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RECOMMENDATIONS REPORT

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Author(s)	*Deloitte*
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Contract Ref.	*C45505/8347/89508*

This document was produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of either the European Bank for Reconstruction and Development or the European Union. This Report is developed within the technical support project funded by the European Union via the Structural Reform Support Programme and implemented by Deloitte.

Delivery Date:	[●] 2022
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Subject:	**Recommendations Report – Designing Recommendations for a Sustainable Capital Markets Strategy and Action Plan for Hungary**
Contract Ref:	C45505/8347/89508

Dear Ladies and Gentlemen,

Reference is made to the project "*Designing Recommendations for a Sustainable Capital Markets Strategy and Action Plan for Hungary*" commenced on 31 August 2020.

Herewith, please find enclosed the final version of the Recommendations Report.

Yours sincerely,

Dr. Péter Göndöcz

Attorney-at-law, Partner, Deloitte Legal Göndöcz and Partners Law Firm

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1 Definition, Abbreviations and Interpretation

1.1 Definitions and abbreviations

"**Assessment Report**" means the legal and regulatory report prepared by Deloitte in relation to the Project, dated 1 April 2021 and identified as D1.1 deliverable in the Inception Report.

"**Benchmark Countries**" means the countries subject to the benchmarking carried out by Deloitte in relation to the Project, being **Poland, Lithuania, Luxembourg, Austria and Belgium**.

"**Beneficiaries**" means MNB, BSE and the Ministries collectively, and "**Beneficiary**" shall mean any of them.

"**BSE**" means the Budapest Stock Exchange.

"**BGS**" means the Bond Funding for Growth Scheme (*Növekedési Kötvényprogram*) launched by the National Bank of Hungary as of 1 July 2019, and announced to be closed on the 14 December 2021, after its planned scale is reached.

"**BRRD**" means Directive 2014/59/EU of European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No 1093/2010 and (EU) No 648/2012, of the European Parliament and of the Council.

"**CSRD**" means the Corporate Sustainability Reporting Directive the proposal of which has been adopted by the European Commission and which amends the existing reporting requirements of the NFRD.

"**Deloitte**" means one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities, which have a contract with EBRD for the Project or are involved in the delivery of the Project.

"**DG REFORM**" means the Directorate General for Structural Reform Support of the European Commission, being the donor of the Project.

"**EBRD**" means the European Bank for Reconstruction and Development.

"**Inception Report**" means the inception report issued by Deloitte in relation to the Project as of October 2020.

"**LTS**" means the Long-Term Strategy, the strategic document prepared by respective EU member countries to meet their Paris Agreement commitments.

"**Ministries**" means the Ministry of Finance of Hungary, and the Ministry of Innovation and Technology (in relation to climate finance) collectively, and "**Ministry**" shall mean any of them.

"**MNB**" means the National Bank of Hungary (Magyar Nemzeti Bank).

"**Mortgage Bond Act**" means Act XXX of 1997 on Mortgage Banks and Mortgage Bonds.

"**NFRD**" means Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

"**Project**" means this project, named "*Designing Recommendations for a Sustainable Capital Markets Strategy and Action Plan for Hungary*".

"**Recommendations Report**" means the report to be prepared by Deloitte in relation to the Project and identified as D3 deliverable in the Inception Report.

"**Report**" means this recommendations report prepared by Deloitte in relation to the Project and identified as D3.1 and D3.3 deliverable in the Inception Report.

1.2 Interpretation, date of Report

Capitalized terms and expressions shall have the meaning attributed to such terms and expressions in the Inception Report, unless otherwise defined herein.

Section and Sub-Section headings are for ease of reference only.

Unless indicated otherwise, any reference in this Report to the "date of this Report" is a reference to 1 January 2022. This Report reflects status as of 1 January 2022, except for any provisions relating to foreign law, regulation, facts and circumstances which are referred and presented of 26 July 2021.

2 Executive summary

In 2019, the European Commission adopted a Communication on the European Green Deal, setting out the roadmap towards a new growth policy for Europe. The European Green Deal outlines the actions to be taken to achieve European climate neutrality by 2050. It describes investments needed and financing tools available and explains how to ensure a just and inclusive transition. The European Green Deal puts sustainable competitiveness at the centre of all European economic development and its financial system.

In line with international efforts, Hungary has been implementing steps to align with the climate-neutrality and energy policy objectives set out in the Paris Agreement. Based on the Hungarian National Energy and Climate Plan, and the National Clean Development Strategy (2050), the Hungarian government is taking steps to transition towards a climate neutral economy by 2050.

Hungary's first sovereign green bond was issued in 2020, kickstarting domestic sustainable capital markets. One of the goals of the sovereign green bond is to contribute actively to the development of green capital markets in Hungary.

The market of non-sovereign green bond issuances (incl. green mortgage bonds) is starting to gradually emerge in Hungary, as market participants are educating themselves with the various market standards and requirements and launching green bond issuances. Within the framework of its various programs, the National Bank of Hungary (MNB) has implemented multiple incentive schemes to promote the development of green financing, including but not limited to the Green Mortgage Bond Purchase Program.

Within the framework of the Project, we have identified certain barriers and difficulties for the green bond market development in Hungary. Inter alia, risk of 'greenwashing' and a lack of standardized green definitions and monitoring systems are among the issues and challenges that should be addressed. Public measures and governmental incentives may have an important role in addressing these challenges and in driving the growth of sustainable products, including green bonds in Hungary.

Deloitte was appointed to support MNB (and its partners, including the Ministries and the Budapest Stock Exchange) with funding from the EU Directorate-General for Structural Reform Support (DG REFORM) and professional oversight from EBRD, to develop recommendations for a Sustainable Capital Markets Strategy and Action Plan for Hungary with the following objectives:

a) to support the initiatives of national authorities to design reforms towards sustainable capital markets according to their priorities;

b) to support the national authorities in enhancing their capacity to formulate, develop and implement reform policies and strategies towards sustainable finance while pursuing an integrated approach;

c) to support the efforts of national authorities to define and implement appropriate processes and methodologies of developing sustainable capital markets by considering best practices of and lessons learned by other countries.

This document provides Recommendations to support the development of sustainable and green finance in Hungary by suggesting the implementation of various steps in green and sustainable financial policies and measures. These are linked to green outcomes and would support Hungary's commitments under the Paris Agreement to activate capital markets and fund the transition of the economy to net zero by 2050 in accordance with the European Climate Law. Accordingly, the focus of the Recommendations is environmental, providing support to achieve the climate- and environment-related targets.

The Recommendations are based on an Assessment Report presented in June 2021 on the current state of the Hungarian sustainable capital market and incorporates input and feedback from public stakeholders (Ministry of Finance, Ministry of Innovation and Technology), and financial market participants (issuers, local, and foreign investors). The Recommendations were further discussed at an Expert Panel in January 2022.

2.1 Non-financial reporting

This section focuses on the information and data demand of a sustainable finance strategy in Hungary. The ESG disclosure maturity of the Hungarian market varies greatly, with some key players driving ESG-related reporting and data sharing with standard-based, externally assured, and often integrated reporting practices. Current ESG reporting is based on the implementation of NFRD through the Accounting Act. The European Commission adopted a proposal for the CSRD on 21 April 2021, which would amend the existing reporting requirements of the NFRD. Although policy makers have recognized the importance of ESG-related disclosures, the requirements are still under-regulated in Hungary. Therefore, we recommend:

- early implementation of CSRD regulation by updating the existing ESG Report guide of the BSE with the preliminary rules of CSRD to allow reporting in Hungary to pick up speed. The Accounting Act could also incorporate the new rules of CSRD and make accountants aware of methods to ensure non-financial sustainability information is embedded into financial reports.
- improving access to non-financial information. Public entities could increase transparency and disclose ESG data to the market so that the market participants are in compliance with European and national regulations on climate risk assessment, reporting or allocation of eligible green assets.
- the MNB could collect and showcase the published non-financial reports of legal entities, either by requirement or by voluntarily opting for such disclosure.

- creating awareness among medium and large market players on reporting requirements, methodologies, and data needs.

2.2 Development of the legal and regulatory framework of sustainable capital markets

Within the framework of the Project, we have identified potential areas of improvement with respect to legislation and regulation. These two main areas are: general and sustainability related capital market regulation reforms. Sustainability related regulations should be introduced too, while it is recommended to advance the general regulations as well.

2.2.1 General regulation relating to bonds

During the benchmarking exercise, we identified various legal institutions that exist in some of the Benchmark Countries with more active or advanced capital markets that are not specifically regulated in Hungary. At the date of this Report the following legal institutions and instruments are not explicitly regulated under Hungarian law:

a) bond trustee or joint representative,

b) collateral or security agent,

c) wider range of collaterals,

d) bondholders meeting,

e) specific bond types.

We recommend considering implementing one or more of the above listed legal instruments into Hungarian legislation.

2.2.2 Green default in green bond documentation

During our research, we did not identify any national regulation on green defaults either in Luxembourg or Hungary, nor did we identify any specific “green default” clause in green bond documentation we reviewed.

Considering the growing demand for increased transparency on the sustainable elements of green bonds defined by international investors, it is recommended

- to first investigate, with the involvement of actual and potential investors, whether there is a justifiable need for, or interest in, supplementing the terms of the current ‘Green Preferential Capital Requirement’ applicable for green bonds with specific provisions on green defaults. Then, the potential effect of the prescription of green default provisions on the volume of green bond issues should be assessed.

- that, depending on the outcome of such investigation and assessment, MNB considers the introduction of green default provisions for green bonds into the Green Preferential Capital Requirement regime and/or any bond program (including a potentially re-launched BGS).
- to consider the specific features and characteristics of the various instruments when prescribing green default provisions and determining its elements in the case of certain securities.

When determining potential green default events and their contractual consequences, the maturity of the green bond market in Hungary must also be carefully considered. Accordingly, in the case of nascent markets, where issuers have just begun to consider issuing (green) bonds and there are only a few green bonds actually issued, stricter and/or additional requirements can be counterproductive and can hold back the volume of bond issues. At such a stage, appropriate measures must be carefully selected and introduced.

2.2.3 Sustainability-linked bonds

Subject to the national climate strategy, in addition to "use-of-proceeds" type of sustainable bonds, it is worth considering supporting the issue of SLBs in the Hungarian market. This would facilitate a broader range of entities from various sectors that might not necessarily be ready for a sustainable turnaround, to embark on the green transition journey. Accordingly, the MNB should consider:

- extending the Green Preferential Capital Requirement regime to SLBs.
- including specific reference to and requirements related to SLBs in the potentially re-launched BGS or any bond scheme.

Nonetheless, any decision on potential actions and measures relating to SLBs should be based on a survey conducted among market participants in Hungary in order to assess – among others – the range of potential issuers (including especially the identification of industries, project types, and optimal issuer size, etc.) and the appetite of investors for such a capital market product.

2.2.4 Municipal bonds

Various limits are applied by countries to municipal bond issues mainly from budgetary considerations, especially when municipal debt forms part of public debt. This is also the case in Hungary, as municipalities must obtain governmental consent for any bond issue.

It is therefore recommended to

- Carry out a detailed and deep analysis for the purpose of validating the justification of and the need for green municipal bonds, covering, among others, the necessity of such types of municipal financing, any potential alternatives for sustainable financing of municipalities substituting green

municipal bonds, potential volumes of municipal bond issues, fiscal concerns and risk and mitigation methods.

- consider amending the current regulation of municipal bonds for the purpose of facilitating issue of green municipal bonds.

2.2.5 Covered bonds

Covered and mortgage bonds are already widely adopted capital market instruments among financial institutions with their dual recourse structure and bankruptcy-remoteness. In Hungary, only mortgage bonds (in Hungarian: "*jelzáloglevél*") qualify as covered bonds and may only be issued by mortgage banks holding a specific licence (in Hungarian: "*jelzálog-hitelintézet*").

Subject to the assessment of market characteristics and investor demands in Hungary, we recommend to

- investigate the potential implementation of a regulation on specific green or renewable energy covered bonds, similar to that in Luxembourg.
- create a plan to strengthen the green criteria of MNB programmes to fall in the 'adequate evidence' threshold in alignment with the EU Taxonomy and tighten the green conditions.
- provide public access to data that can have a pivotal role in identifying and supporting green finance related sustainable activities.

2.2.6 Green asset standards – Eligibility criteria for environmental sustainability

There are no commonly accepted approaches on green asset minimum standards in Hungary. Even though green asset standards are required by the Green Preferential Capital Requirement Program of the MNB, the use of the criteria is subject to utilisation of the programme. External assessments exist on the market, but there is no central accreditation system creating certainty about the information provided by the assessments. In Hungary, there is no requirement on assuring impact or allocation reports of green instruments. Therefore, we recommend:

- highlighting the importance of the EU Taxonomy to the capital market as the minimum benchmark to follow in greening and impact measurement and setting minimum green asset standards. When the regulation is set final and ready, requiring the EU Green Bond standard certification for green bonds in the Hungarian market too.
- enhancing the minimum green criteria set in the Green Preferential Capital Requirement Programme in line with the EU Taxonomy and enhancing the minimum criteria set for external reviews in line with the EU Green Bond Standards.

- development of social, and sustainability standards that safeguard the areas of not only E but S, and G letters as well.

2.3 Landscape of Sustainable Investments and Ecosystems

This section focuses on recommendations for (1) funding the sustainable investment gap, (2) leveraging the highest impact ecosystems, and (3) activating capital market participants. Recommendations in this section aim to utilize capital markets for reducing the Sustainable Investment Gap by leveraging sectoral ecosystems or market participants.

2.3.1 Sustainable investment gap

Understanding the size of the current sustainable investment gap in Hungary is as important as being able to track the development of the investment gap. Through our research, two main limitations in Hungary were identified that provide barriers for estimating and tracking the sustainable investment gap. First, in Hungary investment needs have been identified based on the climate change mitigation angle, disregarding the materiality assessments as well as the climate change adaptation angles. Secondly, no attempt has been made to monitor linkages between policies and investment needs. Therefore, it is recommended:

- to conduct a sustainability risk assessment of the country's economy to understand the adaptation angle of regulation and its investment needs based on materiality.
- to increase the transparency of the sustainable financial gap between state and EU subsidies including the ambition level of becoming net-zero until 2050 by:
    - Providing guidelines for a more transparent sustainability reporting for corporations which do not necessarily fall under the scope of NFRD-CSRD.
    - Establishing expectations on TCFD, supporting the quality and quantity of reporting.
    - Creating an easy-to-use system to evaluate the sustainability risks of investments by the development of minimal requirements for economic sectors.

2.3.2 Mapping pilot ecosystems

The recommendations focus on further development of currently existing sustainable ecosystems, starting new pilot ecosystems, and leveraging ecosystems with high climate mitigation potential. Therefore, it is recommended

- to systemize the financial ecosystem and the market by supporting the implementation of already existing minimum standard such as the EU Green Bond Standard that reflects the EU Taxonomy; and strengthening NACE code-related data provision among companies.
- to prioritize for early carbon neutrality of high carbon-intense activities by sector-specific and/or targeted incentive schemes that comply with EU state aid rules and incorporate social and governance safeguards besides environmental ones.

2.3.3 Mapping participants of sustainable capital markets

Based on interviews with capital market participants and research, we recommend:

- the implementation of guarantees supporting eco-innovation and start-ups.
- absorbing risks of investors in ESG by supporting innovation and high impact investment strategies and to support fund managers, during start-up phase, who focus on innovative climate finance investment strategies and high environmental, social impact.
- forging links between start-ups, ESG funds, impact investors, and incubators in the form of network creation, knowledge sharing, creation of business hubs, and other topics.

2.4 Public funds to foster sustainable investments

2.4.1 Tax incentives, direct subsidies, and public investments

Tax related incentives, such as tax-credit bonds or tax-exempt bonds, may have an important role in accelerating the growth of the green bond market as these measures may be implemented in the short term and may enhance both the demand and the supply side, depending on the aim of the incentive. However, their impact may vary depending on the scope and extent of the respective tax.

With direct subsidies, such as a cash rebate or the offset of expenses related to the increased data collection need and processing of corporates, as well as the additional green advisory and verification services, issuers and investors may be incentivised to issue and invest in green bonds. Such subsidies could also cover the higher

risk/lower return profile of e.g., green bonds versus non-green bonds[1], however such subsidies vary, and are partly in place on a national and industry basis.

Dedicated actors of the financial markets in the Benchmark Countries have been applying strategies and action plans for promoting sustainable financing, including green bonds. These guidelines generally combine multiple aspects, intentions, and incentives to make the country more environmentally friendly and to draw investor attention to green projects. These strategies and related plans are usually gradually implemented and adjusted to financial environmental changes. Based on the reviewed best practices for the selected Benchmark Countries, it can be noted that in some cases different incentive measures are combined and not individually applied.

Based on these best practices, the introduction of one or more tax benefits or incentives, and direct subsidies should be considered, including e.g.:

- *tax-credit bonds* as an incentive for the issuer,
- *tax-exempt bonds* as an incentive for the issuer,
- *preferential withholding tax for bonds* as an incentive for foreign investors,
- *cash rebate* as a demand side direct subsidy incentive,
- and *offset expenses* as a supply side direct subsidy incentive.

2.4.2 Other measures

Other public measures, such as public issuance and public investment in green bonds and the preferential treatment of green bonds in prudential regulation could facilitate the further development of sustainable financing. Regarding these public measures, it should be considered to:

- issue green bonds (by the government, the municipalities and national development banks) to cover the overall cost of state/municipality related potentially underfunded investments.
- increase the level of public investment in short- to mid-term green bonds to demonstrate trust in sustainable finance.
- extend the preferential treatment of green bonds in prudential regulation to other types of sustainability related financing.
- absorb risks associated with green bonds to enhance the credit rating of them.

1 Yields of green bonds were generally lower compared to conventional bonds, although the difference was only 2 basis points on average, caused by the lack of liquidity since the market was small. Besides, the cost of funding of green bonds was not lower compared to traditional bonds. For further reference: Giugale, Marcelo (2018): The Pros and Cons of Green Bond. https://www.worldbank.org/en/news/opinion/2018/10/10/the-pros-and-cons-of-green-bonds (Latest download: 16.12.2020)

2.4.3 Grants and incentives available to the energy sector and for energy-efficiency purposes for the period 2021-2027 in Hungary

Direct grants, incentives and financial instruments are expected to be available for the period 2022-2027, to support energy sector reform and energy efficiency purposes in Hungary.

Interventions related to energy efficiency and renewable energy are mostly included in the Operational Programmes, several of which will also contain financial instruments. Additionally, the Recovery and Resilience Plan of Hungary also has a dedicated energy component. Furthermore, as part of its green strategy, the MNB allocated HUF 200 billion (approximately EUR 550 million) to launch the Green Home Programme promoting the establishment of a green housing loan market. Regarding grants and incentives, it is recommended to analyse the possibilities of using EU Funds to further boost green financing.

2.5 Enablers and barriers of sustainable investments in capital markets

The relationships and linkages between sustainable finance elements (regulations and standards) were referenced with investor concerns identified from interviews conducted with Financial Market Participants (FMPs) as well as conclusions from previous sections. The interactions between these elements were used to identify the enablers and barriers of sustainable investment in the Hungarian Capital Markets.

The analysed sustainable finance elements were the following:

- EU Regulation 2019/2088 on the sustainability - related disclosures in the financial services sector (SFDR);[2]
- Final Report of Draft Regulatory Standards by ESA (SFDR RTS) and the EU commissions official letter regarding SFDR RTS (dated for 25 November 2021);[3]
- Directive proposal of the EU Commission regarding corporate sustainability reporting (CSRD);[4]
- EU Regulation 2020/852 on EU Taxonomy;[5]
- Regulation proposal of the EU Commission regarding European Green Bonds and the Usability Guide of the EU Green Bond Standards (EU GBS);[6]
- ESG Reporting standards of the Global Reporting Initiative (GRI);[7]
- Standards of ICMA Green Bond Principles 2021 (ICMA GBP).[8]

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R2088&from=EN (latest download: 4 January 2022)
[3] SFDR RTS published by ESA https://www.esma.europa.eu/sites/default/files/library/jc_2021_50_-_final_report_on_taxonomy-related_product_disclosure_rts.pdf, and the official letter of the European Commission on the regulatory technical standards under SFDR published by ESA https://www.esma.europa.eu/sites/default/files/library/com_letter_to_ep_and_council_sfdr_rts-j.berrigan.pdf (latest download: 4 January 2022)
[4] Directive proposal on Amending 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting (COM(2021) 189 final) https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0189&from=EN (latest download: 4 January 2022)
[5] EU Regulation 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32020R0852&from=EN (latest download? 4 January 2022)
[6] Regulation proposal of European green bonds (COM/2021/391 final) https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0391&from=EN and the Guide of EU GBS, https://ec.europa.eu/info/files/200309-sustainable-finance-teg-green-bond-standard-usability-guide_en (latest download: 4 January 2022)
[7] https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/ (latest download: 4 January 2022)
[8] Guidance documents of ICMA Green Bond Principles https://www.icmagroup.org/News/news-in-brief/green-and-social-bond-principles-2021-edition-issued/ (latest download: 4 January 2022)

2.5.1 Enablers and barriers identified

Based on the analysis of the relationships between sustainable finance elements and how those intersect with the identified FMP concerns, the enablers and barriers were identified and can be summarised as follows:

- **Definition of green investment:** There is a lack of clarity on the definition of "green investments" among financial market participants; the definition can differ even between EU regulations.
- **Increasing risk of greenwashing:** As most FMPs seek to classify themselves as green, there is at least some risk that more greenwashing cases may arise. EU regulation will improve the information sharing on greenwashing relevant risks, but guidance is still missing on the details.
- **Consideration of climate change risks:** From the perspective of investors, the information on the consideration of climate change relevant risks is still limited.
- **Green bonds and green finance:** There is no precise understanding on the term green default. According to the proposed regulation for EU Green Bond Standards, financial penalties can be introduced at the national level if EU Taxonomy alignment is not guaranteed.
- **Lack of meaningful ESG investors:** the ESG investor base is almost non-existent, those who exist, are not active on Hungarian green asset basis, and the institutional investor base is also passive.

2.5.2 Recommendations to amplify enablers and mitigate barriers

Based on the analysis carried out, the following recommendations were formulated to alleviate the identified barriers and amplify the enablers:

- Raising awareness of the importance of issuers' ESG profiles. ESG profiles of issuers should be consistent with sustainable investment offerings (because the risk of greenwashing might lead to divestment).
- Clarifying identified barriers and enabling linkages between regulatory frameworks for stakeholders. Clarifying for FMPs, issuers, and investee companies the timeline and content differences of EU regulations, including SFDR, EU taxonomy, EU GBS and the forthcoming CSRD as several barriers and enabling linkages could be identified among them.
- Defining green default by determining a more appropriate term for the concept and assessing the potential for introducing financial penalties for such defaults to strengthen the credibility of the sustainable investments.
- Application of voluntary reporting standards (e.g., GRI) should be highly encouraged until CSRD standards are not adopted by the EU and Hungary, in order to generate potential sources of information for SFDR disclosures.

- Providing guidance on how to interpret conflicting definitions (e.g.: DNSH principle in EU taxonomy and SFDR RTS). Guidance should be provided where detailed information is missing on requirements (e.g.: no identified GHG accounting standard, lack of guidance on alignment with climate goals).
- Considering the introduction of minimal reporting requirements for companies not obliged by CSRD on certain relatively easily available ESG data such as GHG emissions (scope 1 and 2) to spread sustainable finance products.
- ESG Investors have to be trained on ESG investees, to re-emerge and re-surface in the Hungarian economy, as well as their incentives have to be deployed to make them financially interested in the sustainable capital market.

3 Introduction

3.1 Purpose of the Report

Within the scope of the Project, EBRD appointed Deloitte to prepare this Report on the ecosystem of sustainable finance in Hungary.

The Hungarian Government and the MNB aim to support a long-term environmentally and socially sustainable economic system in Hungary, as well as to reorient capital flows towards sustainable investment. A *Sustainable Capital Markets Strategy and Action Plan* with clear and concrete recommendations on how to develop a green capital markets investor base is crucial to achieve this goal.

The **main purpose of this Report** is to synthesize and define recommendations on the basis of the findings of the Assessment Report and additional analysis based on focus areas suggested by MNB. This Report will be delivered to EBRD and MNB within the framework of the Project.

3.2 Objectives of the Report

The **overall objective** of the Project is to contribute to institutional, administrative and growth-sustaining structural reforms in Hungary.

The **specific objective** of this Report is to synthesise the main conclusions and findings of the Assessment Report and, also, to provide a high-level overview of the focus points designated by, and agreed with, EBRD and MNB, by:

(a) analysing legal and regulatory obstacles to the development of sustainable finance, including taxation,

(b) identifying specific sustainable capital market products in a selected Benchmark Country (Luxembourg),

(c) supporting the Beneficiaries to conclude the main findings of the current situation of sustainable capital markets in Hungary included in the Assessment Report and have a high-level vision for recommendations.

3.3 Methodology

A synthesis report was developed to inform but also prepare the Beneficiaries for the investment pipeline and the information exchange recommendation phase of the project.

The methodology was separated into the following activities performed by us:

a) collecting information from the experts of the selected Benchmark Country (Luxembourg) regarding their best practices and regulation for the purpose of Section 5;

b) synthesising the conclusions of the Assessment Report and the findings of the conference (voting and conference memo); and

c) defining recommendations based on the conclusions drawn within the framework of the Assessment Report.

3.4 Assessment and research limitation

Scope management: Given the high complexity of the subject of the analysis and the requirement to provide a holistic overview, incremental "scope creep" was inevitable. Given the time and resource constraints, certain new perspectives, sources and possible angles of the analysis cannot always be addressed in full detail. The analytical work was verified through stakeholder involvement by way of sharing draft versions of the Report with both the MNB and EBRD at various points in the process, in order to manage expectations on the final outcome. Unless expressly stated otherwise, our conclusions were drawn and recommendations were defined based on the outcome of our research carried out in relation to one or more of the Benchmark Countries.

Research period and updates: Our research and analysis have been closed as of 1 January 2022 and, thus, facts, conditions in this Report and conclusions drawn therefrom are reflected as of 1 January 2022, unless otherwise expressly indicated in this Report. This Report will not be updated for any matter arising, or coming to our attention, after the date referred above.

Out of scope activities: The following activities fall outside the scope of this Report: (i) analysing the quality of the implementation of EU-level regulation into local law, (ii) formulating draft legislation texts, (iii) specific codification recommendations, and (iv) negotiating recommendations with the relevant authorities and legislator(s).

4 Non-financial reporting

In this Section we provide an overview of the current non-financial reporting directive regulation applicable in Hungary, the upcoming EU corporate sustainability reporting directive, the market based best practises of BSE, as well as the international standards of reporting and ESG scoring. This Section will enlighten the reader on the information and data demands of a sustainable finance strategy.

