sovz.cz/wp-content/uploads/2024/01/nsvz_strategie_online-verze.pdf

[81] https://www.mfcr.cz/en/about-ministry/organisation-chart/section-economic-strategies-and-policies/department-69-sustainability-policies.

[82] https://www.mfcr.cz/cs/ministerstvo/zakladni-informace/organizacni-struktura/sekce-hospodarske-strategie-a-politiky/odbor-69-politiky-udrzitelnosti/oddeleni-6901-financovani-udrzitelnosti.

supporting **sustainable economic growth** while upholding the principles of an **open market economy**. However, the act does not explicitly address **sustainability** or **climate change** as potential sources of financial instability. These terms are also missing in key Czech legal acts relevant to sustainable finance, such as **Act No. 591/1992 Coll. on Securities**, **Act No. 37/2004 Coll. on Insurance Contracts**, and **Act No. 256/2004 Coll. on Capital Market Undertakings**.

CNB published a list of laws and regulations related to sustainable finance and has issued various **decrees** to adapt or transpose **EU regulations** into Czech law, reflecting the interplay between EU directives and national legislation. For example, **Decree No. 184/2022 Coll.** and **Decree No. 185/2022 Coll.** modify the statutes of collective investment funds in accordance with the **SFDR** and **EU Taxonomy Regulation**. Similarly, **Decree No. 227/2022 Coll.** incorporates **sustainability factors** into investment service management as required by **Directive (EU) 2021/1269**, showcasing the integration of sustainability into national financial regulation. [83]

CNB also started to provide guidance on ESG risk management, although its approach is still evolving. The CNB has **signalled its intention to incorporate ESG risks into its supervisory framework**, emphasizing **the importance of sustainability** in maintaining the stability of the financial sector. **By gradually integrating ESG considerations into their oversight processes**, the CNB aims to ensure that banks are better prepared to manage the risks associated with climate change and other sustainability-related challenges[84].

Despite these efforts, the **Czech National Bank (CNB)** has taken a less active **approach**[85] to sustainability in comparison to institutions like the **Dutch National Bank (DNB)**[86], which provides comprehensive **methodological resources** and **interpretative guidance** and engages the public through educational initiatives and events. In contrast, the CNB offers limited guidance, exemplified by **Supervisory Communication No. 2/2024**[87], which outlines obligations for insurance intermediaries in sustainable finance. While this communication offers some clarification on the **EU Taxonomy Regulation**, the **SFDR Regulation**, and the associated **Regulatory Technical Standards**, the CNB has yet to fully embrace its role as a national authority in setting broader compliance criteria for the EU Taxonomy.

Many **central banks and banking supervisors, within their overarching goals of macroprudential policy**[88] **to preserve financial stability**[89]**, the ECB, are making significant progress in measuring and supervising sustainability-related risks with a special focus on climate-related risk**. According to the Financial Sector Survey and consultation with the Czech financial sector, **CNB also should take a more proactive and facilitating role in fostering an ESG-friendly financial market environment and be more aligned with the**

[83] https://www.cnb.cz/cs/dohled-financni-trh/legislativni-zakladna/udrzitelne-finance/pravni-predpisy/.

[84] https://www.cnb.cz/en/public/media-service/speeches-conferences-seminars/presentations-and-speeches/Taming-Inflation-from-18-to-2-and-Paving-the-Way-for-ESG-Financing/

[85] https://www.cnb.cz/cs/dohled-financni-trh/legislativni-zakladna/udrzitelne-finance/konzultacni-materialy-a-navrhy/

[86] https://www.dnb.nl/en/green-economy/sustainable-and-responsible-investment/

[87]https://www.cnb.cz/cs/dohled-financni-trh/legislativni-zakladna/udrzitelne-finance/metodicke-a-vykladove-materialy/

[88] Macroprudential policies aim to prevent the excessive build-up of risk, resulting from external factors and market failures, to smoothen the financial cycle (time dimension); make the financial sector more resilient and limit contagion effects (cross-section dimension); and encourage a system-wide perspective in financial regulation to create the right set of incentives for market participants (structural dimension).

[89] Financial stability is defined by ECB as a condition in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances. Financial stability policies and actions mitigate the prospect of disruptions in the financial intermediation process that are severe enough to adversely impact real economic activity. https://www.ecb.europa.eu/ecb/orga/tasks/stability/html/index.en.html.

supervisory approaches and activities of ECB, which are much more demanding and robust[90]**.** Such a more active role might be triggered by the adoption of CRD VI and CRR III.

National Development Bank

The National Development Bank (NDB)91 is a specialised, state-owned banking institution, which aims, among other things, at contributing to sustainable development and decarbonisation in Czechia. For more than thirty years, it has been supporting investment activities of Czech enterprises, mainly SMEs, enabling them to increase their competitiveness on global markets. Besides this general support, the NDB has also started several specific programmes supporting sustainable financing (e.g., energy efficiency, clean mobility and social enterprises) and has also been active in financing public infrastructure. The NDB collaborates closely with central government authorities, regional bodies, municipalities, and the private sector, with a focus on assisting small and medium-sized enterprises (SMEs). The NDB is overseen by the MoIT, the MoRD, and the MoF. The NDB gained the status of an InvestEU implementing partner in autumn 2023. More information on the role of NDB in sustainable finance is explored in part 3 of this report. Though, to date, NDB concentrates mainly on support of SMEs and unlike e.g. UK Infrastructure Bank92, it does not support large industrial and infrastructural decarbonisation projects.

Financial Sector Professional Associations

The Czech financial sector associations are active promoters of sustainable finance in Czechia. The Czech Banking Association[93] (**'CBA'**) highlights sustainable finance as a key trend, with many banks actively engaging in activities to enhance Czechia's sustainable finance. CBA supports the growth of the Czech banking sector, economy, and financial literacy among citizens. **The Association of Czech Pension Funds** notes a growing trend of integrating environmental, social, and governance (ESG) factors into investment decisions. It focuses on implementing regulations like the SFDR and the EU Taxonomy Regulation, which aim to enhance transparency and encourage sustainable investment practices within the pension fund sector.

Sixteen banks[94] have signed **the CBA's Memorandum for Sustainable Finance**[95], which outlines their commitment to sustainable finance principles and to strengthening environmental and socially responsible business in Czechia. It emphasises the banks' dedication to conducting their business in line with market economy principles while also respecting environmental protection and social responsibility. The banks pledge to align their activities with global sustainability goals and to collaborate with public authorities and stakeholders.

Key National Laws and Regulation Regarding the Real Economy

[90] The example of a central bank with a proactive approach in the Eurozone is De Nederlandsche Bank in the Netherlands; see the Good Practices Report. An example of the national bank outside the eurozone is the National Bank of Hungary. The MNB has launched its Green Program in 2019 to mitigate the risks associated with climate change and other environmental problems, to expand green financial services in Hungary, to widen the related knowledge base in Hungary and abroad, and to reduce financial market participants' and its own ecological footprint. For more information, see https://www.mnb.hu/en/publications/reports/green-finance-report.

[91] https://www.nrb.cz/en/

[92] https://www.ukib.org.uk/.

[93] https://cbaonline.cz/en.

[94] The full list is available on CBA's website at https://cbaonline.cz/upload/1618-seznam-pristoupivsich-bank-memorandum-o-udrzitelnem-financovani-2.pdf.

[95] https://cbaonline.cz/upload/2618-memorandum-pro-udrzitelne-finance.pdf.

The key Czech national legislation relevant for the real economy sector and sustainability includes[96]:

- Act No. 17/1992 Coll., **Environmental Act**[97]: Defines environmental protection principles, setting out responsibilities for legal and natural persons to enhance environmental quality.
- Act No. 563/1991 Coll., **Act on Accounting, as amended**[98] mandates sustainability reporting for named enterprises as stipulated in the CSRD and ESRS. It is a key legislative measure that outlines the requirements for financial and sustainability reporting and ensuring transparency and accountability in corporate operations.
- Act No. 165/2012 Coll., **Act on Promoted Energy Sources and on Amendments**[99] **to Certain Acts, as amended** establishes the regulatory framework for promoting and managing energy production from renewable sources, detailing the support mechanisms and modifications necessary for integrating these sources into the existing energy infrastructure.
- Act. No. 406/2000 Coll. **Energy Management Act**[100] sets guidelines to improve energy efficiency, promote renewable energy use, and ensure energy-saving practices. It mandates energy audits and labelling while aligning with EU energy efficiency directives.

The Czech legal system continues to face challenges in fully integrating modern sustainability principles, often to treating sustainability as a subset of environmental protection. **Act No. 17/1992 Coll.**, which defines sustainable development, is insufficiently aligned with EU obligations, leading to focus on **reactive environmental protection** rather than proactive, future-oriented sustainability. This misalignment also affects technical standards, such as **energy audits under Act No. 406/2000 Coll.**, and sectors like electrical engineering, where the absence of references to the **EU taxonomy** complicates the assessment of material sustainability, making it difficult or nearly impossible[101].

Sustainability Reporting Transposition

The EU Taxonomy must already be used by both financial and non-financial companies subject to the Non-Financial Reporting Directive ('NFRD'). Only around 25 companies on the Czech market must report under NFRD. However, as early as the 2025 financial year, other large groups of companies will become obliged to non-financial reporting as well. In total, the requirements of CSRD will affect directly approximately 1,300 companies in Czechia and 50,000[102] across the EU. **In connection with the implementation of the NFRD, the MoF prepared an amendment to the Accounting Act**, as well as amendments to related regulations, which were approved as part of the so-called consolidation package[103] (**'NFRD Amendment to the Accounting Act'**),

[96] Furthermore, communications and methodologies from the MoE provide detailed guidance and regulatory instructions on various aspects of sustainability. These documents contain specific procedural requirements and best practices to ensure that stakeholders adhere to sustainability standards and contribute effectively to reducing GHG emissions. These laws and regulations significantly impact on the real economy, setting precedents for other statutory and non-statutory endeavours and activities.

[97] https://www.zakonyprolidi.cz/cs/1992-17

[98] https://www.zakonyprolidi.cz/cs/1991-563

[99] https://www.zakonyprolidi.cz/cs/2012-165

[100] https://www.zakonyprolidi.cz/cs/2000-406

[101] https://www.czgbc.org/download/EU_Taxonomie_FINAL.pdf

[102] https://normative.io/insight/csrd-explained/

[103] The regulation was published in the Collection of Laws of the Czech Republic on 12 December 2023 as Act No.349/2023 Coll., amending certain acts in connection with the consolidation of public budgets.

covering the first group of enterprises subject to the new scope of sustainability reporting for the accounting period beginning in 2024[104].

Conclusion

In the **European Union**, the **European Green Deal** and the **Fit For 55 package** set the course for **climate neutrality by 2050**, with key regulations like the **EU Taxonomy**, **SFDR**, **CSRD**. These tools promote **transparency** and drive **sustainability in financial markets**, while initiatives like **carbon pricing** and the **EU Emissions Trading Scheme (ETS)** ensure that environmental costs are integrated into economic activity. This structured framework encourages EU member states, including **Czechia**, to align their national policies with broader sustainability goals, fostering a shift toward a **low-carbon economy**.

In **Czechia**, sustainable finance is advancing but faces challenges in fully integrating sustainability across its financial and legal systems. Recent efforts, such as amendments to the **Accounting Act** and the **Energy Management Act**, aim to promote **energy efficiency** and align with **EU directives**, though older legislation still needs modernization. The establishment of the **MoF's Department of Sustainability Policies** marks progress in coordinating these efforts, but the **Czech National Bank** remains primarily focused on **financial stability**. Institutions like the **National Development Bank (NDB)** are actively supporting **green initiatives**, but more comprehensive regulatory coordination and data improvements are needed to fully integrate sustainable finance and meet **EU targets**.

[104] Another amendment to the Accounting Act was prepared by the MoF, inter alia, to fully transpose the remaining provisions of the CSRD into Czech legislation not covered by the NFRD Amendment to the Accounting Act. For the remaining part of the CSRD transposition, an amendment of Act No. 563/1991 Col., the Accounting Act, Act No. 93/2009 Coll., on auditors and on the amendment of certain laws, as amended, and Act No. 426/2023 Coll., on reconciliation taxes for large multinational groups and large national groups was approved by the Czech Government on 28 August 2024 and was sent as part of the ordinary legislative process to the Chamber of Deputies of the Czech Parliament.

3 Diagnosis of the Czech Sustainable Finance Market

The following chapter delves into the evolving landscape of the Czech sustainable finance market, particularly focusing on the development of sustainable finance products and the roles of various stakeholders including the state, financial institutions, and non-financial corporations.

One of the main challenges in the Czech sustainable finance market is data availability and the quality of ESG information. The market situation features the need for cooperation between the state, financial institutions, and non-financial corporations to tackle these challenges and promote sustainable finance in the Czech Republic.

Emerging challenges in the Czech sustainable finance market include the need for innovative financial products, including i.e. financial instruments introduced by the state, that cater to the unique requirements of sustainability projects, the integration of ESG considerations into traditional financial analysis, and the establishment of corresponding monitoring and reporting frameworks. Additionally, there is a pressing need to bridge the gap between policy initiatives and market practices to ensure a coherent and effective transition towards sustainable finance.

A notable aspect of the Czech financial landscape is that the vast majority of banks in Czechia are under the control of foreign financial groups, typically from Western Europe. This means that **Czech banks are often required to adhere to the ambitious internal sustainability commitments of their parent companies, which frequently surpass the regulatory demands of the EU.**

The Public administration plays a pivotal role in facilitating this transition by setting regulatory frameworks and providing incentives to promote sustainable practices. Government policies are increasingly supportive of sustainability initiatives, aiming to balance economic growth with environmental stewardship. These measures are designed to encourage both public and private sectors to align their financial strategies with sustainability goals.

Non-financial corporations are also crucial players in this transformation. By integrating ESG criteria into their operational and strategic decision-making processes, these corporations enhance their sustainability credentials, which is increasingly demanded by investors. However, the chapter highlights several challenges that non-financial corporations face, including the need for substantial investment in green technologies and the complexity of measuring and reporting on sustainability performance.

3.1 ESG Data, Risk Management and Disclosure

3.1.1 Sustainability Reporting and Disclosure

As sustainability takes a centre stage in global, financial and investment markets, ESG considerations have become paramount for investors and institutions alike. The journey towards sustainable finance **is fraught with challenges, particularly concerning the availability, quality, and utilisation of ESG data and information. Gaps in data quality pose significant hurdles for financial institutions seeking to integrate ESG considerations into their decision-making processes. The key challenges include the absence of public registries for ESG data, the lack of standardised procedures, and varying reliability of ESG ratings**.

International Practice

In Germany and the Netherlands[105], state institutions and central banks use ESG data collected by banks and financial institutions from their clients in several ways:

Central banks, such as Deutsche Bundesbank in Germany, use ESG data from banks to assess systemic risks associated with climate change. This data helps them analyse how changes in climate policy or environmental factors may affect financial stability.

In the Netherlands, data from banks is used to create national policies focused on sustainability. **The Dutch central bank (DNB) integrates ESG data into its financial stability reports and works with the government to develop policies that support the transition to low-carbon economy[106].**

As mentioned in the Good Practice Report, there are systems in Germany, France and the Netherlands that collect data on the energy performance of buildings in one place. In Germany, for example, it is the "**Energieausweis-Datenbank**"[107,108].

Situation in Czechia

Banks in Czechia face a significant lack of quality ESG data, which complicates their efforts to finance the transition to sustainable economy. In response to this problem, **the Czech Banking Association (ČBA) launched an initiative within the Commission for Sustainability which included the introduction of a client questionnaire focused on ESG. ESG questionnaire also helps companies prepare for EU legislative requirements that will come into effect between 2023 and 2026 such as CSRD.** Based on the questionnaire, companies can easily test for themselves the environmental impact of their business activities. **The questionnaire has been publicly available to companies on the CBA's website since November 2021**[109110].

Banks use this unified questionnaire to obtain key information from clients to assess the risks and opportunities associated with ESG factors. **The questionnaire focuses on various matters, including carbon footprint, energy consumption, environmental risk management and the social impact of business. Data from these questionnaires help banks make decisions about loans, investments and other financial products regarding their sustainability.**

The specific outputs from these questionnaires show that most companies still do not have comprehensive strategies for reducing their carbon footprints or for improving the social aspects of their businesses. This indicates the need for further education and support for businesses in the field of ESG[111].

Banks are also working to simplify this questionnaire for small and medium-sized enterprises (SMEs) to facilitate data collection and improve its accessibility. The goal is to motivate SMEs to engage in sustainable activities, which is key for the wider adaptation of ESG principles in the Czech business environment.

[105] https://greencentralbanking.com/2021/07/23/new-dutch-policies-central-bank-independence/

[106] https://greencentralbanking.com/2021/12/13/dnb-dutch-banks-climate-risk/

[107] https://www.statistik.at/datenbanken/adress-gebaeude-und-wohnungsregister/energieausweisdatenbank-eadb

[108] https://www.economie.gouv.fr/particuliers/immobilier-diagnostic-performance-energetique-dpe

[109] https://cbaonline.cz/cba-pripravila-vzorovy-esg-dotaznik-na-pomoc-firmam.

[110] https://service.synesgy.com/cz/bankovni-esg/

[111] https://cbaonline.cz/upload/2815-cba-vyrocni-zprava-2022-eng-web.pdf

This initiative and its results reflect a European trend where the banking sector is increasingly integrating ESG criteria into its decision-making and requires quality data to correctly assess ESG risks. The need for accurate and relevant data is therefore crucial for a successful transition to sustainable economy[112].

A CBA study of December 2023[113] underscores significant challenges in Czechia's ESG ecosystem, particularly regarding data deficiency in the real-estate sector. The study found that access to data is severely limited, covering only 1% of the market. Data for the study **was** sourced from the **MoIT's ENEX database[114], which stores Energy Performance Certificates of Buildings (PENB)[115].** PENB data recording is done via a web interface upload, with manual entry remaining an alternative, emphasizing ongoing data management issues. Consequently, the MoIT's strategies aligning with the EU Taxonomy rely on this data.

In addition to the ENEX[116] database, which provides crucial data on the energy efficiency of buildings, there are several other databases in the Czech Republic that are owned by Czech authorities and could significantly aid banks and financial institutions in assessing the sustainability profiles of their loan portfolios. These databases encompass various aspects of environmental, social, and governance (ESG) criteria and offer valuable insights into sectors like permitting processes, environmental impacts, distribution grid capacities, sustainable infrastructure plans or waste management data.

The Czech Environmental Information Agency (CENIA)[117] operates several databases covering various environmental aspects, including waste management, recycling rates, and environmental permits. Data from CENIA can help banks evaluate the environmental impact of their clients' activities, particularly in industries with significant waste production. The databases include the Waste Management Information System, which tracks waste generation, treatment, and disposal processes, and the Environmental Impact Assessment (EIA) database, which provides insights into the potential environmental impacts of new projects.

The Energy Regulatory Office (ERO)[118] oversees multiple databases relevant to the capacity and distribution of energy grids. These databases contain information on the electricity and gas markets, including data on energy production, consumption, and distribution capacities. By accessing at least part of ERO data, banks could assess the feasibility and sustainability of energy projects, including those related to renewable energy sources. The ERO also provides data on the integration of distributed energy resources, which is crucial for evaluating the potential and challenges of sustainable energy projects.

The Integrated Pollution Register (IRZ)[119] is a comprehensive database managed by the Ministry of the Environment. It collects and provides data on pollutants released into the air, water, and soil by industrial facilities. This register is indispensable for banks and financial institutions aiming to evaluate the environmental impact of their clients' operations. The IRZ includes data on emissions, waste production, and handling, allowing for a detailed assessment of a company's compliance with environmental regulations and its overall environmental footprint.

[112] https://practiceguides.chambers.com/practice-guides/esg-2023/czech-republic

[113] https://cbaonline.cz/studie-top-15-budovy-v-cesku-jsou-neusporne.

[114] https://www.mpo-enex.cz/experti/

[115] https://www.mpo.gov.cz/dokument119528.html

[116] https://www.mpo.gov.cz/hledani.html?lid=1&searchtext=enex

[117] https://www.cenia.cz/#aktuality_

[118] https://eru.gov.cz

[119] https://www.irz.cz

The State Environmental Fund of the Czech Republic (SFŽP)[120] manages several funding programs aimed at environmental protection and sustainable development. The SFŽP's databases provide information on projects receiving funding, including those related to renewable energy, waste management, and water conservation. By accessing these databases, banks can identify benchmarks and trends in sustainability-oriented projects.

Additionally, **the Ministry of Labour and Social Affairs ('MoLSA')**[121] **offers databases that provide crucial social data related to employment practices, workplace safety, and social inclusion programs**. These databases focus on the social dimensions of ESG by offering insights into labour standards, employee welfare, and community engagement initiatives. By utilising MoLSA data, banks can assess the social impact of potential investments and ensure alignment with responsible investment principles.

Opportunities and Advantages

Better ESG management and more exact Green Asset Ration calculation. **By utilizing the data, banks can conduct thorough assessments of the environmental and social impact of potential investments, ensuring they align with responsible investment principles and EU Taxonomy while saving cost of obtaining the information for the bank or their client**. This proactive approach not only mitigates risk but also enhances the bank's reputation as a socially responsible entity[122].

The use of ESG data by the banking sector extends beyond regulation and risk assessment. It supports the creation of policies designed to accelerate the transition to a sustainable economy and increase transparency within the financial sector. **By integrating ESG data into their evaluation criteria, banks send a strong signal of their commitment to fostering a business environment conducive to sustainable and socially responsible development**[123].

Risks and Challenges

The perceived lack of ESG data in the Czech market further complicates sustainable investment decisions, underscoring the urgent need for improvements in data availability and quality. In this context, **ESG data and information in Czechia show a mixed landscape of effort on one hand and a lack of reliable and comparable data on the other hand**.

Lack of access to public sector data to create benchmarks. There is overall unavailability of complete, high-quality (verified) data in the required structure, granularity and correspondence with regulatory EU Taxonomy-aligned requirements being provided at least to the financial institutions subject to regulations free of charge from the state, or also to companies with CSRD reporting obligations. Financial institutions in Czechia, on the other hand, lack available open data, methodologies and metrics or other forms of information flow from the state, e.g., from the point of view of interpretation of the EU Taxonomy in permit procedures and climate data for climate risk management.

Limited access to finance. If the banks had no reliable primary data e.g. on climate and other ESG risks in a specific industry like agriculture, banks would use proxies or only NACE codes for whole portfolio segment classification. This would logically lead to reduction in funding with the aim of delivering the 2030 or 2050 portfolio

[120] https://www.sfzp.cz

[121] https://www.mpsv.cz

[122] https://www.spglobal.com/esg/insights/transparency-and-impact

[123] https://blogs.pwc.de/en/sustainability/article/241886/navigating-the-path-to-standardised-esg-disclosures-in-banking-challenges-implications-and-the-road-ahead/

emissions trajectory and green asset ratio, regardless of real conditions of individual clients. The lower the quality of data for ESG risk assessment, the higher is the price and lower is the accessibility of funding.

As indicated by the findings from the surveys conducted during this assignment, banks need support in the field of ESG data from the public administration and CNB regarding[124]:

1. **Regulatory frameworks and standards:** Clear and consistent regulatory guidance on assessment and integration of ESG criteria into decision-making processes. This includes national sustainability targets, emissions reporting standards, energy efficiency and other relevant metrics, ideally aligned with the EU Taxonomy as a prevailing standard[125].
2. **Data on emissions and energy consumption:** Accurate and regularly updated data on greenhouse gas emissions and energy consumption of businesses is key to assessing the environmental impact of companies to which banks provide financing.
3. **Data on social and governance aspects:** Information on working conditions, diversity, human rights and corporate governance based on unified metrics is essential for assessing corporate social and governance responsibility are needed.
4. **Climate data:** Updated data regarding climate risks with sufficient accuracy tenable the calculation of risks in insurance models and risk management models are needed.

According to financial market sector interviews, there is particularly unavailability of complete, high-quality (verified) data in the required structure, granularity and correspondence with regulatory requirements being provided at least to the financial institutions subject to regulations free of charge, or, generally, to companies with CSRD reporting obligations.

The limitation of the banks is also such that some of the largest Czech banks are obliged to report the reduction of emissions in accordance with the Net-Zero Banking Alliance ('**NZBA**')[126]. **If the banks had not reliable primary data e.g. on climate and other ESG risks in agriculture, they would use proxies or only NACE codes for whole portfolio segment classification, which will logically lead to reduction in funding with the aim of delivering the 2030 trajectory or 2050, regardless of real conditions of individual clients. The lower the quality of data for ESG risk assessment, the higher is the price and lower is the accessibility of funding.**

3.1.2 ESG Risk Management and Capital Requirements

Banks and other financial institutions can use a wide range of data to manage ESG risks in their portfolios, especially in the financing of sectors such as agriculture, industry and energy. For this purpose, there is active data sharing abroad between the state, central banks and commercial banks. Central banks often act as intermediaries in the transmission of relevant ESG data to the banking sector. This enables banks to assess ESG risks and integrate them integrally into their business models, which is key to supporting a sustainable economy.

International Practice

[124] How to cite this report: Moeslinger, M., Fazio, A. and Eulaerts, O., *Data platform support to SMEs for ESG reporting and EU Taxonomy implementation*, €31156 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-55056-3, doi:10.2760/69381, JRC128998.

[125] Banks sometimes still use the ESG criteria of their respective banking group instead of EU Taxonomy, or they use more standards at once, which complicates comparability and adds cost and time consumption of the ESG risk evaluation process.

[126] https://www.unepfi.org/net-zero-banking/

BaFin[127], German financial regulator, has implemented an approach that allows banks to consider the lower risk of sustainable assets when calculating capital requirements. This approach is in line with the CRR III in that it allows banks to use **environmental and climate-related stress tests**, which assess how portfolios are exposed to climate-related risks. If these tests show that sustainable assets actually reduce risk, banks can reduce their capital requirements for these assets. Specific relief is provided in the form of lower risk weights, which is fully in line with Article 501 of the CRR III and allow specific risks to be considered.

Situation in Czechia

On the Czech market, **banks need time to gradually incorporate sustainability-related risks into their scoring models**. This slow progress is partly due to **the lack of availability of quality ESG and sustainability data**, making it difficult for banks to accurately assess risk. However, there are sectors, such as agriculture, **where climate risks are very present and pose a significant problem for banks**. **Agriculture is often exposed to extreme weather fluctuations**, such as droughts or floods, which increase risks and lead to **banks being more reluctant to finance the sector**.

One of the primary methods banks use to measure ESG and climate risks is through the evaluation of **green asset ratios**. **A green asset ratio represents the proportion of a bank's total assets that are deemed environmentally sustainable**. This ratio helps banks assess their exposure to green, or sustainable, investments and identify areas where improvements are needed to meet sustainability goals. However, **calculating these ratios can be complex** due to **the lack of standardized definitions and methodologies** for identifying what qualifies as a green asset.

Banks in Czechia typically **rely on internal assessments and third-party ESG ratings** to evaluate the sustainability of their assets. They consider factors such as **greenhouse gas emissions, energy efficiency, water usage**, and **waste management practices** when determining the environmental impact of their investments. **Social and governance factors**, such as **labour practices, community impact**, and **corporate governance structures**, are also considered[128].

CBA plays a crucial role in facilitating the adoption of ESG risk management practices among financial institutions. The CBA collaborates with its members to **develop best practices**, share knowledge, and promote **the importance of sustainability in banking operations**. By working closely with the CNB and other stakeholders, **the CBA aims to create a supportive environment for the integration of ESG risks** into the risk management frameworks of Czech banks[129].

Opportunities and Advantages

Adoption of ESG principles and climate risk management can enhance the reputation and credibility. **Demonstrating a commitment to sustainability can attract a broader base of environmentally conscious investors and customers**, thereby **increasing the banks' market share and profitability**. Additionally, it can lead to the **development of innovative financial products** such as **green bonds and sustainability-linked loans**, which cater to the growing demand for sustainable investment options[130].

[127] https://www.bafin.de/EN/Homepage/homepage_node.html.

[128] https://link.springer.com/chapter/10.1007/978-3-030-99468-6_19

[129] https://www.cbacg.cz/udrzitelny-byznys/

[130] https://eba.europa.eu/sites/default/files/document_library/Publications/Reports/2023/1062711/Report%20on%20the%20role%20of%20environmental%20and%20social%20risks%20in%20the%20prudential%20framework.pdf

The focus on ESG and climate risk management opens up new avenues for collaboration. Such cooperation includes **government agencies, non-governmental organizations, and the private sector**. Such partnerships can **facilitate the sharing of knowledge and best practices**, driving innovation and enhancing the overall effectiveness of sustainable finance efforts.

Risks and Challenges

Diverse Approaches and Documentation. The adoption of ESG criteria varies significantly across banking groups, leading to a lack of uniformity in documentation requirements. Whereas credit risk process is highly standardised by corresponding CNB regulation, this is not the case of ESG risks. **Czechia struggles with inconsistency and a lack of clear guidelines.** This disparity makes data and documents from clients non-comparable and incompatible, thereby slowing down the financing of sustainable projects and increasing the administrative burden for all parties involved. This is particularly evident in areas such as energy efficiency of buildings and demonstrating the fulfilment of sustainability criteria in agriculture[131].

Evolving regulation. The evolving nature of ESG criteria and climate risk regulations creates a sense of market uncertainty. Banks must constantly adapt to new regulations and standards, which can disrupt business operations and strategic planning. **This uncertainty can also affect investor confidence, making it more difficult for banks to attract capital for sustainable projects. Navigating the complex regulatory landscape of ESG and climate risk management can be daunting. Non-compliance with evolving regulations can result in legal penalties, financial losses, and reputational harm.** Banks must invest in compliance programs and ensure that their practices align with both domestic and international standards. This creates extra cost on consulting and bumpers the internal decision-making process.

Technological and Infrastructural Challenges. Implementing ESG and climate risk management requires investments in technology and infrastructure for the financial institutions. Czech banks have already made considerable investments in upgrading their existing systems to support the integration of ESG data and analytics. Evolving regulation imposes additional cost on banks to adjust their systems to new conditions.

3.1.3 Implementation of the EU Taxonomy

The diversity of approaches and documentation across Member States creates a challenge for banks and investors who must ensure that projects meet the criteria of the EU Taxonomy. **While some countries, such as Germany and the Netherlands, have systems that are linked to the EU Taxonomy[132], other countries, such as Czechia and Poland, still struggle with a lack of clarity and uniformity in documentation requirements.** This leads to data and documents not always being comparable or compatible, which can slow down the financing of sustainable projects and increase the administrative burden for all parties involved. This applies, for example, to the energy efficiency of buildings, demonstrating the fulfilment of sustainability criteria in agriculture, as well as other areas.

International Practice

French banks, as mentioned in the Best Practices Report, and public authorities are working together to integrate the EU Taxonomy into national regulations. **France has created specific methodologies and tools that help**

[131] From a Financial to an Entity Model of ESG

[132] https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-Taxonomy-sustainable-activities_en

banks, and their clients meet the requirements of the EU Taxonomy. This systematic approach allows for a more efficient implementation, although there are certain areas where further harmonisation with European standards is still needed[133].

In Poland, on the other hand, the situation is similar to Czechia, where the implementation of the EU Taxonomy encounters obstacles caused by the lack of clear national guidelines and the slower response of the authorities. **Polish banks also face challenges in demonstrating compliance with the EU Taxonomy and are awaiting more detailed instructions from state authorities**[134].