4.1 NFRD

NFRD outlines the rules on disclosure of non-financial and diversity information applicable to certain companies. NFRD gives flexibility on how to disclose this information, and member states are responsible for the implementation of the detailed rules on a national level.

In Hungary, the NFRD has been implemented through an amendment of the Accounting Act. The Accounting Act requires public-interest entities (PIEs)[9], where the average number of employees in the given financial year exceeds 500 persons and on the balance sheet date in two consecutive financial years preceding the given financial year any two of the following three indicators exceed the respective thresholds below: (i) the balance sheet total exceeds HUF 6,000 million or (ii) the annual net turnover exceeds HUF 12,000 million or (iii) the average number of employees in the financial year exceeds 250 persons, to publish a non-financial report together with their annual financial statements or consolidated financial statements[10].

Although the Accounting Act prescribes non-financial reporting as an obligatory annual disclosure, in Hungary it is embedded in the business/financial report and not the annual report. There is no obligation to disclose such a business/financial report, only upon request and even then, for a limited time and in a limited form. Furthermore, this reporting is often insufficiently prepared by companies, even ones with significant environmental and social impact. Detailed assessment of the level of non-financial information disclosure by corporations in Hungary is out of this Report's scope. The Alliance for Corporate Transparency studied corporate disclosure on environmental and societal risks within the European Union.[11] The study notes that Hungary falls into a category of countries where there is limited awareness of the expected quality and purpose of the non-financial reporting.

The Accounting Act and the related NFRD framework is rather general in content, which makes it difficult for corporates to fulfil their assessment, disclosure and reporting obligations so as to produce reports of sufficient quality and in a consistent manner for market stakeholders. Guidelines and manual tools from various institutions (including

[9] 'Public-interest entities' means a) those entities whose transferable securities are admitted to trading on a regulated market of any member state of the European Economic Area; b) any other entities other than those referred to in Paragraph a), designated by law as public-interest entities, which are of significant public relevance.
[10] Article 95/C(1) of the Accounting Act
[11] https://www.allianceforcorporatetransparency.org/database/2019.html

for instance MNB and BSE) may be particularly useful to increase both quality and consistency across Hungarian corporates' reporting. An appropriate level of ESG reporting may not necessarily be solely dependent on the regulatory requirements, but also on the application of specific incentives and/or the enforcement of the reporting obligations. For instance, the volume of ESG reporting may be increased by broadening the range of persons affected by mandatory ESG reporting (including by amending the Accounting Act to make the publication of non-financial reports mandatory), the publication of ESG Guidelines issued by BSE in cooperation with MNB, the initiation of specific section/instrument category on the regulated market, or a specific multilateral or organised trading facility by BSE. For instance, in Luxembourg, the Luxembourg Stock Exchange set up the Luxembourg Green Exchange (LGX)[12], a platform dedicated to green, social and sustainable securities. In order to enhance transparency, in September 2020 the LGX launched the LGX Data Hub[13], a centralised database of a wide range of green, social and sustainability bonds, and their underlying assets. To ensure transparency and the availability of sufficient information, issuers must commit themselves to transparency and on-going use of proceeds reporting to be able to get their debt instruments displayed on the LGX. Furthermore, the Vienna Stock Exchange introduced a designated product section for green and social bonds as of March 2018.

4.2 CSRD

As the Corporate Sustainability Reporting Directive (CSRD) is currently a proposal, no specific recommendations have been formulated yet beyond the known new thresholds of this regulation impacting approximately 50,000 corporations in the European Union.

The European Commission adopted the CSRD proposal on 21 April 2021, which would amend the existing reporting requirements of the NFRD. The proposal extends the scope to all large companies and listed SMEs on regulated markets (except listed micro-enterprises), requires assurance of reported information, introduces detailed reporting requirements, and requires companies to digitally 'tag' the reported information, so it is readable by machine and feeds into the European single access point envisaged in the capital markets union action plan. The European Commission proposes the development of sustainable reporting standards (a delegated act of CSRD) which large companies are required to fulfil and publish CSRD aligned reports accordingly from January 2024. Proportionate standards will be also elaborated for listed SMEs to be applied from 2026. Non-listed SMEs can apply this standard voluntarily.

[12] LGX - Green exchange (bourse.lu)
[13] https://www.bourse.lu/lgx-datahub

4.3 Market best practises of Hungary

The ESG disclosure maturity of the Hungarian market varies greatly with some key players driving ESG related reporting and data sharing with standard-based, externally assured and often integrated reporting practises.

However, ESG-related disclosure is mostly represented at large corporations and those medium-sized companies whose strategy and corporate identity are closely aligned with sustainability and responsibility. To ensure capacity building and to provide motivation for companies, the BSE has published its ESG Reporting Guide in 2021, encouraging companies to disclose their ESG performance and to continuously and consciously improve their disclosure and data sharing practices.[14]

4.4 International standards of reporting and ESG data

Although policy making has recognised the importance of ESG related disclosures, the requirements are still under-regulated. Voluntary international standards govern the sustainability or ESG related reporting and data sharing. Internationally, the most popular standards for reporting are GRI and SASB (SASB now forming the Value Reporting Foundation with the International Integrated Reporting Council, the IIRC). Both standards are popular in Europe, with GRI having the longest history in sustainability reporting.

There is a growing momentum for the harmonisation and merger of the different disclosure standards, such as the Value Reporting Foundation, which was formed by the merger of SASB and the IIRC. Most disclosure standards and methods use overlapping topics and indicators and can be used together, or are often complementary, with slight differences in their goals and approaches.

The above-mentioned comprehensive disclosure standards were widened in the recent decade, with special standards such as the Task-Force on Climate-related Financial Disclosures (TCFD) proving that climate risk has become part of mainstream disclosures and ESG reporting of corporates, and that such risks are now accepted as real business and financial risks.

[14] https://www.bse.hu/Issuers/corporate-governance-recommendations/bse-esg-/esg-guide

4.5 Recommendation

4.5.1 Early implementation of the CSRD

International best practises, such as France and Germany extending the NFRD obligation to non-listed companies and France and Italy requiring limited assurance to be compulsory for the reports prepared for NFRD compliance, can be considered during the preparation for the implementation of the CSRD.

The CSRD, as the revised framework of the NFRD, offers an opportunity to strengthen the implementation and correct issues in the adoption and application of the NFRD. CSRD will be able to raise the minimum level of reporting to a higher standard than the NFRD can currently achieve.

Possibilities may include mandating disclosure for an extended set of corporations, requiring a certain level of assurance on the reports or even considering levying penalties for non-compliance with the Accounting Act's non-financial reporting provisions (proposed by CSRD).

Given the current state of the Hungarian capital market, approximately 80-100 companies will start their voluntary reporting as a preparatory step for the CSRD and will also go beyond by improving reporting quality. They will do so by using the Budapest Stock Exchange Guide to submit their ESG Roadmaps to the BSE until the end of the year. It is recommended to update the existing ESG Report guide of the BSE with the preliminary rules of CSRD to allow reporting in Hungary to pick up speed. The Accounting Act could also incorporate the new rules of CSRD and make accountants aware of methods to ensure non-financial sustainability information is embedded into financial reports. It is recommended that Hungarian companies that fall under future CSRD rules, such as those having a 250 average number of employees during a financial year, with total balance sheet of 20m EUR and a net revenue of 40m EUR, start ESG trainings.

4.5.2 Access to non-financial information

Transparency and accessibility of non-financial information is also in the focus of disclosure regulations and voluntary standards. Improving access to corporate sustainability-related information is of high importance for both the professional purpose of the initiatives and the public perception of non-financial information. Improved access may be attainable through the introduction of legal and regulatory changes to the NFRD compliance mechanisms, supported by the implementation of administrative measures, and incentives schemes. It is recommended that public entities open up and disclose ESG data to the market so that the market participants are in compliance with European and national regulations of e.g., climate risk assessment, or reporting. Moreover, the MNB can take care of collecting and showcasing the published non-financial reports of legal entities either required to do so or voluntarily opting for such disclosure.

5 Development of the legal and regulatory framework of sustainable capital markets

Based on the conclusions of the benchmarking exercise carried out with respect to the Benchmark Countries, it may be worth considering the introduction of various measures and regulations for the development of the Hungarian capital markets and its shift towards sustainable financial products. In addition to various economic, financial and non-financial types of actions, legal and regulatory amendments might play an important role. Laying down clear definitions, regulations and principles would help market participants better understand the green bond market and the market of other green capital market instruments.[15]

In this Section, in accordance with the preferences formulated by the EBRD and MNB, the focus is on regulation and best practices relating to:

- corporate green bonds, with particular emphasis on (i) general capital market regulation, (ii) "green defaults", and (iii) sustainability-linked bonds (SLBs),
- municipal bonds, and
- covered bonds, in particular renewable energy covered bonds introduced by Luxembourg.

5.1 Corporate bonds

In this Section, we provide a high-level overview of relevant legal instruments that exist under capital market regulation of certain Benchmark Countries.

Furthermore, we have carried out high-level research to identify potential regulations and standard KPIs applied to sustainability-linked bonds in Luxembourg, selected from the Benchmark Countries in consultation with the Beneficiaries. In order to identify and analyse green default mechanism in the case of green bonds, our research covered the review of bond documentations of green bonds issued in Luxembourg.

Similar to corporate bonds, markets will demand green bonds to have minimum rules defined for them and a general understanding of the greening factor of these bonds. Until now, most of the green corporate bond issuers in Hungary aimed to align their bonds with the ICMA Green Bond Principles and CBI in its regulations and incentive schemes, but the EU Taxonomy related alignment should also be adopted. For standardising green bonds, themselves, the EU Green Bond Standard should be viewed as a target to achieve in national legislation.

[15] 2019, GlobalCapital – CEE 'behind the curve' on green bonds https://www.globalcapital.com/article/b1fb0xx61y1pq2/cee-behind-the-curve-on-green-bonds (Latest download: 22.01. 2021)

5.1.1 General regulation relating to bonds

In order to achieve in the long run an effective and efficient legal and regulatory framework in Hungary, which enhances the volume of ESG related financing through capital markets instruments, it is worth considering and assessing the implementation of general types of legislative improvements, particularly certain legal institutions and instruments that are applied in other jurisdictions.

Regarding the general regulation of bonds, the update of the Polish bond regulation, where the Bond Act from 1995 was replaced in 2015 after twenty years, may serve as a good example of how the improvement of the legal environment can facilitate the development of the capital markets by addressing key concerns of market participants and introducing instruments desired by the market.[16]

During the benchmarking exercise, we identified various legal institutions that exist in some of the Benchmark Countries with more active or advanced capital markets that are not specifically regulated in Hungary. The lack of certain capital markets legal institutions and instruments may not necessarily represent an obstacle to the development of the green bond market, but the introduction of any of these institutions and instruments could have a positive impact thereon. At the date of this Report the following legal institutions and instruments are not explicitly regulated under Hungarian law:

f) bond trustee or joint representative,

g) collateral or security agent,

h) wider range of collaterals,

i) bondholders meeting,

j) specific bond types.

We recommend considering implementing one or more of the above listed institutions into Hungarian legislation.

5.1.1.1 Presentation of certain legal institutions under Luxembourg law

The section below is a high-level summary of the regulation under the laws of Luxembourg regarding (a) bond trustee or joint representative, (b) collateral or security agent and (c) bondholders meeting; in each case focusing on the functions and advantages of the respective institution.

[16] The updated Polish act on bonds, among others, introduced the institution of collateral agent and bondholders meeting, and broadened the type of entities eligible to issue bonds.

(a) Bond trustee or joint representative[17]

Purpose and Function: No legal requirement applies to the appointment of a bond trustee or joint representative, but practice seems to follow the requirements set by law for shareholders' meeting. In the event that the bond issuer (company) appoints such a person in order to represent the bondholders' rights, the bond trustee or joint representative is entitled to the following rights listed by the Luxembourg Company Law[18], namely:

- to implement resolutions adopted by the general meeting of bondholders;
- to accept collateral intended to secure the issuer's debt on behalf of the group of bondholders;
- to take protective measures to protect bondholders rights;
- must be present at drawings of lot of bonds and supervise the execution of the amortisation plan and payment of interests;
- to represent bondholders in any bankruptcy, suspension of payment, composition with creditors to prevent bankruptcy, controlled management and all similar procedures and declare all claims in the names and interest of the bondholders and prove the existence and the amount of such claims by all legal means;
- if authorised, to accept any payment and distribution to bondholders;
- if applicable, may be party to legal proceedings as plaintiff or defendant acting in the name and in the interests of the bondholders appointed by the issuer at the time.

Advantages and benefits: The appointment of a trustee and the implementation of a trustee structure may, particularly in the case of complex bond transactions, reduce the administrative burden on the bondholders as well as ease the various decision making and enforcement procedures. For example, bondholders may be geographically dispersed and will need a unified voice and coordination mechanism to act in their interest (as investors). Furthermore, such a structure may remove the barrier of having bondholders meet (as required by some laws e.g., Laws of England and Wales) to discuss issues and resolutions.

[17] It is noted that debt securities issued by Luxembourg issuers are generally governed by foreign law, such as New York, English and German Law, which is primarily the case for debt securities issued by the European Stability Mechanism, as opposed to the Law of England and Wales.
[18] Act of Luxembourg dated 10 August 1915 on commercial companies as consolidated and amended from time to time

(b) Collateral/ security agent

Purpose and Function: Pursuant to the law of 5 August 2005 on financial collateral arrangements, financial arrangements may be granted to security agents who will act for the account of the beneficiaries, provided that they are determined or determinable. Such agents have the same rights as those granted to the direct beneficiaries of the financial collateral(s) under applicable law. Accordingly, collateral or security agents may be entitled to:

- retain possession of the collaterals encumbered,
- upon agreement by parties, demand the defaulting party to pay or perform outstanding obligations (no legal requirement for a notice to be sent before).

Advantages and benefits: By the implementation of the agency structure, the collateral related duties are consolidated and centralised at an agent who acts in the interests of a number of creditors. Additionally, the geographical location of the collaterals may differ from the jurisdiction of the creditors and/or the trustee(s), therefore a local and trained collateral agent may be beneficial in carrying out the roles and responsibilities laid out.

(c) Bondholders' meeting

Purpose and Function: In Luxembourg, no specific legal requirements apply to the purpose or the function of bondholders' meeting(s). Nonetheless, market practice seems to follow the requirements prescribed by the Luxembourg Company Law[19] for shareholders' meeting. Such requirements may be adjusted contractually in respect of the various bond issuances.

Accordingly, these requirements may be, *inter alia*, the following:

- deciding on protective measures to be taken in the bondholders' mutual interest;
- deciding on the modification or release of specific collateral(s) granted in favour of the bondholders;
- deciding on the postponing of one or more interest payment dates, agreeing on a reduction of the interest rate or amending the conditions of interest payment;
- extending the amortisation period and amending the payment conditions;
- deciding on the replacement of bonds with shares issued by the issuer;

[19] Act of Luxembourg dated 10 August 1915 on commercial companies as consolidated and amended from time to time

- deciding on the creation of a fund for the purpose of protecting the bondholders' interests.

Advantages and benefits: The implementation of a bondholders' meeting provides an opportunity for key information interchange of bondholders and companies, as well as a platform for bondholders to discuss and resolve issues in their interest.

5.1.1.2 Conclusion, recommendation

Most of the above presented legal institutions and instruments may be achieved through various structures under Hungarian law, based on the general principle of contractual freedom and other provisions of civil law. However, this may not provide sufficient or equivalent legal comfort to investors or issuers compared to explicit and detailed legislation. Mandatorily applicable requirements may define the framework and playing field of market players and, as such, may lay down minimum guarantees for the participants. The bond market is typically a field where under-regulation could leave unnecessary room for manoeuvre, which implies higher risks. Investor willingness towards bonds and similar types of debt instruments may be enhanced by reducing or eliminating risks by implementing clear legal requirements and minimum guarantees.

Through the improvement of the general legal and regulatory framework, bonds may become more flexible debt instruments and thus, may be able to better compete with traditional bank financing. Consequently, we recommend investigating the implementation of any or all of the legal instruments presented above into the current legal framework.

Nonetheless, as mentioned above, it should also be highlighted that the lack of certain capital market legal institutions and instruments may not necessarily represent an obstacle to the development of the green bond market, but the introduction of any of these institutions and instruments could have a positive impact thereon.

5.1.2 Green-default in green bond documentation

In the early phase of the green bond market, bond documentation was silent on green events of default and investors did not define such demand towards issuers. This phenomenon may be traced back to the general intention to encourage the growth of the green bond market.

Green default as such is not specifically defined but may include any default that relates to the green element of the investment or the project financed from the proceeds of the green bond. For instance, green default may occur when the bond proceeds are not fully applied to the green projects, or the projects no longer qualify for the green requirement.

During our research we have not identified a specific "green default" clause in the issue documentation of green bonds we reviewed. Furthermore, under the laws of Luxembourg, there is no requirement for the inclusion of green default clauses in the issue documentation or the green bond framework, whereby consequences would occur in case the issuer defaults or fails to comply with its undertaking regarding the management and use of the bond proceeds to finance environmentally sustainable projects and/or activities.

At the same time, best practices and guidelines exist and are in place to prevent non-compliance with the requirements of use of proceeds of green bonds. Although we have not identified any consequences for the breach by the issuer of the use of proceeds of green bonds, institutional investors may implement measures to prevent non-compliance by the issuers.

5.1.2.1 Regulation of green defaults

During our research, we have not identified any national regulation on green defaults either in Luxembourg or Hungary.

Nonetheless, in the case of green bonds certified by CBI, the Climate Bonds Standard prescribes a procedure in the event of the non-conformity of the bond with the standard. Accordingly, the issuer must notify CBI of the non-conformity within one month of becoming aware of it and then take the corrective actions as instructed by CBI. Eventually, non-conformity may result in the revocation of the bond's CBI certification which the bondholders must be notified of.[20] It is also worth mentioning that several green bonds do not necessarily use the CBI certification, but are aligned with another standard, such as the ICMA GBP, or 'self-labelled'. Nonetheless, most green bond issuers must implement a proper process for project evaluation and selection and implement a regular reporting mechanism for the allocation of proceeds. This also supports transparent compliance with the sustainability undertaking of the issuer in the bond documentation or the green bond framework.

A growing demand for increased transparency of non-financial information, sustainability of investments and operation of issuers, as well as a constantly strengthening regulatory environment on green investments are a few of the factors that may justify the introduction of green defaults by way of enforceable contractual arrangements. Consequences of a green bond failing to comply with its green element or requirement may be flexibly determined by the bond conditions depending on the preferences of the potential investors and their investment mandate, which might bind them to ensure their investment reaches certain environmentally sustainable KPIs.

[20] Section P10 (*Non-conformance*) of the Climate Bonds Standard (Version 3.0)

Green defaults may take the form of various measures, such as:

- *margin ratchet* requiring the issuer to pay an increased coupon in case of a green default, which is a common tool for green loans and sustainability-linked bonds to encourage sustainable projects or operation of the issuer and consequently, it might be the most effective way of managing green defaults,
- *requirement for a designated account* where the unallocated bond proceeds are credited and retained,
- *early redemption* by bondholders.

Implementing green default provisions into the bond documentation may substantially decrease the risk of investors losing the green characteristic of their investment, which may result in a more favourable pricing of the green bond.

5.1.2.2 Feasibility of green default in instruments

Depending on the type of capital market instrument, there might be certain limitations or impediments on the implementation of green default provisions into the issue documentation. In this Sub-section, we provide a high-level overview of the potential limitations of the application of green defaults, presented through the examples of certain capital market instruments.

In the current legal and regulatory framework, the introduction and application of green default provisions to *corporate green bonds* are merely a matter of business decision for the issuer. In this respect the principle of contractual freedom prevails, and accordingly the decision on the application of any green default provision may be made based on the internal motivation driven by issuer interests or investor demands. Nonetheless, this might change with the finalisation of the EU Taxonomy and the EU GBS, as well as the potential introduction of a uniform "green" definition.

Unlike corporate green bonds, certain limitations may be applied in the case of green capital market instruments issued by financial sector participants. For example, in the case of *green bonds issued by credit institutions or investment firms as MREL-eligible instruments*[21] in order to fulfil the MREL-requirement placed on the issuer, green default provisions may also be part of the bond documentation, but only in a limited way. Accordingly, the default mechanism and the potential consequences of green defaults must be determined in a way that ensures compliance with MREL-eligibility criteria[22] laid down by BRRD and applicable to such green bonds. For instance, an increase

[21] Minimum requirements of own funds and eligible instruments as set out in the BRRD.
[22] Article 45b of BRRD

in the margin or coupon rate may be required as a consequence of the green default, but early redemption or recall may not be a feasible element.

Similarly to the example of MREL-eligible instruments, the application of green default provisions to *green mortgage bonds* may not be feasible considering, among others, the type of the underlying asset portfolio which consists of consumer mortgage loans. On the one hand, consumer loans are strictly regulated products and to ensure consumer protection, potential content and provisions of the loan agreements are limited and defined by law. On the other hand, it may not be rational to link certain terms of the consumer's loan agreement (incl. mandatory prepayment) to the features and characteristics of the mortgaged property which are out of the consumer's control. Accordingly, the application of green default provisions to green mortgage bonds may not seem feasible.

Based on the foregoing, it may be generally established that, when considering the implementation of green default provisions into the bond and securities documentation, the type and characteristics of the respective capital market instrument should be considered in addition to business considerations.

5.1.2.3 Conclusion, recommendation

It is worth considering defining green default events and the consequences of their occurrence for green bonds issued in Hungary either within the framework or outside of a potentially re-launched BGS or any other bond program launched by MNB following the date of this Report. Accordingly, it should be investigated, with the involvement of actual and potential investors, whether there is a justifiable need for, or interest in, supplementing the terms of the current 'Green Preferential Capital Requirement' applicable for green bonds with specific provisions on green defaults. Then, the potential effect of the prescription of green default provisions on the volume of green bond issues should be assessed.

We recommend

- that, depending on the outcome of such investigation and assessment, MNB should consider the introduction of green default provisions for green bonds into the Green Preferential Capital Requirement regime and/or any bond program (including a potentially re-launched BGS);
- considering the specific features and characteristics of the various instruments when deciding on the use of green default provisions and determining its elements.

When determining potential green default events and their contractual consequences, the maturity of the green bond market in Hungary must also be carefully considered. Accordingly, in the case of

nascent markets, where issuers have just begun to consider issuing (green) bonds and there are only a few green bonds actually issued, stricter and/or additional requirements can be counterproductive and can hold back the volume of bond issues. At such a stage, appropriate measures must be carefully selected and introduced.

5.1.3 Sustainability-linked bonds

Sustainability Linked Bonds (SLBs) may be used to finance any corporate activities and are not required to be allocated to specific projects.

5.1.3.1 SLBs in Luxembourg

In order to be listed on the Luxembourg Stock Exchange (LGX), issuers must commit to reaching both ambition based and measurable sustainability performance targets (SPTs) set based on the pre-determined KPIs.

Issuers have a certain degree of flexibility in selecting the KPIs, but in any case, such KPIs must be appropriate for the SPTs laid down by the issuers. The KPIs, among other elements of the issuer's framework, must be verified by a third party.

The LGX recognises several frameworks, standards, taxonomies and methodologies that meet the eligibility criteria and enable a bond to be traded on the LGX, such as:[23]

- *Bond standards* – ICMA's Green Bond Principles (GBP), Social Bond Principles (SBP), Sustainability-Linked Bond Principles (SLBP) and Sustainability Bond Guidelines (SBG), the Climate Bonds Taxonomy, the People's Bank of China Green Bond Endorsed Projects Catalogue, the ASEAN Green Bond Standards and other frameworks;
- *Fund labels* – LuxFLAG's Climate Finance, Environment, Social and ESG labels, FNG's label for sustainable mutual funds, the Nordic Swan Ecolabel for funds, the French government's SRI and TEEC labels and the Austrian ecolabel for financial products (*Österreichisches Umweltzeichen*); and
- *Issuer methodologies* – Climate Bonds Initiative's Climate-Aligned Data Set.

[23] https://www.bourse.lu/sustainability-linked-bonds

We identified the following KPIs issued by certain issuers of SLBs on the LGX:

Industry / Sector	KPI[24]	UN SDGs[25] alignment (goal no.)
Clothing and Textile - Chanel[26]	Carbon footprint emissions: Scope 1 and 2 emissions Value Chain Emissions: Scope 3 emissions amount Percentage of Renewable Energy in Operations	Not specified
Real estate – Kabia[27]	Water Consumption intensity Waste reuse Reintroduction and/ or reinforcement of wild species into the ecosystem	SDGs 6, 12 and 15
Financial services – Berlin Hyp AG[28]	Carbon intensity of loan portfolio	SDG 11
Materials industry	• Percentage of reduction of Scopes 1 & 2 GHG emissions percentage reduction • Percentage reduction of Scope 3 GHG emissions intensity related to the consumption of products sold	SDGs 7 and 13
Financial services - EQT[29]	• Science Based Target initiative ("SBTi") Approved Greenhouse Gas ("GHG") Emission Reduction Targets ➔ Scope 1, 2 and 3 emissions • Percentage of women Investment Advisory Professionals • Percentage of Independent Women Appointed to the Boards of portfolio companies	Not specified
Minerals Industry – Imerys [30]	GHG emissions Intensity for Scope 1 and 2 emissions expressed as tons of CO2 emissions per million Euros of revenue	Not specified

[24] The present table provides examples of KPIs and SDGs alignment of issuers on the Luxembourg Stock Exchange. KPIs and SDGs alignment are reflected in external review, such as second opinion and framework documents.
[25] Sustainable Development Goals adopted by the United Nations in 2015 (https://www.undp.org/sustainable-development-goals)
[26] https://www.bourse.lu/security/XS2239845097/312958
[27] https://www.bourse.lu/security/US49836AAC80/330525
[28] https://www.bourse.lu/security/DE000BHY0SL9/334987
[29] https://www.bourse.lu/security/XS2338570331/336366
[30] https://www.bourse.lu/security/XS2338570331/336366

We identified the following KPIs for SLBs in the SLBP and the SBG:

General Theme	KPI[31]	UN SDGs alignment (goal no.)
Biodiversity: **Landscape conservation/ Restoration[32]**	• Surface of protected, safeguarded and/ or rehabilitated natural landscapes areas (or protected areas) in km^2 • % area under certified land management in km^2 • % soil artificialisation restored/ avoided	SDGs 13 and 5
Biodiversity: **Protected species[33]**	• Absolute number of protected and/ or restored indigenous species, flora or fauna • Maintenance of genetic diversity of species (seeds, plants, animals) on a given territory	SDGs 14 and 15
Energy: **Renewable production[34]**	Energy production from renewable sources in MWh or %	SDG 7
Energy: **Energy efficiency**	Energy savings (absolute and/ or %)	SDGs 7, 11 and 12
Clean Transportation	Revenue, EBITDA, investment /CAPEX, R&D), loans, assets (e.g. absolute or % EU Taxonomy compliant or % SDG alignment)	SDGs 7, 9 and 11
Climate change mitigation	Carbon intensity and absolute carbon emissions (induced and avoided)	SDGs 7 and 13

5.1.3.2 Conclusion, recommendation

Subject to the national climate strategy, in addition to "use-of-proceeds" types of sustainable bonds, it is worth considering supporting the issue of SLBs in the Hungarian market. This would facilitate a broader range of entities from various sectors that might not necessarily be ready for a sustainable

[31] The present table provides an illustrative list of KPIs and its SDGs alignment for Sustainability Bonds.
[32] https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/
[33] https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/
[34] https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/

turnaround, to embark on the green transition journey. Similarly to corporate green bonds, a re-launched BGS or similar bond programme may serve as an appropriate platform and framework for Hungarian issuers to become familiar with the SLB as potential financing alternative. In addition to bond programmes, the Green Preferential Capital Requirement launched by MNB indisputably stimulated the spread of corporate green bonds in Hungary, and it might also contribute to the appearance of SLBs in Hungary and then to enhancing their volume. Accordingly, it is worth for the MNB to consider to:

- extend the Green Preferential Capital Requirement regime to SLBs,
- include specific reference to and requirements on SLBs in the potentially re-launched BGS or any bond programme.

Nonetheless, any decision on potential actions and measures relating to SLBs should be based on a survey conducted among market participants in Hungary in order to assess – among others – the range of potential issuers (including especially the identification of industries, project types, and optimal issuer size, etc.) and the appetite of investors for such a capital market product. We note that the latter might be increased through the extension of the Green Preferential Capital Requirement to SLBs.

Recognising the justification for its existence, CBI has issued a white paper on financing credible transition which put forward a framework for use of the transition label.[35] Also, there are further international examples for supporting transition finance, such as the National Standard of Canada for Green and Transition Finance or the Transition Finance Guidance of Japan[36], and EBRD has its own "Green Transition Bonds"[37].

Furthermore, although this Sub-Section is dedicated to SLBs, it is important to note that, in addition to green bonds and SLBs, there are other types of sustainability related bonds, such as social and sustainability bonds, and it is also worth considering to carry out the investigation and survey detailed above for such bonds.[38]

[35] Financing credible transitions: How to ensure the transition label has impact, Climate Bonds White Paper, September 2020
[36] http://rief-jp.org/wp-content/uploads/Pressrelease-for-Final-version-fo-Transition-Finance-Guidance.pdf
[37] https://www.ebrd.com/work-with-us/sri/green-bond-issuance.html
[38] Detailed summary of bond types is included in the D1.1 Legal and Regulatory Assessment Report.

5.2 Municipal bonds

Where municipal debt is part of the public debt, regulation of municipal bond issues is closely linked to the central fiscal policy and is a tool to control the incurrence of public debt. As such, various limitations are applied by countries for municipal bond issues mainly from budgetary related considerations. In Hungary, though municipalities are entitled to issue bonds, the Stabilisation Act prescribes restrictions for incurring debt by municipalities, including in the form of bond issuance. Namely, municipalities must obtain governmental consent to any bond issue and there are also a number of requirements on raising long-term financing by local municipalities.[39] Such a strict legal environment may substantially limit the possibility for municipalities to issue bonds.

5.2.1 Overview of specific regulation applicable for bonds issued by municipalities in Luxembourg

In Luxembourg, no specific legal framework applies to municipal bonds. Furthermore, ESMA does not distinguish between different types of municipal bonds. Market practice in Luxembourg shows that issuers usually apply ISO 10962 code to define and outline the characteristics for this type of product.

The LGX prescribes specific rules for the listing of municipal bonds on the LGX: on the one hand, rules exist at product level, on the other hand, different criteria are set for trading bonds on the Bourse de Luxembourg market (BdL Market)[40] and on the Euro MTF[41].

5.2.2 Types of municipal bonds issued in the international market

In some EU countries, 'revenue' and 'general obligation' type of municipal bonds are differentiated by local laws, and debt arising from 'revenue' bonds is not taken into account for the calculation of the municipal or governmental debt. This is based on the assumption that the projects financed from the underlying municipal bonds will be able to generate sufficient revenue for the repayment of the debt incurred through the bond issue.[42] Furthermore, these are the two main types of municipal bonds that are generally recognised in U.S. markets and regulated by the Municipal Securities Rulemaking Board (MSRB) in the U.S. Nonetheless, no such differentiation exists under the laws of Luxembourg.

The main types of municipal bonds are the aforementioned 'revenue' and 'general obligation' bonds[43]:

- *Revenue Bonds* are generally issued by non-profit organisations, private-sector corporations (e.g. hospitals and universities) and public service providers, and payments to the bondholders are not backed by the government's taxing power but by revenues from a specific project or source that is financed from the bond proceeds.[44]

[39] Article 10 of the Stabilisation Act
[40] Bourse de Luxembourg (BdL) market is EU regulated market operated by the LGX. (https://www.bourse.lu/listing-bonds-bdl-market)
[41] More details are available on the website of LGX: https://www.bourse.lu/listing-bonds-euro-mtf
[42] Pawel Galinski: *Development of the municipal bond market in Poland after 1989*
[43] Summary is based on the characteristics of municipal bonds issued in the US market.
[44] Please see the airport revenue bonds issued by the City of St. Louis, Missouri. Official statement available at the following link: Microsoft Word - POS V. 11 2019 Series A B C 6.12.19 (msrb.org)

- *General obligation bonds* are most commonly issued by states, governmental entities, cities and towns, and the payments under the bonds are not secured by the revenue generated by a specific project, but the general income of the issuer which includes all taxing power of the issuer. In some cases, general obligation bonds are backed by dedicated taxes on property. In other cases it can be paid from general funds, which are often referred to as bonds "backed by the full faith and credit" of the governmental entity.[45]

Nonetheless, municipal bonds may be structured in various ways and thus, depending on their characteristics and structure, further types of municipal bonds may be identified in market practice in addition to general obligation and revenue bonds, these include:

- *Insured bonds* where principal and interest payments are ensured by commercial insurance companies in the case of the default of the issuer;
- *Taxable municipal bonds* where the financed project is not subsidised by the government for certain reasons (e.g., not being beneficial enough for society);
- *Tax exempt municipal bonds* where all or certain (interest or other income deriving from the difference between the bond price and the face value) payments under the bonds to the bondholders are exempt from taxes levied at state, municipal or federal level;
- *Conduit bonds* where issuers are municipal agencies (*conduit issuer*) that collect proceeds for private entities for the purpose of financing projects like non-profit hospitals, housing developments, colleges and universities, transportation hubs, and public works projects. Usually, the source of bond payment is the loan repayment from the private entities and the conduit issuer is not necessarily obliged to apply other funds for bond payment. This means that bondholders might be exposed to the performance risk of the private entities.

5.2.3 Other international examples

As part of the Expert Panel discussion of the Project, municipal bonds in Poland were discussed. Even though these bonds do not play a leading role in overall green bond issuances in Poland, the financing solution is present at one city and is seen as an opportunity for cities to fund more established projects such as in energy, transportation, waste management or buildings. The municipal bond issuance in Poland is not supported by the incentives mentioned above.

[45] Please see examples for the general obligation bonds issued by the City & County of San Francisco at the following link: Municipal Securities Rulemaking Board::EMMA (msrb.org)

5.2.4 Conclusion, recommendation

In some countries, 'revenue' and 'general obligation' type of municipal bonds are differentiated by local laws, and debt arising from 'revenue' bonds is not taken into account for the calculation of the municipal or governmental debt. This is based on the assumption that the projects financed from the underlying municipal bonds will be able to generate sufficient revenue for the repayment of the debt incurred through the bond issue.[46] It may be worth considering amending the current regulation of municipal bond issue for the purpose of facilitating the creation of green municipal bonds. Nonetheless, prior to the revision of the existing legal framework, a detailed and deep analysis should be carried out in order to assess – among others – the need for such type of municipal financing, any potential alternatives for sustainable financing of municipalities substituting green municipal bonds, potential volumes of municipal bond issues, fiscal concerns and risk and mitigation methods.

5.3 Covered bonds

Covered and mortgage bonds are already widely spread capital market instruments among financial institutions with, among other characteristics, their dual recourse structure and bankruptcy-remoteness.

In Hungary, in accordance with the Mortgage Bond Act, only mortgage bonds (in Hungarian: "*jelzáloglevél*") qualify as covered bonds that may be issued by mortgage banks holding a specific licence (in Hungarian: "*jelzálog-hitelintézet*"). The Mortgage Bond Act regulates mortgage bonds in detail and lays down rules and requirements for, *inter alia,* (i) the type of eligible issuers, (ii) type of collaterals, (iii) the composition of the collateral pool. The Mortgage Bond Act was recently amended to ensure compliance with Directive (EU) 2019/2162, and harmonised rules will be implemented and gradually brought into force until 1 August 2022. However, within the framework of the legal harmonisation, changes were aimed at investor protection and mainly affected the requirements on the coverage of mortgage bonds, the provision of information to mortgage bondholders and special supervision[47]. Consequently the structure and main characteristics of covered bonds issued under Hungarian law remained unchanged.

Furthermore, as a result of the aforementioned harmonisation, from 8 July 2022[48] mortgage bonds issued under Hungarian law and compliant with the requirements prescribed by the Capital Market Act and Directive (EU) 2019/2162 may be labelled as 'European Covered Bond' or 'European Covered Bond (Premium)'.

In Hungary, following the launch of the green mortgage bond purchase programme by the MNB,[49] aiming to promote long-term sustainability and consistent with the principles of the Bank's Green Programme disclosed in February 2019,

[46] Pawel Galinski: *Development of the municipal bond market in Poland after 1989*
[47] Act LVIII of 2021 on the amendment of laws on covered bonds and other laws relating to the financial intermediary system for the purpose of legal harmonization
[48] Section 140(1) of Act LVIII of 2021 on the amendment of laws on covered bonds and other laws relating to the financial intermediary system for the purpose of legal harmonization
[49] https://www.mnb.hu/en/pressroom/press-releases/press-releases-2020/magyar-nemzeti-bank-prepares-for-purchases-of-green-mortgage-bonds

the gradual emergence and spread of green mortgage bonds are expected during the next period in the Hungarian market for mortgage bonds. The first Hungarian green mortgage bond issuance took place in August 2021 in the amount of HUF 5.02 billion[50]. At the time of the report, 4 bonds have been issued with a nominal value of HUF 134 billion by different mortgage banks in Hungary.

5.3.1 Types and general characteristics of covered bonds

We have examined the laws of Luxembourg, where various types of covered bonds are specified by law, mostly, along the type of the collaterals backing the covered bond.

The following types of covered bonds are regulated under the laws of Luxembourg. Their main characteristics are summarised at a high-level in the following chart:

- Mortgage bonds (*Lettres de Gage hypothécaires*)
- Moveable property covered bonds (*Lettres de Gage mobilières*)
- Public-sector covered bonds (*Lettres de Gage publiques*)
- Mutual mortgage bonds (*Lettres de Gage mutuelles*)
- Renewable energy bonds (*Lettres de Gage énergies renouvelables*)

Type of Covered Bonds	Type of Eligible Issuers	Type of Collaterals	Main Criteria of the Covered Pool
Mortgage bonds ➔ conventional	Specialised credit institution (banques d'émission de lettres de gage)	Loans secured by rights in rem over immoveable property	Maximum 60% of the estimated realisation value of the immoveable or moveable property or, in the case of guaranteed loans for residential properties, 80%;

[50] Further details of the mortgage bonds may be found on the following link: https://www.bet.hu/newkibdata/128596736/OJB2031I_BH_20210817_HU.pdf

Moveable property covered bonds ➔ conventional	Specialized credit institution	Loans secured by rights in rem over moveable property	• Minimum of 90% of the assets is made up of claims secured by rights in rem in moveable property or by charges on moveable property, taken separately by category of covered bonds. This threshold is reduced to 50% where the cover pool of the moveable-property covered bonds of the bank includes no more than 20% of such instruments referred to in the previous sentence. • Bonds or debt instruments shall have a credit quality step 1 by a credit rating agency registered on ESMA's list; • Assets resulting from loans couples with guarantees may be used as collateral only up to a maximum of 60% of the estimated realisation value of the immoveable or moveable property serving as a guarantee.
Public-sector covered bonds ➔ conventional	Specialized credit institution	loans to "public sector entities"	• Debt instruments where minimum of 90% of the assets is made up of debt on or secured by public entities. This threshold is reduced to 50% where the collateral for the public-sector bonds of the credit institution includes no more than 20% of such instruments. These bonds and debt instruments shall have the first credit quality step granted by a rating agency which is registered on the list of credit rating agencies of ESMA according to the Regulation no. 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies. • The nominal amount and the net present value of the cover assets of the relevant cover pool must at any time equal at least 102% of the nominal amount of the covered bonds of the same category in circulation.

Mutual mortgage bonds ➔ conventional	Specialised credit institution	loans to eligible credit institutions determined by law which, inter alia, participates in an institutional guarantee scheme	• A minimum of 90% of the assets is made up of claims, in any form, on or secured by credit institutions, members of an institutional guarantee scheme. This threshold is reduced to 50% where the cover pool of the mutual mortgage bonds of the bank includes no more than 20% of such instruments referred to in the previous sentence. • Bonds or debt instruments shall have a credit quality step 1 given by a credit rating agency registered on ESMA's list of credit rating agencies • The nominal amount and the net present value of the cover assets of the relevant cover pool must at any time equal at least 102% of the nominal amount of the covered bonds of the same category in circulation. • Availability of liquid assets at all times to cover the cumulative net outflows of the covered bond program over 180 days • Ordinary collateral may be replaced to the extent of 20% of nominal value of the bond in circulation and can consist of cash, assets, bonds and commitments in any form by public entities • Assets resulting from loans coupled with guarantees may be used as collateral only up to a maximum of 60% of the estimated realisation value of the immoveable or moveable property serving as guarantee.

Renewable energy bonds ➔ Sustainable	Specialised credit institution	loans secured by rights in rem or charges over assets generating renewable energy	• In general, renewable energy property may only be used as collateral up to a maximum of 50% of the estimated realisation value. This threshold is raised to a maximum of 60% if the estimated realisation value is based on a regulated fixed remuneration regime or if the relevant renewable energy project operates with free of charge renewable energy sources (such as wind or sun) and to a maximum of 70% of the estimated realisation value if both conditions are met. • The thresholds may again be raised by an additional 10% for renewable energy assets for which the construction phase has been accomplished. • Immoveable as well as moveable assets which are still under construction may only be taken into account for up to 20% of the ordinary collateral.

It is worth mentioning that the current regime of covered bonds is under revision and a draft law was submitted on 7 May 2021 by the Luxembourg Minister of Finance. Though the draft law has not entered into force yet, once it is adopted it will introduce certain material changes to the current framework.

For instance, not only specialised credit institutions will be eligible to issue covered bond, but also universal banks licensed in Luxembourg. Furthermore, in the case of moveable property covered bond, the draft law distinguishes three different type of asset categories, (i) aircrafts, (ii) ships and (iii) railway rolling stocks, which is not limited under the current legal framework.

5.3.2 Recommendations

In order to stimulate the Hungarian market of such securities, it is worth considering the potential benefits of revising the general Hungarian legal framework in light of well-established European models. Accordingly, among others, the following areas may be subject to revision:

a) *type of covered bonds,*

b) *type of eligible issuer (i.e. universal or specialized credit institution);*

c) *type of collaterals,*

d) *composition of the collateral pool,*

e) *labels.*

Furthermore, it is worth considering looking at the different bond instruments above in light of the greening potential of each sector.

5.3.3 Renewable energy covered bonds

In Luxembourg the world's first green covered bond law entered into force in June 2018, introducing the option for Luxembourg covered bond banks to issue "renewable energy covered bonds" (RECBs) as a new type of asset. The law establishes the legal framework for a new type of covered bond to finance the generation of renewable energies. It contains strict criteria relating to the purpose of the equipment and infrastructure financed, to ensure the "green" characteristic of this new category of covered bond.

5.3.3.1 Main terms of renewable energy covered bonds

The law of RECB[51] (RECB Law) defines essential elements of RECBs, such as "renewable energy" which includes any energy produced from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal, ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases, and energy produced from similar sources. This is essential to ensure the trustworthiness of RECBs and enhance investor confidence.

A further innovation of RECB is the introduction of the substitution right (also known as step-in rights) as a mandatory asset of the cover pool. This enables the lending financial institution to replace the defaulting renewable energy provider in its contractual relationship under "material project contracts"[52] and therefore ensures continuity of energy production and cash-flows from renewable energy projects backing the RECBs. In the case of RECBs where the renewable energy projects are located outside of Luxembourg, enforceability of the substitution right must be based on applicable law or contractual arrangements and legal enforceability of the substitution right must be ensured and justified in the form of independent legal opinion.

The RECB Law considers the specific characteristics of a renewable energy project, and limits the cover value of claims to a certain amount of the estimated realization value of the assets depending on the

[51] Law of 22 June, 2018, amending the law of 5 April 1993 on the financial sector of Luxembourg
[52] Definition and list of material project contracts are laid down in the RECB Law.

status of the renewable energy project. Valuation must be made by an independent appraiser at least on an annual-basis.

Regarding the collateral pool of RECBs, specific criteria have been laid down and the RECB Law sets forth three different relative limits to the use of renewable energy property as collateral, which correspond to the underlying key risk drivers (see Section 5.3.1).

5.3.3.2 Example for successful RECB issuance

In this Sub-Section, the main terms of a RECB are summarised:

Name of Issuer	NORD/LB Luxembourg S.A. Covered Bond Bank (NORD/LB CBB)
Green Bond Framework[53]	Framework based on Luxembourg Financial Sector Act on Covered Bonds (Law of 22 June, 2018 amending the Law of 5 April on the financial sector) and the ICMA Green Bond Principles
Use of Proceeds	To exclusively finance and/ or refinance projects within the renewable energy sector (i.e. Eligible Assets) **1.** Financing of the purchase, design, construction, development and/ or installation of the generation of renewable energy from the following sources: - On and off shore wind power - Solar power **2.** Financing the connection, transmission and storage of renewable energy
Project evaluation and selection	Project Finance transactions comply with Nord/LB CBB Sustainability Guidelines and ESG Risk Assessment of NORD/ LB Group
Management of Proceeds	• Managed by NORD/ LB COO using a portfolio approach • Eligible assets exceed the outstanding volume of Green Covered Bonds and projects that no longer satisfy the eligibility criteria are replaced • At least 20% of net proceeds go towards financing renewable energy assets • A maximum of 20% of the outstanding green covered bonds are not necessarily green but have to fulfil the specific quality requirements

[53] https://www.nordlb.lu/page/docManager/docs/579/NORDLB%20CBB%20Green%20Bond%20Framework%20as%20of%2030%20Sep%202019.pdf

Reporting	Information is provided to investors on a quarterly basis, regarding the portfolio: • total renewable energy assets financed, • share of proceeds used for direct financing versus refinancing - Current volume (total project costs) and financing share NORD/LB CBB (portfolio averages)- breakdown by wind and solar projects, • -breakdown by country and currency, • breakdown by credit rating, - maturities, • loan-to-value (LTV) ratio, and • LTV utilisation, outstanding amount of Green Covered Bonds. Impact reporting: - Total installed capacity of renewable energy (in MW) - Annual (expected) production of renewable energy (in MWh) - Total capacity of renewable energy facilitated trough connection, transmission, transformation and storage (in MW) - Avoided greenhouse gas emissions from the production and facilitation of renewable energy emissions (annual avoided greenhouse gas emissions in tons of CO2 equivalents)

5.3.3.3 Market judgement of Renewable energy covered bonds:

RECB as product itself is innovative and the first of its kind.

An, *inter alia*, specific Luxembourgish legal framework and a well-established reputation for renewable energy projects, such as wind, solar, and water, makes the increasing uptake of RECBs as a product by investors very likely. This may be the case especially with insurance companies and pension funds.

5.3.3.4 Conclusion, recommendation

Subject to the assessment of market characteristics and investor demands in Hungary, it is worth considering implementing a regulation on specific green or renewable energy covered bonds similar to that in Luxembourg. We note that the potential implementation of a new product like this into the Hungarian regulation may be realised through a framework of detailed and comprehensive legislative action, which should be based on a deep and detailed analysis and assessment of the Hungarian market, range and volume of potential assets, potential benefits for investors, and any other instrument that may serve as a potential substitute for renewable energy covered bonds.

5.3.4 Green Mortgage Bond Purchase Programme and Green Home Programme launched by MNB

MNB launched two programmes to encourage the construction and purchase of new and modern real estate, and the renovation of unsustainable buildings in Hungary by supporting green bond issuances and credit institutions.

Firstly, the Green Mortgage Bond Purchase Programme aims to support the issuance of domestic green mortgage bonds through targeted purchases of green mortgage bonds. Through the programme introduced on 2nd, August 2021, MNB purchases mortgage bonds issued by mortgage banks in Hungary that comply with green conditions, among others.

Secondly, the FGS Green Home Programme[54] offers preferential refinancing to credit institutions offering green retail mortgage loans. Eligibility to the programme depends on aligning with conditions on energy efficiency performance of the new properties.

These two programmes aim to increase demand for green, energy efficient buildings in Hungary by promoting green debt instruments – green mortgage bonds and green mortgage loans.

[54] nhp-zop-termektajekoztato-20210916.pdf (mnb.hu)

5.3.4.1 Summary of the main terms of the programme

Main conditions of the programmes are presented in the table below.

	Green Mortgage Bond Purchase Programme	Green Home Programme
Environmental sustainability conditions		
Green criteria	Climate Bonds Standard V3.0 OR ICMA Green Bond Principles (2018) or later versions	New buildings: Maximum 90 kWh/m2/year primer energy demand and minimum EPC BB. Renovation: Not applicable.
Certification, monitoring	Certified as compliant by an external independent party.	If available, EPC. Otherwise, energy performance estimation by experts. Use of proceeds is monitored by credit institution.
Disclosure	Annual public report	-
General conditions		
Currency, term, interest rates, geography	Fixed-rate, forint-denominated mortgage bonds issued by an Issuer on the territory of Hungary, with an original maturity of at least 5 years and a green rating. The Purchase Programme is available on primary and secondary markets.	The MNB provides refinancing at 0% interest rate, which can be lent to retail customers at maximum 2.5%. The maximum term is 25 years, and the loans are forint-denominated.

5.3.4.2 Discussion

Deloitte reviewed the green eligibility criteria of the programmes in the context of national and EU regulations, as well as international practices. Potential areas of development were discussed around (1) sufficiency of green criteria and energy efficiency conditions of the programmes, and (2) application and data availability related to energy performance of buildings in Hungary.

Green Criteria:

Based on national regulation, from mid-2022, all new buildings will have to have at least EPC BB energy performance in Hungary. The regulation will improve the energy performance of new buildings, however, the green criteria of the MNB Programmes raises concerns regarding the sufficiency of energy performance requirements. With no further strengthening of the Programme requirements, non-commercial buildings built according to regulation will satisfy the eligibility criteria of the Green Home and Bond Purchase Programme.

The EU Taxonomy could be seen as a base for a stricter standard. The EU Taxonomy currently requires at least 10% lower primary energy demand than the threshold set for nearly zero-energy building requirements as contained in national measures. Therefore, the minimum Hungarian classification requiring 'nearly zero energy' demand of buildings, does not guarantee alignment with the EU Taxonomy.

Upcoming changes in domestic or international regulation may create a risk of potential green washing without further corresponding alignments of green criteria in the programs."

Data availability:

According to international best practices, and requirements of the CB Taxonomy, buildings in the top 15% of the local national real estate portfolio can be considered green in terms of energy efficiency. In Hungary, a significant portion of the top 15 percent of the domestic real estate portfolio is accounted for by a currently undefined range of EPC CC buildings. It would only be possible to determine exactly which property belongs to the best 15 percent if data on aggregate energy characteristics of each property (kWh / m2) was available. Besides, this top 15% of the real estate portfolio is changing, and therefore, the study would be needed to be constantly updated to specify the best performing range in the country. Currently, aggregate energy performance data (kWh / m2) is only available for buildings with energy performance certificates, which are not publicly available. Data, however, is publicly available for energy rating categories of buildings, at the Lechner Knowledge Centre. Reliance on the Lechner Knowledge Centre for aggregate energy performance data, and the lack of data are major obstacles to green mortgage lending and the issuance of green mortgage bonds.

Moreover, the EU Taxonomy shapes green finance in Europe by establishing sustainable economic activities based on qualitative and quantitative criteria. One of the important conditions for the

success and spread of green lending is the reliability and comparability of the data and that the collection of it does not impose high administrative burdens on financial market participants.

5.3.4.3 Conclusion, recommendation

Due to the continuous development of regulations and green bond standards, to bridge the identified data gaps, it is recommended to make further progresses in the following areas:

- Tighten the green conditions of the programmes to fall into the 'adequate evidence' threshold in alignment with the most recent versions of EU Taxonomy. More specifically, as of now, accept only EPC BB rated buildings until the underlying data to calculate aggregate energy performance becomes available to credit institutions. Follow developments of the Taxonomy regulation to ensure continuous alignment.
- Widen access to energy performance-related information to the public, such as in the form of EPC-s or simplified EPC-s, or energy efficiency improvements. These could be accessed free of charge, and/or services could be supplied centrally.
- Provide public access to data that can have a pivotal role in supporting green finance activities. More specifically, provide access to energy performance data (kWh / m2). Such data might be available at the Hungarian Energy and Utilities Regulatory Authority, the National Environmental Information System (OKIR), or the data collected by the National Climate Protection Authority, the Department responsible for domestic CO2 emissions trading and transmitted to the ETS (Emission Trading System).
- Create a plan to strengthen the green criteria of the programmes over time to align with the transition towards net-zero energy buildings.
- Develop programmes to accelerate the pace of real estate modernisation. Such incentives may include subsidies to customers, tax breaks or the refinancing of interest subsidy solutions in the case of loan refinancing, or the addition of elements supporting energy modernization to existing forms of subsidies (village CSOK, subsidized home renovation loan).

5.4 Green asset standards - Eligibility criteria for environmental sustainability

This Section gives a high-level overview of current market practices on applying eligibility criteria and standards of environmental sustainability for green financial instruments in Hungary. In particular, this Section discusses the risks posed by current market players' practices in applying green asset standards and provides recommendations to mitigate these risks.

First, the lack of committed minimum criteria in green asset standards poses risks of greenwashing and thereby, risks to the local market credibility. Green financial products in Hungary are not required to align with any international green or sustainability standards beyond the usual ICMA GBP or GLP, and therefore, green loans and bonds are at risk of not contributing to pre-set environmental objectives.