In Germany, the Bundes-Immissionsschutzgesetz ('**BImSchG**')[135] plays a key role in demonstrating the compliance of projects with the EU Taxonomy. This process includes assessing the impact of projects on the environment, especially in the areas of emissions and environmental protection. **Banks can use the documentation from this process as evidence of compliance with the environmental standards of the EU Taxonomy.** The documentation includes technical reports and permits from the relevant authorities, which confirm the fulfilment of environmental protection requirements.

Situation in Czechia

The situation with the implementation of the EU Taxonomy in the Czech Republic is complex, and banks are facing challenges, especially when it comes to the link between the EU Taxonomy and legislation. One of the main problems is that banks and their clients do not have clear instructions from the authorities on exactly how to demonstrate project compliance with the EU Taxonomy. **CBA**[136] **is still struggling with a lack of answers to specific questions regarding procedures and documentation that clients should submit to demonstrate compliance. This problem persists even two years after the introduction of the EU Taxonomy.**

Asset managers, investment companies, insurance firms, and non-financial corporations in Czechia are all grappling with the complexities of implementing the EU Taxonomy[137]. Asset managers and investment firms are eager to integrate the Taxonomy into portfolio management to meet sustainability standards and attract eco-conscious investors but face challenges due to the lack of clear guidelines. Insurance companies similarly struggle to incorporate sustainability criteria into underwriting and investment practices without consistent regulatory frameworks. Non-financial corporations are also impacted as they must adapt their operations and reporting to meet sustainability standards, a task complicated by the absence of standardized procedures.

In response, the Czech MoF began coordinating efforts to map these requirements and provide clearer guidance, which is essential for improving transparency and enabling Czech entities to remain competitive with their European counterparts[138].

Opportunities and Advantages

EU Taxonomy supports transition to a low-carbon economy. **This is done by providing guidelines for financing transitional activities.** Czech banks can play a crucial role in funding projects that contribute to this transition, such as investments in energy-efficient technologies and infrastructure. By supporting these initiatives,

[133] https://www.banque-france.fr/fr

[134] https://www.zbp.pl/

[135] https://www.bmwk.de/Redaktion/DE/Gesetze/Energie/BImSchG.html

[136] https://cbaonline.cz/

[137] https://www.conseq.cz/investice/prehled-fondu/conseq-model-portfolio-aggressive-esg-a-czk

[138] https://www.pwc.lu/en/sustainable-finance/a-year-of-esg/application-of-the-eu-taxonomy.html

financial institutions can help drive the decarbonization of the Czech economy and contribute to achieving national and EU climate targets.

EU Taxonomy incentivizes the diversification of investment portfolios. **By providing a standardized approach to assessing the sustainability of different economic activities, it allows financial institutions to identify a broader range of investment opportunities that meet their risk and return criteria while contributing to environmental objectives.** This can lead to more resilient and diversified portfolios, reducing the overall risk exposure of Czech banks.

EU Taxonomy can facilitate better risk management practices within financial institutions. By incorporating sustainability criteria into their investment decisions, banks can better assess and mitigate environmental and climate-related risks. This proactive approach to risk management can enhance the stability and resilience of the financial system, ultimately benefiting the broader economy.

The standardization and transparency promoted by the EU Taxonomy can also improve the overall efficiency of the financial system. By providing clear and consistent criteria for defining sustainable activities, it reduces the administrative burden on financial institutions and companies. This can lead to cost savings and more streamlined processes, allowing banks to allocate more resources to value-added activities.

EU Taxonomy also opens up opportunities for capacity building and knowledge sharing within the financial sector. As banks and other financial institutions work to comply with these standards, there will be an increased demand for expertise in sustainable finance. This can lead to the development of specialized training programs, workshops, and collaborations with academic institutions, fostering a culture of sustainability and innovation within the Czech financial sector.

Risks and Challenges

Harmonisation instead of unification. The issue with the implementation of the EU Taxonomy is that each member state of the European Union approaches demonstrating compliance with the rules in a unique way. This leads to disparate and often incomparable data, which complicates the situation for both the companies and financial institutions that have to assess projects according to these rules. The documents required to prove compliance with the EU Taxonomy differ in individual states (and also among different banking groups), which creates barriers for a transparent and uniform assessment of the sustainability of projects across the EU.

One of the significant areas of ambiguity within the EU Taxonomy lies in compliance assessment according to local standards. Mostly, Czech regulation and technical norms do not take EU Taxonomy into account.

Effective coordination between national authorities is essential for the successful implementation of the EU Taxonomy. Clear and uniform guidance will enable banks, asset managers, insurance companies, and non-financial corporations to align their activities with sustainability criteria, thereby facilitating the transition to a greener economy.

Examples of Difference between National Legislation and EU Taxonomy. There are key differences between national legislation and the EU Taxonomy[139]. For example, Czech law[140] requires energy performance certificates, while the EU Taxonomy mandates more comprehensive documentation, such as a life-cycle emissions analysis, which is absent in the Czech PENB[141]. This misalignment complicates compliance for

[139] https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/270/view

[140] https://www.zakonyprolidi.cz/cs/2020-264

[141] https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/certificates-and-inspections_en

developers, as they must meet both sets of requirements, often resulting in delays and higher costs due to the need for additional assessments and documentation.

The CBA has been vocal about the challenges faced by its members. Without explicit instructions from regulatory bodies, banks struggle to determine the correct procedures and documentation needed to prove alignment with the Taxonomy criteria. **This uncertainty hampers their ability to offer green financial products confidently.** The missing link between the EU Taxonomy and national legislation prevents banks from reporting parts of their assets as sustainable due to the fear of being accused of greenwashing, resulting in decreased GAR.

The industrial sector faces perhaps the most significant challenges due to the complex nature of industrial processes and the heavy emphasis on decarbonisation. Czechia's industrial regulations are not fully synchronized with the EU Taxonomy's detailed requirements for carbon neutrality and sustainable resource usage[142]**.**

3.2 Sustainable Finance Products

Sustainable finance products play a critical role in fostering **economic activities that are environmentally friendly and socially responsible**. These products encompass a range of **financial instruments designed to support projects that contribute to sustainability goals**. In the Czech Republic, the adoption and development of these products are **gaining traction**, albeit at a different pace compared to countries like Germany, France, and the Netherlands, as elaborated in the Good Practice Report. The **evolving regulatory landscape and increasing investor interest** are likely to drive further advancements in this sector in Czechia[143].

The financial sector survey conducted in the Project showed that **most financial institutions offer sustainable financial products** but **face limited interest from clients** so far. Other obstacles include **unclear legislation and administrative burdens**, with **less than a third planning to issue green bonds** due to **high cost**.

3.2.1 Green Bonds

Green bonds are debt securities issued to finance projects with environmental benefits, such as renewable energy, energy efficiency, clean transportation, and sustainable water management. The proceeds from green bonds are earmarked exclusively for green projects, and issuers must adhere to specific guidelines and standards to ensure the funds are used appropriately.

Globally, several standards guide the issuance and management of green bonds. The most prominent include:

- **Green Bond Principles (GBP)**[144]**:** Issued by the International Capital Market Association (ICMA), these principles provide voluntary guidelines for transparency and disclosure in the green bond market.
- **Climate Bonds Standard (CBS)**[145]**:** Developed by the Climate Bonds Initiative, this standard provides a certification scheme for green bonds, ensuring that proceeds are used for projects aligned with climate goals.

The European Union's Green Bonds Regulation (the "EuGB Regulation")[146]**,** which will apply from 21 December 2024, introduces the EU Green Bond Standard (EuGB) proposed by the European Commission. **This standard aims to create a unified framework for green bonds within the EU, ensuring consistency with the EU Taxonomy.** Its alignment with the EU Taxonomy ensures that green bonds support projects meeting

[142] https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/certificates-and-inspections_en

[143] https://www.pse.cz/en/sustainable-investing

[144] https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/

[145] https://www.climatebonds.net/standard/the-standard

[146] https://eur-lex.europa.eu/eli/reg/2023/2631/oj

strict environmental criteria, which will enhance investor confidence. Once in force, the EuGB is expected to become the benchmark for green bonds in the EU, promoting greater standardization and transparency. However, the adoption of the EuGB is anticipated to vary across EU member states depending on their regulatory environments and market maturity. While countries like Germany and France are likely to embrace it rapidly, others, including Czechia, are expected to take longer to integrate the standard.

International Practice

The EIB and national promotional banks play significant roles as **subscribers of green bonds**[147]. The **EIB**, as the EU's climate bank, is a **major issuer and investor in green bonds**. It supports **sustainable projects across the EU and beyond**, leveraging its **financial strength to promote environmentally friendly investments**. In 2020 alone, the **EIB**[148] **issued green bonds worth €3.7 billion**. **KfW**, on the other hand, is **Germany's leading development bank** and a **pioneer in the green bond market**. It **issues and subscribes to green bonds** to fund projects that align with **Germany's sustainability goals**. **KfW's green bond portfolio reached approximately €40 billion by 2021**[149], underscoring its **commitment to green financing**.

Situation in Czechia

In the Czech Republic, their use is on the rise, yet the market remains less mature compared to countries like Germany. In comparison, the green bond market in Czechia is still in its nascent stage, though some individual transactions in real estate were very successful and belonged at the time of issuance to the largest green bond deals worldwide. **As of 2023, the total volume of green bonds issued in Czechia was about €2bn[150].** While this is relatively small market compared to Germany and the broader EU, it represents a significant step towards sustainable financing in the country.

So far, the primary issuers of green bonds in Czechia were large real estate, energy and transport companies including private, public and state-owned entities. Details are presented in the below Figure 3.

Subscribers and investors in green bonds in Czechia include institutional investors such as pension funds, insurance companies, and banks. The proceeds from green bonds have been used to fund projects aimed at reducing greenhouse gas emissions, improving energy efficiency, and promoting sustainable infrastructure.

Figure 3: Major Green and Sustainability-linked Bonds Emissions in the Czech Republic

Name of Issuer	Volume of the Emission Subscribed	Vintage Year	Currency	Maturity	Yield
CPI	€800 million	2019	EUR	7.5 yrs	1.6 %
ČEZ	€600 million Sustainability-linked	2022	EUR	5 yrs	2.375 % Step-up coupon 0.75 %
České dráhy	€500 million	2022	EUR	5 yrs	5.625 %
Accolade	€120 million	2024	CZK	5 yrs	8 %

Source: PwC

[147] https://www.eib.org/en/press/news/eib-receives-2020-green-bond-pioneer-award

[148] https://www.eib.org/en/press/all/2022-308-15-years-of-eib-green-bonds-leading-sustainable-investment-from-niche-to-mainstream

[149] https://www.kfw.de/PDF/Investor-Relations/PDF-Dokumente-Green-Bonds/20231206-KfW-Green-Bond-Framework.pdf

[150] https://csrd.cz/zelene-dluhopisy-financovani-budoucnosti/

In Czechia, issuers primarily follow the Green Bond Principles and the Climate Bonds Standard. The proposed EU Green Bond Standard is gaining traction, but its full adoption depends on the alignment of investment with the EU Taxonomy.

Opportunities and Advantages

Growth of the green bond market can stimulate economic development. This can be done by supporting creation of new industries and job opportunities. **Investments in renewable energy, energy efficiency, and sustainable infrastructure can drive innovation and entrepreneurship, leading to the emergence of new businesses and the creation of high-quality jobs.** This economic diversification can enhance the resilience of the Czech economy, making it less vulnerable to external shocks and more adaptable to changing global conditions.

Greenium[151]. **The green premium, or greenium, signifies the growing attractiveness of green financing.** However, this advantage has been shrinking over time. **Green bonds can facilitate access to capital for sustainable projects, which can in turn result in significant cost savings through improved energy efficiency and the integration of advanced sustainable technologies.** In the general European context, though, greeniums moved to the lower units of basis points.

Other Benefits. **Moreover, green bonds offer substantial reputational benefits, enhancing both brand image and investor confidence by showcasing a commitment to sustainability and attraction to investors. Alignment with internationally recognized green bonds standards not only attracts global investors but also fosters cross-border collaborations, thereby integrating Czech businesses into the global financial ecosystem[152].**

Risks and Challenges

While the potential for the green bonds market in Czechia is significant, realizing this potential requires addressing multiple interconnected challenges. **Regulatory alignment, market maturity, development of sustainability strategies, infrastructure development, cultural shifts, and stakeholder coordination are essential components of a comprehensive strategy to foster the growth of green bonds in Czechia.** By addressing these challenges, Czechia can integrate into the broader EU green finance framework, contributing to national and global sustainability goals.

Transparency and credibility. Setting aside the fact that yield curves in the bond market are currently not very advantageous for large green bonds emissions[153] **a key challenge in implementing green bonds is ensuring transparency and credibility in the use of proceeds by the issuer, which requires rigorous monitoring and reporting frameworks.** Proper planning, monitoring and reporting of sustainable activities has to be in place prior to a green bonds emission. This substantially favours e.g. real estate companies with easily scalable business based on new sites development and international building certifications in place for decades already (BREEAM[154], LEED[155] and others).

Strategic approach to sustainability is missing in Czech companies. **Hence, the critical issue is the lack of comprehensive sustainability strategies among Czech companies.** Many businesses struggle to identify suitable sustainable projects to channel the proceeds from green bonds. This gap is often due to predominant focus on carbon-intensive production, which is not aligned with the objectives of green finance. Sustainability-

[151] https://www.undp.org/blog/identifying-greenium

[152] https://www.imf.org/en/Publications/fandd/issues/2019/12/green-bonds-offer-lessons-for-sustainable-finance-beschloss

[153] https://www.bloomberg.com/quote/BZECG5:IND

[154] https://breeam.com/standards

[155] https://www.usgbc.org/guide-LEED-certification

linked funding (see below) may still be available for such companies, but the lack of strategic approach to sustainability is hindering utilisation of such sources of funds. **Developing robust sustainability strategies within companies is essential for the effective utilization of green bond proceeds.**

As GBP, CBS or also upcoming EuGB require establishment of mechanisms to verify that projects meet the strict environmental criteria set by these standards, the issuer has to have a robust ESG framework already established within the company to seriously think about deploying green bonds as a source of finance. There also has to be an upfront long-term investment plan in place aligned with the selected standard for efficient use of proceeds. **Additional cost for setting and monitoring the green bond framework should be mentioned, usually in terms of several hundreds of thousands of euros**. Again, such cost is lower for companies, who already have well-established sustainability-related plans and reporting in place.

3.2.2 Sustainability-Linked Finance

Sustainability-linked financial products are another critical component, where the terms of the financial products are linked to the issuer's sustainability performance targets**. This category is less developed in Czechia but shows promise as more entities recognize the value of embedding sustainability into their financial strategies**. The primary challenge here is setting and verifying meaningful sustainability targets, which can be difficult to measure and enforce consistently.

Sustainability-linked financial products, such as bonds and loans, are financial instruments designed to promote and incentivize sustainable practices within companies and projects. These products are typically structured to tie the financial and/or interest rate terms to the issuer's or borrower's performance against predetermined sustainability targets[156].

Sustainability-Linked Bonds (SLBs): These bonds are issued with the commitment that the issuer will improve its performance in specific environmental, social, or governance (ESG) areas. The bond's terms, such as interest payments, may vary depending on whether the issuer meets these predefined sustainability objectives. For instance, if a company fails to achieve its carbon reduction targets, it may incur a higher interest rate, thereby financially incentivizing the attainment of its sustainability goals.

Sustainability-Linked Loans (SLLs): Similar to SLBs, these loans link the loan terms to the borrower's sustainability performance. This might involve setting ESG-related Key Performance Indicators (KPIs), such as reductions in greenhouse gas emissions or improvements in energy efficiency. If the borrower meets or exceeds these KPIs, they may benefit from reduced interest rates or other favourable loan conditions. Conversely, failing to meet these targets could result in higher borrowing costs.

To obtain sustainability-linked finance, companies typically focus on several key performance indicators, including:

- Carbon Emissions Reduction: Targets for reducing greenhouse gas emissions.
- Energy Efficiency: Goals for improving energy consumption per unit of output.
- Waste Management: Reduction in waste produced and increase in recycling rates.
- Water Usage: Efficient and sustainable management of water resources.
- Social Impact: Initiatives for enhancing employee well-being and community engagement.

Banks and financial institutions assess these KPIs to determine the eligibility of companies for sustainability-linked finance. They look at the historical performance, current strategies, and future

[156] https://www.schoenherr.eu/content/czech-republic-sustainability-linked-loans-lsta-vs-lma-frameworks

commitments of companies to ensure that the funds are directed towards genuinely sustainable practices[157].

International Practice

The Netherlands and Germany have made significant strides in the realm of sustainability-linked finance. Both countries benefit from well-defined national decarbonisation benchmarks and strong governmental support, which facilitate more extensive adoption of sustainability-linked financial products.

For instance, **the Dutch government has implemented stringent environmental regulations and incentives that encourage companies to adopt sustainable practices. In Germany**[158]**, the presence of robust industrial policies and a high level of environmental awareness among businesses have spurred a more mature market for sustainability-linked finance**[159]**.**

Situation in Czechia

In Czechia, sustainability-linked finance is emerging as a critical tool to support the country's transition towards a low-carbon economy. However, the market faces distinctive challenges, primarily due to the lack of established benchmarks and comprehensive decarbonisation strategies at the national level. This gap often makes it difficult for banks and financial institutions to justify and implement sustainability-linked finance products such as bonds or loans.

According to recent reports, Czechia's market size for sustainability-linked bonds and loans stands at approximately €1 billion, while the Netherlands boasts around €5 billion, and Germany surpasses €10 billion[160]**. These figures highlight the significant disparity and underscore the potential for growth in the Czech market**[161]**.**

An illustrative example of the adoption of sustainability-linked finance in Czechia is the €600 million sustainability-linked bond issued by ČEZ in 2022[162]**.** This landmark emission stands as one of the largest in the country's history and underscores the growing commitment of major corporations to environmental sustainability.

ČEZ utilised the proceeds from this bond to fund a variety of green projects aimed at enhancing energy efficiency and expanding renewable energy capacities. Specifically, the funds were allocated to initiatives such as the development of solar farms, thus ensuring a substantial contribution to reducing greenhouse gas emissions. Additionally, the bond proceeds were used to upgrade existing infrastructure to be more energy-efficient, thereby lowering operational carbon emissions and securing a more sustainable future for the energy sector in Czechia.

Opportunities and Advantages

While the sustainability-linked finance market in Czechia is relatively small, it holds significant potential for growth and development. By capitalising on the opportunities and advantages of sustainability-linked finance, Czechia can accelerate its transition towards a low-carbon economy, enhance corporate accountability,

[157] https://www.theasset.com/article-esg/50731/sustainability-linked-bonds-loans-sink-in-2023

[158] https://iclg.com/practice-areas/environmental-social-and-governance-law/germany

[159] https://www.linklaters.com/insights/publications/2021/august/esg-outlook-in-the-netherlands

[160] https://www.ecb.europa.eu/press/financial-stability-publications/macroprudential-bulletin/focus/2021/html/ecb.mpbu_focus202110_3.en.html

[161] https://www.spglobal.com/esg/insights/featured/special-editorial/global-sustainable-bonds-2023-issuance-to-exceed-900-billion

[162] https://www.cez.cz/sustainability/en/news/cez-issues-sustainability-linked-bonds-160453

stimulate innovation, and attract both domestic and international investments. This, in turn, can drive sustainable economic growth, improve competitiveness, and contribute to the achievement of national and international climate goals.

Investors Attraction. Sustainability-linked finance attracts both domestic and international investors who prioritise environmental, social, and governance (ESG) criteria. This influx of capital can fund projects promoting energy efficiency, renewable energy, and other green innovations, thereby reducing the country's carbon footprint.

Corporate Governance Standards Improvement. Financial instruments can stimulate corporate accountability and transparency. By tying financial terms to specific sustainability targets, companies are incentivised to set ambitious yet achievable goals, such as reducing greenhouse gas emissions or improving energy efficiency. Regular monitoring and reporting of these KPIs foster a culture of continuous improvement and innovation within businesses.

Risks and Challenges

Slower Transition. Insufficient volumes of sustainability-linked funding could slow the adoption of green technologies and practices. As companies find it challenging to secure financing for their environmental and social initiatives, the overall pace of innovation in these areas may decelerate. This stagnation would make it harder for Czechia to keep up with more advanced markets like the Netherlands and Germany, where sustainability-linked finance is more mature and widespread.

Higher Cost of Capital for Czech Companies. Another critical risk is the potential increase in the cost of capital for Czech companies. Investors are increasingly prioritizing sustainability, and companies that fail to meet these criteria may face higher borrowing costs or be excluded from certain funding opportunities. This could result in a competitive disadvantage domestically and internationally.

Loss of Competitiveness. Moreover, with rising global demand for sustainable practices, consumer preferences are shifting towards environmentally and socially responsible products and services. Companies that fail to align with these preferences risk losing market share and facing reputational damage. This shift could be particularly pronounced in critical industries like manufacturing, energy, and transportation.

3.2.3 Green Loans and Green Mortgages

Green loans and green mortgages are designed to fund projects with clear environmental benefits. The debate in Czechia centres on whether these should be linked to the EU Taxonomy to ensure alignment with broader climate goals. While this linkage would bring standardization, it also presents challenges due to the current uncertainties in EU Taxonomy implementation. Meanwhile, such products are well-established in Germany, France or the Netherlands, where stringent regulatory standards and market demand drive their growth. Challenges include establishing clear eligibility criteria and ensuring that borrowers comply with the green objectives throughout the loan term.

International Practice

In some European countries, green loans and mortgages are regulated by specific standards that are linked to the EU Taxonomy and other sustainability criteria, as mentioned in the Good Practice Report. **In Germany, the Netherlands and France, the green credit and mortgage standards are tightly linked to the criteria of the EU Taxonomy and other European regulatory frameworks, such as the Sustainable Finance Disclosure Regulation (SFDR), as mentioned in the Good Practices report**[163].

[163] https://www.bundesbank.de/resource/blob/922198/5e4da127f1ee91095ef016857d3642eb/mL/2023-04-technical-paper-data.pdf

Institutions like the German KfW play a crucial role in on-lending for green projects. National development banks provide technical assistance and financial support to ensure projects meet sustainability standards[164]. The National Development Bank in Czechia could learn from these models to integrate technical support and verification processes for green loans and on-lending products.

Situation in Czechia

Green loans and mortgages in Czechia should ideally adhere to the criteria outlined in the EU Taxonomy and align with the Sustainable Finance Disclosure Regulation (SFDR)[165]. However, the integration of these frameworks into the national context remains a challenge. The Capital Requirements Regulation (CRR)[166] also imposes certain limitations on the use of proceeds, which need to be addressed to promote widespread adoption.

As discussed with the CBA, **green mortgages in Czechia account for less than 1% of the total mortgage market, i.e. approximately €50 million in loans yearly. In contrast, Germany, with its more mature green finance sector, boasts green mortgage volumes exceeding €10 billion[167]**. This stark difference underscores the potential for growth in Czechia and stresses the need for improved regulatory frameworks and incentives to stimulate the market.

Opportunities and Advantages

Investment in Energy Efficient Buildings. The adoption of green loans and green mortgages would drive substantial investment in energy-efficient buildings and sustainable infrastructure. **As financial products designed to support eco-friendly projects, green mortgages incentivise homeowners and developers to prioritise energy-saving measures, such as the installation of solar panels, high-efficiency heating systems, and superior insulation.** This not only reduces the carbon footprint of the housing sector but also contributes to significant cost savings on energy bills for households and businesses alike. The same applies for green loans in the real estate sector aiming at administration building, logistics and manufacturing.

Economic Benefits for Banks. **The green mortgages or green loans portfolio origination or refinancing may be accompanied with a green bonds emission or EIB**[168] or other advantageous source of on-lending or securitisation.

Stimulate Innovation. The development of a robust green finance market can stimulate innovation within the construction and real estate sectors. Companies would be encouraged to adopt greener technologies and building practices, fostering a new wave of eco-friendly developments that align with EU sustainability goals. This, in turn, could position Czechia as a leader in sustainable construction, attracting international investment and enhancing its competitiveness in the global market.

Risks and Challenges

[164] https://economy-finance.ec.europa.eu/system/files/2023-02/dp179_en.pdf

[165]https://www.kfw-capital.de/Sustainability/Regulation-(EU)-2019-2088-on-sustainability-related-disclosures-in-the-financial-sector.html

[166] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R0575

[167] https://www.eba.europa.eu/sites/default/files/2023-12/e7bcc22e-7fc2-4ca9-b50d-b6e922f99513/EBA%20report%20on%20green%20loans%20and%20mortgages_0.pdf

[168] https://www.eib.org/en/projects/topics/climate-action/get-support

The challenges to increasing green mortgage and loan volumes include overcoming the high initial costs and the complexity of transitioning to greener operations. Banks need to invest in educating their customers and developing attractive financial products that offset these costs. There is also a need for stronger regulatory frameworks and government incentives to make green financing more accessible and appealing.

Banks and financial institutions may miss out on profitable opportunities associated with green financing. This could lead to a competitive disadvantage in the European market where sustainable finance is increasingly prioritized. Furthermore, properties lacking in energy efficiency could face devaluation, impacting the real estate market negatively and reducing homeowners' equity.

A lack of progress in green financing also exposes the banking sector to climate-related financial risks. As the effects of climate change become more pronounced, properties that are not energy efficient or located in vulnerable areas may become riskier assets, leading to higher default rates and potential losses for banks.

3.2.4 Transition Finance Products

Transition finance products support companies in transitioning towards greener operations. Although still in nascent stages in Czechia, they represent an essential bridge for businesses aiming to reduce their environmental footprint. The main challenge here is the high initial cost and complexity of transitioning existing operations, which can be a significant barrier for many companies.

International Practice

Germany and the Netherlands serve as exemplary models in the realm of transition finance. In Germany, **KfW provides commercial banks with credit lines tailored for companies transitioning from fossil fuels to more sustainable energy sources,** which have stringent parameters related to energy efficiency and emission reductions[169].

Situation in Czechia

The main recipients of transition finance in Czechia are typically businesses and industries with high carbon footprints, such as manufacturing, energy, and construction sectors. These entities are encouraged to undertake projects that significantly lower their carbon emissions and enhance their overall sustainability. However, to obtain funding, recipients must meet stringent conditions, including the provision of detailed sustainability plans, adherence to environmental regulations, and often, third-party verification of the project's environmental impacts[170].

Currently, the conditions for obtaining transition finance products among Czech banks vary significantly. Generally, banks require detailed project proposals demonstrating clear environmental benefits, particularly in reducing carbon emissions and improving energy efficiency. The criteria include a thorough assessment of the energy consumption and sustainability measures incorporated within the project. Banks also demand compliance with international standards, such as the EU Taxonomy, to ensure that the projects align with broader environmental and sustainability goals[171].

Opportunities and Advantages

[169] https://www.kfw.de/About-KfW/Newsroom/Latest-News/Pressemitteilungen-Details_740352.html

[170] https://economy-finance.ec.europa.eu/publications/2023-country-report-czechia_en

[171]https://www.cnb.cz/en/

The utilisation of transition finance in Czechia offers numerous opportunities and advantages that can significantly accelerate the transition towards a low-carbon economy. By embracing supportive measures, clear decarbonisation targets, and financial incentives, Czechia can foster a thriving green economy that benefits businesses, communities, and the environment. **Establishing clear and ambitious national decarbonisation targets in high-carbon industries would provide a definitive roadmap for financial institutions and businesses alike.** Ensuring that these measures are well-publicized and easy to understand would also help in garnering broader interest and participation from potential beneficiaries.

Sustaining Jobs and Added Value. Companies in coal and other industries have several thousands of employees[172] in Czechia[173]. Increased investment in transition finance can stimulate economic growth by funding innovative projects and new technologies in these companies. This, in turn, can sustain numerous job opportunities in energy and other sectors such as renewable energy, energy efficiency, and sustainable construction. By prioritising green projects, Czechia can develop a robust green economy that not only reduces carbon footprints but also fosters economic prosperity[174].

Promoting Competitiveness. As global markets shift from carbon-based economy towards sustainability, businesses and industries in Czechia that adopt low-carbon technologies and practices early on can gain a competitive edge. Access to transition finance enables these entities to invest in advanced technologies, improve operational efficiencies, and meet international environmental standards, thus enhancing their competitiveness in both domestic and international markets[175].

Energy Security and Cost Savings. Transition finance can support the development of renewable energy sources, reducing dependence on imported fossil fuels and enhancing energy security. By investing in local renewable energy projects such as wind, solar, and biomass, Czechia can achieve greater energy independence. Additionally, businesses that implement energy-efficient practices can significantly lower their energy costs, leading to long-term financial savings.

Access to New Investors. Utilising transition finance can open up access to international funding sources, including grants and loans from the EU and other global financial institutions. These funds often come with favourable terms and conditions, providing Czech businesses with the necessary capital to undertake large-scale sustainability projects. Aligning with international sustainability standards can also attract foreign investments and partnerships[176].

Risks and Challenges

Decarbonisation Strategies are Missing. Government policies and national benchmarks for decarbonisation strategies are essential in guiding financial institutions towards sustainable investments. In Czechia, there is an urgent need for the government to establish clear and ambitious decarbonisation targets, which could serve as

[172] https://www.eca.europa.eu/lists/ecadocuments/sr22_22/sr_coal_regions_cs.pdf

[173]https://ec.europa.eu/regional_policy/en/newsroom/news/2022/09/26-09-2022-eu-cohesion-policy-eur1-64-billion-for-a-just-climate-transition-in-czechia

[174] ibid.

[175] https://oecdecoscope.blog/2023/04/14/the-czech-republic-towards-net-zero-emissions/

[176] https://ec.europa.eu/regional_policy/whats-new/newsroom/07-09-2024-public-sector-loan-facility-6-more-czech-projects-in-just-transition-regions-selected-for-funding_en

benchmarks for transition finance. Furthermore, state support in the form of subsidies, tax incentives, and public-private partnerships could significantly boost the volume of transition finance[177].

The absence of sectoral decarbonisation strategies makes it impossible for some banks in Czechia to finance transitional projects. However, this should change based on the ongoing initiative of the MoIT "Supporting evidence-based regulatory practice and policy coherence to realize the 2030 Agenda for Sustainable Development[178]" finishing in 2025. The implementation of the project will provide practical cooperation with OECD analytical experts in accordance with the activities of the legislative analysis department in the preparation of legislation in the Czech Republic according to the principles of regulatory impact assessment and based on evidence-based policy[179].

Banks are Turning Away from Fossil Fuels. A critical aspect of transition finance is the role of banks and their funding policies towards the fossil fuel sector. Many banks are already moving away from financing fossil fuel-based activities, driven by regulatory pressures and the DNSH principle, which prevents EU funds backed by financial instruments from supporting such activities. The companies in Czechia are used to utilise EU funds grants co-funded by bank loans to finance their investment projects, but this is no more possible if the projects are not following the DNSH principle[180]. **However, internal rules of banks may still allow for transition finance in cases where national benchmarks for decarbonisation strategies exist. This highlights the importance of having a coherent and comprehensive industrial decarbonisation strategies at the national level, which can steer financial institutions towards more sustainable investments.**

Stranded Assets. The risk of stranded assets in carbon-intensive industries would lead to lower innovation and economic stagnation, as industries reliant on outdated technologies may struggle to remain competitive on the global stage. This could lead to a decline in foreign investments and a slowdown in economic growth. Moreover, failing to attract sufficient transition finance could hinder the nation's ability to meet climate targets[181].

3.2.5 Social Bonds

Social bonds finance projects that yield positive social outcomes. Though less prominent in Czechia, there is potential for growth as awareness and demand for social impact investing increase. The main challenge in social bonds is defining and measuring social impact, which can be subjective and vary widely depending on the project and region[182].

Social bonds have emerged as critical instruments in the sustainable finance landscape, aimed at addressing specific social challenges, such as affordable housing, education, healthcare, and more. These bonds function similarly to green bonds but focus on social outcomes and thematic areas such as gender equality and socio-economic advancement[183].

[177] https://oecdecoscope.blog/2023/04/14/the-czech-republic-towards-net-zero-emissions/

[178] https://sdgs.un.org/2030agenda

[179] https://vlada.gov.cz/cz/urad-vlady/fondy-eu/aktivni_projekty/supporting-evidence-based-regulatory-practice-and-policy-coherence-for-implementing-the-2030-agenda-for-sustainable-development-in-czechia-202740/

[180] https://reform-support.ec.europa.eu/what-we-do/revenue-administration-and-public-financial-management/integrating-dnsh-principle-green-transition-czechia_en

[181] https://www.ecb.europa.eu/press/conferences/shared/pdf/20201111_ECB_Forum/academic_paper_vanderPloeg.pdf

[182] https://www.oecd-ilibrary.org/docserver/311c923b-en.pdf?expires=1725954858&id=id&accname=guest&checksum=7A5322256E9262033B886A2F34AAE83F

[183] ibid.

International Practice

Globally, the issuance of social bonds has seen substantial growth. An exemplary case can be observed with KfW, the German development bank, which has successfully issued social bonds aimed at financing affordable housing projects. These bonds have been instrumental in addressing housing shortages and improving living conditions for low-income families in Germany. For instance, KfW's social bonds program has seen subscriptions exceeding €2 billion, primarily directed towards affordable housing, urban development, and renewable energy projects[184].

Similarly, the EIB has also ventured into the social bond market, with a significant portion of the proceeds allocated to affordable housing. The EIB's social bonds have funded numerous projects across Europe, providing essential housing solutions and contributing to the overall socio-economic development. Their Sustainability Awareness Bonds (SAB) issuances have reached volumes of approximately €9 billion, supporting areas such as affordable housing, healthcare, and education[185].

Situation in Czechia

In Czechia, the social and thematic bond market is still in its nascent stage. Unlike their counterparts in Western Europe, Czech financial institutions and potential issuers are only beginning to explore these instruments. The lack of integration with the EU Taxonomy and other European regulatory frameworks stands as a significant barrier. As a result, there are limited examples of successful social bond issuances in the country. Czech banks and issuers are gradually recognizing the potential of these bonds, but practical implementation remains limited[186].

In this emerging landscape, the State Fund for Investment Support ('SFPI')[187] has taken pivotal steps towards promoting affordable housing through financial instruments, though not utilising social bonds at the moment as a form of finance. SFPI aims to bridge the gap between public needs and private investment by offering a reliable framework that ensures transparency and accountability[188]. By supporting municipalities and developers, SFPI provides the necessary capital for affordable housing projects, while combining a soft loan with a grant component, both funded by the EU Recovery and Resilience Facility ('**RRF**')[189] with an allocation of €350m.

Opportunities and Advantages

Leveraging social bonds presents numerous opportunities and advantages that can significantly benefit Czech society, especially in areas like affordable and housing, healthcare or education.

Affordable Housing. The utilization of social bonds can play a crucial role in addressing the pressing issue of affordable housing in Czechia. Social bonds provide a sustainable financing mechanism that can attract private investment for public good projects. By issuing social bonds specifically targeted at affordable housing projects, municipalities and developers can secure the necessary capital to construct and maintain affordable housing

[184] https://www.kfw.de/kfw.de-2.html

[185] https://www.eib.org/en/stories/15-years-green-bond

[186] ibid.

[187] https://sfdi.gov.cz/o-sfdi/

[188] https://sfpi.cz/

[189] https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

units. This approach not only helps in reducing the housing deficit but also ensures that lower-income families have access to safe and affordable living conditions[190].

Senior Homes. The demand for senior housing and care facilities is expected to increase significantly in the coming years. Social bonds can be an effective tool to finance the development of modern, accessible, and affordable senior housing projects. By channelling funds into these projects, social bonds can help in creating communities that cater specifically to the needs of senior citizens, ensuring they live in a comfortable and supportive environment. This can lead to improved quality of life for the elderly and reduce the burden on public healthcare systems[191].

Strengthening Social Infrastructure. Beyond housing, social bonds can be utilized to finance a wide range of social infrastructure projects, including healthcare facilities, educational institutions, and community centres. These projects can have a transformative impact on local communities by providing essential services and amenities. For instance, building new hospitals and clinics through social bond financing can improve access to healthcare services, while investing in schools and vocational training centres can enhance educational opportunities and workforce development[192].

Economic Resilience and Development. Investing in social bonds can contribute to the overall economic resilience and development of Czechia. The construction and maintenance of social infrastructure projects create jobs and stimulate economic activity. Additionally, the availability of affordable housing and high-quality social services can attract businesses and talent to the region, fostering economic growth and development. Social bonds can thus serve as a catalyst for sustainable economic development, benefiting both the public and private sectors[193].

Investor Attraction. As Czech financial institutions and issuers gain more experience with social bonds, they can build investor confidence and attract a broader base of investors. Social bonds appeal to investors who are seeking both financial returns and positive social impact. This growing interest in socially responsible investing can lead to a more robust and diversified financial market in Czechia. Furthermore, successful social bond issuances can set a precedent for future projects, demonstrating the viability and benefits of these instruments[194].

Risks and Challenges

While social bonds hold promises for advancing social objectives in Czechia, several structural and market-related challenges need to be addressed.

Institutional Capacity. Czech governmental and financial institutions are yet to develop the necessary tools and expertise to evaluate and manage social bonds effectively[195].

Missing Certification and Standards. The absence of standardized certification processes and clear guidelines including EU Taxonomy besides minimum safeguards complicates the issuance and verification of social bonds.

[190] https://feps-europe.eu/event/821-housing-policy-in-europe-and-czechia-concrete-actions-for-social-and-affordable-housing/

[191] https://housingcare.org/retirement-properties-abroad/c-czech-republic/

[192] https://www.ifc.org/en/about/investor-relations/social-bonds

[193] https://www.eib.org/en/press/all/2024-067-czechia-eib-group-financing-of-eur1-88-billion-in-2023-helps-the-country-to-grow-greener-better-connected-and-more-competitive

[194] https://assets.kpmg.com/content/dam/kpmg/cz/pdf/2024/KPMG-Invest-in-Czechia-2024.pdf

[195] https://commission.europa.eu/system/files/2022-03/280222-sustainable-finance-platform-finance-report-social-taxonomy.pdf

Slower Achievement of Goals in Social Areas. Inability to scale up social bond issuance would mean missing out on an important vehicle for financing social projects. Social bonds are instrumental in addressing pressing issues such as affordable housing, healthcare, education, and social inclusion. By not leveraging this financial tool, Czechia risks slowing down the progress towards achieving critical social objectives, thereby perpetuating existing inequalities and social challenges[196].

Czechia Falling behind Global Trends. The lack of growth in social bonds could result in Czechia falling behind in the global movement towards sustainable finance. As more countries and financial markets integrate ESG considerations into their investment strategies, Czechia's inability to keep pace could diminish its attractiveness to international investors who are increasingly prioritizing sustainability. This could lead to a potential outflow of investment capital to markets that offer better ESG opportunities, impacting the country's financial stability and growth prospects[197].

3.2.6 ESG Rating – Comparison of Companies in Terms of Sustainability

ESG ratings assess a company's performance in three key areas: environmental impact, social responsibility, and governance practices. These ratings provide insight into how companies manage risks and opportunities related to sustainability and ethical considerations. ESG ratings are crucial for investors, banks, and other stakeholders to evaluate the long-term viability and ethical standing of companies.

Several agencies specialize in providing ESG ratings in the EU, each using their methodologies and metrics. The five main ESG rating agencies include:

- **MSCI:** Known for its comprehensive analysis and widely used ratings, MSCI evaluates thousands of companies worldwide based on their ESG performance[198].
- **Sustainalytics:** Offers detailed ESG risk ratings that help in understanding a company's exposure to and management of material ESG issues[199].
- **ISS ESG:** Part of Institutional Shareholder Services, ISS ESG provides data, analytics, and insights on ESG performance[200].
- **Ecovadis:** A leading provider of business sustainability ratings, Ecovadis evaluates performance across global supply chains[201].

International Practice

In Germany, ESG ratings are widespread practice, due to stronger capital market and a larger number of publicly traded companies. German companies are often rated by independent rating agencies, such as MSCI or Sustainalytics. Additionally, German banks and investment funds actively use ESG ratings in risk assessment and investment decisions. **The Sustainable Finance Advisory Beirat**[202] (a governmental committee), promotes ESG ratings, data usage, benchmarking and interoperability of ESG rating methodologies.

[196] ibid.

[197] https://www.oecd-ilibrary.org/docserver/311c923b-en.pdf?expires=1725956168&id=id&accname=guest&checksum=AC9CF75F305A15A4520B654F194CC2E9

[198] https://www.msci.com/

[199] https://www.sustainalytics.com/

[200] https://www.issgovernance.com/esg/

[201] https://ecovadis.com/

[202] https://sustainable-finance-beirat.de/en/home/

Situation in Czechia

In Czechia, the development of ESG ratings is significantly influenced by the limited capital market and the small number of publicly traded companies. The Prague Stock Exchange (PSE) hosts a number of companies that are beginning to adopt ESG practices. However, the number of firms with comprehensive ESG ratings remains limited. As of the latest assessments, approximately 20 publicly traded companies on the Prague Exchange[203] like ČEZ, Moneta Money Bank, Komerční banka or O2 have received some form of ESG rating. These ratings are provided by various agencies, each utilizing distinct methodologies and criteria, reflecting the broader inconsistency in the ESG rating landscape.

Besides that, ESG rated companies in the Czech Republic are mainly members of large manufacturing companies supply chains. Most of them are active in industries like chemistry, plastics, automotive, metallurgy and also transport and logistics. Energy sector is not very active in applying for ESG ratings with the exception of the publicly traded firms.

Opportunities and Advantages

Enhancing Market Credibility. One of the paramount advantages of ESG ratings is the enhanced market credibility they provide to companies. Firms that excel in ESG practices are perceived as responsible and forward-thinking, attracting a growing segment of environmentally and socially conscious investors. This increased credibility can lead to a wider investor base, lower capital costs, and improved access to financing.

Driving Corporate Accountability. The pursuit of high ESG ratings incentivizes companies to adopt more sustainable and responsible practices. This drive for better ratings encourages greater corporate accountability and transparency, leading to improved environmental stewardship, fair labour practices, and robust governance structures. As companies strive to improve their ESG scores, they contribute to the broader goal of decarbonisation and sustainable development.

Aligning with Global Standards. As global standards for ESG reporting and sustainability practices continue to evolve, Czech companies with robust ESG ratings will be better positioned to comply with international regulations and expectations. This alignment can open up new markets and opportunities for collaboration, further driving the country's sustainable finance agenda.

Risks and Challenges

Low comparability of ESG rating methodologies. **A significant challenge in the ESG rating landscape is the variation in methodologies used by different agencies**. Each agency has its criteria, weighting systems, and evaluation processes, leading to inconsistencies and difficulties in comparing ratings across providers. For instance, one agency might prioritize environmental factors more heavily, while another might focus on governance issues. This lack of standardization can create confusion for investors and other stakeholders who rely on these ratings for decision-making. **The methodologies also differ by sector, making direct comparisons among companies in different industries challenging**.

This situation means that the comparability of companies in terms of ESG criteria is low, which makes it difficult for banks, for example, to assess the sustainability risks of their clients. ESG ratings could significantly contribute to companies being compared based on their ESG practices, which is important not only for investors but also for the banking sector when assessing risks and granting loans.

[203] https://www.pse.cz/udaje-o-trhu/statistika/oficialni-kurzovni-listek

Box 1: Ecovadis Rating Agency Comparison of the Czech and Polish market

Ecovadis belongs to the well-known ESG rating agencies, which are active globally. The methodology of their ESG score assessment is based on a questionnaire that is filled in by the applicant and then assessed by three independent analysts. Ecovadis has more than 500 analysts available worldwide[204]. These analysts identify strengths and gaps based on the information provided by the applicant in the questionnaire[205]. **The rating agency not only provides rating score, which evolves over time and gives necessary independent feedback on improvement of the company in terms of sustainability, but also formulates recommendations and drafts action plans for the assessed companies to address the gaps and improve their ESG rating.** Most of the rated companies tend to improve their ESG rating over time. Companies tackle sustainability as an opportunity[206].

Ecovadis has already assessed more than 130,000 companies worldwide[207]. **In the Czech Republic, the rating agency assessed more than 1,000 companies so far that have their own scorecard.** Most of them are members of a supply chain of German and other surrounding countries-based large companies. Altogether, Ecovadis has already provided more than 1,700 assessments in the Czech Republic. Some of the companies have already been assessed more times to monitor improvements and check on the evolution of their strengths and gaps in ESG topics. The average score of Czech companies is currently 47 points out of 100. Mostly, the applicants are assessed as part of a supply chain following i.e. the German '**Lieferkettensgesetz**' ('**LSKG**') law imposing obligatory reporting on ESG in supply chain of large German companies.

In Poland, there have been more than 2,000 suppliers ESG rated so far. **In Poland, the companies are more active and there are more ESG ratings provided on voluntary basis than in the Czech Republic. The reason is ambitious export orientation and ability and willingness to invest in sustainability.** The Polish companies attract more visibility in the market and achieve diversification from the competition by the fact they have an ESG rating, they are aware of both sustainability strengths and weaknesses and are able to provide independent information on its evolvement. Polish market has also seen a surge in interest of ESG rating assessments also in line with the current war in Ukraine that hindered the interest in business with Polish companies due to a larger safety risk perceived. Polish banks use ESG ratings as they concentrate on sustainable supply chain finance[208].

Source: PwC interview with Ecovadis

3.2.7 Sustainability and Insurance

The insurance industry is increasingly incorporating sustainability into its core practices, recognizing the critical role it plays in risk management and long-term financial stability. This shift is driven by the understanding that sustainable practices can mitigate risks associated with climate change, resource depletion, and social instability.

In many territories, insurers are beginning to reward clients and projects that adopt sustainable practices with lower premiums, while imposing higher rates on those who do not. This approach not only incentivizes sustainable behaviour but also helps insurers manage the rising costs of claims linked to environmental and

[204] https://ecovadis.com/

[205] https://ecovadis.com/solutions/iq/vitals/questionnaire/

[206] https://ecovadis.com/suppliers/

[207] https://support.ecovadis.com/hc/en-us/articles/210459707-Who-are-EcoVadis-customers

[208] https://www.pwc.pl/en/publikacje/green-finance-in-poland-how-will-esg-change-the-banking-sector-and-corporate-financing.html

social issues. For instance, in France and the Netherlands, major insurance companies are moving towards models where sustainability significantly influences rate setting.

International Practice

In the Netherlands[209], insurance companies are not yet moving to large discounts for sustainable projects but are preparing to increase premiums for projects and clients who do not adopt sustainable practices. In this regard, the Netherlands is known for its advanced sustainability regulations, which push insurance companies to adopt ESG principles not only in investments but also in insurance products[210].

Situation in Czechia

Based on information acquired from interviews and questionnaires, insurance companies in Czechia generally do not consider the sustainability of clients or projects in their insurance products, and premium discounts for more sustainable projects are still rather exceptional, though they are becoming more common. Green premium in insurance, i.e., the price advantage for sustainable projects, is very low, if it exists at all. Conversely, the insurance companies in Czechia are gradually increasing insurance rates for clients who do not meet sustainable standards. **This trend is related to the increasing risks of "stranded assets" associated with climate change, which increases the probability of insured events such as floods, fires or storms.**

Pension funds in Czechia exhibit a cautious approach towards sustainable investments. Regulatory limitations and a conservative investment outlook have historically constrained the ability of pension funds to invest in sustainable projects. However, there is a growing recognition of the need to align pension fund investments with long-term sustainability goals.

Regulatory frameworks in Czechia have not yet fully mandated the integration of sustainability into insurance and pension fund operations. While there are no explicit prohibitions against investing in sustainable projects, the regulatory environment has lagged behind more progressive jurisdictions such as the Netherlands. This regulatory lag has resulted in a cautious approach among insurers and pension funds, who are wary of potential compliance issues and the perceived risks associated with sustainable investments.

Opportunities and Advantages

Integrating sustainability into Czechia's insurance sector presents numerous opportunities and advantages. By embracing sustainability, insurers can enhance their market position and profitability while contributing to the global effort against climate change, benefiting both clients and society.

Differentiating Insurance Products. Insurers could introduce innovative products that cater to sustainable projects, offering premium discounts for clients adhering to environmental standards. This could include insurance for green buildings, renewable energy projects, and eco-friendly transportation, attracting environmentally conscious clients.

Portfolio Synergies. Moreover, new revenue streams can be unlocked through partnerships with other sectors. For instance, insurers can collaborate with financial institutions to offer bundled products that include both insurance and green financing. This facilitates sustainable projects by providing both capital and risk mitigation.

[209] https://www.pwc.nl/en/insights-and-publications/services-and-industries/insurers/non-life-insurers-must-do-more-with-esg-when-setting-premiums.html

[210] https://www.pwc.nl/

Pension Funds as Investors in Sustainable Investment Products. Insurers can leverage investment portfolios to drive sustainability by prioritizing green bonds and engaging in shareholder advocacy. Additionally, insurers have a societal role in accelerating the low-carbon transition by raising awareness about sustainability and climate risks through educational initiatives and partnerships with organizations.

Risks and Challenges

Missed Economic Opportunity. From a financial perspective, insurers that lag in integrating sustainability might miss out on the long-term value creation associated with green investments. Sustainable finance products often yield better risk-adjusted returns, and a failure to tap into these opportunities could lead to suboptimal investment performance and lower profitability. Additionally, climate-related risks will remain inadequately managed without advanced analytics and artificial intelligence, exposing insurers to higher claims and financial instability due to more frequent and severe climate events.

3.2.8 Certification of Sustainable Finance Products

Green labelling and certification of sustainable financial products have become pivotal tools for promoting transparency and confidence in the market. These labels assure investors that their investments are environmentally friendly and align with sustainability goals.

Green labelling and certification of sustainable financial products are still relevant even at the time of the introduction of SFDR[211], although their role has changed. Introduced by the European Union in 2021, the SFDR sets rules for transparency in sustainable investment and ensures that investors have clear information on how financial products are classified in terms of sustainability.

International Practice

The SFDR sets uniform standards for all financial products in the EU, which increases transparency and facilitates comparison between products. However, this does not mean that green labelling has lost its meaning. Conversely, certifications such as the **Austrian Umweltzeichen**[212] play a key role in strengthening consumer and investor confidence in sustainable products. These certifications provide an additional layer of assurance and can be a useful tool for financial institutions looking to demonstrate their commitment to sustainability beyond the basic SFDR requirements.

The Austrian Umweltzeichen is one of the most well-known environmental certifications in Europe, covering a **wide range of products, with more than 200 financial products being labelled so far**[213].

Situation in Czechia

There is currently no nationally recognized green label for financial products in Czechia. However, some Czech financial institutions have sought certification from international or foreign labels to demonstrate their commitment to sustainability. For instance, some investment fund products managed by Czech asset management companies have acquired the Austrian Umweltzeichen, an environmental certification known for its stringent criteria and independent audits. This label provides a level of assurance and recognition that appeals to both local and international investors.

[211] https://finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/implementing-and-delegated-acts/sustainable-finance-disclosures-regulation_en

[212] https://www.umweltzeichen.at/de/home/start

[213] https://www.umweltzeichen.at/en/products/sustainable-finance/green-finance-alliance

Opportunities and Advantages

Attractivity of Czech Sustainable Finance Products. **Green labelling can serve as a powerful marketing tool, differentiating Czech financial products from those lacking such certifications.** This competitive edge can help local asset managers and financial institutions expand their market share and influence within the global sustainable finance community. As more investors seek out verified sustainable investments, Czechia could position itself as a leader in sustainable finance, boosting the country's economic growth and environmental stewardship.

Building Trust and Transparency among Retail Investors. Another advantage lies in building trust and transparency within the domestic market. Green certifications provide a clear, verifiable indication that financial products meet stringent sustainability criteria, thereby reducing the risk of greenwashing. This transparency can foster greater investor confidence and encourage more widespread adoption of sustainable financial products among both institutional and retail investors in Czechia.

Risks and Challenges

The lack of standardized and recognized green labelling could lead to increased risks of greenwashing, where financial products are marketed as sustainable without substantiating their claims. This not only undermines investor trust but also jeopardizes the integrity of the entire sustainable finance market within the country. Investors and stakeholders may become sceptical, which can result in reduced investment inflows and a weakened reputation in the global financial community.

3.3 Action at the Level of the Central Government

In recent years, integrating sustainable finance into state budget planning, implementation, reporting, and funding has become increasingly critical. This integration ensures the efficient and transparent allocation of financial resources to projects promoting long-term environmental, social, and economic stability. Sustainable finance addresses immediate needs like combating climate change and promoting renewable energy while establishing a foundation for a resilient and forward-looking economy. By embedding sustainability into financial decision-making processes, governments can create a more predictable and stable fiscal environment that supports innovation and mitigates risks associated with environmental degradation and resource scarcity.

Czechia primarily focuses on the transposition of EU legislation in the realm of sustainability but often fails to implement these laws on time and lacks a comprehensive national strategy. This delay was evident in a 2024 Czech CEO Survey[214]. The country tends to implement recommended tools, policies, and activities later than its neighbours, such as support for renewable resources, aggregation services, flexibility, and the hydrogen economy. As a result, the private sector lacks a clear understanding of the state's sustainability direction and has to operate without a long-term vision or strategic framework.

Central government policies serve as a guiding framework for the entire nation, ensuring that sustainability is integrated into the core financial systems and practices. Without such overarching policies, efforts at sustainability can become fragmented and ineffective, leading to missed opportunities and a lack of coherent progress.

For Czechia, a robust sustainable finance policy is essential for several reasons:

- Provision of clear, unified direction for both public and private sectors, fostering confidence and encouraging investment in green initiatives.
- Alignment of the country with broader EU goals, ensuring compliance and enabling access to various EU funds and support mechanisms.

[214] https://www.pwc.com/cz/cs/temata/cesky-pruzkum-nazoru-generalnich-reditelu.html

- Sustainable finance policies help mitigate risks associated with climate change and environmental degradation, protecting the economy and ensuring long-term prosperity for future generations.

In recent years, the integration of sustainable finance into the state budget planning, implementation, reporting, and funding has become an increasingly critical topic. This integration is essential because it ensures that financial resources are allocated efficiently and transparently to projects and initiatives that promote long-term environmental, social, and economic stability. Sustainable finance not only addresses the immediate needs of combating climate change and promoting renewable energy but also establishes a foundation for a resilient and forward-looking economy. By embedding sustainability into financial decision-making processes, governments can create a more predictable and stable fiscal environment that supports innovation and mitigates risks associated with environmental degradation and resource scarcity.

The central government authorities survey conducted in the Project and interviews with authorities' representatives uncovered the following governance and capacity challenges:

- **Over a third of central government bodies identified specific challenges, such as financial and staffing limitations and complex sustainability criteria**. These hinder broader adoption of sustainable investment and procurement practices;
- **Major barriers include a lack of detailed knowledge about decarbonisation and sustainable finance,** insufficient government involvement, and a need for stronger coordination, governance framework and clearer guidelines;
- **There is a significant lack of political leadership and support and national coordination regarding sustainable finance**. This fragmentation impedes strategic alignment and effective policy implementation across various governmental levels;
- **Missing national framework for managing sustainable finance,** the thematic area is underdeveloped and understaffed, with inadequate connectivity and coordination across sectors and governmental bodies. This results in siloed approaches and impedes the integration of international best practices, as proactive collaboration is essential for advancing sustainable finance. This is a crucial, cross-cutting issue that cannot be successfully resolved without an appropriate coordination framework.
- **There is no specific assignment of competence in sustainability and sustainable finance in the Competency Law**. Also, some competences are shared among some ministries or remain ambiguous or completely lacking, creating coordination challenges. For example, the buildings sector between the MoIT, MoRD and MoE) or the non-existing assignment of the economic policy to any central government body. This complicates the formulation and implementation of effective, internally consistent, and mutually supportive policies and strategies in a hierarchical structure at the national level.

3.3.1 Value for Money Principle

To address these coordination and strategic alignment issues, the Value for Money principle becomes indispensable in state budget planning, implementation, and reporting. This principle mandates that public funds be used in a way that maximizes the benefits derived from each unit of currency spent, ensuring that expenditures are justified by their outcomes.

Adopting a value for money approach helps to create a more efficient, effective, and accountable public finance system, bridging gaps between various sectors and fostering a cohesive strategy towards sustainable development.

In the budget planning phase, this involves conducting rigorous cost-benefit analyses to forecast the impacts of proposed expenditures, identifying the most efficient and effective ways to achieve policy goals. By quantifying the outcomes of different spending options, governments can prioritize initiatives that deliver the highest returns on investment.

During implementation, adhering to the value for money principle requires continuous monitoring and evaluation to ensure that projects and policies remain on track to deliver the expected benefits. This can include adjusting or reallocating resources in response to performance data, thus maintaining a dynamic and responsive approach to public spending.

In the reporting stage, transparency and accountability are key. Detailed reports should be prepared to demonstrate how funds were allocated, what outcomes were achieved, and how these outcomes compared to initial projections. This not only provides a clear record for stakeholders and taxpayers but also facilitates learning and improvement in future budget cycles.

International Practice

In Germany, for example, the concept of Value for Money is integrated into various aspects of the state budget and policies. Germany uses the **Klimaschutzplan 2050**[215] approach, which includes a detailed analysis of the costs and benefits of various measures to reduce emissions. This includes quantifying the costs of reducing emissions per tonne of CO_2 equivalent, allowing for a more targeted allocation of public funds. The German state budget thus tries to allocate funds efficiently in order to achieve the highest possible reduction in emissions at the lowest possible costs.

Situation in Czechia

In Czechia, among other issues, there is still no systemic approach to evaluating the effectiveness of state spending and evaluating subsidies aimed at reducing CO_2 equivalent emissions or achieving other goals. For example, there is no clear metric for the cost intensity (typically, subsidies) needed to reduce emissions by 1 ton of CO_2 equivalent. This concept of "value for money" is key to the effective use of public funds, especially in the field of combating climate change. This leads to the potential risk of public funds being used inefficiently in combating climate change. The introduction of procedures like those used in Germany, the Netherlands or France could significantly improve the transparency and efficiency of the state budget in Czechia, especially in the context of climate goals.

In many cases, the data exist at the project level but is not further utilised. Cost intensity forms a part of evaluation criteria, as in the Modernisation Fund[216] programmes like RES+, oriented towards supporting development of renewable sources, mainly photovoltaics. In some of the grant calls, there was an evaluation criterion set for project economy, meaning the higher the evaluation points, the less grant-intensive the project was. A similar situation can be found in the Energy Efficiency programme within the Operational Programme Technology and Applications for Competitiveness ('OP TAK')[217]. A ceiling for unit cost exists per energy-amount saved in GJ, and the unit cost is also evaluated at the project level. **This data should be standardised and analysed by the MoF or another central government body to improve efficiency of support programmes and set basic reporting standards for climate-oriented funding from the state budget and EU funds.**

Opportunities and Advantages

A rigorous application of the Value for Money principle in state, regional, and municipal budget planning in Czechia would present several opportunities and advantages that could accelerate the transition towards a low-carbon economy.

[215] https://www.bmwk.de/Redaktion/DE/Artikel/Industrie/klimaschutz-klimaschutzplan-2050.html

[216] https://www.sfzp.cz/en/about-the-modernisation-fund/

[217] https://www.agentura-api.org/cs/op-tak/

Increasing Efficiency of the State Budget and Decreasing Structural Deficit. By standardising and meticulously analysing data on cost intensity at the project level, the Czech government could ensure that public funds are allocated more efficiently. This would prevent the wastage of resources and ensure that every penny spent contributes maximally towards reducing CO_2 emissions or other goals as set by the budgetary rules.

Increasing Transparency. Moreover, a more systematic approach to evaluating the effectiveness of state spending would enhance transparency. This would build public trust that tax revenues are being used wisely and effectively, fostering greater public support for climate-oriented policies. Enhanced transparency could also attract additional private sector investment, as investors would have greater confidence in the government's commitment to achieving tangible climate outcomes.

Risks and Challenges

The significance of adopting a value for money approach in budget planning cannot be understated, particularly for Czechia as it navigates its fiscal landscape amidst high deficits and the constraints of the debt brake. Should Czechia fail to enhance its value for money within the state budget, it will inevitably face several severe risks and challenges.

Improvements in Budget Efficiency. Currently, Czechia faces significant budget deficits, which pose a substantial threat to economic stability. Persistently high deficits indicate that government spending consistently exceeds revenue, necessitating increased borrowing. This not only exacerbates the public debt issue but also limits the government's fiscal space to respond to future economic crises or invest in critical areas such as healthcare, education, and infrastructure. The inability to curb these deficits would undermine fiscal sustainability and could even lead to a fiscal crisis.

Budget Accountability. A lack of value for money in state budgeting restricts fiscal flexibility. When resources are not used efficiently, there is less room to manoeuvre in adjusting expenditures to meet changing economic conditions. This could inhibit the government's ability to fund essential programs or respond to unexpected economic shocks. In the worst-case scenario, it could lead to cuts in vital public services, adversely affecting the quality of life for citizens.

3.3.2 Green Budgeting

Green budgeting (GB) is a type of performance-based budgeting that enhances the management of public budgets. It aims to align budgetary and fiscal policies with national and international climate and sustainability goals. GB sets investment priorities, optimizes expenditure allocation, and helps policymakers monitor climate commitments.

GB approaches vary across countries, but common tools include:

- **Tagging the budget,** marking expenditure or income items based on their alignment with sustainability goals. This facilitates expense review and control.
- **Ex-ante environmental impact assessments** to forecast benefits and prevent negative effects of funded measures.
- **Ex-post evaluations** to determine if expenses met the intended goals.
- **Revision of expenses** according to sustainability principles.
- **Green public procurement** that includes environmental criteria and sustainability requirements, supporting sustainable products and services while reducing negative impacts.
- **Climate impact modelling** to provide insights into future budgetary needs for decarbonisation scenarios and their economic effects.

Green budgeting is a process in which public budgets are analysed for their impact on the environment. The aim is to ensure that government spending supports sustainable goals, such as reducing CO_2 emissions or promoting renewable energy sources[218].
Typically, ministries of finance focus on identifying and reporting eligible sustainable activities and investment in the state budget. Eligibility can be based, e.g., on EU-Taxonomy-alignment or on national Taxonomy. This requires adequate capacity of the MoF to provide guidance to the budgetary bodies and a capacity to analyse and report the data in the form of a "green annex" to the yearly state final account, which would include an analysis of the impact of individual budget chapters on the environment. Furthermore, the ministry could collaborate with other bodies to create guidelines for green budgeting at the regional and local levels.