Second, external reviews on the green asset standards are not regulated by law, but also external review guidelines are not fulfilled on their highest standard. External reviews and companies that provide the reviews are not transparent in their methodologies. Therefore, current market practices might not be accountable, creating uncertainty when they are trusted as credible sources of evaluating the green asset compliance of green financial instruments with the respective standards.

5.4.1 Current use of green asset standards

When looking at green asset eligibility in sustainable finance instruments, two characteristics stand out amongst Hungarian market practices. First, there are no commonly accepted approaches on green assets such as loans or bonds in Hungary. Voluntary market-led initiatives are used as principles for green instruments; however, these do not provide clear environmental or sustainability standards or criteria. Second, green asset standards are required by the Green Preferential Capital Requirement Programme of the MNB. This scheme introduces requirements for green assets, but the standards applied in the scheme are subject to utilisation of the program as well as – partly – future enforcement of European regulation (e.g. EU Taxonomy).

5.4.1.1 Common initiatives in Hungary

The most commonly used market-led initiatives in Hungary are the Green Bond Principles (GBPs) by the International Capital Markets Association, and the Green Loan Principles (GLPs) by the Loan Markets Association. These initiatives set directions for the green financial instrument's sustainable use of proceeds; clear description of process evaluation and selection as to set out clear environmental sustainability objectives and the process to determine project or asset eligibility; appropriate proceeds management; and reporting on up-to-date and readily available information on the use of proceeds. Besides these guidelines, green standards, i.e., what assets or projects are eligible as sustainable, are not specified. In practice, this means that green assets in Hungary might be classified as 'aligned' with the GBPs or GLPs even though the green assets that back the financial

instruments might not be aligned with any international standard such as the CBI standards or the EU Taxonomy.

More products are appearing as green in the Hungarian market, but these products can be self-proclaimed as sustainable assets without complying with an accepted green criteria.

5.4.1.2 Requirements of the Green Preferential Capital Requirement Program

Through the Green Preferential Capital Requirement Programme, the MNB intends to improve the risk profile of the banking sector by releasing the capital requirements partially or fully for environmentally sustainable corporate and municipal exposures that meet certain sustainability criteria. The Program sets out a set of criteria that is, in certain industries, set at a lower standard than required by the EU Taxonomy. For example, in the case of agriculture, the Programme has set out green eligibility criteria, even though the agricultural criteria of the EU Taxonomy are still under development. By widening the scope of eligible use of proceeds, the risk of greenwashing increases.

5.4.1.3 Best practice examples

There are best practices to mitigate the above-mentioned greenwashing risks. First, for example, by setting minimum green asset standards on the covered and corporate bond market. In Germany, for example, the minimum standards for mortgage banks[55] have been developed by the vdp (Die deutschen Pfandbriefbanken). These standards are set by the German mortgage bank union and can be applied to access the eligibility of green mortgages. Such standards could not only be required on green real estate, but also on other types of green assets.

Secondly, the EU Green Bond Standard aims to similarly establish a common framework based on the Taxonomy Regulation. These standards are currently under development[56].

5.4.2 External assessment of green assets

External reviews, or second or third party opinions on green bond and loan frameworks are suggested by the ICMA GBPs, LMA GLPs. Second party opinions are required by the Green Preferential Capital Requirement Programme of the MNB when green instruments are subject to utilisation of the Programme. Risks or concerns in the area of external assessments are not specific to the Hungarian market in most cases, but exist internationally. Firstly, these assessments are voluntary (except when the Green Preferential Capital Requirement Programme is utilised but even then, the following two risks stand). Secondly, there is no central

[55] 2019: Minimum standards for use of the wordmarks „Green Pfandbrief"/„Grüner Pfandbrief" (for Mortgage Pfandbriefe). https://www.pfandbrief.de/site/dam/jcr:4b200f2e-8dd7-49d5-ab84-d89144d37164/2019-08_vdp_mindeststandards_GPB_EN.pdf.
[56] https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/european-green-bond-standard_en

accreditation system for assessors creating uncertainty about the information provided by the assessments. Last, there is no requirement on reporting on the impact or allocation reports of green instruments.

There are two types of external assessment on green bond and loan frameworks: the second party opinion and the independent third-party assurance as described in the table below[57].

Type of review	Second Party Opinion (SPO)	Third-party Independent Assurance
What it covers	Alignment to principles	Proceeds management retrospectively throughout the life of the bond Green criteria, project selection and evaluation, internal processes for tracking proceeds, non-financial data on environmental outcomes, and processes for preparing progress reports
Service provider	**Environmental expert or consultant**	**Assurance service provider**
Methodology and standards	Methodology and processes developed by individual agencies	In line with national and/or international professional standards such as the International Standard on Assurance Engagements (ISAE) 3000 Revised
Public information	At the consultant's and/or the issuer's discretion	Yes, published by the issuer
Outcome	Opinion by an environmental expert or consultant	Assurance report in line with established professional standards
Limitations and posed risks	No regulation around the expert or consultant to secure independence and professional accountability No specific standardised professional requirements (professional qualifications and permanent education) and quality control No standardised processes across experts or consultants based on a publicly available framework	By nature, the information subject to third-party independent assurance is based on past actions, for instance, the fulfilment of criteria can be assured once the terms and conditions have been finalised

[57] *Building-a-credible-Green-Bond-market.pdf (accountancyeurope.eu)

5.4.2.1 Risks posed by the current practice of second party opinions

A voluntary SPO expresses the view by an environmental expert on the green criteria used on a green bond or loan framework that is used to select assets backing the instrument. Such an evaluation of the green criteria can be helpful since there is no commonly accepted standard providing clear definitions of "green". SPOs, however, are not mandatory.

The methodologies of current SPOs are not standardised – beyond their 4 main pillars of base content, they are also not always publicly available, and the criteria and methodology to assess and sum up the green impact of the asset (impact factor) is not transparent either pre- and post-issuance. As the SPO methodologies and processes are not standardised or transparent, they can create inconsistency in the market as to what each SPO considers green or aligned with a certain standard. Ensuring the independence and accountability of the SPO expert and the work performed is lacking as well, as some opinions are consultancy work.

In terms of the content of an SPO, SPOs do not aim to address whether the bond will be allocated to the type of projects defined nor whether the related assets are managed as described in the bond's terms. Rather, they evaluate whether the framework under which the green instrument is issued has any evidence of not aligning to the GBPs or GLPs. As mentioned above, these principles are not environmental standards, nor are they a minimum set of criteria. Therefore, SPOs do not necessarily provide an external assessment of the applied green criteria. The selective nature of the scope of a SPO makes it harder to safeguard green bonds in terms of whether and how the proceeds allocation of green bonds is aligned with the issuance documentation.

5.4.2.2 Risks posed by the current practice of third party assurance

A third-party independent assurance typically covers the management of proceeds and/or environmental impacts throughout the life of the financial instrument. It is conducted by assurance providers in line with national and/or international professional standards such as the ISAE 3000.

Third-party independent assurance ensures that a consistent approach is followed when evaluating a given subject matter and require adherence to quality management and ethical standards. Accountability exists for both the firms and the individual professionals issuing the assurance reports. The approach follows an internationally accepted assurance framework, which includes assessing the overall control environment, including internal controls, and gathering a sufficient set of underlying evidence to reach a conclusion or form an opinion. When providing third-party independent assurance, the reporting criteria suitability is key as it serves as a point of reference for the assurance provider.

However, the sustainability/green assurance statements in ISAE 3000 assurance documents are many times shorter, than in SPOs, which could be improved by professional sustainability experts contributing more to these type of assurance reports within audit firms. As yearly allocation and impact reports are partly financial, partly sustainability information based, the balance between the two areas needs to be kept.

5.4.2.3 Example best practices – EU Green Bonds Regulation Proposal

A well-defined EU GBS would not only align terms and approaches used in the green bond market but will also provide a reliable basis to deliver third-party independent assurance. Regulating the frameworks and streamlining the requirements for external opinions would create more transparency and less uncertainty on the market as to what assists are sustainable. The registration and supervision of certified individuals and companies would create credibility. Finally, requirements on what the external assessments should cover, such as including, for example, the evaluation of the green criteria, fulfilment of the criteria, and the assessment of impact and allocation reports would increase the quality, transparency, and accountability of external reviews. The Green Bond Regulation proposal was presented in July 2021 as the backbone of the Green Bond Standard. In the current version of the proposal, requirements for bonds aligned with the EU green bond standard are proposed to become mandatory for all green bonds between 2023 and 2028.

5.4.3 Conclusion, recommendations

There are no commonly accepted approaches on green asset minimum standards in Hungary. Even though green asset standards are required by the Green Preferential Capital Requirement Programme of the MNB, the use of the criteria is subject to utilisation of the programme. External assessments exist on the market, but there is no central accreditation system for assessors potentially creating uncertainty about the information provided by the assessments. In Hungary, there is no requirement on assuring impact or allocation reports of green instruments. Therefore, we recommend:

- highlighting the importance of the EU Taxonomy to the capital market as the minimum benchmark to follow in the area of greening and impact measurement;
- setting minimum green asset standards on the covered and corporate bond market in line with the EU Taxonomy, and based on already existing market best practises;
- enhancing the minimum green criteria set in the Green Preferential Capital Requirement Programme in line with the EU Taxonomy and enhancing the minimum criteria set for external reviews in line with the EU Green Bond Standards. This means including a transparent framework of assessment, the content of such assessment including the evaluation of green criteria, as well as the regulation of assessment of impact reporting;

- when the Regulation on European Green Bonds is issued, requiring the EU Green Bond standard certification for green bonds in the Hungarian market;
- that the minimum details of third party assurance and second party opinions are defined in line with international practice, to enable investors to make well informed decisions, for example if aligned with the EU or CB Taxonomy;
- that annual allocation and impact reporting, and related third party assurance and second party opinions, are made compulsory, so that the already allocated use of proceeds and their greening impact can be tracked.
- development of social and sustainability standards that safeguard the areas of not only Environmental but also Social and Governance. More specifically, amend existing programs such as the MNB's Purchase Programmes to add an additional aim for social and other sustainability-related bonds and loans purchasing.

6 Landscape of Sustainable Investments an Ecosystems

In this chapter, recommendations related to (1) the funding of the sustainable investment gap, (2) channelling funding towards the highest leverage ecosystems, and (3) activating different capital market participants are delineated. We provide a synthesis of the estimated Sustainable Investment Gap, potential ecosystems, and surveys with market participants. We offer recommendations to leverage capital markets to reduce the Sustainable Investment Gap. Increasing transparency surrounding sustainable finance in Hungary is one of the main leverages. We suggest further development of ecosystems by setting goals, strategies and definitions. Lastly, we recommend leveraging market participants – start-ups, corporations, and financial institutions – by incentives and removal of legal barriers to green finance in Hungary.

6.1 Sustainable investment gap

6.1.1 Current estimated investment gap in Hungary

According to the National Energy and Climate Plan (NECP), Hungary is committed to achieving climate neutrality by 2050. The NECP requires significant investments across various sectors of the Hungarian economy. The sustainable investment gap, that is the investments needed to reach the country's climate targets, are estimated to range between approximately HUF 2,642 billion and HUF 3,700 billion until 2030. This Section establishes recommendations related to capital markets based on the findings indicated in *D1.5 Estimation of sustainable development investment gap.*

Estimation of Sustainable Investment Gap Between 2020 - 2030	High Gap Scenario (Billion HUF)	Low Gap Scenario (Billion HUF)
Sustainable Investment Costs:	11035.89	11717.87
Sustainable Investment Funding:	7335.83	9075.55
Sustainable Investment Gap*:	**3700.06**	**2642.32**

** The sustainable investment gap might significantly change over time based on different economic growth scenarios and the spread of the new sustainable technologies.*

This Section focuses on two areas that were identified as key limitations in estimating the sustainable investment gap: (1) identifying investment needs based on materiality both in climate mitigation and adaptation angles, and (2) monitoring linkages between policies and investment needs.

First, understanding the links between the impact of different climate change scenarios and related adaptation and mitigation measures are important to uncover and tackle the risks posed by climate change in Hungary.

However, while climate mitigation measures (such as decarbonisation strategies, renewable energy, or energy efficiency) are assessed in detail in Hungarian climate strategies, the delineation of climate adaptation measures are still lacking. Unveiling material issues of adaptation measures related to different climate change trajectories helps better understand the investments needed to implement policy measures, not only to mitigate climate change but also to adapt to the incurring impact over time.

Second, the allocation of financial flows to leverage sustainability solutions is important to effectively manage the impact of climate change. The link between policy measures and sustainability outcomes is still uncovered in Hungarian climate strategies, such as the National Energy and Climate Plan (NECP) and the Long-Term Strategy (LTS), and therefore, the sustainability impact of the allocated financing is not clear. Tracking the alignment of both private and public funding with the goal of achieving climate targets helps understand the impact of financed measures, thereby creating opportunities to leverage investments to progress towards climate neutrality, and adaptation.

6.1.2 Recommendations

Recommendations for *Sustainable Capital Markets Strategy and Action Plan for Hungary* were identified based on the *D1.5 Estimation of the sustainable development investment gap*, and the limitations faced in the research to estimate the sustainable investment gap.

6.1.2.1 Risk assessment including climate change adaptation

A sustainable risk assessment for the country helps to understand the links between the impact of different climate change scenarios and potential mitigation and adaptation measures. It sheds light on the interdependency between policies and strategies in the NECP and LTS, and the impact of policy implementation (qualitative or quantitative), including the macroeconomic impact, or effects on sustainability measures.

With the help of such a study, implications of impacts at different climate change trajectories, implications of different emission pathways or adaptation options, and the country's adaptive capacity can be assessed, both in environmental and in financial contexts. A climate risk assessment can create understanding of the adaptation angle of the regulation and the investment needs based on their materiality.

It is advised to have a sustainability risk assessment of the country's economy to understand the adaptation angle of regulation and its investment needs based on materiality. This could materialise as a National Climate Risk Assessment system, while also providing support for capital market participants in estimating their respective climate risks.

6.1.2.2 Transparency of sustainable finance and filling the gap

Participants of the capital market need information to integrate sustainability into their decisions. Transparency and monitoring help to understand the links between policies and investment needs to achieve climate neutrality and progress in climate adaptation in Hungary. As the EU's Assessment of the final National Energy and Climate Plan of Hungary[58] concludes, "the link between the investments and the reforms as well as the impact of financed measures are of high relevance for the member states' plans". Tracking and monitoring sustainable finance can delineate both the progress against filling the sustainable investment gap and the progress against reaching climate neutrality in Hungary. Thereby, it may create opportunities for the capital market to leverage investments.

It is worth considering increasing the transparency of sustainable financial flows, instruments and taking steps in measuring the progress towards filling the sustainable investment gap. Examples of this could be:

- Raising awareness in economic sectors on requirements of sustainability-related disclosures. This includes providing guidelines for more transparent sustainability reporting for corporations who do not necessarily fall under the scope of NFRD-CSRD[59].
- Establishing expectations on TCFD, supporting the quality and quantity of reporting.
- Creating an easy-to-use system to evaluate the sustainability risks of investments by the development of minimal requirements for economic sectors. There are currently around 150 green and ESG certification bodies, which use different methodologies, making it significantly more difficult to compare different ratings and rankings. It would help green finance to be able to rely on a widely accepted certificate[60].

In addition to these recommendations, further recommendations might arise from the *D3.2 Investment Pipeline Developmen*t deliverable of the Project.

[58] https://ec.europa.eu/energy/sites/default/files/documents/staff_working_document_assessment_necp_hungary_en.pdf
[59] Christine Lagarde (2021): Climate change and central banks - analysing, advising and acting. Speech by Ms Christine Lagarde, president f the European Central Bank, at the International Climate Change Conference, Venice, 11 July 2021. https://www.bis.org/review/r210712b.htm
[60] Becsei, A., Csányi, P., Bógyi, A., Kajtor-Wieland, I., & Kovács, L. (2021). A fenntartható bankolás 10 pontja. GAZDASÁG ÉS PÉNZÜGY, 8(3), 244-271.

6.2 Mapping pilot ecosystems

6.2.1 Summary of results of the pilot ecosystem mapping

Appetite for sustainable investments has been on the rise, especially in the real estate and energy sectors. By the beginning of 2021 the ratio of green bonds compared to traditional bonds grew to 5.6%, resulting in approximately HUF 85 billion issued in green bonds[61]. By the end of 2021, the MNB estimates of the market size of green bonds were around HUF 189 billion[62]. Looking ahead, sectors that are linked to (i) Hungarian national political priorities and Hungary's current strengths, (ii) positive and measurable impact on sustainability goals and (iii) scalable solutions with strong potential to reach global markets and where the investment gap is significant, are key to consider in filling the sustainable investment gap. Four NACE sectors are highlighted: D - Electricity, gas, steam, and air conditioning supply; F – Construction: Buildings and Infrastructure; H – Transporting and storage; C – Manufacturing.

Detailed description of 4 NACE sectors based on statistical classification of economic activities in the EU:

D – Electricity, gas, steam, and air conditioning supply
This includes construction and operation of electricity generation facilities (NACE: D35), manufacturing of biomass, biogas, or biofuels (NACE: D35), or smart grid operations (NACE D35). Transitioning sector D is a high leverage to achieve climate ambitions due to the high air emissions intensity.

F – Construction: Buildings and Infrastructure
Activities in this ecosystem are related to construction of new buildings (F41, F43), building renovations (F41, F43), and construction of low carbon infrastructure on land and water (F42). European policies and already existing sustainable finance programs in Hungary provide potentials in this ecosystem.

H – Transporting and storage
Activities in this ecosystem are related to passenger and freight rail transport (H49), passenger cars, and commercial vehicles, and public transport (H49).

C – Manufacturing
Activities in this ecosystem are related to manufacturing of low carbon technologies. This economic activity, however, is not defined strictly by NACE codes.

Sustainable finance related to Sector F has the highest levels of maturity, while **Sector D** related financing has high potentials to mitigate CO_2 emissions. In Hungary, **Buildings and Infrastructure, and Real Estate-related sustainable finance** is in the most mature stage, mainly as a result of the stimulating effect of MNB's Green Program. Corporations could benefit from the Bond Funding for Growth Scheme (*Növekedési Kötvényprogram (BGS)*) until the 14th of December, 2021. BGS seemed to drive corporate green bond issuances in Hungary, even though it had no specific sustainability requirements on the bonds or the issuers other than the advice to use

[61] Magyar Nemzeti Bank (2021): Green Finance Report, March 2021. (Green Finance Report, March 2021 (www.mnb.hu))
[62] Based on consultation with MNB.

international standards of green or climate bonds. In practice therefore, green bond issuances follow the international trends such as the alignment with the ICMA Green Bond Principles. Most of the green bonds issued within the framework of the BGS were related to real estate development. Furthermore, MNB – as part of its Green Programme – took a leading role in driving the Hungarian market of green mortgage bonds. Details of the Green Mortgage Bond Purchase Programme are covered in section 5.3.4.

Sectoral data shows that the air emissions intensity in the **electricity, gas, steam, and air conditioning supply** sector is highest among sectors: 5000 g of GHG emissions per EUR. The sector's high emission intensity provides a highly important role and leverage to greening activities in this sector.

Challenges in leveraging identified ecosystems are related to the lack of transparency in data on ESG performance, as well as the lack of common understanding of sustainable finance on capital markets. Recommendations related to transparency are summarised in the previous section. Recommendations on creating and distributing knowledge on sustainable finance, and which is considered sustainable, fall within the scope of this Section.

6.2.2 Recommendations

The recommendations for mapping and leveraging pilot ecosystems are based on the characteristics of the potential ecosystems, more specifically on (1) further development of currently existing ecosystems, (2) starting pilot ecosystems, and (3) leveraging ecosystems with high climate mitigation potential.

6.2.2.1 Systemisation of the financial ecosystem and the market, awareness raising

Ecosystems in the above mentioned four NACE sectors are seen as having a high potential for enhancing and leveraging green financing in Hungary, as they are currently most involved in sustainable finance. However, further systemisation of sustainable finance systems is needed to enable capital markets. For example, clear definitions about what sustainable or green finance is, what are measurable thresholds of sustainability, what goals ought to be achieved by the capital market, as well as guidelines for different actors help the level of structuration of green finance in Hungary.

It is worth considering setting up sustainable finance goals, targets, frameworks, and definitions for further development and structuring of sustainable finance for ecosystems. Such examples could be the following:

- Supporting the creation of further sustainability standards in economic sectors to establish comparability. More specifically, supporting the implementation of already existing minimum standard such as the EU Green Bond Standard (currently under development) that reflects the EU Taxonomy[63].
- Increasing the transparency of financial and non-financial corporations on NACE code-related sustainability performance and sustainable finance.

6.2.2.2 Awareness raising for pilot ecosystems

In ecosystems such as Manufacturing or Transport and storage, green finance has not yet been accelerated. Interest about green financing instruments was already present at the time of the study but it is not characteristic of the ecosystem participants to be aware of the importance, benefits, and opportunities of green finance, nor are they users of green finance instruments. In these ecosystems, awareness raising, network connections, guidance, and incentives are seen as opportunities to leverage the climate potential of the capital markets in the ecosystems.

It is worth considering awareness raising, building networks, and guidance to start pilot ecosystems where sustainable finance is not yet present. Such examples could be:

- Raising awareness about sustainable finance among financial and non-financial corporations.
- Ensuring networks and advice to capital market participants on opportunities and implementation of green finance.

6.2.2.3 Prioritising for early carbon neutrality of high carbon-intense activities

Ecosystems such as electricity, gas, steam, and air conditioning supply have high potential to achieve targets towards climate neutrality due to their high CO_2 intensity. By tapping into these ecosystems first, climate targets can be achieved faster. However, to uncover ecosystems that are the most carbon intensive, effective measurement tools should be present. Furthermore, the transition of these ecosystems should also follow social and governance safeguards.

63 Becsei, A., Csányi, P., Bógyi, A., Kajtor-Wieland, I., & Kovács, L. (2021). A fenntartható bankolás 10 pontja. GAZDASÁG ÉS PÉNZÜGY, 8(3), 244-271.

It is advisable to support ecosystems with high carbon-intensity to be prioritized to increase the effectiveness of sustainability measures. Examples of this could cover:

- Developing and implementing systems for sustainability impact assessment including ESG performance of companies in economic sectors. This could include the use of (a combination of) ESG scores, where available, as well as the implementation of an ESG rating tool that provides an estimation of ESG performance regardless of company size.
- Explore the social and governance aspects of sustainability besides the environmental dimension.
- Create an incentive system that prioritizes green finance with highest emission reduction or removal. This incentive should aim to leveraging high potential ecosystems. Fossil based subsidies have to be rethought and changed so that those ecosystems with high potential can become an economic opportunity to invest into and divest from the fossil industry. Such sector-specific and/or targeted incentive schemes should comply with EU state aid rules.

6.3 Mapping the sustainable capital market participants

In this Section, recommendations on the types of support to market participants are delineated. Different types of market participants – such as corporations, financial institutions, and start-ups – need different types of support to start or to accelerate the development of green finance in their ecosystems. Support might manifest in financial or risk incentives, removal of barriers, creating transparency by measuring sustainability performance, or creating networks.

6.3.1 Corporate issuers and financial institutions

Results of the survey with domestic corporations and financial institutions within the Project show growing corporate-side awareness and interest concerning environmentally sustainable (green) financial instruments in the ecosystems that were involved in the survey. The existence of more green financing opportunities would likely boost awareness of corporations and financial institutions. The implementation of green finance among surveyed companies was driven by factors such as costs of implementation (for example, the issuance of a green bond) and long-term operational considerations (for example, whether currently existing instruments such as bonds make sense to use for financing a development).

According to these survey participants, government plays an important role in advancing sustainable capital markets. The most important opportunities are grants, followed by subsidies, then guarantee schemes. The

favoured instruments were government incentives, green securities, and bonds, grant related financial instruments.

Among financial and non-financial corporations, general knowledge on green finance was reported to be on a medium level. The motivation for using green financial instruments was slightly higher in financial institutions, but both types of corporations were open to, and had interest in, developing or enhancing sustainable finance. ESG reporting was understood and applied by a high number of financial and non-financial companies.

For corporations, limitations in the application of green finance were the lower expected returns (for example, compared to unsustainable commodities) and higher capital costs, followed by the lack of knowledge and experience and administrative burdens. Time requirements of issuance was an important limitation from the financial institution's side. On the regulatory side, ESG guidelines, EU Taxonomy, or bond and loan standards were not yet well-known at the time of the survey.

Figure 1: Limitations in green financing for surveyed corporations.

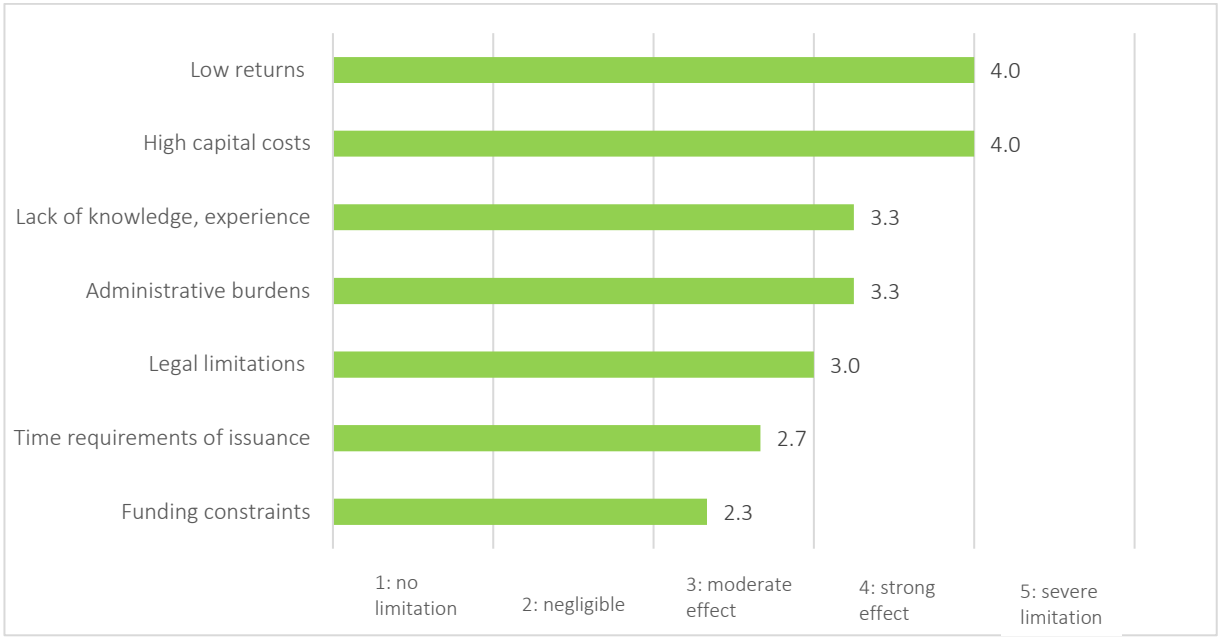


Figure 2: Limitations in green financing for surveyed financial institutions.