International Practice

In Austria, GB is primarily implemented at the federal government level. This approach involves the tagging of budget expenditures and income as environmentally favourable or unfavourable. The tagging is conducted based on six environmental criteria, which are aligned with the sustainability criteria of economic activities under the EU taxonomy. **Budget items are classified into six categories: targeted adverse, adverse through side effects, no impact, favourable through side effects, targeted favourable, and unclear impact.**[219] **In the first year of implementation (2022), approximately 11% of income and expenditure were marked as environmentally relevant.** GB is fully integrated into standard budget procedures. The outputs of green budgeting are included in annual budget plans, and reports on climate and the environment, which are attached to the budget, as well as long-term budget forecasts, similarly to France[220].

Situation in Czechia

In Czechia, the implementation of GB aims to support sustainable development by ensuring that budget decisions account for environmental consequences.

The Czech Republic should develop this approach as recommended by international organizations such as the EU, OECD, and IMF, as well as national institutions like the Supreme Audit Office ('SAO') or the National Economic Committee of the Government ('NERV'). These recommendations underscore the potential of GB to foster more informed and sustainable budgetary decisions.

Opportunities and Advantages

Efficiency of Public Sector Budgets. GB contributes to the more efficient management of public budgets by increasing value for money and enhancing transparency through the integration of environmental considerations into budget items.

Evidence-based Policymaking Instrument. GB can be viewed as a significant tool for evidence-based policymaking, which is strongly recommended for the Czech Republic not only by international organizations such as the EU, OECD, and IMF, but also by national institutions like the SAO and NERV.

Synergic Effects. There are synergic benefits regarding the obligations that the Czech Republic has, or will have, towards the EU, such as the DNSH principle climate screening of investments, and reporting of environmentally harmful subsidies, as well as obligations to the OECD and commitments related to the expenditure review agenda introduced by Government Resolution No. 809 of 1 November 2023. GB together with sustainable public procurement also set the stage for potential future green government bond issuances.

[218] https://www.oecd.org/en/topics/green-budgeting.html

[219] https://blogs.worldbank.org/en/europeandcentralasia/budgeting-climate-action-lessons-austria-france-and-european-union

[220] https://economy-finance.ec.europa.eu/economic-and-fiscal-governance/green-budgeting-eu_en

Support to Green Transition. The state's application of GB supports the green transition of businesses and the economy as a whole. By aligning fiscal policies with environmental objectives, GB encourages sustainable investments and fosters innovation in green technologies together with sustainable public procurement efforts. This approach not only mitigates environmental risks but also enhances economic resilience by promoting resource efficiency and reducing dependency on fossil fuels. It sets a clear framework for future green government bond issuances, thereby attracting environmentally conscious investors and reinforcing the Czech Republic's commitment to international climate goals. Consequently, GB serves as a strategic tool to drive systemic change towards a low-carbon economy.

Risks and Challenges

Higher Cost of Debt Service. **Increased debt financing costs might arise if there is no demonstration of a long-term positive impact on the environment.** Moreover, the public administration might face restricted access to market financing if it attempts to fund technologically obsolete solutions. Inefficient management of financial, personnel, and other resources within state administration may occur without a systematic and comprehensive approach to climate change issues and the necessary transition to a low-carbon economy. A gradual decline in tax revenues related to the production, distribution, or consumption of fossil fuels (e.g., consumption taxes and license fees) is also a risk. The Czech credibility and attractiveness to other countries and business partners may diminish if it fails to meet its European and international commitments.

Fossil Fuel Reporting. **Additionally, there are new requirements to report environmentally harmful subsidies and fossil fuel subsidies**[221]**,** necessitating more detailed disclosure of state expenditures in environmental contexts.

Reluctance on Adoption. **Despite the evident benefits and international endorsements, the MoF in Czechia has yet to fully embrace GB. Several factors contribute to this reluctance:**

- **Institutional Resistance:** There is a general institutional inertia and resistance to change within the MoF. Traditional budget practices are deeply entrenched, and there is often a hesitance to adopt new methodologies that require significant shifts in policy and practice.
- **Lack of Expertise and Capacity:** A significant barrier is the insufficient capacity and expertise across ministries to implement and manage GB effectively. The transition to GB necessitates specialized knowledge and skills that are currently lacking.

3.3.3 Sovereign Green Bonds

Green bonds enable the public administration to obtain funds for projects with a positive environmental impact, such as investments in renewable resources, energy efficiency or sustainable transport systems.

International Practice

As also pointed out in the Good Practice Report, Germany issued its first green bond in 2020 and has since become one of the main players in the market for these instruments. **The German model includes a strict methodology for selecting projects that are financed by green bonds, including regular reports on their impacts.** Germany also uses a "**twin bond**" **structure**[222] **that combines green bonds with traditional government bonds to increase liquidity in the market**. A central feature of these green bonds is their swap mechanism, offering investors the flexibility to swap their holdings with a conventional German government bond with the same maturity and coupon whenever they want.

[221] Notably recent amendment of EU Regulation No. 691/2011 on European environmental economic accounts.

[222] https://www.deutsche-finanzagentur.de/en/federal-securities/types-of-federal-securities/green-federal-securities/twin-bond-concept

Situation in Czechia

While sovereign green bonds offer promising opportunities for financing sustainable projects and achieving national environmental goals, the Czech MoF is taking a prudent approach. Market readiness, economic considerations, administrative challenges, existing funding mechanisms, and investor demand are all factors influencing this decision. **As the global and domestic landscape evolves, Czechia may eventually embrace sovereign green bonds as part of its comprehensive strategy for sustainable development and environmental stewardship.**

Market and Project Readiness. The Czech financial market may not yet be fully prepared to support a robust sovereign green bond framework. Establishing a market for green bonds requires a pipeline of eligible green projects and favourable conditions in the bond market. **The MoF may be waiting for more favourable conditions that ensure the successful issuance and uptake of such bonds.**

Economic and Political Considerations. Economic stability and political will play crucial roles in the decision to issue sovereign green bonds. The MoF might be weighing the potential economic benefits against the risks associated with introducing a new financial instrument. Additionally, political priorities and public opinion could influence the pace at which green financing mechanisms are adopted. **The identification of green projects within the state budget as part of GB, which is not in place in Czechia, is crucial for the transparency and efficiency of public spending and together with efficiently functioning sustainable public procurement creates basic precursors for possible sovereign green bond emissions.**

Administrative and Regulatory Challenges. Issuing sovereign green bonds involves establishing comprehensive monitoring and reporting frameworks to ensure transparency and accountability. The MoF may be addressing these administrative and regulatory challenges before proceeding. Ensuring that the funds raised are allocated to genuinely green projects and tracking their environmental impact requires robust systems and expertise.

Existing Funding Mechanisms. Czechia already has alternative funding mechanisms in place to support sustainable projects, mainly the Modernisation fund, ESIF and RRF, reducing the immediate need for sovereign green bonds. The country might be leveraging other financial instruments, grants, and partnerships to finance its green initiatives. Exploring and optimizing these existing mechanisms could be a priority before introducing new ones.

Opportunities and Advantages

The introduction of sovereign green bonds in Czechia presents numerous opportunities and advantages that can significantly accelerate decarbonisation efforts. **Sovereign green bonds can mobilise substantial financial resources dedicated exclusively to environmentally beneficial projects.** This influx of capital can be channelled towards renewable energy installations, energy efficiency improvements, and sustainable infrastructure development, thereby reducing the nation's carbon footprint. Specialised sustainability financing products create positive impacts through the sustainable projects they finance and which lead, for example, to the reduction of greenhouse gas emissions and, thus, to the fulfilment of the so-called GAR of investors and in turn the fulfilment of national sustainability goals.[223]

Greenium. As seen in other EU countries, small green premiums still exist in the market of sovereign green bonds, but it does not belong to important advantages of the concept.

Non-financial Benefits. Moreover, sovereign green bonds can enhance the transparency and accountability of public spending. By clearly identifying and prioritising green projects within the state budget, these bonds ensure

[223] https://www.alliancebernstein.com/corporate/en/insights/investment-insights/understanding-green-bond-performance-in-market-setbacks.html

that funds are allocated efficiently and effectively towards achieving national sustainability goals. This transparency can also attract a broader range of investors, including those who prioritise environmental, social, and governance (ESG) criteria in their investment decisions.

Awareness for Sustainability. Sovereign green bonds can also foster public awareness and support for environmental initiatives. As citizens see tangible results from green projects funded by these bonds, there can be increased public buy-in for broader sustainability efforts. This societal engagement is crucial for the long-term success of decarbonisation strategies.

Promotion of EU Taxonomy in the Market as a Single Standard. Furthermore, the issuance of sovereign green bonds can help align Czechia's financial markets with the EU Taxonomy (if issued by EuGB standard), ensuring that investments are directed towards projects that meet stringent sustainability criteria. This alignment can enhance the credibility of green financial products and attract international investors looking for trustworthy green investment opportunities.

Risks and Challenges

Missed Opportunities for Capital Mobilization. Sovereign green bonds attract large-scale investments from both domestic and international investors prioritizing sustainable finance. Without them, Czechia may miss out on substantial funding for green projects like renewable energy infrastructures, energy efficiency upgrades, and sustainable transportation, slowing its transition to a low-carbon economy.

Reduced Transparency and Credibility. Issuing these bonds promotes transparency through adherence to internationally recognized sustainability standards and reporting requirements. Without them, Czechia might struggle to demonstrate its commitment to environmental stewardship, leading to decreased credibility among investors and stakeholders.

Non-Alignment with International Standards. Not issuing sovereign green bonds risks Czechia falling behind in aligning with international sustainability standards. This misalignment can isolate the country from global green finance markets and collaborations, reducing opportunities for knowledge exchange and partnerships.

3.3.4 Transparent Investment Environment and Sustainability

For the development of sustainable investments in the private sector, it is crucial to create a transparent and stable environment for investment that will not be subject to frequent and unpredictable changes in legislation and conditions. Such an environment would allow companies to plan long-term investments with a greater degree of certainty, which is essential for sustainable projects that typically require significant upfront investment and have a longer payback.

Businesses need a predictable environment to accurately estimate the risks associated with investments. Frequent changes in legislation or conditions can increase uncertainty and lead to the postponement or cancellation of planned projects. Stability allows companies to plan and manage their investments.

For instance, this affects prioritisation of energy saving, renewable sources and clean mobility investments when corporations approve long-term investment plans. Transparency also enables banks and other financial investors to derisk the long-term funding of such investment programmes. Foreign direct investment in sustainability can benefit from reforms which are duly and transparently communicated.

Sustainable investments in areas such as renewable energy sources, energy efficiency or eco-innovation, often require long-term planning. Unpredictable legislative changes can disrupt these plans and increase project costs, discouraging investors. These include, among other things, technical requirements, support programmes and tax reforms, which must be openly communicated and based on

a long-term plan so businesses can accommodate the upcoming legislation and support programme changes in their decision-making processes.

International Practice

Germany has long had a stable policy in the field of supporting renewable sources, mainly thanks to **the Energiewende**[224] . This stable framework has enabled Germany to become a leader in renewable energy sources, as shown in the Good Practices Report. Businesses in Germany benefit from the predictability provided by German energy and environmental legislation. German renewable feed-in tariffs provided long-term certainty that has encouraged massive investment in solar and wind power. This approach was made possible by the stability of the legal environment, which changed gradually and predictably. At the same time, this support was part of the wider Energiewende effort related tending dependence on coal and, later, the end of nuclear energy supplies. Such a clear link between the energy mix strategy and long-term support is still missing in the Czech environment.

Situation in Czechia

In this regard, the NECP[225], SEK[226] and POK[227] offer very good bases for the communication of transitional reforms. These should be accompanied with long-term support programmes and financial instruments with clear and stable conditions. Currently, there is typically a long-term plan for grant calls in programmes like the Modernisation Fund managed by the State Fund for Environment or OP TAK managed by MoIT. However, such grant call plans only include allocations in CZK billions, whereas the support conditions change call by call. **With financial instruments, even a basic official plan including at least allocations and support areas does not exist yet. There is also no mechanism in place to let market players know whether a specific topic will be supported by grants of by financial instruments.** The Government Committee for Strategic Investments plays an important role in ensuring that these long-term support programmes and financial instruments are effectively aligned with the government priorities.

While Czechia has made some strides e.g. in developing sustainability-related support programmes, the lack of stability, predictability, and a cohesive energy mix strategy significantly limits its potential. To foster a more favourable investment climate and encourage the growth of renewable energy sources, Czechia needs to establish a more transparent and stable policy framework. This includes creating long-term plans for financial instruments, providing clear and consistent support conditions, and developing a comprehensive energy strategy that aligns with long-term goals. By addressing these issues, Czechia can move closer to achieving the success seen in Germany and other leading countries in the renewable energy sector.

Opportunities and Advantages

A transparent sustainability policy offers numerous opportunities and advantages for Czechia. It can enhance investment confidence, reduce compliance costs, promote long-term planning, integrate with financial instruments, encourage innovation, create green jobs, and improve public trust and engagement. **By implementing clear and stable regulations, the Czech government can accelerate the transition towards a low-carbon economy, ensuring a sustainable and prosperous future for all. The alignment of NECP,**

[224] https://www.bmwk-energiewende.de/EWD/Redaktion/EN/Newsletter/2015/01/Meldung/topthema-the-energy-transition.html

[225] https://energy.ec.europa.eu/topics/energy-strategy/national-energy-and-climate-plans-necps_en

[226] https://commission.europa.eu/system/files/2023-10/Czech%20Draft%20Updated%20NECP%202021%202030_en.pdf

[227] https://www.mzp.cz/cz/news_20240206_MZP-aktualizovalo-Politiku-ochrany-klimatu-v-CR-Do-roku-2030-budeme-ziskavat-tretinu-energie-z-obnovitelnych-zdroju-a-spotrebu-snizime-o-petinu

SEK, and POK with transparent communication and long-term support programmes will be instrumental in achieving these goals.

Enhanced Investment Confidence. A transparent sustainability policy would significantly enhance investment confidence. When companies and investors have a clear understanding of the regulatory environment and the long-term commitments of the government, they are more likely to invest in sustainable projects. This stability reduces the perceived risk associated with long-term investments, making it easier for companies to secure financing and allocate resources to low-carbon initiatives. This, in turn, can accelerate the deployment of renewable energy technologies, energy-efficient practices, and other sustainable innovations.

Reduction of Compliance Costs. Clear and stable regulations reduce the compliance costs for businesses. When companies do not have to constantly adapt to changing rules and can instead rely on a consistent regulatory framework, they can save on legal fees, administrative costs, and other compliance-related expenses. These savings can then be reinvested into further sustainability efforts, driving continuous improvement and innovation in the sector.

Promotion of Long-Term Planning. A transparent policy environment encourages long-term planning and investment. Companies can develop comprehensive sustainability strategies that align with national and international climate goals, knowing that the regulatory landscape will support their efforts. This alignment is crucial for achieving large-scale decarbonization, as it enables businesses to undertake significant projects that require substantial time and resources to complete.

A transparent environment with rules would give companies a competitive advantage by allowing them to more efficiently allocate resources and reduce compliance costs. This clarity would enable businesses to better plan and execute long-term strategies, fostering a more stable and predictable investment climate. In this regard, the NECP, SEK and POK are very good bases for the communication of transparency reforms. These should be accompanied with long-term support programmes and financial instruments with clear and stable conditions.

Risks and Challenges

The risks and challenges for sustainable finance in Czechia consisting in lack of transparent environment are manifold, when the government's sustainability goals are not properly monitored, reported, revised, and communicated.

Investor Uncertainty Leading to Circumvention of Czechia on Investment Map. **There is the risk of continued investor uncertainty, leading to a reluctance to invest in long-term sustainable projects.** This uncertainty is exacerbated by the lack of clear and consistent policies, which can lead to sudden and unpredictable changes in financial support mechanisms, such as subsidies and tax breaks.

In Czechia, legislation supporting RES and other sustainable investments has historically been unstable. Frequent changes in subsidies, tax breaks and other forms of support create uncertainty that discourages companies from long-term investments in sustainable projects.

Insufficient Planning of Grant Calls. Grant call plans of managing authorities only includes allocations in CZK billions and topic, whereas the support conditions change call by call.

To address these shortcomings and ensure that the goals set out in the National Energy and Climate Plan (NECP), State Energy Strategy (SEK), and the Climate Protection Policy (POK) are effectively monitored and reported to the public, Czechia faces a challenge of adopting a robust and transparent performance-based framework.

3.3.5 Support for Financing the Development of Sustainable Infrastructure

The development of sustainable infrastructure is a critical component in addressing the global challenges of climate change, resource depletion, and social inequality. By leveraging both public and private capital, and fostering collaboration between various stakeholders, the country can pave the way for a more resilient and sustainable future. However, to achieve this, it is imperative to establish a framework that ensures transparency, accountability, and effective communication across all levels of project implementation and financing.

International Practice

In the UK, **Major Projects Authority (MPA)**[228] oversees major projects since 2007. The MPA is dedicated not only to monitoring the progress of major state projects, but also provides support in the planning, implementing and financing these projects. One of the main functions of the MPA is to coordinate government agencies and private investors to ensure that projects are not only approved but also effectively financed and managed. **The MPA also provides expert assistance in financing structuring, including the implementation of projects through PPP models, which enables the efficient use of private capital in the implementation of public projects**[229]. This model has proven to be effective in managing risk and ensuring that projects are completed on time and within budget.

Situation in Czechia

State and private sustainability-oriented projects often represent ambitious investment plans that have very complex permitting processes, and thus a complicated financing structure, that reflect significant project and market risks. In the public sector, for example, the high-speed-rail project[230], is gradually moving forward in terms of preparation, but is far from over. In the private sector, the first planned investment in the production of batteries (in a so-called “gigafactory”), has failed in 2023 due to an array of reasons, including complicated permitting process on land use and connecting disponible infrastructure. **Despite certain improvements with the introduction of the Transport and Energy Construction Office (DESÚ)**[231] **from 1 July 2024**, there is still a lack of authority for large projects that would also be devoted to structuring financing from public and private sources, including PPP.

There is still a lack of a central authority that would coordinate both permit processes and the structuring of financing, especially for large infrastructure projects that could be also implemented in the form of PPPs. In addition to the lack of a long-term infrastructure development plan for 10–20 years, it is not possible to set up long-term financing, through e.g. large sovereign green bonds frameworks. For example, in the case of the EuGB standard[232], funding must only be provided to EU Taxonomy-aligned projects.

[228] https://www.gov.uk/government/groups/major-projects-authority

[229] https://www.adb.org/sites/default/files/institutional-document/31484/public-private-partnership.pdf

[230] https://www.railtarget.eu/technologies-and-infrastructure/highspeed-lines-the-most-ambitious-infrastructure-project-in-the-czech-republic-is-finally-approaching-its-implementation-736.html

[231] https://desu.gov.cz/

[232] https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/european-green-bond-standard-supporting-transition_en

Sustainable finance products are crucial for the development of infrastructure projects in Czechia, particularly those that aim to enhance energy efficiency and sustainability. These products include green bonds, sustainability-linked loans, and other financing mechanisms that are designed to support projects with positive environmental impacts.

The responsibility for conducting the EU Taxonomy screening typically falls on a combination of project planners, developers, and environmental specialists. Project planners and developers are often the first to assess the project's alignment with the EU Taxonomy criteria, ensuring that the project's design and objectives meet the necessary standards, but they are lacking local Czech standards and norms that use EU Taxonomy categories. Environmental specialists play a crucial role in conducting detailed assessments of the project's environmental impact, providing the technical expertise needed to navigate the complex criteria of the EU Taxonomy.

Banks and financial institutions also play a significant role in structuring the information required for EU Taxonomy screening. They often provide support in the form of advisory services, helping project developers to understand and meet the necessary criteria. Banks may also offer financing solutions that are specifically aligned with the EU Taxonomy, such as green bonds, which are designed to fund projects that contribute to environmental sustainability.

Opportunities and Advantages

EU Taxonomy Alignment. Deployment of sustainable finance products not only enhances the financial performance of infrastructure projects but also ensures that investments contribute positively to long-term sustainability goals. **By aligning with EU Taxonomy or other environmental standards, these projects can set new standards in environmental stewardship while benefiting from improved funding terms and access to a broader investor base e.g. utilising green bond.**

Easier Access to Finance Additionally, sustainability-aligned projects can access larger amounts of funding. The growing pool of green investors is keen to allocate capital to projects that meet stringent environmental criteria, thus expanding the investor base and potentially speeding up the transaction structuring process.

Institutional Grade Transaction. Moreover, by ensuring EU Taxonomy or other standard alignment, projects can attract larger institutional investors and funds dedicated to sustainable investments. This influx of capital can further enhance the financial stability and scalability of the project.

Risks and Challenges

The absence of EU Taxonomy-aligned investments and the inability to utilize sustainable finance products would significantly impede Czechia's progress towards its decarbonization goals. Without these crucial financial instruments, the country would face several challenges:

Slower Adoption of Environmental Standards. The funding conditions for infrastructure projects would likely worsen if not environmental standard-aligned, making projects less economically viable. This would result in a higher reliance on traditional, potentially more polluting, sources of energy and infrastructure development, slowing the transition to a low-carbon economy.

Loss of Competitiveness. Moreover, the pace of structuring and executing transactions would decelerate, as the lack of standardized sustainable finance frameworks would complicate and lengthen the investment process. This delay would hinder the timely implementation of essential projects aimed at reducing carbon emissions.

The opportunity to attract larger investors interested in green and sustainable projects would diminish. Sustainable finance products and alignment with EU Taxonomy offer a level of credibility and appeal to investors looking to support environmentally responsible initiatives. **Without this alignment, Czechia could struggle to secure the necessary capital to fund large-scale infrastructure projects.**

3.3.6 Sustainable Public Procurement

Sustainable procurement refers to the process of acquiring goods and services in a way that ensures economic, social, and environmental benefits. This approach integrates sustainability considerations into financial decision-making, aiming to minimise negative impacts and enhance positive outcomes. Sustainable procurement goes beyond traditional cost and quality factors, prioritising long-term value and responsible resource management.

International Practice

Sustainable public procurement (SPP) plays an essential role in promoting sustainable development and ensuring that public funds are used responsibly to achieve economic, social, and environmental benefits, as mentioned in the Good Practice Report. Countries like Germany and the Netherlands have established well-designed systems that serve as exemplary models. These systems are comprehensive, focusing on environmental stewardship, social responsibility, and economic efficiency.

In Germany, sustainable public procurement is guided by a robust framework and legislation that emphasize environmental and social criteria. **The German Public Procurement Law (Gesetz gegen Wettbewerbsbeschränkungen, GWB[233])** includes provisions that allow public authorities to integrate sustainability criteria into their procurement processes. This law is complemented by the Green Public Procurement (GPP) guidelines[234], which provide detailed recommendations for incorporating environmental considerations into procurement decisions.

Situation in Czechia

The amendment to the Public Procurement Act in the Czech Republic[235], which was approved with the aim of supporting green purchases, represents a significant step towards sustainable development and responsible use of public funds. This amended law will allow public procurement providers to give preference to products and services that meet environmental standards, thus strengthening the role of the public administration in environmental protection.

The amendment of the law and the Czech Public Procurement Strategy introduce the possibility of awarding public contracts with a preference for green products and services. This step will make it easier for public institutions to choose more environmentally friendly solutions in various sectors, like energy, transport and construction.

The amendment to the Public Procurement Act in the Czech Republic includes provisions that allow contracting authorities to prefer products and services that meet specific environmental standards. The law specifies ten key products, including, for example, electric vehicles, building materials with a low carbon footprints, energy-saving appliances and lighting.

Opportunities and Advantages

The introduction of sustainability into public procurement legislation means that public institutions will be able to systematically prioritise environmentally friendly solutions. This will strengthen the state's role in the fight against climate change and contribute to the achievement of national and European climate goals.

[233] https://www.gesetze-im-internet.de/gwb/

[234] https://www.bundeskartellamt.de/EN/Information_Service/LegalFramework/PublicProcurement/LegalFramework_PublicProcurement_node.html

[235] https://www.uohs.cz/download/Legislativa/legislativa_EN/act-no.-134_2016-coll.-on-public-procurement.pdf

Furthermore, connections, like that with the NDB, can enable the necessary funding to implement these projects, which can be especially important for smaller institutions with limited budgets.

Access to Sustainable Finance. Access to sustainable finance is a significant opportunity embedded within the framework of green procurement. By leveraging green bonds, loans, and other financing instruments, public institutions can secure the financial resources needed to procure eco-friendly products and services. This financial backing not only makes green procurement more attainable for institutions with limited budgets but also incentivizes the market to develop and offer more sustainable solutions.

Leveraging National Development Bank. Activities of NDB is particularly crucial here as it can provide tailored funding options designed to support green projects. Such financial mechanisms ensure that the transition towards sustainable procurement is not just an aspiration but a practical reality. Additionally, aligning procurement practices with sustainability criteria can attract investment from conscientious investors who are increasingly looking to put their capital into environmentally responsible ventures.

Supporting Decarbonisation in the Public Sector. Sustainable public procurement supports decarbonisation efforts by acquisition of low-carbon technologies, renewable energy solutions, and other innovations that reduce greenhouse gas emissions. By prioritising these investments, public procurement can drive significant reductions in carbon footprints across various sectors, contributing to broader decarbonisation goals set at both national and European levels.

Risks and Challenges

Failing to apply sustainable public procurement practices can lead to several risks and challenges, particularly in the realms of decarbonisation and the adoption of sustainable finance. Without a concerted effort to purchase environment-friendly goods and services, public institutions may inadvertently contribute to higher emissions and perpetuate reliance on non-renewable resources. This not only undermines national and international decarbonisation targets but also stifles the growth of green industries that are crucial for a sustainable future. **Effective sustainable public procurement is also a necessary precursor to green bonds emissions as the current mainly lowest price-oriented public procurement environment does not motivate for acquisition of sustainable solutions and therefore use of proceeds in line with EuGB or other green bond standard could be very limited leading to inefficiency.**

3.3.7 Sustainability and Companies with State Participation

Czechia maintains a diverse portfolio of companies with state participation that play pivotal roles across various industries, including energy, transportation, and telecommunications. These enterprises are crucial not only for their economic contributions but also for their role in the nation's sustainability endeavours.

Among the most significant companies with state participation enterprises in Czechia, particularly regarding efforts towards decarbonisation, are:

1. **ČEZ Group**[236]: Dominating the energy sector with extensive investments in renewable energy sources.
2. **MERO ČR**[237]: Focused on oil transportation and storage, with increasing investments in sustainable energy solutions.

[236] https://www.cez.cz/en/home

[237] https://mero.cz/

3. **NET4GAS**[238]: The primary natural gas transmission system operator, pivotal in transitioning to greener gas options.
4. **České dráhy** (Czech Railways)[239]: A key player in sustainable transportation through electrification and modernisation of rail services.

International Practice

In Germany, Deutsche Bahn, the state-owned railway company, has been instrumental in leading the charge towards decarbonisation. By investing heavily in electrification of its rail network and sourcing a significant portion of its energy from renewable sources**, Deutsche Bahn aims to achieve climate neutrality by 2040. The company has committed to investing €12 billion in green projects by 2030. Deutsche Bahn employs green bonds as a key instrument of sustainable finance, raising over €2 billion specifically allocated for environmentally friendly projects,** such as upgrading train fleets to more energy-efficient models and enhancing infrastructure to support renewable energy integration. Their funding also includes green loans and grants from both national and European entities focused on sustainability.[240]

In the Netherlands, the public administration has significant ownership interest in energy companies. One prime example is **Energie Beheer Nederland (EBN)**[241] in which the Dutch government is the majority shareholder. EBN plays a key role in the extraction of natural gas and oil but also in the transition to sustainable energy sources, for example through investments in geothermal energy and CO_2 storage.

Situation in Czechia

ČEZ and České dráhy are examples of companies that actively participate in the development of sustainability in Czechia. **ČEZ leads in the field of financing through green bonds and investments in renewable sources, while České dráhy focuses on modernising its fleet and reducing emissions**. Through their actions, both companies significantly contribute to the achievement of national climate goals and inspire other companies to adopt sustainable strategies.

ČEZ, the largest energy company in Czechia, is one of the leaders in the field of sustainability. The business of the company used to be based on fossil fuels and the consensual push from the financing banks and investors was one of the triggers of green transition of the company. The company is focused on transitioning to low-carbon energy and decarbonising its portfolio.

- **Commitments**: ČEZ is committed to achieving carbon neutrality by 2050 and gradually reducing CO_2 emissions. By 2030, it plans to reduce emissions by 55% compared to 2019.
- **Investment in renewable sources**: ČEZ invests significant funds in the development[242] of renewable energy sources. The company plans to increase its renewable electricity generation capacity to 6,000 MW by 2030.
- **Sustainability-linked bonds**: In 2022, ČEZ issued sustainability-linked bonds worth of €600m. The proceeds from these bonds are intended to finance projects focused on renewable energy sources, energy efficiency and electromobility.

[238] https://www.net4gas.cz/cz/home/

[239] https://www.cd.cz/en/default.htm

240 https://www.bahn.de/

[241] https://www.ebn.nl/

[242] ibid.

České dráhy (ČD, or Czech Railways), as the largest railway carrier in the country, also takes an active approach to sustainability. The company focuses on reducing the carbon footprint of its transport fleet and improving energy efficiency.

- **Commitments**: ČD is committed to gradually reducing its greenhouse gas emissions and improving energy efficiency. They plan to modernise their fleet by 2030 and replace older trains with new ones that have lower energy consumption and lower CO_2 emissions.
- **Investments in sustainability**: ČD invests in the modernisation of trains and railway infrastructure with the aim of reducing energy consumption. They also plan to expand the use of renewable energy sources to operate their facilities.
- **Green bonds**: ČD issued €500m green bonds in 2022, mainly in connection with the modernisation of rolling stock and investments in energy-saving technologies.

Opportunities and Advantages

The opportunities for sustainable finance emerging from the decarbonisation goals and investments of companies with state participation in Czechia are significant. While there are challenges to be addressed, the potential benefits in terms of cost savings, improved cash flow, and accelerated decarbonisation make a compelling case for the development of a robust sustainable finance framework. By aligning goals, implementing KPIs, and leveraging sustainable finance products, Czechia can pave the way for a greener and more sustainable future.

Potential for a Sustainable Finance Framework. The maturity of companies with state participation in terms of sustainability is a critical factor in the development of a sustainable finance framework. While some enterprises, like České dráhy, have taken initial steps, there is still a need for comprehensive decarbonisation and transition strategies for companies like DIAMO or MERO.

Accelerating Decarbonisation. Sustainable finance products can play a crucial role in accelerating the decarbonisation of companies with state participation in Czechia by:

- Providing the necessary capital for the development and implementation of green technologies.
- Encouraging the adoption of best practices and innovative solutions.
- Facilitating collaboration between different stakeholders to achieve common environmental goals.

Risks and Challenges

Failure to address and implement sustainable finance for companies with state participation presents several substantial risks and challenges. For Správa železnic (SŽ), the absence of a robust sustainable finance framework could jeopardize critical projects like their high-speed rail (VRT) initiative. Without sustainable funding, SŽ might face increased operational costs and lost opportunities for efficiency gains through green technologies. Additionally, their reliance on non-green electricity for train operations poses a significant risk as carbon prices rise and environmental regulations tighten.

The challenges associated with České dráhy green bonds emission must be acknowledged:

- Green bonds currently solve only a small part of the financing needs of the ČD group;
- The Railway Administration and carriers do not yet have aligned goals around decarbonization;
- The Railway Administration does not have any related KPIs imposed by the Ministry of Transport.