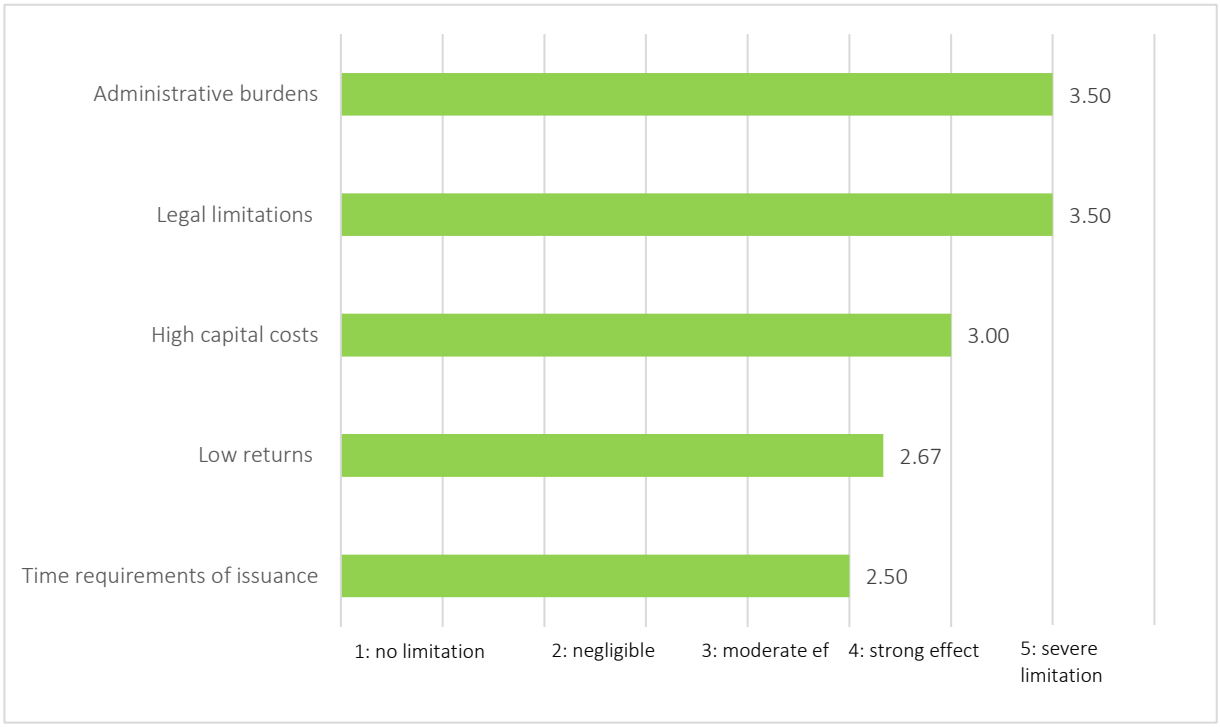


Figure 3: Opportunities for the Hungarian government to support the spread of green financing among surveyed corporations.

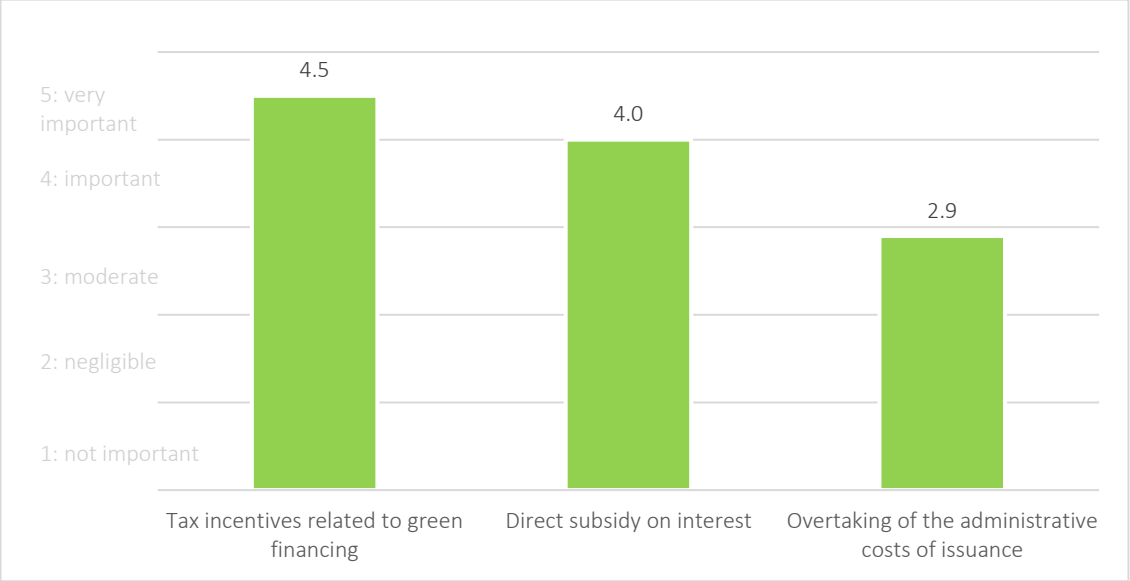
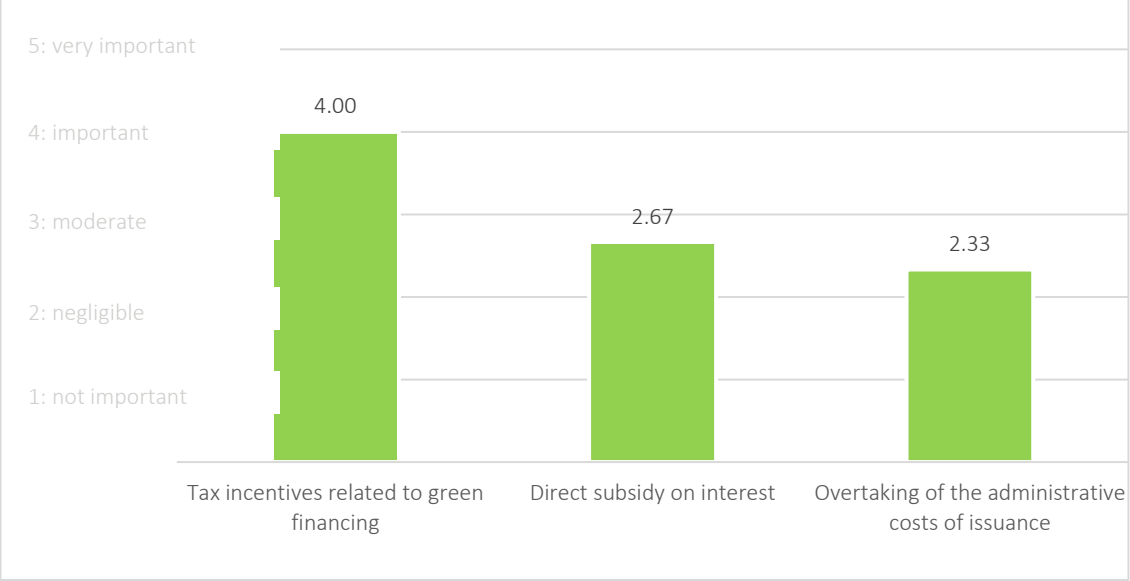


Figure 4: Opportunities for the Hungarian government to support the spread of green financing among surveyed financial institutions.



6.3.2 Start-ups

Results of the survey with start-ups within the Project show that the start-up ecosystem is in a premature stage in Hungary. Both business-related and sustainability knowledge is in development. Start-ups serve as an innovation system, and therefore, the ecosystem is key in delivering innovation in climate change mitigation and adaptation in Hungary.

Main challenges of the start-up ecosystem for green financing are the lack of sustainable investors/venture capitals, sustainable lenders, green grants, and support schemes. Grants and aid are the most targeted financial instruments among start-ups. Development of knowledge-sharing and opportunity generating networks is seen as an opportunity to start a green start-up ecosystem.

Our research revealed that start-ups' understanding of green finance is limited. The general knowledge of post-seed start-ups showed that they have acquired a certain level of understanding of the Hungarian sustainable finance environment, while such knowledge was not present among pre-seed start-ups. Green financing was reported to have an important and accelerating role in the development of start-ups.

One of the main topics during the interviews was measuring and reporting on sustainability performance. There seems to be a slight upward trend in reporting on measuring sustainable operations and their impact, however the reports are not built up following globally (or locally) accepted standards. Currently, reporting can be encouraged by the commitment of key personnel in the start-ups, such as CEOs.

Generally, start-ups have low levels of awareness of green financial instruments existing on the market. Availability of sustainable financial instruments and growth potential are seen as the most encouraging factors for using green financing instruments.

Meetings with the Association of Impact Investors

Meetings were held with the Association of Impact Investors where representatives of start-ups, start-up networks, venture capitalists, funds, and the MNB were present. Outcomes of the meeting suggest:

- It is important to leverage the investments of wealthy individuals in Hungary through sustainable Venture Capital. In Hungary, there is a plan for wealthy individuals available at credit institutions (e.g., banks), and investment service providers (e.g., intermediaries) to be able to deposit money on a long-term investment account (in Hungarian: "tartós befektetési számla" or "TBSZ") and gain tax benefits. Shares, bonds, securities, ETFs, options, foreign exchange transactions, and foreign securities can all be invested in the TBSZ account, but investment in sustainable VC-s is not possible. Impact investors could benefit from being able to use TBSZ accounts and offer the related incentives such as tax benefits to wealthy individuals.

- Start-ups bring important innovations that can help achieve climate neutrality. Knowledge sharing, however, is a limitation. Start-ups have limited knowledge on investors' needs, and it is a challenge for investors to understand the sustainability or ESG performance of start-ups.
- The start-up market is not affected by sustainability related development measures in general, and sustainable start-ups, a smaller portion of the market, are in a premature stage of development. Grants, guarantee schemes, and other financial or risk-transfer incentives that are targeted at high ESG performance or positive impact on sustainability might accelerate the market by incentivizing investments in sustainable start-ups.

6.3.3 Examples of public incentive measures to finance green start-ups and eco-innovation

This Section gives an overview of further public measure examples to finance green start-ups and eco-innovation in the Benchmark Countries. This Sub-Section references the latest Eco-Innovation Reports published by Eco-Innovation Observatory financed by the European Commission.[64]

The Eco-Innovation Observatory (EIO) serves as an information source platform, providing structured collection of a significant range of eco-innovation[65] and circular economic data for companies including start-ups, innovation service providers and policy makers.

Based on the Eco-Innovation Reports presenting the Benchmark Countries it can be stated that most of them do not provide public incentives exclusively for start-ups. Rather, such countries generally implement green strategies with the aim of promoting eco-innovation that can also be beneficial for start-ups.

6.3.3.1 Poland

Poland's economy is among the least resource-efficient economies in the EU. Therefore, as eco-innovation drivers, the Polish government offers grants and subsidies for introducing innovations associated with environmental benefits. Entrepreneurs are also encouraged to change the structure of their business models by providing adjustable financial and advisory tools. Nonetheless, the main barriers for eco-innovation are the insufficient awareness of companies of financial benefits and their reluctance to take the risk of adopting eco-innovations.[66]

The Polish Ministry of Climate and Environment recognised the need to encourage innovative business models. The implementation of an innovation support programme, based mainly on EU

[64] Source and other information on the website of Eco-Innovation Observatory: https://www.eco-innovation.eu/index.php/about-us (Latest download: 29.04.2021)
[65] Eco-innovation: "*Eco-innovation is the introduction of any new or significantly improved product (good or service), process, organisational change or marketing solution that reduces the use of natural resources (including materials, energy, water and land) and decreases the release of harmful substances across the whole life-cycle.*" (Definition by EIO; https://www.eco-innovation.eu/index.php/about-us)
[66] Eco-Innovation in Poland: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_poland.pdf (Latest download: 28.04.2021)

funds and especially targeting SMEs, would be a significant step as these companies often lack resources to cope with the submission of applications for co-financing.[67]

A business acceleration measure in Poland is the Green Technology Accelerator (GreenEvo) program managed by the Ministry of Climate and Environment. The goal of the project is to encourage the development of green technologies offered by Polish entrepreneurs and their transfer both within Poland and at the international level.[68]

6.3.3.2 Belgium

Eco-innovation and the focus on the circular economy are becoming even more popular in Belgium. Federal strategic policy frameworks (e.g. the Smart Specialisation Strategy or the Belgian Federal Institute for Sustainable Development), support eco-innovation at the national level and several regional policies facilitate eco-innovation in different areas as well, inter alia circular economy, industrial symbiosis development and climate change. Some of the main drivers of eco-innovation in Belgium are the strong pool of innovative companies, the developed R&D ecosystem, supportive government focus on sciences, tax incentives, R&D factors and the existence of dedicated support institutions. Factors that may slow the development of the eco-innovation are, for instance, the lack of a stabile national policy integration, since policy is mostly limited to the regional level, and the limited number of green profiles, for which the demand is high[69] but only few exist in Belgium. Thus, for companies, including start-ups, it could be difficult to find the adequate profile.[70]

Local incentive programs are available in Belgium. For example, in the region of Brussels, Greenlab.brussels offers a 6-month long programme focusing on accelerating the development of innovative start-ups. Although the participants do not receive financial support, they get access to coaching, thematic workshops and expert consultancy.[71]

6.3.3.3 Lithuania

In Lithuania, there is still room for improvement in the field of eco-innovation and the circular economy. Some drivers that have been identified as having a positive effect on eco-innovation development in the country are the continuously rising interest in the topic and the trend of constantly updating the relevant policies. The main barrier to development is that the industrial production in Lithuania is linear and there is no intention at a political level to turn towards eco-

[67] Eco-Innovation in Poland: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_poland.pdf (Latest download: 28.04.2021)
[68] Eco-Innovation in Poland: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_poland.pdf (Latest download: 28.04.2021)
[69] Science, Technology, Engineering and Mathematics (STEM) profiles. Source: https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_belgium.pdf (Latest download: 29.04.2021)
[70] Eco-Innovation in Belgium: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_belgium.pdf (Latest download: 28.04.2021)
[71] Greenlab Sustainable Startup Accelerator (hub.brussels, NA) https://hub.brussels/en/greenlab-accelerator-for-sustainable-start-ups/ (Latest download: 28.04.2021)

innovation and a circular economy. However, local policies harmonized with EU legislation and strategies support inter alia innovation activities and an increase in the usage of renewable resources. Regarding start-ups, the preconditions of creating a developed ecosystem have already been laid, however there is still a long way to go. It is a notable fact that mandatory study modules on sustainable development have been introduced at Kaunas University of Technology with the aim of facilitating a transformative nature of start-ups grounded in eco-innovation and circular economy.[72]

As a publicly co-founded venture capital fund, the Investment and Business Guarantees (INVEGA in Lithuanian) provides guarantees for financial institutions for loans lent to companies, including start-ups, and also administers a public support mechanism, the partial compensation of credit interest. Besides, INVEGA also manages micro-credit lending to SMEs. INVEGA might also be able to cover guarantee for eco-innovations.[73]

As a business incubator, The Agency for Science, Innovation and technology (MITA) provides consulting opportunities for companies, especially for start-ups and for entrepreneurs as well.[74]

6.3.3.4 Austria

Austria is a developed country with a strong economy led by the service sector, and it belongs to the top performing countries from an eco-innovation and circular economy point of view. The main drivers behind this are favourable location, comprehensive environmental legislation, detailed regulations and policies and the public incentives provided for development and/or application of innovative environmental technologies. Despite this, some barriers can be mentioned. The Austrian economy is dominated by SMEs with limited financial and human resources resulting in restrained alternatives for development activities, including R&D. Furthermore, generally companies have limited access to government aid and tax incentives in the country. However, in recent years, several policy frameworks and measures towards eco-innovation and circular economy have been created to achieve the vision of being the EU's leading supplier of environmental technology. For instance, the main focus of a new policy framework, Masterplan Environmental Technology[75] is 'circular economy through digitalisation' which supports the development of environmental technology in Austria through the collaboration of politics, administration, industry and science.[76]

In 2019, according to the 2019 Start-up Cities Index, the capital city of Austria, Vienna was, and is still, considered the best place to start a business. This is mainly due to its favourable, easily accessible

[72] Eco-Innovation in Lithuania: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_lithuania.pdf (Latest download: 28.04.2021)
[73] INVEGA: https://invega.lt/en/ (Latest download: 28.04.2021)
[74] MITA website: https://mita.lrv.lt/en/ (Latest download: 29.04.2021)
[75] More information: https://www.bmk.gv.at/themen/klima_umwelt/nachhaltigkeit/green_jobs/umwelttechnologien/mut.html (Latest download 30.04.2021)
[76] Eco-Innovation in Austria: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_austria.pdf (Latest download: 28.04.2021)

location in the middle of Europe and its low development costs, which makes it more affordable for start-ups.[77] Besides, Vienna had and still has a strong start-up infrastructure with significant co-working spaces and accelerators that provide support for entrepreneurs founding start-ups. Business founders also have access and can get subsidies and grants from a few dedicated agencies (e.g., Austria Wirtschaftsservice (AWS) and Austrian Research Promotion Agency (FFG)). In addition, the presence of available venture capital funding and the growing network of business angels are also to be highlighted. Finally, two further factors that contribute to preserving the 1st place are the outstanding universities and the inclusive attitude of the start-up community in Vienna.[78]

Direct financial support for eco-innovation in Austria is provided by the Climate and Energy Fund. The fund focuses on R&D activities related to environmental technology and provides grants and guidelines to boost innovation regarding sustainable technologies and scientific research. Besides, it creates direct connections between settlements, regions, and municipalities and also facilitates Austrian innovative solutions to find their way into the domestic and international market.[79]

6.3.3.5 Luxembourg

Luxembourg has the leading position among the EU member states in terms of eco-innovation and circular economy. The main drivers behind the performance are strong political support, comprehensive legislation and the open economy of the country characterized by dynamic development and outstanding R&D. In Luxembourg, eco-innovation and circular economy are considered cross-sectorial topics, thus they are implemented by several public authorities. However, a barrier to be continuously handled is that due to the size and the location of the country, eco-innovations that have a broad impact or require a holistic development approach have to be implemented in cooperation with the bordering regions, and material flows are needed to be well coordinated and optimised Nonetheless, the government has will and commitment to transform the country into a global technology hub in terms of eco-innovation with the objective of developing and growing in niche markets.[80]

In 2019, Luxembourg was selected by the European Commission to host a supercomputer as part of the EuroHPC agency project[81] that strengthened and still strengthens the country's position as an

[77] Startup Cities website: https://www.peopleperhour.com/content/startup-cities/ (Latest download: 30.04.2021)
[78] Why Vienna Is The Best Place To Start A Business (Coleman, Alison. 2019) https://www.forbes.com/sites/alisoncoleman/2019/09/10/why-vienna-is-the-best-place-to-start-a-business/?sh=5a7fbdfc4f29 (Latest download: 28.04.2021)
[79] Was ist der Klima – und Energiefonds? https://www.klimafonds.gv.at/ (Latest download: 28.04.2021)
[80] Eco-Innovation in Luxembourg: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_luxembourg.pdf (Latest download: 28.04.2021)
[81] Details on the following website: https://eurohpc-ju.europa.eu/ (Latest download: 30.04.2021)

advanced technological hub, as it provides significant power of calculation for researchers but also for companies including start-ups and SMEs dealing with big data.[82]

An introduced direct financial support for eco-innovation is the International Climate Finance Accelerator (ICFA), a public-private partnership set up in 2018 by ten private financial entities and two ministries of Luxembourg to support innovation and high impact investment strategies. The ICFA also supports fund managers during start-up phase who focus on innovative climate finance investment strategies and high environmental, social impact and a strategy for scale.[83]

6.3.4 Recommendations

Recommendations on the support to different market participants, such as corporations, financial institutions, and start-ups, acting as issuers are different. Start-ups serve as an innovation ecosystem, while corporations and financial institutions have a more established role in the ecosystem with different needs for support. Support might manifest in financial or risk incentives, removal of barriers, creating transparency by measuring sustainability performance, or creating networks.

Recommendations on the support to green capital market investors include: the transparent information of data (such as ESG); on related ESG risks specified for industry; the introduction and support of high-quality green standards based on the EU Taxonomy; and removing barriers from emerging sustainable technology. If this information is developed and disclosed in a consistent manner, green capital market investors will be more interested, their number should grow.

6.3.4.1 Absorbing risks of investors

Mitigating the risk to investors in sustainable start-ups encourages venture capital flows towards sustainable innovation. Tools such as guarantees or tax incentives relief risks for the investors, making sustainable venture capital more attractive. However, the limitations and opportunities of such incentives should be studied first, both from the angle of start-ups, and investors.

[82] Eco-Innovation in Luxembourg: EIO Country Profile 2018-2019 (European Commission, 2019). https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_luxembourg.pdf (Latest download: 28.04.2021)
[83] International Climate Finance Accelerator website: https://www.icfa.lu (Latest download: 30.04.2021)

It is recommended to consider boosting investments in sustainable start-ups by mitigating risks for investors, for example, by guarantees or tax incentives. Such examples could be:

- Setting up supporting measures such as a public-private partnership like International Climate Finance Accelerator (ICFA) that aims to support innovation and high impact investment strategies and to support those fund managers, during the start-up phase, who focus on innovative climate finance investment strategies and high environmental, social impact;
- Implementation of guarantees supporting eco-innovation.

6.3.4.2 Removing barriers of investing into start-ups and clean technology

It is worth considering removing barriers that can potentially limit investments in sustainable start-ups. Factors that constrain investment in sustainable start-ups include the relatively small size of start-up firms; the uncertain sustainability impact of their technology; the lack of transparent ESG data; market knowledge; and further business and administrative barriers that sustainable start-ups face. It is recommended that

- the MNB should start collaborating with public and private entities (ministries, ESG and venture funds) on this subject,
- a holistic study is prepared that identifies funding challenges for sustainable start-ups in Hungary to develop an action plan on accelerating investment in sustainable start-ups.

6.3.4.3 Incentives for ESG Data collection, standardisation and assessment

It is important to develop standardized ESG impact assessment methodologies for start-ups, in order to foster information exchange and availability towards investors. Examples of this could be the following:

- Providing access to easy-to-understand sustainability-related information about corporations and start-ups for investors, employees, and the public;
- Publishing guidelines and creating definitions in order to achieve a common understanding of what sustainability is in different ecosystems to measure and be able to compare ESG performance of start-ups in different economic sectors. This could include the implementation of an ESG rating tool that provides an estimation of ESG performance regardless of company size;

- Setting goals and expectations for ecosystems and sectors for the climate-related targets.

It is important to consider forging links between start-ups, ESG funds, impact investors, and incubators in the form of network creation, knowledge sharing and other topics. Examples of this could be to:

- Supporting the implementation and development of sustainable business incubators to create connection between the different actors of the start-up ecosystem, as well as between different regions and cities to accelerate learning.
- Supporting the creation of business hubs that facilitate learning, connection, and innovation.

7 Public funds to foster sustainable investments

7.1 Tax incentives, direct subsidies and public investments

In this Section we provide an overview of the barriers and difficulties of the development of a green financing ecosystem, we then go through the possible incentives and assess how green public investments could stimulate the development of green financing with particular emphasis on the green bond market. Any incentives or benefits to be introduced shall nevertheless be assessed, when developed in detail, as either not constituting, or as compatible with EU state aid rules.

7.1.1 Barriers and difficulties

In 2019, the green bond market was still a considerably small market compared to non-labelled bond markets and, therefore, *lack of liquidity* was sometimes a problem.[84] In addition, as institutional investors increasingly apply ESG criteria to their investment policies, it was found that green bonds generally have *lower yields* (by an average of 2 basis points) compared to conventional bonds. Nonetheless, green bond issuance is still more expensive for issuers, as they need to engage external reviewers to get appropriate and officially verified green bond status and certified green bonds, and they also must continuously monitor the debt's compliance with generally accepted principles and initiatives for such financial assets which also come at a cost (e.g. qualified internal team, IT reporting needs, time consuming, complex processes etc.).[85] Investors tend to screen issuers using the ESG criteria which may tilt demand toward issuers with higher environmental scores; those however generally offer lower yields than the comparable non-green bonds.[86] The main benefits of green bonds for companies are attracting customers and staff who are committed to tackling environmental problems, as well as signalling a contribution to sustainability for both investors and issuers, which, due to the halo-effect could positively affect the trading of the non-green bonds of the same issuer as well. Thinking and acting in order to become more sustainable has become more normal in the financial sector. This is one of the reasons for investors' willingness to accept lower returns from green bonds.[87] Besides, they invest because a reduced risk from likely future environmental penalties on the issuer, which increases risk of default – hence they may accept a lower coupon along with a lower risk.[88]

[84] Giugale, Marcelo (2018): The Pros and Cons of Green Bond. https://www.worldbank.org/en/news/opinion/2018/10/10/the-pros-and-cons-of-green-bonds (Latest download: 16.12.2020)
[85] Investors may pay 'greenium' as green bond demand outstrips supply https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/investors-may-pay-greenium-as-green-bond-demand-outstrips-supply-43593311 (Latest download: 16.12.2020)
[86] Zach Tokura (2020) Have corporate green bonds offered lower yields? MSCI: https://www.msci.com/www/blog-posts/have-corporate-green-bonds/01738309960 (Latest download: 26.01.2021)
[87] Aaron Maltais & Björn Nykvist (2020) Understanding the role of green bonds in advancing sustainability, Journal of Sustainable Finance & Investment, DOI: 10.1080/20430795.2020.1724864 https://www.tandfonline.com/doi/full/10.1080/20430795.2020.1724864 (Latest download: 26.01.2021)
[88] Aaron Maltais & Björn Nykvist (2020) Understanding the role of green bonds in advancing sustainability, Journal of Sustainable Finance & Investment, DOI: 10.1080/20430795.2020.1724864 https://www.tandfonline.com/doi/full/10.1080/20430795.2020.1724864 (Latest download: 26.01.2021)

Green investments tend to be less commercially viable, as they are generally more expensive compared to conventional investments. Besides, due to their lower rate of return, green financing is frequently accompanied by lower interest rates through concessional finance. Therefore, the financial gap between conventional and green investments must be managed (e.g., there is a tendency of providing public subsidies and introducing other incentive measures for green financing).[89]

The risk of 'greenwashing' and the lack of standardised monitoring systems are also among the issues that should be addressed. Moreover, there are significant differences related to the levels of development of the green bond markets between countries as well as a lack of uniformity in what constitutes green. Therefore public measures, regulation and governmental incentives tailored to local conditions may have an important role to manage the challenges and support the expansion of the green bond market at the initial stages of its development. Ideally, public measures and governmental incentives should help establish and support the growth of the green bond market until it matures, however in the long run green forms of financing are also expected to become standardized, commercially viable and widely accepted and understood, and should then be able to operate without any significant state intervention.

7.1.2 Tax related incentives

7.1.2.1 Types of tax benefits and incentives

According to CBI, tax incentives may be able to provide a big boost to green investments with a relatively low impact on public finances.[90] These measures may also enhance the demand side (the investor benefits from the incentive) or the supply side (the issuer benefits from the incentive) of green bonds.[91]

The administrative costs of tax incentives are moderate, and their impact varies depending on the scope and the extent of the respective tax. The measure is relevant for both developed and less developed green bond markets. However, experts warn that a change in tax regime in favour of green bonds could increase the probability of greenwashing [92] conventional bonds. Furthermore, the introduction of tax incentives may enhance the policy risk, meaning that the interest in green bonds is dependent on the willingness of the government to incentivize the green bond market.[93]

Tax incentives provided to domestic investors primarily benefit larger countries, which have a sufficient internal market, as the tax scheme has no advantage for foreign investors. However, foreign

[89] Public action and support can attract private investment by reducing the cost of capital of green growth https://reports.weforum.org/green-investing-2013/reducing-the-cost-of-capital-for-green-projects/ (Latest download: 16.12.2020)
[90] Tax incentives for issuers and investors: https://www.climatebonds.net/policy/policy-areas/tax-incentives (Latest download: 05.11.2020)
[91] Agliardi, Elettra & Agliardi, Rossella (2019) Financing environmentally-sustainable projects with green bonds. Environment and Development Economics. 24. 1-16. (Latest download: 03.12.2020)
[92] Greenwashing means that a company promotes positive environmental impact of a project, however in real life, the investment has little or no significant green impact. (resources: Agliardi, Elettra & Agliardi, Rossella (2019) Financing environmentally-sustainable projects with green bonds. Environment and Development Economics. 24. 1-16. (Latest download: 03.12.2020)
[93] Paragraphs based on: Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 53.)

investors might also be attracted into domestic bond markets through preferential withholding tax rates for green bonds.[94]

Similar advantages could be provided to a broader range of companies or business practices under the condition that they comply with strict ESG conditions and refer to the EU Taxonomy. Investors could be granted tax relief on personal or corporate income tax against a sustainable investment made, for example, in a sustainable-labelled investment fund or social impact companies.[95]

Indirect taxes also have the potential to encourage socially and environmentally oriented business models. As of the date of this Report, the list of activities eligible, for instance, for a reduced VAT rate covers several essential sectors and products from a social point of view, but mostly does not consider environmental aspects. Reduced VAT rates could include more generally sustainable business models and activities, becoming a measure that would support not only the growth and development of large companies, but SMEs as well.[96]

7.1.2.2 Recommendations – tax benefits and incentives

It is worth considering the introduction of one or more tax benefits or incentives. Different types of tax benefits could be used and implemented in the short term as regulators have significant experience with tax incentives for financial products in so far as such incentives or benefits remain in line with EU state aid rules:

- *Tax-credit bonds* apply to bond investors who receive tax credits instead of interest payments. This means that issuers do not have to pay interest to the creditors on bonds, which is an incentive for the issuer.
- *Tax-exempt bonds* mean that investors do not have to pay income tax on their bonds' interest or the difference between its price and the face value, therefore issuers can offer lower interest rates for the bondholders, and thus it is an incentive for the issuer. For instance, in the USA, interest on municipal bonds is typically exempted under federal tax income.
- *Preferential withholding tax for bonds* apply to foreign investors. They receive an exemption from tax or a reduced withholding tax rate on income from their investments.

[94] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 103.)
[95] Luxembourg Sustainable Finance Roadmap (United Nations Environment Programme – Finance Initiative, 2018), https://gouvernement.lu/dam-assets/documents/actualites/2018/10-octobre/04-sustainable-finance/Luxembourg-Sustainable-Finance-Roadmap-WEB.pdf (Latest download: 04.12.2020)
[96] Luxembourg Sustainable Finance Roadmap (United Nations Environment Programme – Finance Initiative, 2018), https://gouvernement.lu/dam-assets/documents/actualites/2018/10-octobre/04-sustainable-finance/Luxembourg-Sustainable-Finance-Roadmap-WEB.pdf (Latest download: 04.12.2020)

7.1.3 Relevant examples in the Benchmark Countries

In this Sub-Section relevant tax related examples are presented; however, it is important to note that in reality most of the Benchmark Countries combine different types of incentives and strategies to enhance greener finance. Besides, the actors of the financial markets have dedicated and applied action plans for promoting sustainable financing and/or investments that may also include green bonds. These guidelines combine multiple aspects, intentions and incentives in order to make the country more environmentally friendly and draw attention to green projects.

In Belgium, personal income tax can be used to promote the use of renewable energy. The incurred expenses related to the installation of these energy producing systems can be offset against personal income tax. The maximum of the potential reduction is 40% of the total construction costs. For companies, corporate tax exemption may be approved if the entity uses the savings for constructing renewable electricity generation systems.

Poland was the first country that issued sovereign green bonds in 2016. The country committed itself to issuing green bonds on a yearly basis and to become a regular sovereign green issuer. In the country, under the eligible sector of renewable energy, due to the regular sovereign green bond issuance, EUR ~71.6 million was spent on refinancing and financing the excise tax exemption from the years Q2 2017 – Q2 2018 for electricity generated from renewable energy sources.[97]

Another relevant example can be found in Luxembourg. In the Sustainable Finance Roadmap published in 2018 in the frame of United Nations Environment Programme – Finance Initiative[98], it was recommended to analyse and redesign the system of incentives and taxation of the country:

- Redesign investment incentives to promote long-term investments at the level of product developers, investors and investees.
- Analyse how direct tax incentives could be linked to sustainable finance activities and business models.
- Analyse whether the scope of reduced indirect taxes should be broadened for sustainable companies and business models.

The reason behind the above recommendations is that, according to the Sustainable Finance Roadmap, Luxembourg's success as a financial centre serving the European and global economy is founded on, inter alia, the legal, regulatory and tax framework tailored to serving international financial actors and investors.

[97] Green Bond Report on the Use of Proceeds (Ministry of Finance, Republic of Poland, Institute of Environmental Protection – National Research Institute, Kobize – The National Centre for Emissions Management, 2019)

[98] Sub-section is based on: Luxembourg Sustainable Finance Roadmap (United Nations Environment Programme – Finance Initiative, 2018), https://gouvernement.lu/dam-assets/documents/actualites/2018/10-octobre/04-sustainable-finance/Luxembourg-Sustainable-Finance-Roadmap-WEB.pdf (Latest download: 04.12.2020)

With regard to analysing and redesigning the incentives, they could be designed to encourage long-term, sustainable investments and discourage unsustainable investments. Furthermore, the multiplying effect of incentives at the level of the product issuer, investor and investee must be integrated into this assessment. Incentives could be linked to specific investment models. For example, the financial performance of an investment could be linked to its environmental or social benefits. Sound expertise in extra-financial performance measurement is needed for such innovative incentive schemes.

Direct taxes have an important multiplier potential, both at the level of the investee and of the investor. Waiving subscription taxes for microfinance funds has driven significant growth in this sector. Analysis should be conducted to determine the conditions under which the same measures could be implemented for sustainable investment funds at large. The Ministry of Labour, Employment and the Social and Solidarity Economy has started certifying commercial companies that comply with strict criteria around their business model, performance indicators, auditing and reporting. These social impact companies (SIC) enjoy tax advantages and greater access to public procurement.

Though the Netherlands is not a Benchmark Country, it is worth mentioning the *Green Funds Scheme*, a tax incentives scheme that was launched in 1995 to compensate investors for the lower interest rates offered by green projects by financial institutions. Individuals investing in a green fund or saving money with financial institutions practicing 'green banking' receive lower rates than the market interest rate. This is compensated by tax incentives; thus, banks can charge a lower interest rate on green projects. The compensation is important, as green bonds issued by banks in the Netherlands offer lower interest rates compared to market interest rates, which enable banks to finance green projects by providing loans, also at a lower interest rate and thereby improve their financial situation as well. The above mentioned scheme was also applied for the first green bond issue in the Netherlands. As for 2010, individual investors had to pay 1.2% points less capital gains tax on the amount invested, however green capital was exempt up to EUR 55 000/person. Moreover, green investors were also eligible to pay 1.3% points lower income tax on their green capital. All in all, the total tax incentive could add up to 2.5%, thus the individual investors could accept a lower interest rate or dividend on their investment.[99]

[99] The Green Funds Scheme - A success story in the making (NL Agency, 2010, p. 3.)
https://www.rvo.nl/sites/default/files/bijlagen/SEN040%20DOW%20A4%20Greenfunds_tcm24-119449.pdf (Latest download: 03.11.2020)

7.1.4 Direct subsidies

In general, if green bonds offer the same risk, return and additional benefit as non-labelled bonds, investors tend to choose the green alternative: the environmental benefit may be an additional motivating factor for investing in green bonds.[100] The incentives can be classified based on whether they have an impact on the demand or supply side of the green bond market, or both.[101]

7.1.4.1 Cash rebate (demand side subsidy)

Cash rebate has been used as a direct subsidy in the case of green bond investors for subsidizing their net interest payment.[102] Cash rebate means refunding a previously determined ratio of the price directly to the buyer after purchasing a product/service or, in this case, a green bond. The investor first pays the total price and later some of the amount paid is refunded to the bondholder.

7.1.4.2 Offset of expenses (supply side subsidy)

Offset of expenses can be a potential incentive measurement as well. Generally, the administrative costs of issuing green bonds are significant[103], therefore offset of expenses could be used for compensating these high administrative prices (e.g., costs of external reviews to officially prove the greenness of the bonds).

7.1.4.3 Relevant examples in the Benchmark Countries

In Lithuania the project "*Lithuanian Strategy and Action Plan on Sustainable/Green Finance"* (Green Capital Markets) was launched in October 2019[104], and was finalised in January 2022 in cooperation with the EBRD and the European Commission. Lithuania aims to assess the best and most relevant incentives for sustainable finance, such as direct fiscal and/or other incentives for different stakeholders, innovative ways to use the tax system along with regulatory signals to scale up market opportunities (for instance differentiation of tax regime between high carbon or low carbon investments), grants for technical assistance and investments, design of other smart green incentives prioritizing innovation and coherency in monitoring and evaluation of sustainable finance, etc. Taking into consideration the results, Lithuania intends to incentivise both issuers and investors to issue and invest in green investment products, respectively.

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[100] Aaron Maltais & Björn Nykvist (2020) Understanding the role of green bonds in advancing sustainability, Journal of Sustainable Finance & Investment
[101] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 46.) https://ec.europa.eu/environment/enveco/pdf/potential-green-bond.pdf (Latest download: 04.11.2020)
[102] Echo K. Wang, Financing Green: Reforming Green Bond Regulation In The United States, 12 Brook. J. Corp. Fin. & Com. L. (2018)
[103] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016) https://ec.europa.eu/environment/enveco/pdf/potential-green-bond.pdf (Latest download: 04.11.2020)
[104] Lithuania: The Lithuanian Strategy and Action Plan on Sustainable/Green Finance (Green Capital Markets), 2017 https://www.ebrd.com/cs/Satellite?c=Content&cid=1395282205534&pagename=EBRD%2FContent%2FContentLayout&rendermode=live%3Fsrch-pg%3Dadv (Latest download: 04.12.2020)

7.1.4.4 Recommendation – direct subsidies

It is worth considering introducing direct subsidy incentives on both the demand side (cash rebate) and supply side (offset of expenses) of green bonds.

7.2 Other measures

In addition to tax related incentives and direct subsidies, other types of measures are also applied in the Benchmark Countries as presented in the following Sub-Sections.

7.2.1 Public issuance of green bonds

Recommendation: To increase the volume of green bonds, the government, the municipalities and national development banks should continue or start issuing green bonds to cover the overall cost of state/municipality related potentially underfunded green investments.

Public issuances, where the capital is raised by public actors (like development banks), can serve as a role model for subsequent private issuances and boosting green bond market liquidity.[105] The objective of the measure is to increase the supply of green bonds for the market. The increase could attract more investors who, in turn, will also incentivise more private actors such as companies and banks to issue green bonds, increasing the liquidity of the market. Consequently, public issuances may enhance the recognition of ESG-related financial products by the market.

The public issuance of green bonds is a short-/mid-term measure until the green bond market becomes more mature. The measure can be effectively applied in the short-term if it can be built on existing practices. Otherwise, it might take more time for the market to adapt and could be introduced only in the medium-term. However, public issuance would no longer have a significant impact on the green bond market once it exceeds a certain size and the private sector takes the leading role. As the demand for green bonds exceeds the supply, public issuances and promotion activities are important as well as relevant measures for supporting the development of the green bond market. The measures are generally supported by the stakeholders as these facilitate the growth of the green bond market while leaving the decision to buy such green bonds or to issue additional bonds to private market actors.[106]

The administrative costs of issuing green bonds depend on how familiar the institutions are with the asset. While public issuances are also relevant for developed green bond markets, they are highly advantageous for

[105] So what's next? How to grow green bond markets around the world https://www.climatebonds.net/files/files/10%20point%20policy%20guide.pdf (Latest download: 04.11.2020)
[106] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016) https://ec.europa.eu/environment/enveco/pdf/potential-green-bond.pdf (Latest download: 04.11.2020)

less developed markets, as public issuances have a significant leveraging effect.[107] Bigger publicly issued bonds continuously raise international interest, hence they are an important tool to maintain the international investor interest to a geography and country.

7.2.2 Public investment in green bonds

Recommendation: increased level of public investment in short- to mid-term green bonds could demonstrate trust in sustainable finance.

To increase the demand for green bonds, public institutions, public development banks and financial institutions could hold green bonds in their portfolios.[108] This can be achieved by the authorities setting up green investment targets for public institutions.[109] Public investments are important as they have a signalling effect to private investors that green bonds are reliable type of investment.

There is a need for guidance on how international standards relating to bonds are used in the market. The potential of greenwashing and green-default needs to be prevented, so that international investors feel more comfortable entering the market. For standardisation, public investments should follow international market standards both in bond and taxonomy standards.

The timeframe for the implementation of public investment in green bonds is short-term to medium-term. If the investment in green bonds is not covered under the mandate of the respective public institutions, regulators shall adjust the funding guidelines and plans. To enable public institutions to invest in green bonds, first the requirements regarding their investments need to be adjusted, for instance if it is against their mandate to ensure high risk investments, then green bonds could be an exemption, or if they are not obliged to invest in green bonds, there could be a specific target for it.[110]

Investments in green bonds by public actors can take the form of credit enhancement whereby the public actors invest in the junior tranches of bonds issued and thus take on higher risks than the private investors.[111] Potential securitisation of green bonds and loans, that may be in the form of asset backed securities or mortgage bonds, are also expected to raise awareness of domestic and foreign public institutions.

The administrative costs of this measure can be considered low to moderate, however, the most important cost factor for investments is the actual price of the transaction.[112]

[107] Hungary issues EUR 1.5 bln green eurobond (BBJ, 2020)
https://bbj.hu/economy/hungary-issues-eur-15-bln-green-eurobond_183854 (Latest download: 04.11.2020)
[108] To give an example, MFB Invest (member of the Hungarian Development Bank), purchases the bonds of MNB's Growth Bond Programme on the secondary market.
[109] Boosting demand: Mandates for domestic funds, quantitative easing https://www.climatebonds.net/policy/policy-areas/boosting-demand (Latest download: 04.11.2020)
[110] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 48, 88-90.)
[111] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 48, 88-90.)
[112] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 48, 88-90.)

7.2.3 Preferential treatment of green bonds in prudential regulation

Recommendation: Consider the extension of preferential treatment of green bonds in prudential regulation to other types of sustainability related financing, such as sustainability-linked (transition) bonds.

In addition to regulation, central banks themselves could also enter the market by purchasing green bonds or use green bonds in their quantitative easing programmes. However, these measures should only be taken in the short run, since in the green bond market a market-based operation without any state intervention would be ideal in the long run.

The introduction of prudential regulations implies moderate administrative costs, but potentially they can have a high impact. They are relevant for both developed and less-developed markets.[113][114]

7.2.4 Credit rating enhancement

Recommendation: Consider absorbing risks associated with green bonds to enhance the credit rating of them.

Generally, credit rating enhancement is a risk mitigating tool used to reduce risks on financial products with the aim of obtaining better terms for investors. Institutional investors mainly search for investment-grade bonds to hold in their portfolios, therefore limiting their investment in high-risk, high-yield bonds. Green bonds of non-financial issuers tend to have worse credit ratings compared to bonds issued in conventional sectors (e.g., oil and gas), as they represent a fairly new product which might include some unknown risks, and rating agencies do not have enough experience in pricing the risks of green assets. In the early stages of green bond market development, public entities can reduce the risk of green bonds by absorbing some of the risks associated with them, i.e., providing guarantees, insurance or by taking a subordinated equity or debt position. Regarding guarantees, public financial institutions have two options of influencing the market: they can issue loan guarantees at the project finance stage, and they can provide partial-risk or full guarantees at the bond issuance stage.[115]

Most of the measures could be implemented for a short-term, however, policy risk insurances might only be implementable in the long-term, if at all. The administrative costs of these measures are moderate to high, and their potential effects are moderate.[116]

[113] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 54.)
[114] A good example for that is the Bond Funding for Growth Scheme (Növekedési Kötvényprogram) launched by the MNB as of 1 July 2019, and closed down on the 14th of December, 2021, until planned disbursement lasts.
[115] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 98-99.)
[116] Study on the potential of green bond finance for resource-efficient investments (European Union, 2016, p. 98-99.)

7.2.5 Relevant examples in the Benchmark Countries

The first green bond issue in Hungary falls within the "*public issuance*" category, as in June 2020 the Hungarian government issued green government bonds whose proceeds will finance government investments related to climate and environmental goals defined in Hungary's National Clean Development Strategy.

In its report published in August 2020[117], the MNB described potential measures that could be taken to develop green financing. One of them is the MNB's intention[118] and realised step[119] to implement a "green benefit" in the mortgage funding adequacy ratio (MFAR), as a supply-side measure, which could result in the growth of issued green mortgage bonds. The Green Preferential Capital Requirement Programme which is intended to enhance the growth of green financial products and to improve the energy efficiency of the Hungarian building stock can be claimed for green housing loans granted between 1 January 2020 and 31 December 2023.[120] Four mortgage bonds have been issued since in Hungary. It is a good first step towards shaping the approach of the Hungarian financing system regarding green financing.[121]

As it has become a key priority for the MNB to integrate long-term sustainability considerations into its bond programmes, it decided to reintroduce its mortgage bond purchase programme in 2020, purchasing only green mortgage bonds from November 2020.[122] The first Hungarian green mortgage bond issue took place in August 2021. According to MNB's notice on the terms and conditions[123] the MNB would purchase mortgage bonds issued in Hungary, both in the primary and the secondary market in order to promote sustainability, green housing loans and the modern housing market.

The studied Benchmark Countries can provide useful practices regarding the issuance of green bonds that may also be implemented in Hungary. As mentioned, Poland was the first country that issued sovereign green bonds in 2016. Since then, Poland issued a EUR 1.5 billion 10-year and a EUR 500 million 30-year green bond in 2019. The aim of issuing euro denominated green bonds was to reach more investors, including international actors.[124] Since 2016, there have been three issuances totalling EUR 3.75 billion making Poland the most frequent sovereign issuer of debt linked to climate and environmental projects, however on the corporate side the market is thin. Regarding corporate bonds until January 2020, there were only five issuances.[125]

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[117] A magyarországi zöld kötvénypiac beindításának lehetőségei (MNB, 2020) https://www.mnb.hu/letoltes/a-magyarorszagi-zold-kotvenypiac-beinditasanak-lehetosegei.pdf (Latest download: 04.11.2020)
[118] Lakossági zöld hitelezés Magyarországon (MNB, 2019, p. 22.) https://www.mnb.hu/letoltes/lakossagi-zold-hitelezes-magyarorszagon.pdf (Latest download: 04.11.2020)
[119] 20/2021. (VI. 23.) MNB rendelet a hitelintézetek forint lejárati összhangjának szabályozásáról https://net.jogtar.hu/jogszabaly?docid=A2100020.MNB
[120] MNB introduces a Green Preferential Capital Requirement Programme (MNB, 2019) https://www.mnb.hu/en/pressroom/press-releases/press-releases-2019/mnb-introduces-a-green-preferential-capital-requirement-programme (Latest download: 04.10.2021)
[121] Az MNB erősödő szerepvállalása a zöld lakáscélú hitelek hazai piacán (Párkányi Szabolcs, 2021) https://www.mnb.hu/letoltes/parkanyi-szabolcs-az-mnb-erosodo-szerepvallalasa-a-zold-lakascelu-hitelek-hazai-piacan.pdf (Latest download: 01.10.2021)
[122] Magyar Nemzeti Bank prepare for purchases of green mortgage bonds (MNB, 2020): https://www.mnb.hu/en/pressroom/press-releases/press-releases-2020/magyar-nemzeti-bank-prepares-for-purchases-of-green-mortgage-bonds (Latest download: 26.01.2021)
[123] Notice on the terms and conditions of secondary market purchases in the MNB's Green Mortgage Bond Purchase Programme (MNB, 2021) https://www.mnb.hu/letoltes/notice-green-mortgage-bond-purchase-programme-secondary-20210802.pdf (Latest download: 04.10.2021)
[124] Pioneering Poland Pumps up Environmental Credentials and Considers Local Green Bonds: https://wholesale.banking.societegenerale.com/en/about/news-press-room/news-details/news/pioneering-poland-pumps-environmental-credentials-and-considers-local-green-bonds/ (Latest download: 2.12.2020)
[125] Emerging Market Green Bonds Report 2019 (Amundi Asset Management and International Finance Corporation, 2020) https://www.ifc.org/wps/wcm/connect/a64560ef-b074-4a53-8173-f678ccb4f9cd/202005-EM-Green-Bonds-Report-2019.pdf?MOD=AJPERES&CVID=n7Gtahg (Latest download: 04.12.2020)

The PLN 250 million (EUR 56 million) green covered bond issuance by PKO Bank Hipoteczny AS was the first under the mortgage bank's Green Covered Bond Framework, which was certified by CBI to be aligned with its low carbon buildings criteria. The green covered bonds are used for financing residential buildings that reduce greenhouse gas emissions and also provide a new financial asset for the bank to finance green mortgages, and to diversify its investor base. EBRD also invested PLN 50 million (EUR 11.2 million) in PKO Bank Hipoteczny AS' first green covered bond issuance.[126] PKO Bank Hipoteczny also established a Green Covered Bond Committee in 2019, whose responsibility is overseeing the entire Green Covered Bond process, including the evaluation and selection of eligible loans. The members[127] of the Green Covered Bond Committee meet on a regular basis (at least once a year) to perform additional analyses on the selected mortgages to ensure that those continuously meet the eligibility requirements.[128]

Belgium had the second-largest sovereign green bond to come to the market, raising EUR 4.5 billion in 2018.[129] The green bonds were allocated to around 150 institutional investors.[130] In its green bond framework, the Belgian government said funds from the deal will be allocated to finance projects in main green sectors (e.g., energy efficiency, renewable energy etc.).[131]

Brussels Capital Region developed an Energy, Climate and Air Protection Plan in 2016 in order to reach ambitious energy and climate goals such as reducing CO2 emission and energy consumption in the region. Related to this purpose, commercial banks in the region offer two different kinds of loans to finance housing energy retrofits from low to medium income households: consumer loan and mortgage that can include energy renovation costs as well. Furthermore, some of the municipalities offer financial incentives to motivate citizens to make the houses more energy-efficient, such as energy grants only for energy retrofit work and renovation grants that could finance any work related to the renovation of a building. For the mentioned reason, Brussels Capital Region launched a Brussels Green Loan, a zero to low interest loan which helps homeowners pre-finance the energy renovation works. The Brussels Green Loan offers short-term consumer loans (with an interest rate of 0% or 1%, up to 10 years) or long-term mortgages (with interest rate between 0% and 2%, up to 30 years).[132] Motivating homeowners with financial incentives to improve the level of energy-efficiency of their homes could be implemented in Hungary as well.

The largest issuer of green bonds in the Nordic and Baltic regions in 2017 was the Nordic Investment Bank (NIB)[133] jointly owned by Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden, with the

[126] EBRD invests in debut issue of Polish green covered bonds (EBRD, 2019) https://www.ebrd.com/news/2019/ebrd-invests-in-debut-issue-of-polish-green-covered-bonds.html (Latest download: 26.01.2021)
[127] Representatives from the treasury, the residential mortgage loans office, risk office, the compliance office, the controlling office and the cover pool register office
[128] Sustainalytics (2019): PKO Bank Hipoteczny SA Green Covered Bond. https://www.pkobh.pl/media_files/8e9ea805-381d-4af2-a8e7-41c18758972d.pdf (Latest download: 09.03.2021)
[129] Belgium joins the ranks of green bond issuing countries, 2018 https://www.ft.com/content/1f96c644-1b1c-11e8-956a-43db76e69936 (Latest download: 26.01.2021)
[130] BELGIUM HAS RAISED THE SECOND LARGEST GREEN GOVERNMENT BOND IN THE WORLD, 2018 https://companies.bnpparibasfortis.be/en/article?n=belgium-has-raised-the-second-largest-green-government-bond-in-the-world (Latest download: 26.01.2021.)
[131] Belgium joins green bond club with EUR-4.5bn sale, 2018 https://renewablesnow.com/news/belgium-joins-green-bond-club-with-eur-45bn-sale-603144/ (Latest download: 26.01.2021)
[132] The Brussels Green Loan Scheme (2017), https://energy-cities.eu/best-practice/the-brussels-green-loan-scheme/ (Latest download: 25.01.2021)
[133] Website: https://www.nib.int/

issuance of EUR 3 billion of green bonds. Issuance in Lithuania was dominated by sovereign bonds in the same year. However, Lithuania's grid company accounts for practically the whole corporate market given it is EUR 300 million and the corporate total is EUR 306 million according to cbonds.com data.[134]

In April 2018, Lithuania became the second CEE country to issue sovereign green bonds with the aim of funding energy efficiency improvements in multi-apartment buildings. The total amount of green bonds was planned to reach EUR 68 million in 3 years.[135][136]

An energy company, Verbund AG[137] was the first green bond issuer in Austria. The company raised in the value of EUR 500 million for energy efficiency programs in hydroelectric and wind power plants in 2014. In addition, in 2018 Verbund AG closed a EUR 100 million digital green bond issuance and uses the funds for grid updates.[138] Verbund AG reached another milestone in 2021 by issuing sustainability-linked bonds (SLBs) that are already aligned with the ICMA Green Bond Principles and seeks compliance with the most recent draft of the delegated acts of the EU Taxonomy.[139]

In Austria, the Green Bond Framework of Hypo Vorarlberg Bank (HypoVBG or Bank) published in 2020[140] includes projects, loans and investments in the field of energy efficiency (e.g., in new and refurbished buildings) and green buildings (that meet recognised standards and/or have a certification). The State of Vorarlberg provides residential building subsidies for the construction of residential housing (new buildings, conversions or additions), the amount of which is defined by a basic subsidy per square metre of eligible housing space and that can be increased by fulfilling additional guidelines. To obtain a subsidy, stricter energy values than the minimum standards fixed in the Structural Engineering Order of the Austrian federal states Bautechnikverordnung der Bundesländer have to be applied. These values must be set by each Austrian state – and those selected by the state of Vorarlberg are particularly ambitious. The residential building subsidies are paid by the state of Vorarlberg.