ČD purchases most of its emissions through electric traction from the Railway Administration, which has not yet purchased green electricity for the operation of train lines.

Net4Gas, in particular, risks becoming a stranded asset if it does not propose a clear and actionable transition plan to secure funding. As the global energy landscape shifts towards renewables, the value of fossil fuel-based infrastructure could plummet, leaving Net4Gas with underutilized or obsolete assets. This scenario underscores the urgency for Net4Gas to align with sustainable finance principles to avoid significant financial losses and ensure long-term viability.

Resistance to change within the organizational culture also poses a significant hurdle. Employees and management teams may be reluctant to adopt new sustainable practices due to perceived risks or lack of immediate benefits. Overcoming this inertia requires strong leadership and a clear vision for the future, supported by continuous education and engagement efforts.

3.4 Municipalities, Regions and Financing Sustainability

Sustainable finance for municipalities and regions is a pivotal element in the transition towards a resilient, low-carbon economy. As cities and regions around the globe face mounting pressures to address climate change, resource depletion, and environmental degradation, the need for innovative financing mechanisms has never been more urgent. **Sustainable finance encompasses a variety of instruments and approaches that enable local governments to fund projects promoting environmental sustainability, social inclusivity, and economic resilience.** By accessing green bonds, sustainable loans, and other financial tools, municipalities and regions can spearhead initiatives that not only mitigate adverse environmental impacts but also drive long-term economic growth and enhance the quality of life for their residents.

International Practice

German cities, such as Hamburg, have successfully issued green bonds to finance projects that contribute to achieving climate goals. As articulated in the Good Practices Report, municipal green bonds in Germany are an evolving aspect of the country's approach to financing sustainable urban infrastructure and environmental initiatives. This practice is supported both by state policy and by institutions, like KfW, which provide financial and technical support[243].

KfW Bankengruppe provides technical assistance to cities and municipalities in German in the planning and implementation of infrastructure projects. In addition to financing, it also offers project management development programmes and administrative support to ensure that projects are prepared and approved in accordance with national and EU regulation. This approach enables faster implementation of projects and minimises the risk of delays.

The **Banque des Territoires**[244] [245] part of the **Caisse des Dépôts**, focuses on supporting cities and municipalities to implement their infrastructure projects in France. It also provides technical support that includes both financing and expert assistance in planning and permitting processes. French cities also benefit from centralised project preparation support, which ensures that projects are prepared efficiently and on time.

Situation in Czechia

[243] https://www.deutsche-finanzagentur.de/en/federal-securities/types-of-federal-securities/green-federal-securities

[244] https://www.banquedesterritoires.fr/C

[245] https://www.caissedesdepots.fr/en/modele-unique/notre-organisation

According to the Ministry of Finance of the Czech Republic (MoF CR), in 2023, municipalities reported a surplus of approximately 816.3 mil EUR[246]. This shows that municipalities are generally able to manage finance efficiently, but this surplus is far from sufficient to cover extensive sustainability investment needs[247].

City and municipal climate plans in Czechia require much greater financial resources**. For example, Prague estimates that in order to achieve its carbon neutrality goals by 2050, it will need investments exceeding €9.4bn.** Similarly, other cities like Brno and Ostrava, need tens of billions of crowns to implement their climate measures[248] [249]. This gap between budget surpluses and the need to finance sustainable projects is therefore considerable[250].

Municipalities are increasingly exploring sustainable financial products to fund projects that will help them achieve their carbon neutrality goals. **For instance, the potential issuance of green bonds has gained traction in cooperation with banks, but according to interview with a large city budget department representative, the cities are not in an eminent need to issue green bonds because of the cited budgetary surpluses.** This show lack of long-term budgetary planning even at the level of largest Czech cities.

Opportunities and Advantages

Sustainable finance helps mitigate the risks associated with climate projects by providing stable and predictable funding sources. **Sustainable finance enhances the credibility and reputation of the cities and regions that use them, signalling a strong commitment to sustainability. This can lead to increased public support, attract further investments, and foster partnerships with international bodies and private-sector players committed to environmental goals.**

Funding Diversification. By incorporating financial instruments dedicated to sustainability, local governments can access a wider range of resources aimed specifically at environmental projects. One of the most significant opportunities lies in the issuance of green bonds, which are designed to fund projects that have positive environmental impacts. These bonds not only attract a new category of investors interested in environmental sustainability but also often come with favourable terms compared to traditional bonds.

Risks and Challenges

Cities and municipalities in Czechia face enormous challenges when planning, preparing and implementing large-scale infrastructure projects, such as wastewater treatment plants. These projects, which require not only significant funds (estimated at €4.1bn)[251] but also effective planning and permitting, often run into problems with insufficient project management capacity at the level of cities and municipalities, as shown in the surveys conducted by PwC in the Project.

According to the local and regional governments survey in the Project, 6 out of 18 cities in survey have already set some sustainability targets but they also have to consider these key barriers:

- **Lack of experts in project management**, especially in smaller cities and towns.

[246] https://www.mfcr.cz/cs/rozpoctova-politika/uzemni-rozpocty/hospodareni-uzemnich-rozpoctu/mesicni-zpravy-o-hospodareni-uzemnich-ro/2023/zprava-o-vyvoji-rozpoctoveho-hospodareni-55251

[247] https://www.mfcr.cz/en/fiscal-policy/monthly-reports-on-the-management-of-ter/2023/report-on-the-development-of-budgetary-m-5540

[248] https://ekodotace.brno.cz/wp-content/uploads/2019/09/SECAP_Brno_zpr%C3%A1va_29.8.2019_fin%C3%A1ln%C3%AD.pdf

[249] https://zdravaova.cz/wp-content/uploads/2017/10/AS-Ostrava-Analytick%C3%A1-%C4%8D%C3%A1st-plus-pocitov%C3%A1-mapa-a-zranitelnost-minimal.pdf

[250] https://klima.praha.eu/DATA/Dokumenty/Klimaplan_2109_15_online_LOWRES_final2.pdf

[251] https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3209

- **Complexity of administrative processes** that prolong the preparation and approval of projects.
- Insufficient experience in the preparation of large and complex projects that require multi-agency coordination and long-term planning.
- **Cities need to develop their project management capacities** to be able to effectively plan, prepare and implement complex infrastructure projects, such as wastewater treatment plants, which are key to achieving environmental goals and improving the quality of life of residents.

3.5 Non-Financial Enterprises and Sustainable Finance

The real economy is where major changes towards sustainability take place. Businesses, industry and infrastructure are areas where specific measures leading to decarbonisation, increasing energy efficiency and the use of renewable energy sources are being implemented[252].

3.5.1 Sustainability and Large enterprises

International Practice

German companies are considered leaders in the field of decarbonisation and ESG reporting in Europe. Most large German companies, such as **Siemens**[253] and **BMW**[254], have well-established ESG strategies that are integral parts of their businesses. Germany uses strong legislative frameworks, such as the **Lieferkettengesetz**[255], which requires companies to monitor and report environmental and social impacts across their supply chains. Companies often create dedicated sustainability teams or departments that are responsible for achieving the decarbonisation targets they have set and for transparent ESG reporting.

In the Netherlands, large firms are known for their progressive approach to ESG. Companies like **Philips**[256] have integrated decarbonisation plans that focus on reducing their carbon footprints across the entire supply chain. The Netherlands is also a leader in green finance, giving businesses access to financial products supporting sustainability. The country has strong regulatory requirements for ESG reporting, which are combined with voluntary initiatives, such as the **Dutch Sustainable Growth Coalition (DSGC)**[257].

Situation in Czechia

Over two thirds of large companies in Czechia are involved in calculating and estimating emissions at various levels according to a representative survey of Association of Social Responsibility[258]. **However, there is variation in how closely companies track emissions. Like their international counterparts, most Czech firms can measure direct emissions and indirect emissions from purchased energy in detail but are less**

[252] https://energy.ec.europa.eu/index_en

[253] https://www.siemens.com/global/en/products/services/gbs/operations/project-management-services-and-transformations/esg-sustainability-services.html

[254] https://www.bmwgroup.com/en/sustainability.html

[255] https://www.bmz.de/resource/blob/154774/lieferketo tengesetz-faktenpapier-partnerlaender-eng-bf.pdf

[256] https://www.philips.com/a-w/about/environmental-social-governance.html

[257] https://www.dsgc.nl/en

[258] https://www.spolecenskaodpovednost.cz/en/

capable of monitoring other indirect emissions. At least a third of large firms in Czechia involved in our ESG rating partially calculate and estimate other indirect emissions. In total, a quarter of the large companies participating in the rating have their own Chief Sustainability Officer[259].

In Czechia, large companies can be segmented according to how they structure the financing of their sustainable investments. This process is primarily influenced by the ownership structure of firms, which determines their access to financing, including whether they prefer subsidies, loans or other financial instruments.

Large Firms with Foreign Participation. **Such companies usually have easy access to finance from their parent companies or through foreign financial markets**. This means that they are not dependent on funding from Czech banks to a large extent. However, these firms often apply for subsidies for improving the financial return of their sustainable projects. Subsidies are key for them when deciding whether to place a given investment in Czechia. Subsidies increase the priority of the project within their internal investment plans, and these can be decisive for the placement of new investments.

Large Czech-owned Companies. **Such businesses often rely on financing from local Czech banks. These companies do not have such easy access to international financial markets as their foreign counterparts do, therefore the availability of loans and other financial instruments at the local level is crucial for them.** Their funding options are very limited in case of CZK financing is sought. In addition to subsidies, these companies would also use preferential financial instruments, such as low-interest loans, green bonds, or loan guarantees, as derives from a MoIT study[260].

An interesting phenomenon in Czechia is the fact that Czech companies keep more funds in their accounts than they draw in the form of loans[261]. Around 40% of corporate funds is placed in bank accounts, while the corporate debt ratio (loan-to-GDP ratio) is lower than in Western countries such as Germany or France. **This situation suggests an inefficient capital market where firms are often not motivated to reinvest funds into growth or green transition.**

Decarbonisation Plans. In Czechia, decarbonisation plans and ESG reporting are still a relatively new phenomenon among large companies. Since ESG reporting is not mandatory for all companies, only the largest companies and often those with international participation actively create and publish their ESG strategies. For example, companies such as **Škoda Auto**[262] already have robust ESG plans that include emissions reduction and environmental sustainability goals. These companies often draw inspiration from their parent companies abroad or from foreign markets where the pressure on ESG reporting is higher. However, smaller and medium-sized companies are less advanced in the implementation of ESG strategies and often lack the necessary background and knowledge for effective reporting and decarbonisation.

For instance, **Škoda Auto has set ambitious decarbonisation goals as part of its broader ESG strategy.** The company aims to reduce its carbon footprint significantly by 2025, targeting a 30% reduction in CO_2 emissions compared to 2015 levels[263]. This goal is part of their commitment to achieving net-zero emissions by 2050.

[259] https://www.spolecenskaodpovednost.cz/esg-rating-2022-jak-si-vedou-ceske-firmy-v-udrzitelnosti/

[260] https://www.mpo.gov.cz/

[261] As of Q2 2024, the loan exposition of banks towards non-financial enterprises was CZK 1.6bn, whereas deposits of non.financial enterprises totalled at CZK 1.7bn. Source: https://www.cnb.cz/arad/#/cs/indicators.

[262] https://www.skoda-auto.cz/o-spolecnosti/udrzitelnost

[263] https://www.skoda-storyboard.com/en/press-releases/skoda-autos-2023-sustainability-report-updated-esg-strategy-and-advancements-towards-a-more-sustainable-future/

Škoda Auto also imposes stringent sustainability criteria throughout its supply chain. The company works closely with more than 1,000 suppliers to ensure that they adhere to high environmental standards, while many of the suppliers are located in the Czech Republic. This includes regular audits and assessments to verify compliance with sustainability guidelines, which cover energy use, waste management, and emissions reduction. Suppliers are encouraged to adopt green technologies and practices, contributing to the overall reduction of the carbon footprint associated with the manufacturing and distribution of Škoda vehicles.

Opportunities and Advantages

An advanced legal framework and regulation provide a robust foundation for businesses aiming to integrate sustainability into their operations. The high pressure from investors, regulators, and the public for ESG transparency compels companies to adopt sustainable practices to meet these expectations. Additionally, there is strong support for research and development in the field of green technologies, which further encourages innovation and sustainability.

The integration of ESG into corporate culture and management can lead to substantial benefits, including enhanced reputation, increased investor interest, and improved risk management. Moreover, the obligation for non-financial reporting for large companies ensures that sustainability becomes a key component of corporate strategy.

Active support from the government and investors can significantly boost efforts in sustainability, providing necessary resources and incentives for businesses to pursue sustainable initiatives.

Risks and Challenges

Limited experience and knowledge of ESG among management, coupled with insufficient legislative support that would motivate more companies to perform ESG reporting, present significant challenges. Furthermore, there is less involvement in international initiatives that could strengthen their ESG agendas.

Missing Awareness of Benefits. Additionally, there is often a lack of awareness and understanding among businesses about the long-term benefits and financial returns of sustainable finance. Many companies are hesitant to allocate resources towards sustainability initiatives due to perceived risks and uncertainties.

Cultural Resistance in Traditional Czech-owned Businesses. Cultural resistance within organizations also plays a role, as traditional business practices and short-term financial goals often take precedence over long-term sustainability objectives. This mindset can hinder the integration of sustainable finance into core business strategies.

Evolving Regulation. Moreover, the complexity and evolving nature of sustainability regulations create a challenging environment for businesses to navigate. Keeping up with regulatory changes and ensuring compliance can be resource-intensive and may require specialized knowledge and expertise that many companies currently lack.

Access to Reliable ESG Data. Access to reliable data and metrics for measuring and reporting on sustainability performance is another significant hurdle. Without standardized metrics and reporting frameworks, businesses may struggle to demonstrate the impact and value of their sustainability efforts to stakeholders, including investors and customers.

According to the interviews conducted in the Project, the current situation in the market creates environment, where financial institutions are ready to promote sustainable finance data, but they do not correspond with enough interest or demand on the side of real economy.

The results of the non-financial corporates survey in the Project identified the following challenges:

- **One third of surveyed entities have implemented transformational climate and sustainability plans,** but only a few of them are willing to publicly share them.
- **The EU Taxonomy has a dual impact on business strategies of real-economy actors**. For some respondents, the EU Taxonomy is seen as an opportunity in terms of the sustainable orientation of their business, including emerging sustainable finance options. Others view it as a risk or challenge due to increased costs and regulatory burdens.
- **Almost two thirds of the respondents actively engage stakeholders, primarily through staff training and volunteer programs,** although challenges such as bureaucratic hurdles, financial demands, and a lack of societal interest in sustainability persist.

3.5.2 Sustainability and SMEs

Most of the above conclusions on large enterprises apply also to Small and medium-sized enterprises (SMEs)[264]. But specifically, **SMEs often lack the resources or experience to handle the complexities of ESG reporting and other aspects of sustainable business on their own**. Although larger companies are already starting to integrate ESG into their processes, it can still be a new and challenging topic for SMEs. Education regarding ESG reporting is key for SMEs to not only meet increasing regulatory requirements, but also to gain access to sustainable financing and remain competitive in the market.

According to an IPSOS survey for the SME Association[265], two thirds of enterprises do not understand what is meant by ESG. However, many companies have already unknowingly implemented ESG elements based on intuitive and natural company behaviour. Almost threequarters of firms plan to develop a strategy for ESG adoption within three years. They do not reject ESG completely, though they are reticent about the bureaucratic burden that comes with it[266]. Therefore, the survey results suggest that SMEs lack specific and unbiased information about ESG and what ESG reporting entails. Up to half of the companies also see a problem in unclear returns on investment[267].

Business and industry unions and associations can play a vital role in educating SMEs in the following areas:

- **Providing information**: Unions and associations can provide SMEs with up-to-date information on legislative requirements, trends and best practices in the field of ESG reporting and sustainability.
- **Training and seminars**: Training, webinars and seminars on ESG reporting and other areas of sustainable business should be organised. These activities can include both a basic level for companies that are new to ESG and advanced courses for companies that want to deepen their knowledge.
- **Consulting and mentoring**: It would be beneficial to offer consulting services and mentoring, where experts help SMEs to implement ESG processes and ensure that their reporting is in line with international standards.
- **Building tools**: Developing and providing tools, templates and example reports that SMEs can use to create their own (preferably simplified) ESG reporting is vital.

There are a number of successful initiatives abroad, for example the German Bundesverband der Deutschen Industrie (BDI[268]), providing SMEs with training and information materials on the topic of sustainable

[264] https://single-market-economy.ec.europa.eu/smes/sme-fundamentalso /sme-definition_en

[265] https://www.ipsos.com/cs-cz/udrzitelnost-nebo-cena

[266] https://www.ipsos.com/sites/default/files/ct/publication/documents/2023-07/the-ipsos-esg-council-report-2023-WEB.pdf

[267] https://www.researchgate.net/publication/375000900_ESG_in_Czech_organisations

[268] https://bdi.eu/

development and ESG reporting. BDI also organises conferences and workshops focused on the integration of ESG corporate strategies. **De Nederlandse Vereniging van Banken ('NVB'[269]),** in cooperation with other organisations, helps SMEs to understand sustainable financing and ESG reporting through seminars and specialised working groups.

It is crucial for SMEs to have access to relevant information, tools and support in ESG reporting. Unions and associations play a vital role in providing this support, and their active involvement is necessary to increasing the competitiveness of Czech SMEs on the global market.

Case Study 1: ESRS (CSRD) Reporting Process in a Czech Mid-Cap Engineering Company

The subject of this case study is a privately owned mid-cap engineering company based in the Czech Republic, a vital component in the supply chain of large energy companies. Historically, the company boasts several ISO and other certifications, underscoring its robust mechanisms in quality and process management. Despite these strengths, the company had not engaged with ESG and sustainability issues until recently.

CSRD Reporting Steps

In 2023, the company's commercial bank introduced an ESG questionnaire. This development exposed a gap: the company was unfamiliar with sustainability terminology and had not calculated its carbon footprint or implemented any internal sustainability reporting. The revelation prompted an awareness that sustainability was becoming a critical consideration for their clientele, particularly large corporations.

Acknowledging the growing importance of sustainability, the company decided to enlist an external consultant to streamline the sustainability process. Market consultations led them to a strategic decision: rather than adopting a comprehensive sustainability strategy, they opted to commence only with CSRD reporting compliance. This approach will be mandatory for the company starting from the financial year 2026, utilizing 2025 data.

The company undertook several stages to prepare for ESRS (CSRD) reporting:

- Materiality Assessment: The first step involved identifying material ESG issues relevant to the company and its stakeholders across all three ESG dimensions.
- Data Gap Analysis: The next phase was to determine the gaps in existing data and what additional information is required to comply with ESRS standards.
- Reporting Methodology: The company established a methodology for collecting, analyzing, and reporting sustainability data.
- Preparation of the First Non-Financial Report: The initial report served as a baseline, providing a foundation for future ESG strategy development.

Only after completing these steps, the company plans to develop a comprehensive ESG strategy.

Main Challenges in the Process

At the beginning, the company was able to quickly mobilise internally and propose an internal ESG team, though there was no sustainability officer in place at the beginning of the project.

At the beginning of the project, there was a strategic introductory workshop including most of the board members, head of finance, head of legal, head of IT and head of production, that lead to the following conclusions: ESG would be sponsored directly by CEO and one of his directly reporting staff was appointed

[269] https://www.nvb.nl/

as provisional ESG officer and ESG project manager. **Some of the Czech companies are struggling with the horizontal nature of ESG and may fail appointing ESG project manager or may fail in coordination of the ESG implementation alter.** This was not the case; the company was well-positioned internally towards project and change management and also for reporting connected with supply chain or certification.

In case of holding structures, the companies also have to decide, whether they would create a consolidated report for whole group of companies they represent. **In some cases, the holding may decide to carve out the fossil fuel business with more difficult access to finance, or on the contrary provide banks with reports only for the renewable sources division, which may get more favourable funding conditions than the rest of the holding structure.**

After identifying material issues, the company was exploring the dataset available in their ERP (Enterprise Resource Planning) system. **They found out they did not have all baseline data available in the company yet.** They established an internal working group, which aimed at acquiring baseline data within the firm. **The firm was not using data from the public administration or other peers in industry (e.g. ESG ratings) as a baseline or a benchmark, because this data is largely unavailable in the Czech Republic.** This includes e.g. benchmarks for carbon footprint, emissions of harmful substances, renewable sources utilisation in the production plant, water consumption, sewage water quality, waste management etc.

Key Takeaways for Sustainable Finance

The Czech mid-cap engineering company identified material issues and found gaps in their baseline sustainability data following a request to fill-in a banking ESG questionnaire. They formed an internal group to gather this data, as external benchmarks were unavailable in the Czech Republic. Then they developed their first baseline non-financial report. Following up on these steps, the company began developing a sustainability strategy, relying on their own resources and estimates to set targets for key areas like carbon footprint and renewable energy generation. **The company does not perceive any direct influence of their sustainability reporting related efforts on the funding conditions. But they were able to sustain the current levels of funding following their sustainability profile. This may further develop in future as the company is now preparing their sustainability strategy and will gradually involve sustainability into their business decision-making. This will gradually lead them to develop EU Taxonomy-aligned projects and rise their attention in sustainable finance products.**

All companies need to have a clear vision at the beginning of ESG/sustainability adoption, whether it would

- **(i) only comply with necessary regulatory requirements, or rather**
- **(ii) also explore market opportunities emerging from actively tackling the sustainability topics or**
- **(iii) embrace sustainability as central piece of the business.**

Typically, the Czech companies start with the option (i), which typically means preparing a baseline CSRD-aligned non-financial report and later gradually find out they would like to explore also possibilities of tackling sustainability also as a strategic opportunity and therefore start searching for sustainable finance options.

The key takeaway for this and many other companies in Czechia these days is that "ESG is a process" – companies do not instantly become sustainability leaders, but they typically start with humble steps and gradually embrace the whole topic. Prioritisation is one of the keys to adopt ESG in an efficient manner. Only later (3-5 years horizon since inception of sustainability activities) will steps on this way lead the companies to make EU Taxonomy-aligned investments and rise significantly their demand for sustainable finance products.

3.6 Investment Gap Calculation

This chapter aims to quantify the investment gap, specifically to calculate the additional decarbonisation investment required beyond the scenario with existing measures (WEM) 2030. Note that the scenario WEM and the scenario with additional measures (WAM), which are crucial to identifying the investment gap, are defined in the National Climatic and Energetic Plan (NECP) document in Chapter 5. The government discussed this document in June 2024; the SEEPIA modelling consortium calculated the analytical background for NECP earlier in 2024.[270] Our analysis is twofold: First step was to identify the priority sectors within the Czech industry that require these investments. Second step was to quantify the extent of the investment gap. To accomplish this, modelling results from the SEEPIA consortium were utilised. **The primary motivation for this analysis is to contribute to the Czech Republic's 2050 climate neutrality goal and to catalyse discussions on necessary institutional and economic reforms within the country.** The gap determines a necessity of new financial tools for financing decarbonization. Results of the model indicates a middle-term gap, i.e. a priority for both public and private sector to cooperate in inventing innovative financial products.

The methodological framework of this chapter draws primarily from the 2023 study conducted by Polish researchers at ICF, titled "Bridging the climate financing gap with public policy instruments," with specific reference to Deliverable 3, Diagnostic report – Part 1: Investment needs, are duly cited throughout the text, either in footnotes or within the literature review section. The following chapter explains the sequential stages of methodology development and comprehensively interprets the resultant findings.

3.6.1 Determination of Priority Sectors

The initial phase of our analysis necessitated the compilation of a dataset, encompassing key variables for the Czech economy's NACE sectors (two-digit codes) in 2022 representing the most recent year with complete data availability. These variables include Gross Value Added (GVA), Employment, Greenhouse Gas (GHG) emissions (Scope 1-3), and GHG emissions reduction potential (Scope 1-3).[271]

Data acquisition followed a multi-source approach. Gross Value-Added data for individual NACE sectors was extracted from the Eurostat, while Employment data was sourced from the Input-Output tables provided by the Czech Statistical Office (CZSO). GHG emissions data (Scope 1) was also obtained from Eurostat[272], however, this data was only available for basic NACE sectors (A-U). To address this limitation, a proportional allocation method based on Gross Value-Added shares to estimate values for the remaining two-digit NACE sectors was employed.[273]

GHG emissions data (Scope 2) was calculated using CZSO data[274] reflecting the consumption of electricity, natural gas, hard coal, and brown coal including lignite, motor gasoline and diesel fuel in NACE sectors and using data on the intensity of greenhouse gas emissions during the production of electricity energy as well as during usage of the mentioned fuels[275]. Tons of CO_2 equivalent emissions produced in 2022 by each sector were thus

[270] Results are from March 2024

[271] https://ec.europa.eu/eurostat/databrowser/view/nama_10_a64/default/line?lang=en

[272] Ibid.

[273] It was considered that the shares of emissions in e.g. sectors A01–A03 are analogous to the gross value added of these sectors within sector A – Agriculture, forestry, fishing. From the point of view of the robustness of the model, it can be considered a reasonable assumption.

[274] https://apl.czso.cz/pll/rocenka/rocenkaout.dod_uziti?mylang=CZ

[275] See: https://ec.europa.eu/eurostat/databrowser/view/ENV_AC_AINAH_R2/default/line?lang=en

calculated. For sector D (Electricity, gas, steam and air conditioning supply) itself, the value of GHG emissions (Scope 1) was subsequently deducted to avoid double counting these emissions. GHG emissions (Scope 3) cannot be calculated for the Czech Republic due to lack of relevant data. **Besides, they are already implicitly included in GHG emissions within Scope 1 and 2 in the case of national accounts. Due to the neglect of the direct influence of Scope 3, it was necessary to adjust the weights of the individual variables compared to the Polish study**[276], see below.

The GHG emissions reduction potential (Scope 1) data was calculated with the knowledge of the reduction potential of NACE sectors A–H in the Czech Republic based on the methodology from relevant academic articles by Krüger and Tarach[277] from 2020 and 2022. Considering the complexity of the information, it is necessary to point out that the studies of Krüger and Tarach are based on different assumptions than the TIMES-CZ model (used by the SEEPIA consortium), from which data regarding the investment gap were drawn. The authors work with a production curve responding to the need to reduce emissions, and therefore follow a short- to medium-term horizon. Nevertheless, these are the best available data with which our assumptions can be appropriately approximated. **Since the reduction potential of NACE sectors I–U is not available, the reduction potential of NACE sector H (Transport and storage) was used as a proxy since NACE sectors I–U are also service sectors. The values of GHG emissions (Scope 1) were multiplied by this reduction potential, thus obtaining potential tons of CO_2 equivalent that can be reduced in individual sectors.** The two-digit NACE sectors were subsequently added up according to shares in GHG emissions (Scope 1).

Finally, the GHG emissions reduction potential Scope 2 data was calculated using a reduction potential of the NACE sector D (Electricity, gas, steam and air conditioning supply). This potential was subsequently multiplied by the values of GHG emissions (Scope 2). Regarding GHG emissions reduction potential (Scope 3), the data was omitted for the same reason mentioned above, as was the case with GHG emissions (Scope 3).

For each of these six factors, the twenty NACE sectors with the highest respective values of gross value added, employment, emissions, etc. were then identified. These were then scored using weights taken from the mentioned Polish study – but these weights were adjusted as the GHG categories emissions (Scope 3) and GHG emissions reduction potential (Scope 3) were excluded. The following table summarizes the weights used:

Table 2: Weights of Individual Factors

Factor	Weight[278]
Gross value added	0.15
Employment	0.20
GHG emissions (Scope 1)	0.25
GHG emissions (Scope 2)	0.10
GHG emissions reduction potential (Scope 1)	0.20

[276] In the Polish study, the researchers employed experts' opinion to derive this particular data point.

[277] Krüger, J.J., Tarach, M. Greenhouse Gas Emission Reduction Potentials in Europe by Sector: A Bootstrap-Based Nonparametric Efficiency Analysis. Environ Resource Econ 81, 867–898 (2022). https://doi.org/10.1007/s10640-022-00660-7

[278] Weights are taken from the above-mentioned Polish study by ICF, while 5% weights from omitted GHG emissions (Scope 3) and GHG emissions reduction potential (Scope 3) factors added to GHG emissions (Scope 1) and GHG emissions reduction potential (Scope 3). The Polish authors determined these weights so that there is a balance between the socio-economic importance of a sector (gross value added and employment representing 35% of the score), current GHG emissions (representing 35% of the score) and the GHG emissions mitigation potential of the sector (representing 30% of the score).

Factor	Weight[278]
GHG emissions reduction potential (Scope 2)	0.10

To determine 10+2 priority sectors, the following methodology was used. From the list of 20 NACE sectors with the highest scores within 6 factors, identical industries were subsequently removed (the same industries often appeared on the top ranks), and thus 36 industries were listed, ranked according to the scores described in Annex 1. Ten industries (out of 36 sectors) with the highest score then form the priority sectors determined by us and the output of the first part of this study. The result of the analysis is the selection of the ten most important NACE sectors based on the mentioned six criteria from all NACE sectors. Based on negotiations with the Public administration, two strategic sectors were added to these ten sectors, namely petrochemicals (NACE code C20) and building materials (C23) [9] .

It is crucial to focus on these sectors because they emit 77.5 % of the total volume of greenhouse gases within Scope 1 (or 44.5 % within Scope 2) and, among other things, they represent 26.3 % of gross added value. Moreover, as shown in the following chapter, these sectors swallow a total of 91.85 % of the total additional investments (calculated by the TIMES model for the entire period 2023-2030).

Two extra sectors (petrochemicals and building materials) were added because of their importance in the context of the Czech economy and also based on consultations with the public administration. In the last step, these sectors were found to be eligible according to the EU Taxonomy. In the context of determining investment gaps for climate neutrality, this eligibility is crucial as it identifies sectors that are not only significant in terms of emissions and economic impact but also align with established sustainability criteria. This alignment notifies targeted policy interventions and investment strategies aimed at achieving climate neutrality goals. **The following figure shows the 10+2 most important NACE sectors of the economy based on the described methodology.**

Table 3: Most Important NACE Sectors in Czechia according to the Chosen Methodology

Rank	Sector	Short rationale
1	H49 (Land transport and transport via pipelines)	High GHG emissions (Scope 1 and 2) as well as reduction potential
2	D (Electricity, gas, steam, and air conditioning supply)	High GHG emissions (Scope 1 and 2) as well as reduction potential
3	C29 (Manufacture of motor vehicles, trailers, and semi-trailers)	High GVA and employment, one of the most important sectors in the Czech Republic
4	A01 (Crop and animal production, hunting and related service activities)	High GHG emissions (Scope 1 and 2) as well as reduction potential
5	F (Construction)	High GVA and employment, one of the most important sectors in the Czech Republic
6	B (Mining and quarrying)	High GHG emissions (Scope 1 and 2) as well as reduction potential
7	C25 (Manufacture of fabricated metal products, except machinery and equipment)	High GHG emissions (Scope 1 and 2) as well as reduction potential
8	C10–C12 (Manufacture of food products; beverages and tobacco products)	Strategically important sector, consuming higher level of electricity
9	H52 (Warehousing and support activities for transportation)	Higher GVA and employment (an important sector for C29

Rank	Sector	Short rationale
10	C28 (Manufacture of machinery and equipment new)	High GHG emissions (Scope 1 and 2) as well as reduction potential (an important sector for the Czech Republic as a transit country)
EXTRA	C23 (Manufacture of other non--metallic mineral products)	This deserves attention as a strategic sector based on consultation with the MoIT.
EXTRA	C20 (Manufacture of chemicals and chemical products)	This deserves attention as a strategic sector based on consultation with the MoIT.

Note: Numerical codes indicate NACE sectors, the full list of all sectors can be found here: https://ec.europa.eu/competition/mergers/cases/index/nace_all.html

3.6.2 Determination of the Investment Gap

In the next stage, estimation of the investment gap for sectors from the Table 3 was calculated. The investment gap is defined as a difference between the total investment needs in the decarbonization scenario WAM (see NECP Chapter 5 for definition) and the investment needs in the scenario with existing measures WEM (the investment gap is also mentioned as "additional investment" in this chapter). Importantly, investments also take place in the WEM scenario, and the costs of decarbonization cannot be completely separated from the costs of normal capital renewal, in which, for example, equipment in a factory X is spontaneously replaced by more efficient equipment due to natural technological progress[279]. To calculate the investment gap, calculations from the TIMES model were used, which were carried out by the SEEPIA consortium.[280] In particular, we are making a reference to Chapter 5.3 in NECP: Overview of funding sources and investment needs. The mentioned document also contains the information about the TIMES model for the reference.

It is important to note that our approach to assessing the emission reduction potential differs from that employed in the SEEPIA model. While SEEPIA is calibrated to minimize total emissions to approximately 10 million tons of CO_2 equivalent by 2050, it does not specifically identify priority sectors (in the same way as in this report). Moreover, the available documentation of the SEEPIA output does not provide a granular breakdown of this emission reduction stratified by NACE industrial sectors. To address this limitation and to align with our objective of identifying priority sectors, the methodology leverages the research conducted by Krüger and Tarach. **Their study offers a detailed analysis of reduction potential disaggregated by NACE sector, which was incorporated into the methodology. This approach allows for a more nuanced understanding of sector-specific emission reduction capabilities.**[281]

Then the extrapolation of the investment gap calculated in the TIMES model for 7 categories followed: Energy and heat production, Industry, Buildings + tertiary sector, Transport, Just transition, Adaptation, Circular economy on our designated priority sectors from Table 3. Reflecting this, the investment gap was defined as the difference between total investment needs in WAM and total investment needs in WEM. Table 4 shows the total investment needs, including the public sources for both WEM and WAM scenarios, and the investment gap in the last column.

Table 4: Investment Needs from the TIMES Model 2023-2030 (2023 Fixed Price, EUR billions)

[279] If a firm X needed a new freight transport truck in 2025, this truck would be more efficient (i.e. consume less energy and produce less emissions) also in the WEM scenario (trucks are just more efficient).

[280] Centre for socio-economic research on the impact of environmental policies - https://seepia.cz/ (SEEPIA), Impact Analysis FF 55. For download on the SEEPIA website: https://seepia.cz/novinka/studie-o-dopadech-fit-for-55-na-cr-dokoncena/

[281] Krüger, J.J., Tarach, M. Greenhouse Gas Emission Reduction Potentials in Europe by Sector: A Bootstrap-Based Nonparametric Efficiency Analysis. Environ Resource Econ 81, 867–898 (2022). https://doi.org/10.1007/s10640-022-00660-7

Categories defined in TIMES	WEM investment value	WEM public sources	WAM investment value	WAM public sources	WAM minus WEM
Energy and heat production	13.45	6.08	35.28	16.50	21.81
Industry	9.50	3.37	9.58	3.37	0.08
Buildings + tertiary sector	15.87	6.21	45.90	16.37	30.03
Transport	9.54	5.75	9.54	5.75	0.00
Just transition	0.67	0.71	3.17	2.54	2.50
Adaptation	1.96	1.96	11.45	9.79	9.50
Circular economy	0.54	0.37	0.54	0.37	0.02
Total investments and grant needs	51.53	24.45	115.47	54.69	63.96
Total available resources				46.94	
Missing resources				-7.75	

*It does not include agriculture and forestry, personal road vehicles, railway infrastructure except electrification, financing costs of new nuclear sources, and R&D and non-investment transfers.

Note: Originally, the amounts in TIMES were in 2023 CZK; the exchange rate of 24.01 to convert the 2023 CZK to 2023 EUR was used. The last column is the difference between the WEM (with existing measures) and WAM (with additional measures) scenarios. These are cumulative amounts for the 2023–2030 period, i.e., the energy and heat production sector will need €21.79bn more in the WAM scenario in the WEM scenario constant 2023 prices precisely because of the requirements within the decarbonisation scenario. It's important to recognise that the WEM scenario also includes investments. The expenses associated with reducing carbon emissions in WAM cannot be entirely distinguished from regular capital replacement costs. For instance, during routine upgrades, older equipment may be substituted with more technologically advanced and energy-efficient alternatives.

The extrapolation proceeded as follows: there was one of the 7 sectors from Table 3 assigned to each NACE code and weighted the resulting investment gap by the reduction potential of emissions in Scope 1 within each of the seven sectors. **In the Graph 1 below, the results for the prioritized sectors from Table 4 are shown.**

The highest additional investments will be required in the energy and heat production sector (NACE code D). **This is primarily based on the assumption of transitioning to cleaner energy sources, including the construction of new renewable energy facilities and, potentially, nuclear power plants. In the period of 2023-2030, this amounts to €21.8bn (in constant 2023 prices).**

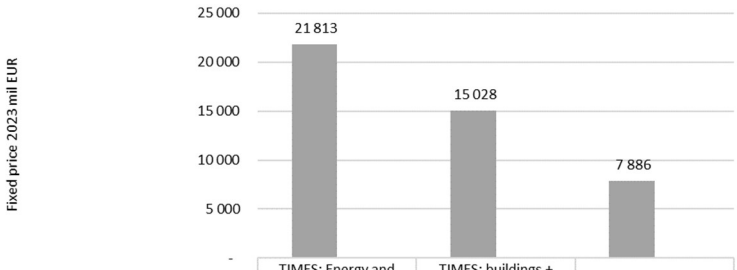
The second sector indicating large additional investments is the buildings and tertiary sector (NACE code H52). This assumes the reduction of the energy demand in buildings through renovations, improved insulation, and other efficiency measures, as well as supporting activities for transportation. The total additional investments for this sector in the period 2023-2030 amount to €15.0bn (in constant 2023 prices).

The third significant sector is adaptation, primarily in agriculture (NACE code A01). **This involves investments to prepare the agricultural sector for climate change impacts. The total additional investments for this sector for the period 2023-2030 amount to €7.9bn (in constant 2023 prices). It's important to add that this sector is largely financed by the Common Agricultural Policy (CAP), which was not included in the SEEPIA modelling tool used for the analysis. Therefore, the actual investment gap may be lower than presented here.**

These three sectors combined represent 70 % of the whole investment gap identified, underscoring their critical importance in the overall climate strategy. The investment shares were calculated by assigning one

of the seven sectors from the Figure 6 to each NACE code and weighting the resulting investment gap by the reduction potential of emissions in Scope 1 within each of the seven sectors.

Graph 1: Investment Gap by NACE



	TIMES: Energy and heat production NACE: D (Electricity, gas, steam and air conditioning supply)	TIMES: buildings + tertiary sector NACE: H52 (Warehousing and support activities for transportation)	TIMES: adaptation NACE: A01 (Crop and animal production, hunting and related service activities)
Investment gap 2023-2030 mil. EUR (fixed price 2023)	21 813	15 028	7 886
Share of investment gap from the TIMES category	100,00%	48,90%	83,76%

Source: SEEPIA, TIMES model

Note: These three sectors account for 70% of the total additional investment in Figure 6 (the entire 2023–2030 period, last column).

The financing strategy for the decarbonisation scenarios comprehensively addressed in the NECP, which serves as our primary reference for this discussion (see NECP section 5.3.2 Sources of Funding). A critical analysis of the available funding sources reveals that approximately one third of the required investments for the decarbonisation scenario (referring to total investments in the WAM scenario) can be covered by established European and national financial mechanisms (for details, please see NECP). These include cohesion policy funds, the National Recovery Plan, the Modernization Fund, the Social Climate Fund, and revenues from both ETS 1 and ETS 2.

Consequently, the remaining two thirds of the investment gap will require a combination of financial instruments with private-sector capital mobilisation. It is imperative to note that these investments represent incremental capital requirements above the baseline scenario with existing WEM measures. For details, refer to table 114 in NECP in section 5.3.2.

Conclusion

To achieve climate neutrality in 2030, a total investment of approx. €114bn, is needed across all sectors of the Czech economy cumulatively**,** of which **approx. €67bn** in the three aforementioned sectors (both in constant 2023 prices). The investments referenced pertain to the scenario with additional measures. **The investment gap, calculated as the difference between total investments in WAM (With Additional Measures) and WEM (With Existing Measures), amounts at €64.0bn**. Notably, the three key sectors account for nearly 70% of this differential including both public and private sources.

3.7 Motivating the Private Sector to Invest in Sustainable Activities

Investments in sustainability in Czechia, especially in terms of meeting the goals of the National Energy and Climate Plan (NECP)[282] by 2030, will require massive financial injections from the private sector. **The key to**

[282] https://energy.ec.europa.eu/topics/energy-strategy/national-energy-and-climate-plans-necps_en

unlocking the private sector sustainable investments is the creation of a motivating and supportive environment that combines subsidies, financial instruments and other incentives aimed at ensuring the profitability and sustainability of these investments.

The private sector will only invest in sustainable projects if these investments are considered economically viable. **Profitability, stable returns and long-term financial benefits are essential for companies' decision-making processes. They are also depending on stable and transparent environment, as described above.**

3.7.1 Sustainable Investment and Existing Support Programmes

The energy transition requires substantial investment across various sectors, including technology, construction, renewable energy, and infrastructure. Diverse financing sources will play a critical role in funding projects leading up to 2030 and beyond.

To cover the investment gap in the decarbonisation process, assumption can be made that the amount of about €39 bn[283] is currently available in EU programmes in Czechia for supporting sustainability as part of the funding. The Modernization Fund will utilise its full sustainable financing allocation of €12–20bn, depending on actual price of the emission allowances. The Recovery and Resilience Facility (RRF) will contribute approximately 61% of its NRP budget, amounting to €5.6bn[284]. Meanwhile, operational programmes (MFF) will dedicate around 58% of their total allocation to finance sustainable investments, which is roughly €13bn[285].

Given the extensive funding from the EU Multiannual Financial Framework ('MFF') [286], the National Recovery Plan ('NRP'), and the EU Emissions Trading System ('EU ETS'), Czechia is well-positioned to advance its energy transition. These funds can cover typically 30% to 70% of individual project investment cost, depending on type of beneficiary and measure. The remainder of project cost is typically financed through private investments[287].

However, a key challenge remains in ensuring transparent and effective use of these funds to maximise their impact on the country's sustainability goals. It is also important that the managing authorities properly assess demand for subsidy programmes and consult conditions widely beforehand to ensure efficiency and effectiveness of the programmes.

The specific information on allocations of 2023–2030 support programmes are summarised in the following table.

Table 5: Funding Sources 2023–2030 (EUR Billions, Constant 2023 Prices, 1 CZK = 24.007 EUR)

	2023	2024	2025	2026	2027	2028	2029	2030	2023–2030
National Recovery Plan	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	**3.40**
Modernization Fund	1.76	1.89	1.85	1.85	2.31	2.31	2.31	2.31	**16.55**
European Structural and Investment Funds	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.00	**6.85**
State Budget – financing by New Nuclear Sources	0.00	0.00	0.00	0.00	0.00	2.14	2.14	2.14	**6.47**
EU Emissions Trading System (ETS) 1	0.67	1.01	1.72	1.55	1.47	1.26	1.01	0.80	**9.49**
EU Emissions Trading System (ETS) 2	0.00	0.00	0.00	0.00	0.55	0.88	0.92	1.01	**3.36**
Social Climate Fund	0.00	0.00	0.00	0.00	0.34	0.34	0.34	0.34	**1.30**

[283] https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en

[284] https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

[285] https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/637979/EPRS_BRI(2019)637979_EN.pdf

[286] https://www.consilium.europa.eu/en/policies/eu-long-term-budget/

[287] https://www.europarl.europa.eu/doceo/document/A-9-2022-0039_EN.html

Subsidy needs	4.28	4.75	5.38	5.21	6.85	9.79	9.79	9.07	**55.15**
Missing resources	**0.00**	**0.00**	**0.00**	**0.00**	**-1.26**	**-1.93**	**-2.10**	**-2.52**	**-7.81**

Source: NECP (2024), numbers calculated by the SEEPIA consortium based on allocations at the level of priority axes and the intervention areas of the programmes

Notes: Sector A01 is also subject to the Common Agricultural Policy and relevant subsidies, which are not mentioned here. Pressure on missing state support resources worth €7.81 billion arises primarily from 2027 onwards, ranging from €1.26 billion to €2.52 billion annually. These needs will be partially, if not fully, covered by allocations from the next period of cohesion policy funds; however, an ongoing impact on the state budget cannot be ruled out (especially for pre-financing and co-financing in the case of support for public sector projects).

3.7.2 Support for the Development of Renewable Energy Sources

Sustainable finance plays a pivotal role in accelerating the development of renewable energy installations. By providing the necessary capital through green bonds, loans, state support and investment funds earmarked for eco-friendly projects, sustainable finance reduces the financial barriers that often impede the adoption of renewable technologies. Investors seeking to align their portfolios with environmental goals can channel funds into projects that promise not only financial returns but also positive environmental impact.

Though the following applies mainly to the photovoltaic systems renewable energy generation as main source of installed capacity of renewable energy sources ('RES') in Czechia, similar support schemes are in place also for other RES.

International Practice

Germany has one of the most sophisticated renewable energy support systems:

- **Feed-in Tariffs (FIT)**: This system guarantees feed-in prices for electricity from renewable sources for 20 years, significantly reducing market risk for investors and facilitating project financing. Although Germany is gradually transitioning to auction systems, FITs have been key to the development of photovoltaics and wind power.[288]
- **Auctions**: In recent years, Germany has switched to an **auction system**, where investors compete for the lowest purchase price for new RES projects. This model ensures efficiency and reduces costs for end consumers. Auctions are often focused on specific technologies (photovoltaics, wind) and regions.

France also combines different forms of support:

- **Auctions**: France uses auctions for photovoltaic and wind projects with regular rounds for different technologies. This system ensures competitive prices and reduces the need for public subsidies[289].
- **Contracts for Difference (CfDs)**: This model works similarly to PPA (Power Purchase Agreement), where the state guarantees a minimum price for the energy produced for 10-15 years, typically through an auction system. If the market price falls below this level, the public administration pays the difference, which significantly reduces the market risk for investors[290].

Situation in Czechia

[288] In April 2024, Germany has increased FIT for C&I (commercial & industrial) installations, see https://www.pv-magazine.com/2024/04/26/germany-launches-new-measures-to-support-solar/

[289] https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5aa83001d&appId=PPGMS

[290] https://www.optima-energie.fr/blog/energies/le-contrat-pour-difference-le-futur-de-la-regulation-de-lelectricite/

The support of renewables in Czechia is a versatile effort, involving substantial financial backing from the Modernisation Fund, a rigorous permitting process, and the strategic use of sustainable finance instruments like green bonds. While challenges remain, particularly in securing long-term PPAs, the country's commitment to expanding its renewable energy portfolio is evident and continues to progress.

Permitting Process and Legislation. The permitting process for renewable energy projects in Czechia is comprehensive and involves multiple steps. This process can be lengthy, often taking several years to complete. Steps in the permitting process are as follows:

- **Initial Consultation:** Developers must engage in preliminary consultations with local authorities and stakeholders;
- **Environmental Impact Assessment (EIA):** Conducting an EIA (screening or full EIA) is mandatory in some cases to assess the potential environmental impacts, mainly in case of larger projects[291];
- **Land Use Planning and Building Permit:** Developers must secure land use permits from the relevant construction and municipal authorities. Since July 2024[292], land use and building permits are being awarded in a single administration procedure.
- **Grid Connection Agreement**: Agreements with the regional grid operator for connecting the project to the grid (ČEZ Distribuce[293], Pražská energetika[294] or E.ON[295]);

Furthermore, renewable energy projects in Czechia must comply with several legislative frameworks, including:

- Act No. 283/2021 Coll. ('Building Act')[296];
- Act No. 114/1992 Coll. ('Nature and Landscape Protection Act')[297];
- Act No. 458/2000 Coll. ('Energy Act')[298], which regulates energy infrastructure and grid connection.

Obtaining permits for a solar power plant bigger than 50 kWp can take anywhere from 2 to 4 years[299], depending on the scale of the project and the responsiveness of the regulatory authorities.

Grid Connection Process: The process of connecting a renewable energy project to the grid involves technical assessment, conclusion of a grid connection agreement, physical connection to the distribution grid, testing operation and commissioning. Technical assessment starts with verification of connection capacity in the selected location. The distribution grids operators publish information and maps[300] on disponible connection capacity on their websites[301].

In case of locations in the south of Czechia with highest yearly irradiation, and thus highest yields of solar power in photovoltaic systems, the connection capacities are typically already exhausted due to

[291] https://www.zakonyprolidi.cz/cs/2001-100
[292] https://www.zakonyprolidi.cz/cs/2021-283
[293] https://www.cezdistribuce.cz/
[294] https://www.pre.cz/cs/domacnosti/
[295] https://www.eon.cz/domacnosti/
[296] https://www.zakonyprolidi.cz/cs/2021-283
[297] https://www.zakonyprolidi.cz/cs/1992-114
[298] https://www.zakonyprolidi.cz/cs/2000-458
[299] https://www.pravniprostor.cz/clanky/spravni-pravo/jak-od-ledna-2024-funguje-povolovani-vetrnych-solarnich-elektraren
[300] https://www.informacni-portal.cz/clanek/prenosova-soustava
[301] https://www.cezdistribuce.cz/cs/pro-zakazniky/technicke-informace/stav-distribucni-site

missing distribution grid infrastructure like transmission substations, smart grid operation elements. Distribution grid operators are investing massively in Czechia in development of their grids and services including virtual batteries, allowing for services of aggregation of third parties, community sharing of energy due to recent amendment to the Energy Act[302], and other measures. The grid operators estimate that by 2030, the capacity of renewable energy sources (RES) will more than double compared to the current levels. To adjust the distribution and transmission grids for this increase, the estimated cost will be €3.3 billion, according to the National Energy and Climate Plan (NECP) and the State Energy Concept (SEK). Part of the cost will be covered by grants from programmes mentioned above and directly managed programmes of EU like Connecting Europe Facility ('CEF')[303]. Another source of funding is the distribution grid fee regulated by ERO. **At least part of the cost will also have to be covered by sustainable finance products like green bonds and loans.**

Sustainable Finance in Renewables Development. **Sustainable finance already plays a crucial role in the development of renewable energy in Czechia. One notable example is the issuance of green bonds by ČEZ**, the largest energy company in the country. These bonds are specifically designed to finance environmentally sustainable projects, including RES developments. Green bonds have provided a substantial source of capital, enabling the acceleration of renewable energy projects and the expansion of the RES sector in Czechia.

Opportunities and Advantages

Sustainable finance presents a promising avenue for the funding of renewable energy projects in Czechia. The primary instruments in this domain include green bonds, sustainability-linked loans, and SFDR-aligned investment funds. These tools can attract a broader range of investors who are keen on supporting environmentally friendly initiatives.

Stabilizing the Price of Energy from Renewables**.** Sustainable finance can play a pivotal role in stabilizing the price of energy from renewables. By providing long-term financing options, green bonds and sustainability-linked loans, the sustainable finance ecosystem can reduce the financial risk associated with renewable energy projects. This stability in financing translates to more predictable energy prices, benefiting both developers and off-takers.

Promoting Development of RES. Investment subsidies from funds like the Modernisation Fund can lower the initial cost of renewable energy projects, making them more financially viable. Feed-in tariffs (FIT) and auctions, as practiced in countries like Germany, France, and the Netherlands, can further stabilize the market by ensuring a guaranteed price for the energy produced. This approach can help bridge the gap between the expectations of producers and off-takers, fostering a more robust and stable renewable energy market in Czechia.

Risks and Challenges

Obstacles in Access to Finance. Photovoltaic projects in Czechia face financing problems because banks are reluctant to provide loans for projects with electricity price market risk. **Although the Modernization Fund provides investment subsidies typically of up to 30%[304], this is not enough to reduce market risk for financing banks, which would allow for a credit if there was a PPA in place. Nevertheless, the grant amount is also not enough to solve price expectation difference between producers and electricity off-takers in PPAs**. Difference in supply and demand expectations are stemming from the fact that while the

[302] https://public.psp.cz/sqw/historie.sqw?t=313&o=9

[303] https://cinea.ec.europa.eu/programmes/connecting-europe-facility_en

[304] https://modernisationfund.eu/

electricity prices are generally harmonized across Europe, the so called 'capture price' (revenues captured by the indicated technology per unit of energy generation) is worse for investors in Czechia. As a consequence, there have been very few long-term purchase price guarantees or stable PPA-type customer contracts[305] concluded to date.

Grid Integration Cost. As mentioned above, RES are intermittent by nature and can cause instability in the power grid. Ensuring that the grid can handle these fluctuations without compromising reliability requires significant investment in infrastructure and technology, which poses an additional financial challenge. This challenge is on the other hand also an opportunity for sustainable finance to support the market solution.

Stakeholder Opposition. Lastly, public acceptance and social impact must be considered. Renewable energy projects, especially large-scale installations, can face opposition from local communities concerned about environmental impacts, land use, and aesthetics. Gaining public support and addressing these concerns is essential for the successful implementation of sustainable finance initiatives in the renewable energy sector.

Case study 2: Sustainable Finance and Development of RES in the Czech Republic

Recently, the Czech Republic has re-evaluated its support for the incremental development of renewable energy sources (RES), mainly in response to ambitious national goals aligned with the European Union. Several new financing mechanisms have been introduced, including investment grants from the Modernisation Fund, investment subsidies for retail rooftop installations, and operational support through auctions for wind installations. Despite the success in the retail sector, the anticipated momentum for larger new build developments has not materialized as expected due to market risks and other issues detailed further below.

Power Purchase Agreements and Contracts for Difference in Czechia

A Power Purchase Agreement (PPA) is a long-term contract between a renewable energy producer and a buyer, typically a utility or a large corporation, in which the buyer agrees to purchase electricity at a predetermined price for a specified period. This mechanism provides financial security to energy producers by ensuring a steady revenue stream and mitigating the risks associated with market fluctuations. PPAs gained prominence in the early 2000s as the global push for renewable energy intensified, driven by the need to reduce greenhouse gas emissions and combat climate change. They have since become a crucial tool for financing large-scale renewable energy projects, enabling the expansion of solar, wind, and other sustainable energy sources by providing a stable investment environment.

The primary reason why PPAs are currently insufficient to accelerate the development of large photovoltaic (PV) energy sources in the Czech Republic (excluding 'behind the meter' resources) is a mismatch between the price expectations of investors and potential customers. This discrepancy implies that investors expect similar returns and off-takers anticipate comparable prices to those in other European markets. Unfortunately, solar and wind capacities in the Czech Republic are somewhat lower, necessitating larger subsidies to level the playing field. Additional factors hampering the development of PPAs in the Czech Republic, according to banks and investors, include an insufficient number of potential off takers with low credit risk over an extended period (more than ten years) and issues related to compensation in case of early termination, which ties the PPA price to the expected future development of capture prices. Another, albeit less significant, issue is the absence of standardized templates for PPA contracts and term sheets.

PPAs or Contracts for Difference (CfDs) are also inadequate as standalone solutions to accelerate wind power system (WPS) development. Primarily, there is a lack of WPS projects in the Czech Republic

[305] https://www.cezesco.cz/cs/produkty/ppa

due to a very long permitting process, which often leads to negative outcomes. This results in insufficient competition in CfD auctions. Several potential state support options for PPAs could accelerate the development of renewable energy sources, particularly in terms of price reduction for PV plants. For instance, increasing investment subsidies to a percentage that makes it profitable to implement projects with a PPA price at the capture price level could be beneficial. Another measure could be accelerating the implementation of EU directives (RED 3 and the update of EU directive 2019/944), particularly regarding aggregation, flexibility, and accumulation. These measures could alleviate zero or negative electricity prices during periods of abundant sunlight and maximize the utilization of battery storage co-located with PV plants to provide power balance services and other support services. This could also reduce balancing costs for RES (solar and wind) and thus lower the total cost of PPAs for potential off-takers and producers.

Furthermore, the preparation of acceleration zones and the expedited permitting processes would ensure that numerous WPS projects are ready for construction, alleviating investor concerns about project rejections after many years of preparation.

CfD Practice in Neighbouring Countries

An overview of the support mechanisms for RES development in Germany and Poland is depicted in the figure below, focusing specifically on Contracts for Difference (CfD). In Germany, CfD allocation and pricing are determined through auctions conducted separately for individual RES technologies, such as rooftop photovoltaic (PV), ground-mounted PV, and wind power systems (WPS). The auctions are based on the price per megawatt-hour (MWh), and the auction schedule, including expected volumes, is announced several years in advance. Participation in these auctions requires a building permit.

In Poland, the allocation and pricing mechanisms for CfDs are also determined through auctions, but the auctions for PV and WPS are conducted together in the same auction group or basket. Similar to Germany, the auctions are based on the price per MWh, and the schedule, including expected volumes, is announced several years in advance. However, participation in the auctions in Poland requires both a building permit and a network connection.

Table 6: Overview of support of RES development in Germany and Poland

Aspect of CfD	Germany	Poland
CfD allocation and pricing mechanism	Auction – separately for individual RES technologies (e.g. PV on roofs, PV on the ground, WPS), while the subject of the competition is the price per MWh. The auction schedule (including expected volumes) is announced several years in advance	Auction – according to technologies, but CfD for FVE and WPS compete together, i.e. they are in the same auction group / basket. The subject of the competition is the price per MWh. The auction schedule is announced several years in advance (including expected volumes)
Terms of participation in the auction (key terms)	Building permit	Building permit + network connection
Financial guarantee provided by auction participants (mandatory)	Guarantee for connection to the grid within 24 months of obtaining the CfD (FVE: 50 EUR / kW, WPS: 30 EUR / kW). The guarantee is	Guarantee for connection to the grid within 24 months of obtaining the CfD for FVE and 33 months for WPS (PLN 30 / kW but capped). The guarantee is returned to unsuccessful auction participants

	returned to unsuccessful auction participants	
Type of CfD	One-sided [306](level of protection against low prices is contested in auctions)	Bilateral / symmetrical
Reference price	Annual real capture price for the given technology (determined ex-post)	Simple daily average of wholesale prices (established ex-post)
Support (CfD) in case of negative spot prices	Support (in the form of CfD) stopped after 6 or 4 hours with a negative price according to the conditions of the auction. From 2027, support will be stopped for every hour with a negative price	No change
Production volume for settlement	Annual aggregated production profile for a given technology	Determined by the producer according to the auction conditions (checked every 3 years, while the required volume of support (in MWh) may be different every year (according to the offer in the auction), but the actual volume of support must be at least 75% of the required volume)
CfD tenure	20 years, with this period extended by the number of hours when support was stopped due to negative spot prices	15 years

Source: PwC

Key Considerations for Sustainable Finance

To enhance the investment landscape for renewable energy sources, several key measures can be considered. Firstly, increasing the transparency and predictability of the regulatory framework would be beneficial. In particular the public administration should outline how is willing and able to meet the NECP targets. This includes providing clear guidelines on accelerating permitting processes, improving financial incentives, which could not only help lower the initial capital costs for renewable energy projects but also reduce the market risk arising from the electricity sale. Lastly, promoting the development of standardized PPA contracts and term sheets would streamline negotiations and reduce transaction costs.

In conclusion, while the Czech Republic has made significant strides in supporting renewable energy development, further efforts are needed to address the current challenges and create a more favourable investment environment. By adopting best practices from neighbouring countries and implementing targeted

[306] It is important to mention that Germany uses a one-sided CfD support mechanism so its applicability to Czechia is limited because, as per the new EU Regulation, two-sided (i.e. symmetrical) CfD should be used (existing schemes are allowed to continue for three years but there is no existing CfD supporting scheme here). This fact makes also the resulting price comparison for such auctions very challenging across Europe.

support measures, the Czech Republic can accelerate the growth of its renewable energy sector and achieve its ambitious national goals.

Conclusion

Sustainable finance plays a crucial role in funding the development of RES, as evidenced by the Czech Republic's experience during 2008-2010. The use of Contracts for Difference (CfDs) in Germany and Poland has been a catalyst for RES development, replacing the previously used feed-in tariffs (fixed operational price support). Establishing a defined CfD length, whether 15 or 20 years, offers stable financial support that is fundamental for attracting private investments in RES projects. For the state, this approach allows for control over production volumes based on national and market needs and ensures the overall affordability for the state budget.

In the context of sustainable finance in Czechia, it can be anticipated that through an optimal combination of PPAs and potential CfD mechanisms for both solar and wind energy, the national targets outlined in the National Energy and Climate Plan (NECP) of achieving 11-12 GW total capacity can be realized. Achieving this goal would require a total capital investment of approximately 200-300 billion CZK, with an estimated 120-180 billion CZK of private capital attracted through a combination of loans and bonds.

By adopting these strategies and leveraging sustainable finance mechanisms, the Czech Republic can make significant progress towards its renewable energy targets and contribute to a more sustainable and resilient energy future.

3.7.3 Energy Efficiency and EPC

Energy Performance Contracting (EPC) is a way to effectively reduce energy consumption and building operating costs. EPC is a model where the energy service provider (ESCO) guarantees the achievement of energy savings and projects are financed from future savings. EPC projects are designed to provide energy savings and thus reduce operating costs without requiring the building owner to make an upfront investment. Instead, the ESCO finances the renovation and is paid back through the energy savings achieved.

EPC method is often used in public sector projects, such as schools, hospitals, and government buildings, typically for pools of buildings, where the potential for energy savings is substantial. However, it is also applicable in the private sector, particularly in industries with high energy consumption.

The different alternatives of EPC contracts include:

1. **Comprehensive renovation**: This includes modernization of heating systems and lighting and improvement of building insulation. Typical examples are hospitals and schools, where energy savings are often high, guaranteeing a quick return on investment. Typically, these are sets of buildings; for EPC projects, economies of scale are best used.
2. **Targeted energy savings**: This option focuses only on specific issues, such as replacing lighting with LED technology. This approach may be less expensive, but the savings are less significant than with a comprehensive renovation.

In an EPC arrangement, the ESCO conducts an energy audit to identify potential energy-saving measures. These measures may include upgrading HVAC (Heating, Ventilation and Air Conditioning) systems, improving insulation, installing energy-efficient lighting, and implementing advanced energy management systems. The ESCO then guarantees a certain level of energy savings over a specified period.

International Practice

The Netherlands is known for its approach to energy efficiency through the **Energy Efficiency Obligation Scheme** (EEOS)[307], where energy companies must achieve a certain percentage of energy savings. The programme is supported by grants and subsidies for households and companies modernising buildings and equipment.

Situation in Czechia

The Association of Energy Service Companies (APES)[308] plays a pivotal role in promoting and supporting Energy Performance Contracting (EPC) projects in Czechia. APES, established to foster cooperation among Energy Service Companies ('ESCOs'), clients, and other stakeholders, has been instrumental in advancing the energy efficiency agenda within the country.

The history of EPC projects in Czechia dates back to the early 1990s, with the first projects focusing on municipal buildings and public facilities. Over the years, the scope and scale of these projects have expanded significantly, encompassing a wide variety of building types and industries.