Regarding sovereign green bonds, Austria is currently analysing the possibility to issue this type of financial instrument, in order to support the achievement of its climate goals. However, there is no final decision yet on the date, conditions and other details of the issuance.[141][142]

[134] Nordic and Baltic public sector green bonds (Climate Bonds Initiative, 2018), https://www.climatebonds.net/files/files/Nordic_Muni_Final-01%281%29.pdf (Latest download: 04.12.2020)
[135] Lithuania to issue first green bonds http://www.xinhuanet.com/english/2018-03/30/c_137075340.htm (Latest download: 12.10.2020)
[136] Lithuanian Green Bonds are already on the Stock Exchange https://finmin.lrv.lt/en/news/lithuanian-green-bonds-are-already-on-the-stock-exchange (Latest download: 12.10.2020)
[137] Website: https://www.verbund.com/
[138] Climate Bonds (2018): The green bond market in Europe. https://www.climatebonds.net/system/tdf/reports/the_green_bond_market_in_europe.pdf?file=1&type=node&id=33922 (Latest download: 03.04.2021)
[139] Verbund AG – Green Finance Framework, March 2021
[140] Green Bond Framework, Hypo Vorarlberg, 2020, https://www.hypovbg.at/fileadmin/Hypovbg/Hypo-Vorarlberg/Investor-Relations/Green-Bond/Green-Bond-Framework-2020_EN_Hypo-Vorarlberg.pdf (Latest download: 04.12.a2020).
[141] Jennider Laidlaw, Francis Garrido (2020): Now sovereign and corporate issuers cement Europe's green bond leadership. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/new-sovereign-and-corporate-issuers-cement-europe-s-green-bond-leadership-60587041 (Latest download: 04.03.2021)
[142] Austria 'analysing' issuance of green bonds https://www.globalcapital.com/article/b1q9xpgmqhw0gz/austria-analysing-issuance-of-green-bonds (Latest download: 04.03.2021)

7.2.6 Other relevant international examples

Besides the opportunities in the Benchmark Countries, some other best practices related to the green bond market might be worth considering in Hungary. In May 2019, the government of the Netherlands issued its first green bond - the first from any AAA rated sovereign issuer. The issuance of the 20-year bond was set to raise EUR 4-6 billion, rising to some EUR 10 billion in the next few years. The funds raised are earmarked for climate adaption measures, renewable energy, energy efficiency and clean transportation projects.[143]

Finally, although Singapore is not a selected Benchmark Country, its good practice is worth mentioning. The Sustainable Bond Grant Scheme of the Monetary Authority of Singapore (MAS) encourages the issuance of green, social, sustainability bonds and SLBs in Singapore and is also open to first-time and repeat issuers. These types of bonds can help channel capital towards catalysing a broader adoption of sustainability practices. Issuing such bonds allow companies to meet corporate social responsibility objectives, diversify their investor base and achieve long-term pricing advantages.

MAS recognises that issuers of green bonds may have to bear additional costs, as they engage external reviewers to verify their green, social, sustainability and sustainability-linked bond status. Therefore, costs incurred in respect of the independent external reviews or ratings done based on any internationally recognised green/social/sustainability bond principles or frameworks are eligible for financing if certain criteria are met.[144]

The MAS announced in November 2020 the launch of the Green and Sustainability-Linked Loan Grant Scheme (GSLS), which is effective as of 1 January 2021. The GSLS aims to support corporates in obtaining green and sustainable financing by covering the expenses of engaging independent service providers. The grant also encourages banks to develop green and sustainability-linked loan frameworks to make this type of financing more accessible to small and medium-sized enterprises.[145]

[143] Netherlands government issues first AAA sovereign green bonds, 2019, https://www.internationalinvestment.net/news/4002304/netherlands-government-issues-aaa-sovereign-green-bonds (Latest download: 26.01.2020)
[144] Sustainable Bond Grant Scheme, 2020, https://www.mas.gov.sg/schemes-and-initiatives/sustainable-bond-grant-scheme (Latest download: 04.12.2020)
[145] Source of the entire GSLS description: MAS Launches World's First Grant Scheme to Support Green and Sustainability-Linked Loans (2020), https://www.mas.gov.sg/news/media-releases/2020/mas-launches-worlds-first-grant-scheme-to-support-green-and-sustainability-linked-loans (Latest download: 04.12.2020)

7.3 Grants and incentives available to the energy sector and for energy-efficiency purposes for the period 2021-2027 in Hungary

7.3.1 Operational Programmes

Interventions related to climate change mitigation, including energy efficiency, renewable energy, and smart energy network projects (covering energy storage developments) will be mostly co-financed by the Environmental and Energy Efficiency Operational Programme Plus (EEEOP Plus) and Economic Development and Innovation Operational Programme Plus (EDIOP Plus), but they also appear in the Territorial and Settlement Development Operational Programme Plus (TSDOP Plus) and the Digital Renewal Operational Programme Plus (DROP Plus).

EEEOP Plus, regarding energy efficiency will mainly co-finance the measures of the Energy Efficiency Obligation Scheme of Hungary (according to Article 7 of the 2012/27/EU Energy Efficiency Directive, EED), that among others, will provide grants and financial instruments to support energy suppliers (including for instance electricity, district-heating sector utilities) in delivering mandatory energy savings on the consumers' side. In this regard, the EEEOP will support the establishment of the so-called energy service company solutions (ESCO) that will provide a partly market based financial solution to implement energy efficiency measures on the side of final consumers. The energy suppliers will be able to receive both grants and/or refundable grants (loans with decreased interest rate) via the ESCO solution (combination of grants and loans will be possible). According to such energy efficiency investments priorities, the EEEOP aims to support a wide range of stakeholders, including corporates, SMEs, public entities and households. By the introduction of the obligation scheme, as it is stated by the EEEOP, the aim is to enhance the private market interest in energy efficiency investments. It's worth taking into account that such goal can potentially impact the interest for financial market products, as well as the form of future energy efficiency related financial products in Hungary (as for example residents won't be interested in loans that target energy efficiency). Through the implementation of the energy efficiency measures the program aims to achieve an annual 209,000 tCO2e GHG saving by 2029. Other major mitigation investment priorities of the EEEOP are the increase of renewable energy capacities, covering hydrogen developments, and the development of local transmission networks to help the integration of the increased volume of volatile renewable energies (including storage capacity increasing developments). The current version of the programme, beside the use of grants, aims to apply financial instruments for individual and community based renewable energy projects for electricity, and heating and cooling energy generation, including hydrogen generation, by supporting SMEs, and households accordingly. Certain transmission network relevant projects (those that would aim hydrogen storage) could be also financed via financial instruments based on the current version of the EEEOP. Details are not known yet on the exact conditions of the instruments, only the planned budget allocations which indicates that EEEOP will allocate

circa total HUF 1290 billion (around EUR 3.5 billion) in a form of grants, HUF 170 billion (EUR 0.5 billion) in a form of loan and a corresponding HUF 5 billion (EUR 13 million) in a form of guarantee. An additional amount of HUF 72 billion (EUR 0.2 billion) will need to be allocated as a grant adjusting loans.[146] It is important to consider that only the amount of the proposed EEEOP offers close the double amount of financial instrument budget that was dedicated for energy in the 2014-2020 financial period. It has to be noted that, in the end, the previous HUF 100 billion (EUR 0.27 billion) of the budget (that excluded Budapest and Pest County) could not be entirely allocated for projects as demand for such instruments in both SME and residential sector remained low. The HUF 10 billion (EUR 27 million) budgets for Budapest and Pest County was allocated almost immediately.[147]

In addition, TSDOP Plus, that targets the less developed regions of Hungary, supports the use of renewable energy in municipal buildings and the development of energy communities as part of the 'Climate-Friendly County' priority axis[148], for which a total of HUF 75 billion (EUR 208 million) will be available for the selected municipalities (the proportion of the amount being repayable is not yet known).

EDIOP Plus also supports energy efficiency investments related to buildings and renewable energy investments realized by SMEs as a complementary element under the 'Business Development' priority. Energy transition relevant developments will be accountable in projects that will be supported via financial instruments. The programme does not dedicate investment priority for energy developments, but their support does not seem to be excluded as the program addresses rather general economic developments priorities, leaving room for the more flexible use of EU supported loans.[149]Within the framework of DROP Plus, digital efficiency-enhancing and network developing activities can be implemented in connection with energy. These activities could include for instance the development of software systems to manage energy data from smart meters or systems that can remotely control and monitor energy production and optimize the management of energy storage, integrating of several types of renewables.[150]

7.3.2 Recovery and Resilience Plan (RRP)

The European Union's Recovery Fund provides an opportunity for Member States to mitigate the consequences of the COVID-19 epidemic. It focuses primarily on the area of green transition, accordingly, there is a dedicated energy component in the Hungarian RRP. There are two types of intervention planned under the energy component, one focusing on the classic and smart grid development of transmission system operators

[146] Environmental and Energy Efficiency Operational Programme Plus 2021-2027 , Version 1.0 by Prime Minister's Office https://www.palyazat.gov.hu/kornyezeti_es_energiahatekonysagi_operativ_program_plusz (Latest download: 11 January 2022)
[147] Evaluation of the results of energy purpose constructions for the 2014-2020 development period, published by Prime Minister's Office, https://www.palyazat.gov.hu/az-pletenergetikai-fejlesztsek-s-a-megjul-energia-elltshoz-kapcsold-intzkedsek-rtkels- (Latest download: 11 January 2022)
[148] TSDOP Plus Territorial and Settlement Development Operational Programme Plus 2021-2027, Version 5.0 by Prime Minister's Office, https://www.palyazat.gov.hu/terulet_es_telepulesfejlesztesi_operativ_program_plusz (Latest download: 11 January 2022)
[149] Economic Development and Innovation Operational Programme Plus 2021-2027, Version1.4 publsihed by Prime Minister's Office https://www.palyazat.gov.hu/gazdasagfejlesztesi_es_innovacios_operativ_program_plusz (Latest download: 11 January 2022)
[150] Digital Renewal Operational Programme Plus 2021-2027 Version 4.1 by Prime Minister's Office, https://www.palyazat.gov.hu/digitalis_megujulas_operativ_program_plusz (Latest download: 11 January 2022)

and distributors, and the other on promoting residential renewable energy investments (i.e., promoting residential solar systems and electrification of heating systems combined with solar systems). The budget for these areas will be HUF 262 billion (EUR 729 million) in grants[151], since as of the current status, Hungary will not use the additionally available loan component.

7.3.3 Green Home Programme launched by MNB

As part of its green strategy, the MNB allocated HUF 200 billion (approximately EUR 550 million) to launch the Green Home Programme to catalyse the development of green assets in the housing market. It is a demand-side incentive promoting the establishment of a green housing loan market. The Scheme enables the purchase and building of energy-efficient new housing with a predictable long-term interest rate loan up to HUF 70 million (approximately EUR 0.2 million). The MNB provides loans for credit institutions with 0% interest rate, which can be lent further to retail customers with a maximum interest rate of 2.5%.[152] Under the Green Home Programme a new housing is considered energy efficient if the calculated value of the aggregated energy characteristic (primary energy demand) does not exceed 90 kWh/m2/year and obtains a BB or better energy quality rating (that is, it meets the near-zero energy requirement).[153]

7.3.4 Recommendation

Recommendation: The options of using EU Funds to further boost green financing should be analysed.

Financing green investments is one of the main priorities in the EU in this programming period. Shared managed funds like Cohesion Policy and the Recovery and Resilience Facility cover a significant part of public spending in Hungary. It is recommended to analyse the possibilities of further "greening" the use of EU Funds, especially financial instruments, as they can have a large leverage effect with attracting private funds. The possibilities could be green loans and capital through prioritising green investments (e.g., receiving additional points if the project aims decreasing greenhouse gas emissions) or backing commercial bank loans with guarantees.

Based on the maturity of EU programmes it can be assumed that investment relevant impact assessments, target setting methods (e. g. there are target numbers on GHG savings originated from investments) and monitoring practices in sustainability relevant matters are rather advanced, therefore we recommend assessing potential methods that could be applied by financial market participants as well and providing guidance accordingly in order to improve current information collecting practices of FMPs.

[151] Recovery and Resilience Plan of Hungary https://www.palyazat.gov.hu/helyreallitasi-es-ellenallokepessegi-eszkoz-rrf (Latest download: 08.10.2021)
[152] NHP Green Home Program (MNB, n.d.) https://mnb.hu/zold-otthon-program?gclid=EAIaIQobChMIg4uU8sq28wIVZLR3Ch1LCw5UEAAYAiAAEgJWO_D_BwE (Latest download: 06.10.2021)
[153] Product information in the framework of FGS Green Home Programme on the conditions of the loans (MNB, 2021) https://www.mnb.hu/letoltes/nhp-zop-termektajekoztato-20210916.pdf (Latest download: 29.11.2021)

Furthermore, to identify possible state incentives for the financial market in greening the financial landscape, it's worth assessing what is the interest and potential benefit of the Hungarian state to apply such incentive and make a decision accordingly. As a first step of such assessment, it can be recommended to identify the relevant state interest ecosystems that can deliver the possible benefits the beneficiary and investment landscape of EU and national programs could be assessed, as the financial market should target investments that cannot be financed from public programmes and as such, they can have the interest to seek for financial market products, meanwhile providing a major contribution to the achievement of national sustainability goals, through for instance the decarbonisation of the economy.

Lastly, as mentioned by BSE during the Expert Panel, in order to support SMEs, they are involved in expert services and educational activities concerning ESG education under the EDIOP. Specifically, expert services are provided related to green bond issuance (preparatory expert advice on green bond issuance and Second Party Opinion) and provide ESG training for SMEs to improve their competitiveness and promote their further development.[154] After the programme ends, it should be assessed whether it was successful in reaching out to the SMEs and whether the program should be improved or repeated.

[154] Increasing the efficiency of the SME sector, in particular by providing measures regarding their listing on the stock exchange (KKV szektor hatékonyságának növelése elsősorban tőzsdei bevezetést szolgáló intézkedések biztosítása révén) https://www.palyazat.gov.hu/ginop-117-17-kkv-szektor-hatkonysgnak-nvelse-elssorban-tzsdei-bevezetst-szolgl-intzkedsek-biztostsa-rvn# (Latest download: 21. 01.2022)

8 Enablers and barriers of sustainable investments in capital markets

In this section we analyse the relationships and linkages between the various sustainable finance elements and the concerns of FMPs to identify the emergent barriers and enablers of sustainable investment and formulate recommendations for mitigating barriers and amplifying enablers. The analysis presented here aims to bring together considerations from the preceding chapters with the linkages identified between sustainable finance elements (regulations and standards) and FMP concerns. Due to the many sources of information being considered here, large portions of this section are structured in a bullet point format, with subheadings denoting the sources of information being considered, conclusions drawn from the interrelationships between the sources of information and the recommendations based on those conclusions.

8.1 Overview of the analysis approach

The first part of our analysis was focused on the identification of linkages between relevant EU obligations and the most common voluntary standards in ESG reporting and green bond issuance. We used comparison matrices to identify linkages between various sustainable finance frameworks (both regulatory and voluntary).

The second part of our analysis focused on interviewing FMPs to identify their concerns regarding sustainable finance and to understand what barriers to growth exist in their view. To support the initial line of questioning we conducted a literature review, which is presented in the next section.

Finally, the results from examining the linkages, the concerns identified from the FMP interviews and the analysis conducted in previous phases of the project were used to identify the complex interactions in the sustainable finance landscape that constitute barriers or enablers and recommendations on how to deal with them were formulated.

8.2 Literature review underpinning the FMP interviews

8.2.1 Overview of approaches regarding the integration of ESG factors in sustainable finance

Market practices suggest that many investment management firms have investment teams tasked with researching ESG factors which are then incorporated alongside financial inputs into their investment valuation methodologies. For example, Morning Star, which is an influential asset management research and recommendations firm, has formally integrated ESG into its valuation methodology[155].

[155] https://newsroom.morningstar.com/newsroom/news-archive/press-release-details/2020/Morningstar-Formally-Integrates-ESG-into-Its-Analysis-of-Stocks-Funds-and-Asset-Managers/default.aspx

In order to augment their analysis, investment management firms regularly add new, so-called "alternative" data sets and seek to leverage the capabilities of their data science teams to generate improved returns. The largest investment firms holding ESG exposures usually have a separate "ESG stewardship team"[156] or "ESG research team"[157].

Over the years, several different approaches have been developed for the integration of ESG factors. For example, AXA Group combines fundamental, quantitative and qualitative analyses whenever ESG-related portfolio decisions are made. In particular, ESG scores are complemented by qualitative ESG analysis and reports, fed by information collected from the external expert sources[158].

EUROSIF has identified the following responsible investment strategies[159]:

- *Exclusions* – This approach involves excluding companies or sectors on the basis of certain ESG criteria such as GHG emission intensity, or on the basis of ESG rating where companies below a certain rating (or above particular ESG risk level) are excluded from the investable universe. Additional criteria may include the exclusion of certain sectors for ethical reasons (weapons, gambling, tobacco, etc.).
- *Norms based screening* – A special case of exclusion where companies are excluded based on whether they are signatories of certain international norms such as the UN Global compact.
- *Best in class* – ESG investing approach where the best performing investments in a given universe or category are selected or weighted according to their ESG performance. Best in class can also be defined as a ranking hurdle that companies have to meet in order to be included in a portfolio.
- *ESG integration* – Inclusion of ESG factors in fundamental analysis or valuation models alongside valuation drivers. It is more common for ESG factors to be included on a qualitative basis but an increasing number of investors are quantifying ESG factors and integrating these into forecasting and valuation models.
- *Sustainability themed* – Thematic investment is when the investor focuses on investing in companies that are exposed to trends in sustainable development.
- *Engagement & voting* (activist investing) – Engagement & voting, otherwise known as activist investing is when an investor acquires an influential stake in a public company in order to influence the company's ESG behaviour.

[156] https://assets-us-01.kc-usercontent.com/094ee837-48bb-001c-6959-053670061ebf/7b76116b-0023-4e02-89dc-e8311f703604/Parnassus%20Investments_Our%20Approach%20to%20ESG%20Integration.pdf
[157] https://www.calvert.com/research-team.php
[158] https://www-axa-com.cdn.axa-contento-118412.eu/www-axa-com%2Fdaadd8ce-58bf-4c1f-bd28-96890bdb51aa_axa_ri_+policy_march2020.pdf
[159] https://www.eurosif.org/responsible-investment-strategies/

- *Impact investments* – Are those investments that are made with the goal of achieving explicit environmental and social targets alongside producing financial returns.

The chart below shows the range of sustainable and responsible investment (SRI) strategies in 2015 and 2017 from the 2018 European SRI Study created by EUROSIF:[160]

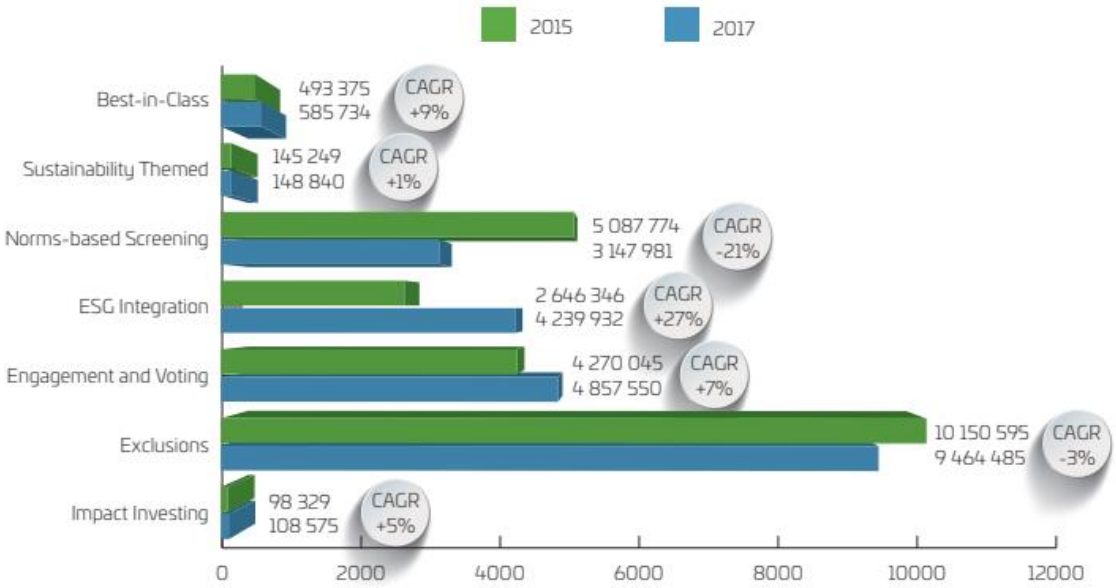


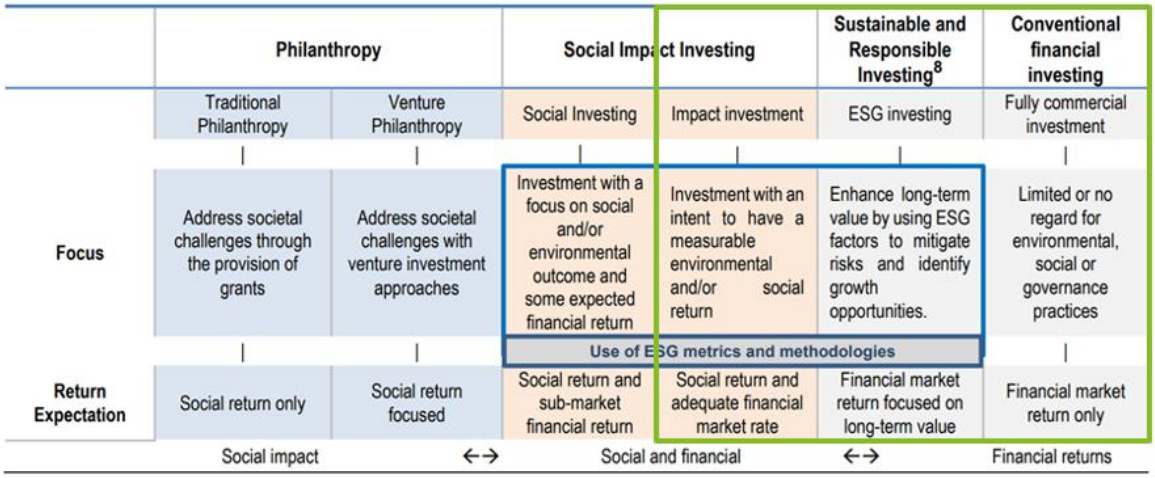
Figure 1: Overview of SRI strategies in Europe, values shown in 1000 EUR.

8.2.2 Categorisation of investor concerns

In the previous section we outlined the different approaches to ESG integration into investment decision making. In this section we will present the basis for our initial approach for categorising investor concerns. We intend to place investor concerns gleamed in during our interviews on a spectrum ranging from value based[161] to values-based investment[162].

The OECD spectrum of social and financial investing will serve as the basis for defining our own spectrum along which we will place investor concerns found in the literature and those gleamed from the responses of the FMPs to be interviewed as part of the project.

[160] https://www.eurosif.org/wp-content/uploads/2021/10/European-SRI-2018-Study.pdf
[161] ESG factors are included alongside other financial factors in valuing the investment, but explicit sustainability targets are pursued.
[162] In addition to evaluating the financial return, return of an investment, the investor also evaluates whether the characteristics of the investment also align with the investor's values.



Source: stylised adaptation from OECD (2019), "Social Impact Investment, the Impact Imperative for Sustainable Development," based on earlier versions from various organisations; for illustrative purposes only.

Figure 2: The spectrum of social and financial investing. Green border indicates the scope of the spectrum that will be used in our project

The above 3 categories included in the scope of our spectrum are understood in the context of our project as follows:

Fully commercial investment: The concerns of those investors who currently don't pursue any form of ESG based investment and don't take any ESG factors into consideration. They are only concerned with the financial returns of their investment. Informally, this category is referred to as non-green investors.

ESG investing: those investors who integrate ESG factors into their investment decision making process in order to mitigate risks and identify growth opportunities while trying to balance satisfying the increasing demand for sustainable investment with the ensuring sufficient financial returns.

Impact investing: values-based investing where in addition to financial returns, investors are seeking to make an impact through their activity on some sustainability factor.

8.3 Summary of interview results

We conducted interviews with 6 FMPs. Our interviews broadly covered 4 topic areas:

- Self-categorisation in terms of the spectrum of investing described in the previous section
- Programmes and opportunities in Hungary
- ESG and taxonomy integration into investment and finance practices
- Regulatory expectations

A short overview of FMP opinions is presented here. This summary is not comprehensive. Some FMP opinions that were included in the detailed analysis are not present in this summary because they cannot be summarised and need their full context to be understandable. These opinions can be found in the analysis (Section 8.4).

- Most of the FMPs put themselves in category 2 investor (non-green investor with some green investments), only 1 company categorised itself as a green investor.
- Most FMPs are aware that pursuing green investment is a market and regulatory expectation. This means that there is a risk of greenwashing on the part of FMPs. It will be important for regulators to ensure that they have the processes and means in place to prevent this as greenwashing will undermine the credibility of the market.
- Both domestic and international participants welcomed the guiding role of the National Bank of Hungary. Hungarian FMPs do not see the real added value of green portfolios.
- For international investors, the Hungarian market is too small and not liquid enough.
- Bonds should be issued in euros and international investors would like to see more benchmark-size offerings.
- According to a few Hungarian interviewees, greening the balance sheet of the National Bank of Hungary would incentivise other financial institutions to green their portfolios as well.
- The policy intentions of the Hungarian Government are not clear regarding a number of sustainability and taxonomy related areas such as renewable energy technology.
- Targeted tax incentives could help increase green bond issuance and taxonomy integration.
- Lack of reliable data was emphasized by all interviewees.
- GRI is the most preferred voluntary framework.
- Interviewees emphasized that harmonization of standards would be important.
- The understanding of the market's state and capacity, as well as clarifications on SFDR and EU Taxonomy requirements would be needed for FMPs in order to facilitate sustainability disclosures and impacts.