To provide concrete figures, as of recent reports, approximately 200 EPC[309] projects have been realized across Czechia. The total investment cost for these projects amounts at €81.6m. In terms of energy savings, these projects have collectively saved an estimated 50,000 [310]megawatt-hours (MWh) annually.

According to available data from CZSO[311] and MoIT[312], the public administration renovates buildings the least among all sectors. Though, the State is one of the major owners of buildings. For while private buildings and local government buildings renovations aimed at energy efficiency more often, state-owned buildings represent a significantly smaller share. Only 6–8% of state-owned buildings have undergone energy renovation in recent years, compared to around 20% of buildings in the private sector.

Opportunities and Advantages

Sustainable finance products can attract investors leading to scalability of EPC initiatives, ensuring that a broader range of buildings, both public and private, benefit from energy-efficient upgrades.

Cost Savings and Risk Mitigation. EPC projects can lead to significant reductions in energy bills without requiring upfront capital investment. The Energy Service Company (ESCO) assumes the performance risk, thereby guaranteeing energy savings.

Capital Relief for ESCO Companies. The integration of sustainable finance products, such as factoring, into Energy Performance Contracting (EPC) projects can significantly enhance their impact. Factoring provides upfront capital to cover the initial costs, thereby alleviating the financial burden on property owners and enabling quicker implementation of energy efficiency measures. This, in turn, accelerates the timeline for realizing energy savings and carbon reduction.

Risks and Challenges

[307] https://www.rvo.nl/onderwerpen/energiebesparingsplicht

[308] https://www.apes.cz/en/index.php

[309] https://www.mzp.cz/cz/news_20240523_EPC-projektu-v-Cesku-rychle-pribyva-Loni-usetrily-pres-400-milionu-korun

[310] https://www.mpo.gov.cz/cz/energetika/energeticka-ucinnost/energeticke-sluzby/energeticke-sluzby-se-zarukou---energy-performance-contracting-epc--105425/

[311] https://csu.gov.cz/

[312] https://www.mpo.gov.cz/default_en.html

Despite its benefits, EPC projects can be complex and require careful planning and management. Key considerations include ensuring a comprehensive energy audit, selecting a reliable ESCO, understanding the terms of the performance guarantee, and monitoring the project's performance over time.

Budgetary Rules. Budgetary Rules[313] in Czechia complicate the use of EPC projects[314] for buildings owned by state organisational units. The main issue is that EPC contracts typically set long-term liability at the level of the organisational unit (often 8–15 years), which is against state budget management rules. The budget is prepared annually for a short-term period and does not allow taking on long-term financial liabilities in the form of EPC contracts, which are financed from future savings.

Technical Assistance. Another issue is **lack of technical assistance**. **ELENA** programme[315] provides technical and financial assistance for the preparation of projects aimed at energy savings, but typically for a specific region or a specific group of beneficiaries.

Case Study 3: EPC Project at Psychiatrická nemocnice Bohnice

The energy efficiency project at Psychiatrická nemocnice Bohnice (PNB), a prominent psychiatric hospital in Prague, Czech Republic, represents a significant stride towards sustainable healthcare infrastructure. This project was executed under the Energy Performance Contracting (EPC) model, which is a comprehensive energy service solution aimed at enhancing energy efficiency without the need for upfront capital expenditure from the client. The primary aim was to reduce energy consumption and operational costs while simultaneously improving the hospital's environmental footprint. The total investment cost for the project was approximately €23.5 million making it the largest ever EPC project in Czechia. The project was realised in 2021-2023.

PNB with its extensive facilities and intensive energy requirements, represented an ideal candidate for an EPC project. The decision to opt for EPC was driven by several factors: the need for substantial energy savings, the desire to modernize outdated infrastructure, and the opportunity to leverage external expertise and funding mechanisms.

Project Goals

The overarching goals of the project were centred around significant reductions in energy consumption and greenhouse gas emissions. Specific objectives included:

- Achieving a 30% reduction in annual energy consumption.
- Upgrading and modernizing heating, ventilation, and air conditioning (HVAC) systems.
- Implementing advanced energy management systems for continuous monitoring and optimization.
- Improving the overall comfort and safety conditions for patients and staff.
- Ensuring financial savings that would cover the project costs within a defined repayment period.

The repayment period was structured over a span of 10 years, during which the hospital would repay the ESCO from the savings generated by the reduced energy costs. This model ensures that the hospital did not

[313] https://www.zakonyprolidi.cz/cs/2000-218

[314] https://www.mpo.gov.cz/cz/energetika/energeticka-ucinnost/energeticke-sluzby/energeticke-sluzby-se-zarukou---energy-performance-contracting-epc--105425/

[315] https://www.eib.org/en/products/advisory-services/elena/index

bear any upfront costs, and the financial risk was transferred to the ESCO. The ten years period of guaranteed energy savings commenced in spring 2024.

The project has successfully achieved notable energy savings, with annual reductions in energy consumption amounting to approximately 2,500 MWh. The guaranteed annually savings is translated into yearly savings of €680k in energy cost. Additionally, the project has resulted in a reduction of CO_2 emissions by 1,200 tonnes annually, contributing positively to the hospital's environmental impact.

The project was funded with a 55% grant from Operational Programme Environment and 45% from New Green Savings programme of the State Fund for Environment.

Integrating financial instruments could efficiently substitute a portion of grant funding, especially for EPC projects that guarantee substantial energy and cost savings over an extended period. Given the 10-year period of guaranteed savings, financial instruments could be structured to bridge the gap between the total investment cost and the projected savings.

For instance, funding could be provided with maturity exceeding the guaranteed savings period in 5-10 years. This approach would not only reduce the dependency on grants but also leverage the future cost savings to finance the initial investment. This method ensures a steady return on investment while maintaining financial viability and encouraging the implementation of more energy efficiency projects.

Conclusion

The energy efficiency project at PNB exemplifies the effectiveness of the EPC model in achieving substantial energy savings and financial benefits without imposing upfront costs on the client. Through strategic funding, including the valuable grant from the Operational Programme Environment, the project not only met but exceeded its initial goals. The hospital now enjoys reduced energy costs, improved comfort levels, and a significantly lower environmental footprint, setting a benchmark for future energy efficiency initiatives in the healthcare sector.

3.7.4 Clean Mobility

Clean mobility is intricately linked to sustainable finance, as the transition to greener transportation systems requires substantial financial investment and innovative funding approaches.

Investments in clean mobility can lead to significant environmental benefits, including reduced greenhouse gas emissions and improved air quality. Financing mechanisms such as green bonds, government grants, and private sector funding are crucial in supporting the development and deployment of clean transportation technologies. By aligning financial incentives with environmental goals, stakeholders can accelerate the adoption of electric vehicles, expand public transportation networks, and enhance cycling infrastructure.

International Practice

According to the Good Practice Report, Germany stands out with its comprehensive approach to promoting clean mobility. **The German government offers substantial financial incentives, including a premium for the purchase of electric vehicles and plug-in hybrids. Buyers can receive up to €9,000 in subsidies[316],**

[316] https://www.nrb.cz/produkt/elektromobilita/

combining federal support and manufacturer discounts. The country also grants tax exemptions and reductions for electric vehicle owners, further encouraging the adoption of sustainable transport.

Furthermore, Germany is heavily investing in the expansion of its EV charging network, with a goal of having one million charging points by 2030[317]. Grants are available for both private individuals and businesses to install charging stations. **The KfW Development Bank[318] provides low-interest loans for projects enhancing sustainable mobility, including the electrification of public transport fleets and the development of bike-sharing systems[319].**

The Dutch electric vehicle (EV) market experienced a significant downturn following the withdrawal of government support. In 2020, EV sales reached a record high of 69,000 units, buoyed by generous subsidies and tax incentives. However, once these incentives were scaled back in 2021, sales plummeted to just 42,000 units, a staggering 39% decline. **This sharp drop in sales not only highlighted the dependency of the EV market on governmental support but also underscored the financial challenges faced by stakeholders**, particularly leasing companies, in sustaining a profitable EV market without such backing[320].

Situation in Czechia

Charging Infrastructure. Development of charging station networks is pivotal to Czechia's transition to electric fleets. Currently, there are over 1,200 public charging points across the country, with plans to double this number by 2025. Prague alone has more than 400 charging stations, while Brno and Ostrava host approximately 200 each. The government has earmarked significant funding to support the expansion of these networks, with targets to install fast chargers at intervals of 60 kilometres along major highways. This ensures that electric vehicle (EV) drivers can travel long distances without the concern of running out of power[321].

Battery Electric Vehicles ('BEV') Uptake. The expansion of electric fleets is not limited to personal vehicles. The Czech Republic is also witnessing a significant shift towards electric load vehicles. Logistics companies and public transport operators are increasingly investing in electric trucks and buses, driven by the dual imperatives of reducing emissions and complying with stringent environmental regulations. These electric fleets are part of a broader vision to transform the transportation sector, making it more sustainable and less reliant on fossil fuels[322].

In 2023, the market for electric vehicles in Czechia saw significant growth. According to recent data, a total of 7,200 BEVs and 3,500 PHEVs were sold throughout the year. This represents a year-on-year increase of 25% for BEVs and 20% for PHEVs, reflecting the growing consumer interest and confidence in electric mobility[323].

As of the end of 2023, the cumulative number of electric vehicles on Czech roads has reached a notable milestone. There are currently 25,000 BEVs and 15,000 PHEVs registered in the country. The substantial

[317] https://www.bmwk-energiewende.de/EWD/Redaktion/EN/Newsletter/2020/01/Meldung/news2.html

[318] https://www.kfw-entwicklungsbank.de/International-financing/KfW-Entwicklungsbank/

[319] https://www.kfw-entwicklungsbank.de/International-financing/KfW-Development-Bank/News/News-Details_506496.html

[320] https://cleantechnica.com/2022/02/03/dutch-electric-car-market-in-decline-in-2021/

[321] https://www.cez.cz/

[322] https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/czech-republic

[323] https://scopesdata.com/sustainability-country-information/czechia-2023

presence of these vehicles underscores the country's commitment to reducing emissions and transitioning to sustainable transportation solutions[324].

For example, the city of Prague has recently launched an ambitious project to replace its entire fleet of diesel buses with electric alternatives by 2030, which is funded by an EIB loan. The project aims to reduce the city's carbon footprint by 50% and improve air quality for its residents[325]. Additionally, České dráhy is investing in hybrid trains that combine electric and diesel power, particularly for routes that are not yet fully electrified.

Sustainable Finance Initiatives. Beyond the governmental support, the development of clean mobility in Czechia is significantly bolstered by sustainable finance initiatives. Financial institutions in the country are increasingly recognizing the potential and necessity of investing in green technologies and infrastructure. **Financing options are not limited to traditional banking products. NDB provides subsidies and guarantees to clients of leasing companies supporting the EV purchase and installation of private charging stations[326].**

Opportunities and Advantages

Sustainable finance products not only provide capital for the development of electric vehicles and charging infrastructure but also come with favourable terms that reward companies for meeting specific environmental targets.

Utilisation of International Financial Institutions Funding. EIB and other international financial institutions play a crucial role by offering low-interest loans and grants for green projects. These financial instruments not only enhance the affordability of electric vehicles (EVs) and related infrastructure but also accelerate transition to a low-carbon economy.

Opportunities for an Integrated Support Approach. Government policies aimed at providing subsidies or financial instruments can also offer tax incentives for clean mobility encouraging both BEV dealers and consumers to adopt cleaner technologies.

Risks and Challenges

Fragmented Support. For clean mobility, the state support is divided into different programmes and funds, each of them having unique conditions, call planning, evaluation and also separated channels to apply for support:

- **The New Green Savings Programme (NZÚ)** provides subsidies for the construction of home chargers[327];
- **The Modernization Fund** offers support for municipalities to build public charging infrastructure, but there is a limited allocation of funds and a high administrative burden[328];
- **NRP[329]** supports private charging stations installations only for businesses**.**

[324] https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/czech-republic

[325] https://www.ivecogroup.com/media/brand_press_releases/2023/EMEA-(English)/Iveco-Bus/iveco_bus_wins_major_tender_in_the_czech_republic_to_supply_up_to_140_urbanway_articulated_hybrid_buses_to_the_prague_public_transit_companynbsp_20230412T085929T815_lktenvgakw3jji5dpydxi5xl

[326] https://www.nrb.cz/

[327] https://2014-2021.novazelenausporam.cz/about-the-new-green-savings-programme/

[328] https://modernisationfund.eu/

[329] https://www.planobnovycr.cz

- **OPTAK**[330] supports acquisition of BEV and private charging stations installations for businesses only in a form of a guarantee financial instrument implemented by NDB**.**
- **OPD** supports the construction of public charging stations along major transport routes, but its implementation is slow and has its own set of conditions[331].

Even in this complex system, there are blind spots, e.g. households do not get any support for acquisition of BEVs, unlike other surrounding countries like Germany. In EU countries, such support is typically granted smoothly by tax incentives.

There is no common body in place (beside the central government) coordinating all the programmes mentioned above.

This fragmentation makes it difficult for potential applicants to research which programme is right for them and applicants often face different requirements for the same type of investment. The allocation of funds between these programmes is also unbalanced and insufficiently coordinated.

Secondary Market Pricing Challenge. Leasing companies face a unique set of challenges when it comes to the secondary market price of electric vehicles (EVs), especially in a climate where new EVs are becoming increasingly affordable and offer longer range than older models. As the initial purchase price of new EVs decreases, the resale value of older models is likely to drop, potentially leading to significant financial losses for leasing companies that rely on the residual value of these vehicles to remain profitable. This depreciation not only affects their bottom line but also complicates the financing structures they offer, making it harder to present attractive leasing deals to customers.

3.7.5 Affordable Housing and Sustainability

Affordable housing is a critical component of sustainable urban development, aimed at ensuring that all individuals, regardless of their income, have access to safe and affordable homes. This concept not only addresses the immediate need for shelter but also contributes to socio-economic stability and environmental sustainability.

Investment in affordable housing is typically structured through a combination of public and private funding sources. Governments often play a vital role by providing subsidies, grants, and low-interest loans to developers. Public-private partnerships are also common, where private developers undertake the construction of affordable housing projects with financial incentives or regulatory support from the government.

International Practice

Germany has embraced sustainable finance to boost its affordable housing sector. The country's green finance market is robust, with numerous banks offering special loans for projects that meet energy efficiency and sustainability criteria. **Additionally, the German government provides tax incentives and guarantees to investors who prioritize green housing initiatives. These efforts have led to a surge in the construction of affordable, energy-efficient homes**[332].

Situation in Czechia

[330] https://www.optak.cz

[331] https://dotaceeu.cz/en/evropske-fondy-v-cr/kohezni-politika-po-roce-2020/programy/list/op-doprava

[332] https://bundesfinanzministerium.de/Content/EN/Standardartikel/Press_Room/Publications/Brochures/sustainable-finance-strategy.html

In Czechia, significant efforts have been made to support affordable housing through the State Fund for Investment Support (SFPI). The SFPI has been a pivotal player in the development of affordable housing by leveraging various financial instruments and programs. One of their most noteworthy recent efforts has been achieved through the Recovery and Resilience Facility (RRF) programme, which aims to accelerate the creation of sustainable and affordable housing units across the country by providing €350 million in the form of soft loan and subsidy[333].

SFPI has allocated substantial resources towards these goals. In 2023 alone, the SFPI invested approximately €163.2mil in affordable housing projects. These funds have been channelled into a variety of initiatives, including the construction of new housing units, the renovation of existing buildings improving energy efficiency, and the creation of mixed-use developments that incorporate affordable housing[334].

The SFPI's approach involves close collaboration with both public and private sector partners to design and implement financial instruments that maximize the impact of their investments. SFPI offers low-interest loans and grants to developers who commit to building affordable and sustainable housing[335].

Opportunities and Advantages

Affordable Housing as a Flagship of Sustainability. One key advantage for developers is the ability to build affordable housing that meets or even exceeds average environmental standards. This is not only beneficial for the environment but also adds value to the properties, making them more attractive to future residents who are increasingly prioritizing sustainability. With the SFPI's support, these projects can incorporate advanced energy-efficient technologies and sustainable building materials, which can reduce operational costs over time and provide healthier living conditions.

Cooperation with Private Sector. Moreover, the creation of mixed-use developments that include affordable housing beside common housing options can foster more integrated and resilient communities. Developers can take advantage of this by creating vibrant, multi-purpose spaces that attract a diverse mix of residents and businesses, thereby enhancing the overall economic vitality of the area. There is also a room for development of PPPs.

Social Bond Opportunity for SFPI. Another intriguing possibility is for the SFPI to create its own social bond framework. Such a framework could attract a new class of socially responsible investors who are eager to support projects with clear social benefits. This would not only provide additional funding for affordable housing initiatives but also enhance the SFPI's reputation as a leader in sustainable finance.

Risks and Challenges

Financial Instability and Limited Funding. Without sustainable finance, the primary source of funding for affordable housing projects would likely remain conventional loans and government subsidies. This can lead to financial instability and limited availability of funds. Traditional financing options are often insufficient to meet the high demand for affordable housing, resulting in a significant shortfall in the number of housing units available to low- and middle-income families.

Reduced Social Impact. The absence of sustainable finance could lead to the development of affordable housing projects that do not fully consider the social aspects of community building. Mixed-use developments and other initiatives that promote social integration and resilience may be overlooked, resulting in less vibrant and

[333] https://sfpi.cz/

[334] ibid.

[335] ibid.

economically diversified communities. This could exacerbate social inequalities and limit the overall quality of life for residents.

Challenges in Meeting Policy Goals. Czechia has set ambitious goals for both housing affordability and environmental sustainability. The non-utilization of sustainable finance could hinder the country's ability to meet these targets. The lack of funding and support for eco-friendly affordable housing projects would make it challenging to achieve the envisioned reductions in carbon emissions and improvements in living standards for all citizens.

3.7.6 Supporting Sustainable Finance with Financial Instruments

To promote the integration of sustainable finance, a variety of financial instruments can be employed. These tools are designed to channel capital into projects that yield both financial returns and positive environmental and social outcomes. They include green bonds, social impact bonds, sustainability-linked loans, and green mortgages, among others. Each of these instruments offers unique mechanisms and incentives to attract investments into sustainable projects, ensuring that funds are allocated efficiently and effectively.

The role of national development banks in this ecosystem is crucial. These banks are pivotal in mobilizing significant financial resources and directing them towards sustainable projects that align with national and international sustainability goals. **By offering green loans, guarantees, and other financial products, they help derisk and prioritise sustainable investments private investors, thus catalysing further investment into green and socially responsible projects**. National development banks also play a crucial role in implementing government policies and initiatives aimed at fostering sustainable development, ensuring that the financial mechanisms in place are accessible and effective.

International Practice

The German development bank KfW Bankengruppe has a long-term strategy to support the transition to sustainable economy by financing energy efficiency, renewable energy sources and industrial innovation. In 2022, KfW provided more than €33bn for projects related to the climate and environmental protection[336].

For example, it offers the following products:

- **KfW Energy Efficiency Programme**: This programme provides loans with low interest rates for projects focused on the energy efficiency of buildings and industrial processes[337].
- **KfW Renewable Energy Programme**: This programme offers financing for the construction of facilities to produce energy from renewable sources, such as wind and solar power plants[338].
- **KfW Innovation and Digitization**: This programme supports digital and innovative projects that contribute to the decarbonisation of industry[339].

The French development bank Bpifrance plays a key role in supporting sustainable projects through the financing of small and medium-sized enterprises (SMEs) and innovation. Its strategy includes the support of

[336] https://www.kfw.de/kfw.de.html

[337] https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000003416_M_292_293_EEP_Produktion.pdf

[338] https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000000178_M_270_EE-Standard.pdf

[339] https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000004011_M_380_390_391.pdf

energy transformation, especially in the fields of industry and transport. By 2022, Bpifrance has allocated more than €7bn[340] to sustainable projects. For example, it offers the following products:

- **Green Loans (Prêts Verts)**[341]: They provide financing of up to €5m for projects that contribute to reducing CO2 emissions, improving energy efficiency and using renewable energy sources.
- **Climate Plan**: Bpifrance offers financing for projects that are in line with the goals of the Paris Agreement and supports innovation in green technologies[342].

Situation in Czechia

The National Development Bank (NDB) in Czechia focuses on supporting small and medium-sized enterprises, including financing projects focused on energy efficiency and ELENA technical assistance[343]. However, the volume of financing provided is smaller compared to development banks in the aforementioned countries. The volume of financing for sustainable projects in Czechia is more limited; in 2022 the NDB provided around €40.8mil for[344] projects related to energy savings, which is significantly less than the volumes in the aforementioned countries[345].

NDB offers the following sustainable finance products:

- **Energy savings loan**: Provides loans with a lower interest rate for projects focused on energy savings with a grant component.
- **Clean Mobility Guarantee**: Provides guarantee for a leasing with a grant component, available only for businesses and sole traders.

SFŽP also provides support through preferential financial instruments in the field of sustainability[346]**.** It notably cooperates with savings banks in the Oprav dům po babičce (Repair Your Grandma's House) programme[347].

SFPI is an active player in the field of financial instruments in affordable housing, as described in more detail above.

Opportunities and Advantages

Strengthening the Role of NDB and State Funds. NDB has the potential to become a key player in the field of sustainable financing in Czechia. This role would involve working closely with the State Environmental Fund (SFŽP)[348] and other public and private entities. **Cooperation with commercial banks would be essential for the NDB**, especially in supporting SMEs and larger firms that implement sustainable projects.

Furthermore, NDBs and state funds can leverage their unique position to attract international funding and investment. By advocating for and implementing sustainable projects, they can gain access to global green funds,

[340] https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.bpifrance.fr/download/media-file/77985&ved=2ahUKEwiTqYDLo7mIAxXb87sIHXHtGcAQFnoECBIQAQ&usg=AOvVaw0qwab3bRWQpZoKj_aYSkIV

[341] https://www.bpifrance.fr/catalogue-offres/pret-vert

[342] https://www.bpifrance.fr/nous-decouvrir/bpifrance-banque-du-climat

[343] https://www.NDB.cz/en/

[344] https://www.nrb.cz/produkt/uspory-energie/nove-uspory-energie-optak/

[345] Ibid.

[346] https://www.sfzp.cz/

[347] https://mmr.gov.cz/cs/narodni-dotace/podpora-a-rozvoj-regionu/podpora-rozvoje-regionu-2023/podpora-obnovy-a-rozvoje-venkova

[348] https://www.sfzp.cz/

climate finance initiatives, and partnerships with international organizations dedicated to sustainability. This influx of external capital not only boosts the local sustainable finance market but also enhances the credibility and reach of these institutions.

Preferential Funding Conditions. Another significant advantage is the ability of NDB and state funds to offer tailored financial products that cater specifically to the needs of sustainable projects. This includes offering long-term loans with favourable terms and specialized credit lines that commercial banks may not provide. Such financial instruments are crucial for overcoming the initial high costs associated with sustainable projects, thereby encouraging more enterprises to embark on green initiatives. Such initiatives shall also use commercial as natural channels to reach funds down to the final recipients.

Risks and Challenges

Limited Funding Capacities and Lack of Long-Term Strategy. The NDB would focus exclusively on supporting sustainable projects, allowing the expansion of capacities and financial resources. Currently, however, the NDB faces several challenges. Its own capacities and financial resources are limited, and, despite its importance, it belongs to the smallest banks in Czechia. For its transformation process to be successful, it is essential for the NDB to have a credible and well-structured strategy embracing prioritisation of NDB product development and resource planning. The discussed €4 billion state guarantee for NDB liabilities may help solve the situation, but as it is not envisaged to aim only at sustainable activities, it could be expected only limited impact of this action on sustainable finance development and closing the €67 billion funding gap towards 2030 identified in Chapter 3.6[349].

The NDB has the potential to become a key player in the field of sustainable finance, but its success will depend on the creation of a credible strategy, capacity expansion and effective cooperation with commercial banks and other partners. Inspiration from practice in Germany, France, the Netherlands and Poland shows that state-owned banks can play a vital role in promoting sustainable development if they are well organised and strategically focused.

Reluctance in Using Commercial Banks as Financial Intermediaries. So far, state institutions have only used cooperation with private financial institutions through financial instruments to a very limited extent when distributing support for sustainable projects. In practice, the “fund of funds” model can very effectively distribute support and motivate their clients to invest in sustainability, as shown by examples from other countries, including neighbouring Germany. Fund of funds structure involves entrusting the implementation role to private financial institutions which have a long-term relationship with their clients and robust channels of communication. National development financial institutions in the EU mainly act as providers of green credit lines, global guarantees and counter-guarantees, leaving the work with individual clients to the private sector. Such a system is more efficient, cheaper and faster than the prevailing model in Czechia, where each individual applicant must apply for support from a state institution.

Misalignment to Standards. As the current NDB sustainable finance offering is utilising EU funding, the funding conditions are aligned with specific EU programmes requirements instead of widely recognised sustainable finance standards such as EU Taxonomy. This may later lead to misalignment of NDB products with expectations of commercial banks as financial intermediaries[350].

Discouraging Private Investors. Moreover, the lack of robust support for sustainability projects could deter private investments, as investors in other countries often rely on the backing and stability provided by state-owned banks.

[349] https://www.mfcr.cz/cs/ministerstvo/media/v-mediich/2023/spojme-se-s-ceskou-exportni-bankou-rika-51750

[350] https://www.ndb.int/wp-content/uploads/2020/05/2020_FC22_AI13_018_b-NDB-Sustainable-Financing-Policy-Framework.pdf

Without the NDB's active participation, the financial market might remain wary of the long-term viability of green projects, thereby inhibiting the influx of much-needed capital into this critical sector.

Fragmented Support. Furthermore, the absence of a strategic and well-structured approach from the NDB might lead to fragmented efforts that fail to address the comprehensive needs of sustainable development. This could result in inefficiencies, duplicated efforts, and a misallocation of resources, ultimately undermining the broader goals of sustainability and environmental protection.

Mindset Constraints. Another major challenge is the resistance to change within the institution. Shifting from conventional financing models to those prioritizing sustainability involves altering deeply ingrained practices and mindsets. Such transformation demands comprehensive training programs, continuous learning, and a willingness to adopt innovative financial instruments tailored to green initiatives.

3.7.7 Technical Assistance

Technical assistance from states, such as regional decarbonisation centres recommended by the European Commission and assistance from international financial institutions, such as the EIB[351] and EBRD[352], can significantly help banks and other financial institutions to increase the volume of sustainability financing.

International Practice

The EIB and the European Bank for Reconstruction and Development (EBRD) play a key role in supporting the financing of energy savings and sustainability in Europe, in particular by providing technical assistance to states, banks and other financial institutions.

The EIB Green Gateway technical assistance programme is designed to support the transition to a low-carbon economy by assisting EIB group financial intermediaries in the preparation and implementation of projects that contribute to energy savings and sustainability. This programme offers a comprehensive range of services, including feasibility studies, project structuring, and the identification of appropriate financial instruments. By providing expert guidance and tailored solutions, the Green Gateway initiative aims to mitigate risks and enhance the bankability of sustainable projects. It serves as a vital conduit for channelling investment into renewable energy, energy efficiency, and other climate-friendly ventures, thereby advancing the EU's overarching environmental objectives.

EBRD focuses on financing sustainable projects in Central and Eastern European countries, including Czechia. The EBRD provides support to banks and other financial institutions around ESG risks, green energy financing and technical assistance. The EBRD also works with governments and the private sector to create an appropriate regulatory framework for the development of sustainable projects.

Situation in Czechia

EIB technical assistance through the ELENA (European Local Energy Assistance) programme is very active in Czechia with 6 projects already implemented by the Capital City of Prague, NDB, Central Bohemian Region, Komerční banka or MoIT with total expected investment of €685m[353]. ELENA is a joint initiative of the EIB and the European Commission which provides technical assistance for the preparation of energy-efficient projects at the local level. ELENA focuses on supporting public and private entities in the

[351] https://www.eib.org/en/index

[352] https://www.ebrd.com/home

[353] https://www.eib.org/en/products/advisory-services/elena/map.htm

implementation of projects aimed at increasing energy efficiency, the use of renewable energy sources and sustainable transport. The program covers up to 90% of the costs of technical support, such as feasibility studies, technical preparation of projects, administrative costs and other key steps before the actual financing of the project[354].

Opportunities and Advantages

Key areas where technical assistance can assist access to sustainability finance are:

Risk Reduction. Quality technical assistance helps reduce the risks associated with financing energy savings and sustainable projects. Through detailed studies and analyses, banks can understand the economic returns of these projects and adapt their credit terms.

Access to Finance. Projects prepared with the support of technical assistance have a higher chance of obtaining financing because they are structured and meet the requirements of financial institutions. This is especially important for small and medium-sized enterprises (SMEs), which often do not have sufficient capacity to prepare complex projects.

Innovation Support. Technical assistance supports the implementation of innovative solutions in the fields of energy and sustainability. As a result, banks can finance projects that bring new technologies and approaches, supporting the transition to low-carbon economy.

Risks and Challenges

Non-compliant Projects. **Lack of expert guidance can lead to poorly structured projects that fail to meet the stringent criteria set by financial institutions**. This can result in lower chances of obtaining necessary financing, particularly affecting small and medium-sized enterprises (SMEs) or municipalities that often lack the internal resources to navigate complex project requirements.

Aligning projects with the EU Taxonomy for sustainable activities becomes more difficult. **Without specialized support, projects may struggle to demonstrate compliance with EU Taxonomy, thereby failing to attract green financing or investment**. This misalignment can also lead to reputational risks, as stakeholders increasingly demand transparency and adherence to recognized sustainability standards.

Slow Adoption of Innovation. The absence of technical assistance can hinder innovation in sustainable technologies and approaches. In the fields of energy and sustainability, where rapid advancements are essential for a low-carbon transition, the lack of support may stifle the development and implementation of new, impactful solutions. As a consequence, the broader goal of achieving a sustainable, low-carbon economy could be delayed, with significant long-term implications for both the environment and the economy.

3.8 Capacity Building in Sustainability

A major barrier to the development of a robust and credible finance ecosystem is the widespread lack of awareness, appropriate skills, and capabilities. Achieving sustainable financial literacy is crucial for creating a resilient financial sector. A comprehensive understanding of sustainable transition concepts, goals, content and data is vital among financiers, businesses, and public servants to enable informed investment decisions and mitigate the risks of greenwashing.

International Practice

[354] https://www.eib.org/en/products/advisory-services/elena/index

The German government established an independent Sustainable Finance Advisory Committee with 34 members from the financial sector, real economy, academia, and civil society. The Committee advises the German government on the development of its Sustainable Finance Strategy and promotes dialogues among various stakeholder groups. Furthermore, **the Dutch National Bank set up the Sustainable Finance Platform** to boost awareness and implementation of sustainable finance. Additionally, promoting science and research is an essential element of the German government's initiatives, for example through funding **the Sustainable Finance Research Platform**[355]**.**

Situation in Czechia

The development of **sustainable finance education in Czechia is still in its early stages, although it shows promising signs of growth**. Initiatives like specialised tracks, master's programmes and institutes dedicated to sustainable finance have emerged, and they represent the initial steps towards building a robust educational framework in this field. As awareness of ESG principles continues to rise, these efforts are likely to expand, fostering a more comprehensive understanding of sustainable finance practices among students and professionals alike.