From the interviews it also became clear the categorisation approach for investor concerns identified based on the literature review would not be useful in the final analysis of the Hungarian Sustainable Finance Landscape and therefore was not continued beyond this point. The reason for this is that there is no evidence of impact investing taking place in Hungary, most FMPs have a mix of value and values-based concerns and separating concerns along this dimension did not add anything to the final analysis.

8.4 Analysis of relationships between regulatory elements and standards of the sustainable finance landscape

The first part of our analysis was focused on the identification of linkages between relevant EU obligations and the most common voluntary standards in ESG reporting and green bond issuance. The examined frameworks were the following:

- EU Regulation 2019/2088 on the sustainability - related disclosures in the financial services sector (SFDR);[163]
- Final Report of Draft Regulatory Standards by ESA (SFDR RTS) and the EU commissions official letter regarding SFDR RTS (dated for 25 November 2021);[164]
- Directive proposal of the EU Commission regarding corporate sustainability reporting (CSRD);[165]
- EU Regulation 2020/852 on EU Taxonomy;[166]
- Regulation proposal of the EU Commission regarding European Green Bonds and the Usability Guide of the EU Green Bond Standards (EU GBS);[167]
- ESG Reporting standards of the Global Reporting Initiative (GRI);[168]
- Standards of ICMA Green Bond Principles 2021 (ICMA GBP).[169]

In the analysis we summarised first the requirements of RTS in relation to each Article of SFDR as RTS defines the delivery and content details on the obligatory disclosures set by SFDR, then identified potential enabling or challenging factors of the RTS against SFDR. In the next steps, we assessed each of the above listed regulations and voluntary standards from the aspect of potential enablers and barriers as well according to each SFDR article and the relevant RTS requirements. Additionally, we addressed the main cross-linking barriers and enablers based on the outcome of the detailed analysis. As a final step we sorted the findings into data and time categories, and evaluated their importance, taking into account the outcome of interviews and preliminary findings of the report.

[163] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R2088&from=EN (latest download: 4 January 2022)
[164] SFDR RTS published by ESA https://www.esma.europa.eu/sites/default/files/library/jc_2021_50_-_final_report_on_taxonomy-related_product_disclosure_rts.pdf, and the official letter of the European Commission on the regulatory technical standards under SFDR published by ESA https://www.esma.europa.eu/sites/default/files/library/com_letter_to_ep_and_council_sfdr_rts-j.berrigan.pdf (latest download: 4 January 2022)
[165] Directive proposal on Amending 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting (COM(2021) 189 final) https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0189&from=EN (latest download: 4 January 2022)
[166] EU Regulation 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32020R0852&from=EN (latest download? 4 January 2022)
[167] Regulation proposal of European green bonds (COM/2021/391 final) https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0391&from=EN and the Guide of EU GBS, https://ec.europa.eu/info/files/200309-sustainable-finance-teg-green-bond-standard-usability-guide_en (latest download: 4 January 2022)
[168] https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/ (latest download: 4 January 2022)
[169] Guidance documents of ICMA Green Bond Principles https://www.icmagroup.org/News/news-in-brief/green-and-social-bond-principles-2021-edition-issued/ (latest download: 4 January 2022)

8.5 Perspectives of financial market participants on sustainable capital markets

8.5.1 Lack of clarity on the definition of sustainable investments

Interviews:

- According to the opinion of several interview participants a clear understanding is missing among FMPs as to what constitutes green investing.

Framework assessment:

- Nevertheless, EU regulations seem to converge on a common understanding on what can be counted as green investments (according to EU Taxonomy environmental objectives). The requirements of SFDR define 2 types of categories for financial products, which does help clarify what constitutes green investment. According to SFDR there are products that promote environmental and social characteristics (Article 8 products) and there are those which have explicit sustainability objectives (Article 9 products). Although Taxonomy-aligned investments can be considered under both categories, the regulation provides space, in the case of both products, for investments with social objectives, and for investments that have environmental objectives, but are not taxonomy-aligned. In case of the latter 2 subcategories, clear definitions are not provided by SFDR, nor RTS.
- In the case of EU Green Bond Standards, green investments are those that are fully aligned with the EU Taxonomy, meanwhile voluntary, non-EU regulation based bond frameworks, such as ICMA GBPs which were also analysed, set only recommendations that issuers should consider to identify green projects, and does not oblige bond issuers to disclose information on EU taxonomy-alignment, creating another, non-EU standardised category of green projects.

Conclusions from analysis in preceding chapters:

- Established definitions, practices, and leadership from authorities can contribute to encouraging the growth of sustainable investments and finance.
- The lack of standardized green definitions should be addressed.

8.5.1.1 Conclusion and recommendations

There is missing clarity on the definition of ‘green investments’, despite the EU’s taxonomy related achievements in this respect.

Both the interviews and regulatory assessment showed that the definition on sustainable investment can differ even in the case of EU regulations, leading to confusion. For instance, environmentally sustainable investments can be understood as fully taxonomy aligned investments or not (according to SFDR).

Furthermore, the term 'green investments', which is commonly used by the FMPs in Hungary, don't reflect the definitions set by the regulations as the term green investment does not reflect the potential social characteristics (as defined in the SFDR) or objectives of sustainable investments. Therefore, we recommend:

- To clarify the definitions of sustainable investments for FMPs according to the current regulatory definitions and in relation to each other. The provided guidance needs to be straightforward, to help common understanding. It is recommended to maintain a living document of frequently asked questions in both English and Hungarian on the responsible authorities' website. For example, the Bank of England has a dedicated climate change page outlining its own commitments.
- To clarify that 'green projects' are those that set environmental objectives and fit under the umbrella term of sustainable investments which, on the other hand, also include investments with social characteristics.

8.5.2 Increasing risk of greenwashing

Interviews:

- Most FMPs are aware that pursuing green investment is a market and regulatory expectation. For that reason, there is no FMP (according to interviewees) who would not seek to classify themselves as green, at least to some extent.
- Reputational risks are becoming more important for FMPs and can be considered as a key driver in avoiding greenwashing. This can also be seen in the fact that at least some FMPs monitor the ESG profile of corporations that issue green bonds. FMPs stated that incongruence from issuers in terms of ESG profile and the purpose of green bonds can be seen as an indicator green washing and one FMP mentioned that they had to divest from a green bond when an issuer acquired a coal mine after their green bond issuance.
- It was emphasized by the interview participants that greenwashing can be avoided by expecting congruency and transparency from all participants. In other words, ESG reporting will be important for all capital market participants, not just issuers and investee companies.

Framework assessment:

- In the case of FMPs, SFDR requires FMPs to assess sustainability risks and objectives at the entity and product level and assess and report on the consideration of PAIs (via metrics) resulting from investment choices, as well as to provide information on how these choices fit into their investment strategy and overall approach to sustainability.
- In the case of investee companies, Voluntary standards like GRI currently prescribe more detailed guidance on governance and social relevant risks than the EU standards.
- Reliable data won't be required by new EU legislations for SMEs until at least 2026 as CSRD will only require large companies to disclose their ESG performance, which means it will be difficult to ensure consistency in what data will be required of SMEs to have access to sustainable finance services
- Implementation of national level rules of CSRD (after the EU level regulation is adopted) will need to reflect the minimum requirements on ESG reporting in accordance with the directive. Member States may apply financial sanctions if national level requirements are not fulfilled by the incumbents, which can help mitigate the risk of greenwashing.
- Member States will have only a few months to implement national CSRD rules, which will need to be done by January 2023 based on the current timing plan of the EU Commission.
- Publication of Taxonomy-alignment will be mandatory only for large companies.

Conclusions from analysis in preceding chapters:

- Sustainability related capital market regulation may be introduced.
- The risk of greenwashing should be addressed.
- Early implementation of CSRD may be mandatory for an extended circle of companies (according to the proposed CSRD), requiring a certain level of assurance on the reports or even considering levying penalties.
- It is recommended to update BSE's ESG guide, published in 2021, in line with the proposed CSRD.

8.5.2.1 Conclusion and recommendations

As most FMPs seek to classify themselves as green, there is at least some risk that more greenwashing cases may arise. Therefore, it will be important for regulators to ensure that they have the processes and means in place to prevent this as greenwashing will undermine the credibility of the market.

The requirements of EU standards will improve the information sharing on risks relevant from the aspect of greenwashing, however, guiding information on the details is still missing according to the interviewed FMPs.

We recommend:

- Starting to elaborate national CSRD rules well in advance and assessing the market acceptance of potential CSRD relevant financial penalties, benefits and possible ways of introduction, and to make national decision accordingly.
- Assessing what minimal disclosure requirements for SMEs should be introduced at the national level, to facilitate access to sustainable finance services. Minimal considerations could be limited in scope to those data that are already available in most companies, such as GHG Scope 1 and 2 emissions, as financed GHG emissions will be a key consideration in sustainable finance.
- Continuing sharing information by BSE on helping listed companies develop their ESG profile, including the identification of priorities and goals (short-, mid., and long term), management of sustainability risks, engagement policies, and monitoring methods. These recommendations should be in line with SFDR requirements as well to help FMPs report on PAIs. Information shared should be based on best practices and updated when the proposed CSRD delegated act will be published by ESMA[170]. The guide should be jointly published by MNB and BSE.

8.5.3 Understanding of climate change related risks among investors is low

Interviews:

- Climate change related risks such as transition and physical risks are still not well understood by most investors.
- One reason for problem is likely be the lack of long-term, quality ESG data. More than one FMP highlighted the need for the harmonization of GHG inventory methods as this would facilitate understanding risks better.

[170] The *European Securities and Markets Authority (ESMA) is the* dedicated entity to elaborate the EU's Sustainability Reporting Standards (the delegated act of CSRD)

Assessment of frameworks:

- In relation to Article 9 products of SFDR an explanation will be required (methods shared) if the reference benchmark qualifies as EU Climate transition Benchmark or an EU Paris-aligned Benchmark (as of EU reg. 2016/2011) or not. If not, efforts on reaching Paris Agreement goals must be presented.
- Voluntary standard guidelines, e. g. in the case of GBPs, and GRI, are more detailed and advanced in relation to Climate Transition recommendations, for instance in terms of GHG calculation method, target setting according to SBTi, scenario analysis etc., and can better support FMPs than the existing EU regulated guidelines.
- Meanwhile EU reporting standards (SFDR, CSRD) and EU Green Bond framework don't recommend using any GHG estimation method, voluntary standards require at least the use of GHG protocol (GRI and ICMA GBPs).

Conclusions from the analysis in preceding chapters:

- Information on the potential climate change impact and mitigating measures could contribute to identifying and addressing climate change risks in Hungary.
- Measuring progress against climate targets can provide higher levels of transparency.
- Measurement tools should be applied to uncover the most carbon intensive ecosystems.
- It is advisable to prioritize ecosystems with greater carbon saving potential (those that currently have high carbon-intensity).
- The popularity of special standards such as TCFD shows that climate risk assessment is becoming a part of the mainstream disclosures.

8.5.3.1 Conclusion and recommendations

Currently there is limited information available on how individual companies align with climate change related goals, which makes it difficult for investors to assess climate transition risks inherent in investing and financing activities.

There are currently no agreed upon methods for quantifying physical risks for climate change.

Harmonization of GHG calculations between reporting standards and green bond frameworks does not seem to be guaranteed by EU requirements, as they do not recommend the application of any particular method. In contrast, voluntary standards require the use of GHG Protocol, as an internationally accepted and applied method.

Therefore, we recommend:

- Detailed guidance in relation to the climate transition relevant risk management procedures such as strategic goal setting, project selection and monitoring mechanisms (that also consider double materiality) should be provided by the regulatory authorities, in particular:
- MNB and BSE should recommend the use of GHG protocol standards to support the harmonization of GHG inventory reporting (for each scope).
- Guidance on tools and information sources that can support the identification climate change relevant risks in Hungary (e. g. modelling results how local weather will change) and national level mitigation relevant goals (e. g. current energy strategy priorities).
- Furthermore, it is recommended to assess if information on specific, sectoral and investment focused climate impact and risk assessment methods, which are also based on GHG Protocol, could be recommended for FMPs and reporting companies (e. g. EIB's Carbon Footprint guidance[171], Climate Proofing of EU Commission[172] that are relevant for EU granted projects).
- It is recommended to share information on the best practices of FMPs in setting strategic climate transition relevant goals (short-, mid., and long term), management of transitional risks, selection processes and monitoring methods used by FMPs with ESG rating scores (e. g. CDP[173] ratings).

[171] https://www.eib.org/attachments/strategies/eib_project_carbon_footprint_methodologies_en.pdf
[172] https://ec.europa.eu/regional_policy/en/newsroom/news/2021/07/29-07-2021-commission-adopts-new-guidance-on-how-to-climate-proof-future-infrastructure-projects
[173] https://www.cdp.net/en/

8.6 ESG reporting

8.6.1 No one size fits all solution on ESG reporting

Interviews:

- The ESG profile of issuers is important to green investors due to the reputational risks of green washing (for example issuing green bonds and investing in carbon intensive technologies means the issuers actions are not congruent with the ESG profile of an issuer committed to climate change mitigation).
- Harmonisation of reporting standards would be beneficial.
- GRI is the most preferred voluntary framework.
- Improvement of climate change relevant disclosures should be the top priority.
- Investors seek credible information and transparency on risks, e. g. those products are preferred where information on EU Taxonomy alignment is available.

Framework assessment:

- Only EU standards require the disclosure of EU taxonomy alignment, voluntary standards only recommend it.
- SFDR requires the potential negative impacts of investments. Requirements on positive impacts appear only within the definitions of environmental and social characteristics or explicit sustainability objectives (e. g. via metrics) compared to voluntary standards.
- Compared to EU standards, voluntary standards require more detailed disclosure on social and governance pillars which can be important for FMPs from the aspect of reputational risks and tracking the ESG profile of the issuer or investee company.
- Sustainability risk, based on the definition of SFDR, means risks that can impact the value of an investment because of some environmental, social, or governance related event or condition (reflecting double materiality). RTS, on the other hand, does not detail what type of risks should be considered here, leaving the choice to FMPs to use voluntary standards or their own approach in this regard.
- Since EU sustainability reporting standards (which will be the delegated act of CSRD) have not yet been published, differences in content requirements compared to voluntary standards like GRI, cannot be accurately identified yet. (Approval of standards can be expected by the end of 2022).
- For now, it is unclear whether voluntary standards or CSRD and its delegated act will cover all the needed data to calculate the mandatory indicators set out by SFDR.

Conclusions from analysis in preceding chapters:

- In Hungary there is no obligation to disclose the business/financial report, only on request (for a limited time and form).
- Preparation of reports is insufficient, and there is a limited awareness of the expected quality and purpose of the non-financial reporting in Hungary.
- Guidelines and tools elaborated by e. g. MNB and BSE may be useful to increase both quality and consistency on reporting.
- Quality of ESG reporting may not depend exclusively on regulations, but also on specific incentives and/or the enforcement of the obligations.
- ESG-related disclosure is mostly published by large companies and SMEs with sustainability profile.
- The most popular ESG standards used internationally are GRI and SASB.
- Most ESG standards and methodologies are using overlapping topics and even indicators and can be used together or are often complementary.

8.6.1.1 Conclusion and recommendations

None of the voluntary standards can provide a "one size fits all" solution for the new EU disclosure requirements as they are not binding, and requirements are different from several aspects (e. g. on taxonomy-alignment disclosure). On the other hand, as voluntary standards are more advanced than the EU standards in several areas for the time being, especially those that are important for investors (e. g. governance, climate transition), focusing only on the fulfilment of EU requirements does not seem to be enough to better attract investors.

It is still uncertain how EU reporting requirements will turn out in comparison to voluntary standards.

For the above reasons, voluntary standards will continue to play an important role.

Therefore, we recommend the following:

- Regulatory oversight on the market capability and competency will be needed to bridge the gaps between EU reporting (including SFDR, CSRD) and voluntary reporting standards. Luxembourg is a good example in creating procedures to understand the market. Another example is to set minimum standards that guide the market.
- The identified gaps, especially regarding climate transition, governance, and social pillar related requirements, should be filled in by regulatory authority guidance.

8.6.2 Differences and ambiguities in EU regulation requirements on ESG reporting

Interviews:

- FMPs would like to see the harmonisation of standards.
- FMPs expressed those linkages of EU regulations are not entirely clear, therefore sharing information that helps the understanding of requirements would be useful, especially on SFDR and EU taxonomy linkages.

Framework assessment:

- Lack of coherence could be identified between CSRD and SFDR/RTS on what belongs under the social and governance pillars. According to CSRD for instance, wage of employees is related to the social pillar, meanwhile SFDR requires the assessment of investees on employee relations, remuneration of staff and tax compliance under the 'good governance' aspect.
- However, according to SFDR RTS if there is no available taxonomy-alignment information reported publicly by non-financial undertakings, an explanation is needed to be disclosed on how equivalent information was obtained directly from investee companies or from third party providers. However, the SFDR does not provide guidance on how to publish an estimation for taxonomy alignment, implying that only reported taxonomy-alignment data can be considered under for both SFDR Article 8 and Article 9 financial products.
- CSRD compliant sustainability reports, and therefore the data that could support the calculation of PAIs required by SFDR RTS, will be required by non-financial large companies only from 1 January 2024, one year after the obligation on product-level reporting of FMPs will enter into force as it is required by SFDR-RTS.[174]
- As there will be more obliged companies to report on sustainability according to CSRD, more companies will be obliged to report on their taxonomy-alignment of their activities, supporting SFDR disclosures as well. On the other hand, the vast majority of companies who may be potential sustainable finance clients (for example green loans) will still not be obliged to publish taxonomy-alignment.
- It is not defined by CSRD by when companies should publish the information required by CSRD within a financial year (publication "shall not exceed 12 months" after the balance sheet date). This may indicate challenges in regard of scheduling the work on periodic disclosures (for both products).
- Level of detail of the EU's Sustainability Reporting Standards (the delegated act of CSRD) is still unknown.

[174] Official letter of the EU Commission on the postponed start of SFDR application: com_letter_to_ep_and_council_sfdr_rts-j.berrigan.pdf (europa.eu)

- EU Taxonomy does not define social and governance relevant objectives (only environmental), therefore its taxonomy-alignment cannot be stated in the case of several products under SFDR.
- SFDR RTS requires the consideration of Do No Significantly Harm Principle (DNSH principle) on sustainable objectives via the PAIs that shall cover social and governance pillar relevant indicators as well. In contrary, EU Taxonomy defines the DNSH principle only in relation to environmental objectives. Furthermore, EU Taxonomy requires the consideration of use and end of life of products and services which does not seem to be reflected by SFDR RTS requirements in regard of DNSH principle. Other frameworks such as EU GBS refers to EU Taxonomy as well, regarding the consideration of DNSH principle.
- EU GBS Green projects are expected to be fully aligned with EU Taxonomy which means that it cannot provide all the information via its annual allocation reports that SFDR would require as products that promote social characteristics are not covered by EU Taxonomy.
- EU GBS does not list metrics to be used (nor by allocation report, nor by impact report templates) which provides flexibility for issuers but may not lead to issuers using those metrics that are in alignment with SFDR.
- EU GBS use of proceeds only covers the environmental pillar, social is excluded.

Conclusions from analysis in preceding chapters:

- The Accounting Act and the NFRD contain rather general provisions, which makes it difficult for corporates to fulfil their assessment and reporting obligations, to produce quality reports and in a consistent manner.
- On the regulatory side, ESG guidelines, EU Taxonomy, or bond and loan standards were not yet well-known according to the performed the survey.

8.6.2.1 Conclusion and recommendations

Several barriers and enabling linkages could be identified among EU frameworks. One of the most important barriers found is that while CSRD reports will serve as information sources for SFDR disclosures, CSRD reports will be required to be published only from January 2024 and will cover only large companies at least until 2026 according to the proposed CSRD regulation, leaving FMPs without data from investees for the time being.

Data gaps are likely going to be filled through estimates using ESG data from other similar investments, investee companies or using Life-cycle assessment or other benchmarking databases (for example GRESB in the case of real estate). The level of detail expected from incumbents in the EU's sustainability reporting standards (the delegated act of CSRD) is still unknown, therefore it cannot be assessed if CSRD reports will provide all the information needed from potential investees or issuers

for FMPs to comply with SFDR requirements. Information relevant for products that promote social characteristics does not seem to be ensured by EU taxonomy and EU GBS either as they only cover environmental objectives. FMPs would require clarifications on the linkages of EU requirements.

Therefore, we recommend:

- MNB and BSE should provide guidance for FMPs on the timeline and content differences of EU regulations, including SFDR, EU taxonomy, EU GBS and the forthcoming CSRD, at least regarding the aspects emphasized above (in findings and conclusions).
- Updates on the state of EU regulation guidance should be published regularly, at least every 6 months.

8.7 Green bonds and green finance

8.7.1 Uncertainties surrounding green default

Interviews:

- Some FMPs expressed concern that the term green default may be unhelpful as it can lead to confusion and suggested a term like non-compliance would be more suitable (to preserve the continuity of the report and avoid introducing new terminology we will continue to use the term throughout).
- FMPs interviewed have not seen cases of green default.
- One interesting case of divestment from green bond was mentioned however:
    - The FMP invested in the green bond offering of an Eastern European issuer
    - Sometime after issuance, the issuer also acquired a coal mine
    - The FMP found this to be an unacceptable change in the ESG profile of the issuer and divested due to reputational risk considerations
    - No green default had occurred on the bond itself.
    - The FMP emphasised that in addition to the quality of the issuance itself, the ESG profile of the issuer is also important to FMPs who consider themselves green investors.

Framework assessment:

- The term green default is not present in the assessed frameworks.
- The proposed regulation on EU GBS[175] provides the option for Member States to introduce national level regulation on administrative sanctioning in cases where, among others, the issuer fails to guarantee compliance with EU-taxonomy-alignment relevant to the use of proceeds. The applied financial penalty cannot exceed EUR 500 000 (or the corresponding value in the national currency) or the 0.5 % of the total annual turnover (based on the last available financial statement) of the company.

Conclusions from analysis in preceding chapters:

- There is no accepted definition of green default.
- It is worth assessing whether to define green default events and the consequences of their occurrence for green bonds issued in Hungary.
- Investor interest in bonds and similar types of debt instruments may be enhanced by reducing or eliminating risks through the implementation of clear legal requirements and minimum guarantees.

8.7.1.1 Conclusion and recommendations

As stated previously, there is no precise understanding on what the term green default means.

According to the proposed regulation for EU Green Bond Standards, financial penalties can be introduced at the national level when an issuer fails to ensure taxonomy-alignment. Therefore, we recommend:

- Implementing green default provisions may decrease the risk of reputational risks associated with green bonds (e.g., from greenwashing) and could provide the guarantees needed to foster foreign investment in the Hungarian sustainable investment opportunities.
- There is some evidence in the literature on sustainable finance that green bond issuance from issuers has a signalling value (commitment to ESG) and implementing green default provisions may help reinforce this.

[175] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0391&from=EN

- It is recommended to encourage investors to carefully monitor on a continuous basis whether investments fulfil the sustainability requirements and the achievement of sustainability objectives and be ready to take engagement actions or divest as necessary if company behaviour changes and the relevant ESG objectives are not met. Information on best practice policies and tools should be shared in this regard.
- It's worth assessing the market acceptance and potential benefits of a national level regulation on financial sanctions relating to green default, not only for EU Green Bond Standards, but other bond frameworks as well, and decide on the introduction of penalties for cases of non-compliance.

8.8 Summary of recommendations

Based on the detailed regulatory assessment, the interviews with financial market participants, and previously stated conclusions in the present report, MNB should consider implementing the following measures:

8.8.1 In relation to the Sustainable Investing Landscape/Ecosystem:

- It is recommended to clarify the definitions of sustainable investments for FMPs by providing regulatory guidance that clarifies contradictions between legislation and voluntary standards and provide additional guidance in areas where there currently is none, such as defining term what is understood under green default, what should the appropriate term be and how cases of green default should be handled.
- It is recommended to raise awareness among issuers and investee companies regarding the investor requirement of sustainable investment issuances (particularly green bonds) to be consistent with the ESG profile of the issuer. This can be further strengthened by providing additional guidance on and highlighting best practices of managing climate risk and alignment with global, EU and national sustainability targets. Furthermore, it would be beneficial to encourage Hungarian FMPs to monitor the ESG profile of issuers and investee companies in order to create market demand for consistency in company behaviour that is aligned with ESG commitments and to reduce the risk of greenwashing.
- It is recommended to assess the introduction of minimal GHG reporting requirements (Scope 1 and Scope 2) for companies below the threshold of the proposed CSRD requirements in order ensure that data is available for FMPs providing sustainable finance services. In particular, such indicators would be valuable for assessing financed emissions.

8.8.2 Regarding ESG reporting:

- There is lack of clarity concerning how ESG standards and regulatory requirements (CSRD, SFDR) fit together in the complex regulatory landscape of sustainable finance. Particularly there is a lack of clarity on how good governance practices, alignment with sustainability goals, managing climate risk, reporting on social and governance related issues, the definitions of which are not consistent between regulations and frameworks, relate to sustainable investments. It is recommended to provide regulatory guidance that clarifies inconsistent definitions and provides definitions where they are currently not available.
- Due to the several barriers and enabling linkages identified between EU reporting frameworks and voluntary standards **it is recommended to clarify for FMPs, issuers and investee companies the timeline and content differences of EU regulations, including SFDR, EU Taxonomy, EU GBS and the forthcoming CSRD.** Updates of EU regulation guidance should be performed on a regular basis, at least every 6 months.
- As CSRD reports will be required to be published from January 2024, and it is not clear whether these first reports will prove to be **reliable information sources for reporting under SFDR, guidance on estimation approaches for reporting on PAIs should be provided to FMPs. Voluntary reporting of Hungarian companies** (according to both CSRD and voluntary standards), **especially SMEs** that won't be obliged by any EU regulation to report on ESG performance should be encouraged as soon as possible and should at the very least cover relatively easily available data such as scope 1 and 2 GHG emissions. MNB and BSE should provide support for voluntary reporting, with the recently released guidance on ESG roadmaps being a good example.

8.8.3 Related to Green bonds and green finance:

- It is recommended to clarify the definition of green default, determine a more appropriate term for the concept and assess the potential for introducing financial penalties for such defaults to help strengthen the credibility of the sustainable investments.

8.8.4 In respect of leadership and oversight:

- **MNB should seek to provide oversight** on the gaps in regulations and clarify any discrepancy between regulations and voluntary standards. Such a regulatory approach is likely to be necessary to anticipate emerging barriers as EU regulation continues to evolve. Overall, the regulatory guidance is likely to be most effective in short, easy to understand guidance documents, and should be supplemented with a series of workshops with the most important FMPs and issuers. Prior to carrying out these workshops, targeted assessments are recommended to assess the knowledge gaps of each stakeholder group.

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