MoF laid the groundwork of the **Sustainable Finance Platform** launched in 2023. This initiative aims to centralize information and resources related to sustainable finance, offering a one-stop-shop for stakeholders including both private and public sector representatives. By providing access to a wealth of knowledge, the platform facilitates discussion and informed decision-making, while enhancing the understanding of ESG principles among financial market participants. The platform is poised to play a critical role in promoting sustainable finance, fostering dialogue among stakeholders, and accelerating the integration of sustainability in the financial sector in Czechia.

A positive signal in the awareness landscape is also that the **MoF intends to publish a comprehensive website with one-stop-shop information on sustainable finance in the second half of 2024.**

The **Czech National Bank** (CNB) prepares methodological and interpretative documents as an overview of current official information. Furthermore, it is planning to be provide materials for discussions and financial market participants.[356]

The **Czech Banking Association** facilitates ESG seminars.[357] These seminars describe the global context of ESG and the implications for sustainability in Europe and Czechia. It focuses on practical initiatives related to sustainability and emphasizes the crucial role of the banking sector in translating ESG theory into practice and implementing reporting frameworks, ESG scoring and utilising ESG data in banking[358].

When it comes to higher education, institutions are beginning to pave the way for sustainable finance and environmental studies. At the University of Chemistry and Technology in Prague, **a master's degree in Sustainability and Environmental Engineering**[359] offers students comprehensive knowledge in subjects like environmental chemistry, microbiology, and waste handling technologies. Meanwhile, the Czech University of Life Sciences provides a **master's degree in Environmental Modelling**. Other universities are currently developing and implementing sustainability-related programmes.

[355] https://www.dnb.nl/en/green-economy/sustainable-finance-platform/

[356] https://www.cnb.cz/cs/

[357] https://www.cbaeducaplus.cz/esg-seminar-novinky-v-esg/

[358] https://cbaonline.cz/esg-seminar-2023

[359] https://study.vscht.cz/bachelor-master-information/master-programmes/an208

At the University of Economics in Prague, the **Institute of Sustainable Finance ('IUF')** serves as a hub for students and professionals interested in sustainable finance. Operating across educational, pedagogical, and research pillars, IUF organises events like the ESG Summit and offers certified ESG training for institutions.[360]

Furthermore, the University of Economics in Prague is in the process of developing a master's degree in Sustainability, which will offer a more comprehensive and in-depth exploration of sustainable practices. The master's degree in Sustainability is scheduled **to commence in September 2025**.

Opportunities and Advantages

Role of the Sustainable Finance Platform. It can play an important role in stakeholder engagement through elevating awareness and hastening the involvement of finance professionals with representants from public and private sector.

Training and Capacity Building in Key Institutions. Enhancing the training and developing capacities of relevant personnel in key institutions such as CNB, NDB and relevant ministries (MoF, MoIT, MoT) can foster awareness and foster active engagement. This involves not only education about the role of finance in the transition but also convening stakeholders to build a shared understanding and vision of sustainability.

Risks and Challenges

Mediocre Level of Sustainability Knowledge and Management Involvement across Real Economy. The Surveys and the workshop discussions with stakeholders during the Assignment show that the concept of ESG and its ensuing application in sustainable finance is still not perceived by the management of many real economy businesses as a factor conducive to future success and competitiveness, in particular by the businesses with Czech capital and SMEs. As such, the capacity building in sustainability and sustainable finance related areas are not seen as a priority, leading towards insufficient number of experts within the companies.

National Centre of Excellence for Sustainable Finance is Missing. Czechia has no national public institute committed to accelerating the transition towards an environmentally sustainable and resilient economy on an ongoing expert and scientific basis. As a result, unless the centre of excellence focused on channelling capital at pace and scale towards real-economy outcomes for creation of high-value jobs and increase of prosperity for all sustainable finance is established, Czechia would struggle to catalyse investment in sustainability at scale.

[360] https://iuf.vse.cz/

4 Barriers and Bottlenecks (Challenges)

This concluding chapter of the Diagnostic Report comprises the challenges and risks identified above. The challenges are grouped into five thematic and sectoral pillars by areas used also in the preceding chapter for easier orientation. Each pillar addresses specific issues pertinent to their respective areas, thereby allowing for a focused and detailed examination of the intricacies involved.

Figure 10: Five Thematic and Sectoral Pillars of Sustainable Finance Challenges in Czechia

ESG Data, Risk Management and Disclosure

- Sustainability Reporting and Disclosure
- ESG Risk Management and Capital Requirements

Sustainable Finance Products

- Green Bonds
- Sustainability-Linked Finance
- Green Loans and Green Mortgages
- Transition Finance Products
- Social Bonds
- ESG Ratings
- Sustainability and Insurance
- Certification of Sustainable Finance Products

Public Sector

- Green Budgeting
- Sovereign Green Bonds
- Transparent Investment Environment and Sustainability
- Support for Financing the Development of Sustainable Infrastructure
- Sustainable Public Procurement
- Sustainability and Companies with State Participation
- Municipalities, Regions and Sustainability Financing

Non-Financial Enterprises and Sustainable Finance

- Sustainability and Large Enterprises
- Sustainability and SMEs

Motivating the Private Sector to Invest in Sustainable Activities

- Support for the Development of Renewable Energy Sources
- Energy Efficiency and EPC
- Clean Mobility
- Affordable Housing and Sustainability
- Supporting Sustainable Finance with Financial Instruments
- Technical Assistance
- Capacity Building in Sustainability

Financial institutions in Czechia face several challenges related to **ESG data, risk management, and disclosure**. These include a lack of access to high-quality, verified public sector data necessary for regulatory compliance, which affects their ability to assess climate risks accurately and secure financing. The inconsistency in ESG criteria adoption and documentation among European banking groups leads to non-comparable data and increased administrative burdens. Additionally, evolving regulations require constant adaptation, imposing extra costs and complicating strategic planning. Technological and infrastructural challenges further add to the complexity, as banks must continuously invest in systems to integrate ESG data. Lastly, the varying implementation of the EU Taxonomy across member states creates disparate data, complicating compliance and project assessment.

Development and utilisation of **sustainable finance products** also faces significant challenges in Czechia. Green bonds face challenges due to a lack of comprehensive sustainability planning and the need for a robust ESG framework. Sustainability-linked finance is hindered by the absence of standardized frameworks and benchmarks, making it difficult to attract ESG-focused investors. These issues slow the adoption of green technologies and practices, ultimately affecting the pace of innovation and competitiveness in the Czech market compared to more advanced markets like the Netherlands and Germany.

As regards challenges in the **public sector**, Czechia exhibits delayed and limited activity in sustainability, primarily focusing on EU legislation transposition without timely implementation or a cohesive national strategy, affecting the private sector's clarity and long-term planning. The national framework for sustainable finance is underdeveloped, lacking coordination and proactive collaboration, while significant budget deficits threaten economic stability and fiscal sustainability. Inefficiency in budgeting restricts fiscal flexibility, posing risks to vital public services and economic responsiveness. The absence of a systematic approach to climate change and transitioning to a low-carbon economy could lead to higher debt service costs and reduced market financing. Additionally, declining fossil fuel tax revenues and new reporting requirements for environmentally harmful subsidies highlight the need for more detailed state expenditure disclosures in environmental contexts.

Non-financial enterprises face several challenges in adopting sustainable finance, including a lack of awareness about its long-term benefits, cultural resistance within traditional Czech-owned businesses, and the complexities of evolving sustainability regulations. Access to reliable ESG data for measuring and reporting on sustainability performance is also a significant hurdle. The EU Taxonomy has a dual impact on businesses, being seen as both an opportunity and a challenge. For SMEs, the lack of resources and standardized solutions for ESG reporting makes integration difficult, emphasizing the need for education to meet regulatory requirements and access sustainable financing.

Challenges in **motivating the private sector to investing in sustainable activities** in Czechia, including fragmented state support for renewable energy sources (RES), energy efficiency, and clean mobility. There occur financing obstacles for photovoltaic projects due to banks' reluctance to absorb electricity price market risks, insufficient investment subsidies, and the complexity of securing power purchase agreements (PPAs) or contracts for difference (CfDs). Additionally, it addresses the excessive costs of integrating RES into the grid, legal and budgetary constraints hindering the implementation of energy performance contracting (EPC) for state-owned buildings, and the impact of declining resale values of electric vehicles (EVs) on leasing companies' profitability and financing options. Robust financial instruments and EU Taxonomy-aligned framework is also missing.

4.1 ESG Data, Risk Management and Disclosure

4.1.1 Sustainability Reporting and Disclosure

Lack of access to public sector data to create benchmarks. There is overall unavailability of complete, high-quality (verified) data in the required structure, granularity and correspondence with regulatory EU Taxonomy-aligned

requirements being provided at least to the financial institutions subject to regulations free of charge from the state, or also to companies with CSRD reporting obligations. Financial institutions in Czechia, on the other hand, lack available open data, methodologies and metrics or other forms of information flow from the state, e.g., from the point of view of interpretation of the EU Taxonomy in permit procedures and climate data for climate risk management.

Limited access to finance. If the banks had no reliable primary data e.g. on climate and other ESG risks in a specific industry like agriculture, banks would use proxies or only NACE codes for whole portfolio segment classification. This would logically lead to reduction in funding with the aim of delivering the 2030 or 2050 portfolio emissions trajectory and green asset ratio, regardless of real conditions of individual clients. The lower the quality of data for ESG risk assessment, the higher is the price and lower is the accessibility of funding.

4.1.2 ESG Risk Management and Capital Requirements

Diverse Approaches and Documentation. The adoption of ESG criteria varies significantly across large European banking groups, leading to a lack of uniformity in documentation requirements imposed on clients. Whereas credit risk process is highly standardised by corresponding CNB regulation, this is not the case of ESG risks. Czechia struggles with inconsistency and a lack of clear guidelines. This disparity makes data and documents from clients non-comparable and incompatible (with the exception of the ESG questionnaire), thereby slowing down the financing of sustainable projects and increasing the administrative burden for all parties involved. This is particularly evident in areas such as energy efficiency of buildings and demonstrating the fulfilment of sustainability criteria in agriculture.

Evolving regulation. Banks must constantly adapt to new regulations and standards, which can disrupt business operations and strategic planning. This uncertainty can also affect investor confidence, making it more difficult for banks to attract capital for sustainable projects. Navigating the complex regulatory landscape of ESG and climate risk management can be daunting. Non-compliance with evolving regulations can result in legal penalties, financial losses, and reputational harm**.** Banks must invest in compliance programs and ensure that their practices align with both domestic and international standards. This creates extra cost on consulting and bumpers the internal decision-making process.

Technological and Infrastructural Challenges. Implementing ESG and climate risk management requires investments in technology and infrastructure for the financial institutions. Czech banks have already made considerable investments in upgrading their existing or introducing new systems to support the integration of ESG data and analytics. Evolving regulation imposes additional cost on banks to adjust their systems to new conditions.

4.1.3 Implementation of the EU Taxonomy

Harmonised, not unified conditions. In each member state, demonstrating compliance at the project level with EU Taxonomy is done in a unique way. This leads to disparate and often incomparable data, which complicates the situation for both the companies and financial institutions that have to assess projects according to these rules. Mostly, Czech regulation and technical norms do not take EU Taxonomy into account yet, such as PENBs, biodiversity protection rules and many others. Another layer of complexity is e.g. complying with sustainability standards of EIB, which are also not 100% EU Taxonomy aligned, which complicates taking on new EIB framework loans and on-lending facilities.

Missing sustainability metrics in technical norms. The EU Taxonomy requires comprehensive reporting on emissions reductions and sustainable resource usage. However, Czech legislation on technical materials and manufacturing methods does not focus on sustainability metrics. This discrepancy leads to confusions and

significant administrative burden for sustainable project management and access to finance in manufacturing industry.

4.2 Sustainable Finance Products

Higher cost of capital for Czech companies. Investors are increasingly prioritizing sustainability, and companies that fail to meet these criteria may face higher borrowing costs or be excluded from certain funding opportunities. This could result in a competitive disadvantage domestically and internationally.

Loss of competitiveness. Moreover, with rising global demand for sustainable practices, consumer preferences are shifting towards environmentally and socially responsible products and services. Companies that fail to align with these preferences risk losing market share and facing reputational damage. This shift could be particularly pronounced in critical industries like manufacturing, energy, and transportation.

4.2.1 Green Bonds

Lack of comprehensive sustainability planning. Hence, the critical issue of limited green bonds issuance is the lack of comprehensive sustainability strategies among Czech companies. Many businesses struggle to identify suitable sustainable projects to channel the proceeds from green bonds. This gap is often due to predominant focus on carbon-intensive production, which is not aligned with the objectives of green finance. Sustainability-linked funding (see below) may still be available for such companies, but the lack of strategic approach to sustainability is hindering utilisation of such sources of funds. Developing robust sustainability strategies within companies is essential for the effective utilization of green bond proceeds.

Missing critical mass of sustainable projects meeting standards. As green bond standards require establishment of mechanisms to verify that projects meet the strict environmental criteria set by these standards, the issuer has to have a robust ESG framework already established within the company to seriously think about deploying green bonds as a source of finance. There also has to be an upfront long-term investment plan in place aligned with the selected standard for efficient use of proceeds. It is also important to mention additional cost for setting and monitoring the green bond framework, usually in terms of several hundreds of thousands of euros. Again, such cost is lower for companies, who already have well-established sustainability-related plans and reporting in place.

4.2.2 Sustainability-Linked Finance

Standardisation of frameworks. Without clear benchmarks and consistent reporting, companies struggle to demonstrate their sustainability initiatives, making it difficult to attract ESG-focused investors. The absence of these frameworks exacerbates the already low ESG awareness among Czech businesses, creating a vicious cycle of underperformance in sustainability metrics.

Slower green transition. Insufficient volumes of green and sustainability-linked funding could slow the adoption of green technologies and practices. As companies find it challenging to secure financing for their environmental and social initiatives, the overall pace of innovation in these areas may decelerate. This stagnation would make it harder for Czechia to keep up with more advanced markets like the Netherlands and Germany, where sustainability-linked finance is more mature and widespread.

4.2.3 Green Loans and Green Mortgages

Lack of standardisation and higher transaction cost. The challenges to increasing green mortgage and loan volumes include overcoming the high initial costs and the complexity of transitioning to greener operations. Banks need to invest in educating their customers and developing attractive financial products that offset these costs. There is also a need for stronger regulatory frameworks and government incentives to make green financing more accessible and appealing.

4.2.4 Transition Finance Products

Banks are Turning Away from Fossil Fuels. A critical aspect of transition finance is the role of banks and their funding policies towards the fossil fuel sector. Many banks are already moving away from financing fossil fuel-based activities, driven by regulatory pressures and the DNSH principle, which also prevents EU funds from supporting such activities. However, internal rules of banks may still allow for transition finance in cases where national benchmarks for decarbonisation strategies exist. This highlights the importance of having a coherent and comprehensive industrial decarbonisation strategies at the national level, which can steer financial institutions towards more sustainable investments.

Decarbonisation strategies are missing. Government policies and national benchmarks for decarbonisation strategies are essential in guiding financial institutions towards sustainable investments. In Czechia, there is an urgent need for the government to establish clear and ambitious decarbonisation targets, which could serve as benchmarks for transition finance. Furthermore, state support in the form of subsidies, tax incentives, and public-private partnerships could significantly boost the volume of transition finance.

Stranded assets. The risk of stranded assets in carbon-intensive industries would lead to lower innovation and economic stagnation, as industries reliant on outdated technologies may struggle to remain competitive on the global stage. This could lead to a decline in foreign investments and a slowdown in economic growth. Moreover, failing to attract sufficient transition finance could hinder the nation's ability to meet climate targets.

4.2.5 Social Bonds

Institutional Capacity. Czech governmental and financial institutions are yet to develop the necessary tools and expertise to evaluate and manage social bonds effectively.

Missing Certification and Standards. The absence of standardized certification processes and clear guidelines including social pillar of EU Taxonomy complicates the issuance and verification of social bonds.

Slower Achievement of Goals in Social Areas. Inability to scale up social bond issuance would mean missing an important vehicle for financing social projects. Social bonds are instrumental in addressing pressing issues such as affordable housing, healthcare, education, and social inclusion. By not leveraging this financial tool, Czechia risks slowing down the progress towards achieving critical social objectives, thereby perpetuating existing inequalities and social challenges.

4.2.6 ESG Ratings

Varying methodologies of ESG ratings. A significant challenge in the ESG rating landscape is the variation in methodologies used by different agencies. Each agency has its criteria, weighting systems, and evaluation processes, leading to inconsistencies and difficulties in comparing ratings across providers. For instance, one agency might prioritize environmental factors more heavily, while another might focus on governance issues. This lack of standardization can create confusion for investors and other stakeholders who rely on these ratings for decision-making. The methodologies also differ by sector, making direct comparisons among companies in different industries challenging.

4.2.7 Sustainability and Insurance

Missed Economic Opportunity. From a financial perspective, insurers that lag in integrating sustainability might miss the long-term value creation associated with green investments. Sustainable finance products often yield better risk-adjusted returns, and a failure to tap into these opportunities could lead to suboptimal investment performance and lower profitability. Additionally, climate-related risks will remain inadequately managed without

advanced analytics and artificial intelligence, exposing insurers to higher claims and financial instability due to more frequent and severe climate events.

4.2.8 Certification of Sustainable Finance Products

Greenwashing prevention is largely missing in the financial market. The lack of standardized products and recognized green labelling could lead to increased risks of greenwashing, where financial products are marketed as sustainable without substantiating their claims. This not only undermines investor trust but also jeopardizes the integrity of the entire sustainable finance market within the country. Investors and stakeholders may become sceptical, which can result in reduced investment inflows and a weakened reputation in the global financial community.

4.3 Public Sector

Delayed and limited activity. Czechia primarily focuses on the transposition of EU legislation in the realm of sustainability but often fails to implement these laws on time and lacks a comprehensive national strategy. The country tends to implement recommended tools, policies, and activities later than its neighbours, such as support for renewable resources, aggregation services, flexibility, and the hydrogen economy. As a result, the private sector lacks a clear understanding of the state's sustainability direction and has to operate without a long-term vision or strategic framework. There is a significant lack of political leadership and support and national coordination regarding sustainable finance.

Inadequate national framework for sustainable finance. The national framework for managing sustainability and sustainable finance is underdeveloped and understaffed, with inadequate connectivity and coordination across sectors and governmental bodies. This results in siloed approaches and impedes the integration of international best practices, as proactive collaboration is essential for advancing sustainable finance. This is a crucial, cross-cutting issue that cannot be successfully resolved without an appropriate coordination framework.

4.3.1 Value for Money Principle

Improvements in Budget Efficiency. Currently, Czechia faces significant budget deficits, which pose a substantial threat to economic stability. Persistently high deficits indicate that government spending consistently exceeds revenue, necessitating increased borrowing. This not only exacerbates the public debt issue but also limits the government's fiscal space to respond to future economic challenges or invest in critical areas such as healthcare, education, and sustainable infrastructure. The inability to curb these deficits would undermine fiscal sustainability and could even lead to a fiscal crisis.

Budget Accountability. A lack of value for money in state budgeting restricts fiscal flexibility. When resources are not used efficiently, there is less room to manoeuvre in adjusting expenditures to meet changing economic conditions. This could inhibit the government's ability to fund essential programs or respond to unexpected economic shocks. In the worst-case scenario, it could lead to cuts in vital public services, adversely affecting the quality of life for citizens.

4.3.2 Green Budgeting

Higher cost of debt service**.** Increased debt financing costs might arise if there is no demonstration of a long-term positive impact on the environment. Moreover, the public administration might face restricted access to market financing if it attempts to fund technologically obsolete solutions. Inefficient management of financial, personnel, and other resources within state administration may occur without a systematic and comprehensive approach to climate change issues and the necessary transition to a low carbon economy

Fossil fuel income and reporting. A gradual decline in tax revenues related to the production, distribution, or consumption of fossil fuels (e.g., consumption taxes and license fees) is also a risk. Additionally, there are new requirements to report environmentally harmful subsidies and fossil fuel subsidies[361], necessitating more detailed disclosure of state expenditures in environmental contexts.

4.3.3 Sovereign Green Bonds

Missed Opportunities for Capital Mobilization. Sovereign green bonds attract large-scale investments from both domestic and international investors prioritizing sustainable finance. Without them, Czechia may miss substantial funding for green projects like renewable energy infrastructures, energy efficiency upgrades, and sustainable transportation, slowing its transition to a low-carbon economy.

Reduced Transparency and Credibility. Issuing green bonds promotes transparency through adherence to internationally recognized sustainability standards and reporting requirements. Without them, Czechia might struggle to demonstrate its commitment to environmental stewardship, leading to decreased credibility among investors and stakeholders.

Non-Alignment with International Standards. Not issuing sovereign green bonds risks Czechia falling behind in aligning with international sustainability standards. This misalignment can isolate the sovereign from global green finance markets and collaborations, reducing opportunities for knowledge exchange and partnerships.

4.3.4 Transparent Investment Environment and Sustainability

Investor uncertainty leading to circumvention of Czechia on the investment map**.** There is the risk of continued investor uncertainty, leading to a reluctance to invest in long-term sustainable projects. This uncertainty is exacerbated by the lack of clear and consistent policies, which can lead to sudden and unpredictable changes in financial support mechanisms, such as subsidies and tax breaks.

Performance-based framework is missing in the public sector. Czechia faces a challenge of adopting a robust and transparent performance-based framework in strategic planning, subsidy management or tax and legislative measures.

4.3.5 Support for Financing the Development of Sustainable Infrastructure

Investor attractivity of EU Taxonomy-aligned projects. The funding conditions for infrastructure projects would likely worsen if not EU Taxonomy-aligned, making projects less economically viable. This would result in a higher reliance on traditional, potentially more polluting, sources of energy and infrastructure development, slowing the transition to a low-carbon economy. The opportunity to attract larger investors interested in green and sustainable projects would diminish. Sustainable finance products and alignment with EU Taxonomy offer a level of credibility and appeal to investors looking to support environmentally responsible initiatives. Without this alignment, Czechia could struggle to secure the necessary capital to fund large-scale decarbonization projects.

4.3.6 Sustainable Public Procurement

Sustainable public procurement as precursor to wider adoption of sustainable finance. Failing to apply sustainable public procurement practices can lead to several risks and challenges, particularly in the realms of decarbonisation and the adoption of sustainable finance as it is a necessary precursor for effective green budgeting and sovereign green bond issuance. Without a concerted effort to purchase environmentally friendly

[361] Notably recent amendment of EU Regulation No. 691/2011 on European environmental economic accounts.

goods and services, public institutions may inadvertently contribute to higher emissions and perpetuate reliance on non-renewable resources.

4.3.7 Sustainability and Companies with State Participation

Lack of coordination. The activities of companies with state participation in sustainability are not well-coordinated. The companies are lacking leadership from the responsible ministries and sometimes fail to coordinate among themselves. E.g. the Railway Administration ('SŽ') and railway carriers including České dráhy do not yet have aligned goals around decarbonization, which lead to a situation that České dráhy cannot decarbonise its business effectively without SŽ ensuring electricity from renewable sources. SŽ is not obliged to do so as it does not have any related KPIs imposed by the Ministry of Transport.

Risk of stranded assets. Companies active in the oil and gas ('O&G') industry like Net4Gas, ČEPRO or MERO risk becoming stranded assets if they do not propose a clear and actionable transition plan to secure funding. As the global energy landscape shifts towards renewables, the value of fossil fuel-based infrastructure could plummet, leaving them with underutilized or obsolete assets. This scenario underscores the urgency for these companies to align with sustainable finance principles to avoid significant financial losses and ensure long-term viability.

Resistance to change within the organizational culture. Employees and management teams may be reluctant to adopt new sustainable practices due to perceived risks or lack of immediate benefits. Overcoming this inertia requires strong leadership and a sharp vision for the future, supported by continuous education and engagement efforts.

4.3.8 Municipalities, Regions and Sustainability Financing

Lack of experts. Cities need to develop their project management capacities to be able to effectively plan, prepare and implement complex infrastructure projects, such as wastewater treatment plants, which are key to achieving environmental goals and improving the quality of life of residents. Lack of experts in project management, especially in smaller cities and towns, on the one hand and complexity of administrative processes on the other hand that prolong the preparation and approval of sustainable projects.

4.4 Non-Financial Enterprises and Sustainable Finance

4.4.1 Sustainability and Large enterprises

Missing awareness of benefits. Additionally, there is often a lack of awareness and understanding among businesses about the long-term benefits and financial returns of sustainable finance. Many companies are hesitant to allocate resources towards sustainability initiatives due to perceived risks and uncertainties.

Cultural resistance in traditional Czech-owned businesses. Cultural resistance within organizations also plays a role, as traditional business practices and short-term financial goals often take precedence over long-term sustainability objectives. This mindset can hinder the integration of sustainable finance into core business strategies.

Evolving regulation. Moreover, the complexity and evolving nature of sustainability regulations create a challenging environment for businesses to navigate. Keeping up with regulatory changes and ensuring compliance can be resource-intensive and may require specialized knowledge and expertise that many companies currently lack.

Access to reliable ESG data. Access to reliable data and metrics for measuring and reporting on sustainability performance is another significant hurdle. Without standardized metrics and reporting frameworks, businesses

may struggle to demonstrate the impact and value of their sustainability efforts to stakeholders, including investors and customers.

Dual sustainability impact. The EU Taxonomy has a dual impact on business strategies of real-economy actors. For some enterprises, the EU Taxonomy is perceived as an opportunity in terms of the sustainable orientation of their business, including emerging sustainable finance options. Others view it as a risk or challenge due to increased costs and regulatory burdens.

4.4.2 Sustainability and SMEs

Lack of own capacities and need for standardised solutions. SMEs often lack the resources or experience to manage the complexities of ESG reporting and other aspects of sustainable business on their own. Although larger companies are already starting to integrate ESG into their processes, it can still be a new and challenging topic for SMEs. Education regarding ESG reporting is key for SMEs to not only meet increasing regulatory requirements, but also to gain access to sustainable financing and remain competitive in the market.

4.5 Motivating the Private Sector to Invest in Sustainable Activities

Fragmented support. State support for the development of renewable energy sources (RES), energy efficiency, and clean mobility is divided among various programmes and funds, each with its own unique conditions, schedules for calls, evaluation criteria, and separate application channels. This complex system also has its blind spots. There is no single coordinating body (apart from the collective government) to oversee sustainability-related programmes.

4.5.1 Support for the Development of Renewable Energy Sources

Obstacles in access to finance. Solar power projects in Czechia encounter financing challenges because banks are unable to assume the market risk associated with electricity prices. Although the Modernization Fund offers investment subsidies, these are insufficient to mitigate the market risk for financing banks, which would be more willing to grant a loan if a Power Purchase Agreement (PPA) or Contract for Difference (CfD) were in place. Additionally, the aid intensity is inadequate to bridge the gap in price expectations between producers and electricity off-takers in PPAs, due to the limited natural conditions in Czechia. CfDs are also not a one-size-fits-all solution, as they assume sufficient market capacity, which is currently lacking for wind projects.

Grid integration cost. RES are intermittent by nature and can cause instability in the power grid. Ensuring that the grid can manage these fluctuations without compromising reliability requires significant investment in infrastructure and technology, which poses an additional financial challenge.

4.5.2 Energy Efficiency and EPC

Budgetary rules. Law No. 218/2000 Coll., Budgetary Rules, complicate the use of EPC projects[362] for buildings owned by state organisational units. The main issue is that EPC contracts typically set long-term liability at the level of the organisational unit (often 8–15 years), which is against state budget management rules. The budget is prepared annually for a short-term period and does not allow taking on long-term financial liabilities in the form of EPC contracts, which are financed from future savings.

Lack of technical assistance. ELENA programme provides technical and financial assistance for the preparation of projects aimed at energy savings, but typically for a specific region or a specific group of beneficiaries.

[362] https://www.mpo.gov.cz/cz/energetika/energeticka-ucinnost/energeticke-sluzby/energeticke-sluzby-se-zarukou---energy-performance-contracting-epc--105425/

4.5.3 Clean Mobility

Secondary Market Pricing. New EVs are becoming increasingly affordable and offer longer range than older models. As the initial purchase price of new EVs decreases, the resale value of older models is likely to drop, potentially leading to significant financial losses for leasing companies that rely on the residual value of these vehicles to remain profitable. This depreciation not only affects their bottom line but also complicates the financing structures they offer, making it harder to present attractive leasing deals to customers.

4.5.4 Affordable Housing and Sustainability

Financial Instability and Limited Funding. Without sustainable finance, the primary source of funding for affordable housing projects would likely remain conventional loans and government subsidies. This can lead to financial instability and limited availability of funds in grant programmes. Traditional grant schemes are insufficient to meet the high demand for affordable housing, resulting in a significant shortfall in the number of housing units available to low- and middle-income families.

Challenges in Meeting Policy Goals. Czechia has set ambitious goals for both housing affordability and environmental sustainability. The non-utilization of sustainable finance could hinder the country's ability to meet these targets. The lack of funding and support for affordable housing projects would make it challenging to achieve the envisioned improvements in living standards for citizens and also reductions in carbon emissions in the housing sector.

4.5.5 Supporting Sustainable Finance with Financial Instruments

Limited Funding Capacities and Lack of Long-Term Strategy in NDB. The NDB faces several challenges: its own capacities and financial resources are limited, and, despite its importance, it belongs to the smallest banks in Czechia. For its transformation process to be successful, it is essential for the NDB to have a credible and well-structured strategy embracing prioritisation of NDB resource planning and product development. The suggested state guarantee for NDB liabilities solve the situation only partly, but as it is not envisaged to aim only at sustainable activities, only limited impact of this action on sustainable finance development and closing the funding gap is expected towards 2030 goals identified in chapter 3.6.

Reluctance in Using Commercial Banks as Financial Intermediaries. National development financial institutions in the EU mainly function as providers of green credit lines, global guarantees and counter-guarantees, leaving the work with individual clients to the private sector. Such a system is more efficient, cheaper and faster than the prevailing model in Czechia, where each individual applicant must apply for support from a state institution. The "fund of funds" model involves entrusting the implementation role to private financial institutions which have a long-term relationship with their clients and robust channels of communication.

Misalignment with EU Taxonomy. As the current NDB sustainable finance offering is utilising EU funding, the funding conditions alignment with specific EU programmes requirements instead of widely recognised sustainable finance standards such as EU Taxonomy. This may later lead to misalignment of NDB products with expectations of commercial banks as financial intermediaries.

Discouraging Private Investors. Moreover, the lack of robust support for sustainability projects could deter private investments, as investors in other countries often rely on the backing and stability provided by state-owned banks. Without the NDB's active participation, the financial market might remain wary of the long-term viability of green projects, thereby inhibiting the influx of much-needed capital into this critical sector.

4.5.6 Technical Assistance

Non-compliant projects. Aligning projects with the EU Taxonomy for sustainable activities becomes more difficult. Without specialized support, projects may struggle to demonstrate compliance with EU Taxonomy, thereby failing to attract green financing or investment. This misalignment can also lead to reputational risks, as stakeholders increasingly demand transparency and adherence to recognized sustainability standards.

4.5.7 Capacity Building in Sustainability

Mediocre Level of Sustainability Knowledge and Management Involvement across Real Economy: The capacity building in sustainability and sustainable finance related areas are not seen as a priority, leading towards insufficient number of experts within the companies.

No National Centre of Excellence for Sustainable Finance: Czechia has no national public institute committed to accelerating the transition towards an environmentally sustainable and resilient economy on an ongoing expert and scientific basis.