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The impact of the EU Sustainable Finance framework on banking regulation

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…to my wonderful parents, and to all who inspire change.

The impact of the EU Sustainable Finance framework on banking regulation

Abstract

Climate change is widely seen as one of the greatest challenges of the 21st century. In line with its commitments under the UN 2030 Sustainable Development Agenda and the Paris Agreement, the European Union grasped from early on the importance that the financial system has to play in enabling the shift towards a greener, fairer and more sustainable economy, thereby promoting a *sustainable finance.*

In 2018, the European Commission adopted the Action Plan on Financing Sustainable Growth (the **Action Plan**), an ambitious and overarching strategy aimed to *(i)* reorient capital flows towards sustainable investment, *(ii)* mainstream sustainability in risk management by managing financial risks stemming from climate change and *(iii)* foster transparency and long-termism in the financial system. In implementing the Action Plan, the EU has laid down the three building blocks of its sustainable finance framework, namely *(i)* a classification system, or 'taxonomy', of sustainable activities (by virtue of the **Taxonomy Regulation**), *(ii)* a disclosure framework for non-financial and financial companies (by virtue of the **Sustainable Finance Disclosure Regulation** and the **Non-Financial Reporting Directive** respectively), and *(iii)* investment tools, benchmarks, standards and labels, including the **Low Carbon Benchmarks Regulation** and the Commission's proposal for a **European Green Bond Standard**.

Concurrently, understanding that banking regulation and supervision have a key role to play in realizing Europe's climate change objectives, the EU policymakers have tried hard fitting environmental and climate change concerns into the existing microprudential framework for banks, by strengthening the microprudential rulebook of the Basel Accords for microprudential banking regulation and supervision. In doing so, policymakers have been faced with the inherent difficulties in calculating climate change risks, including the fundamental uncertainty, complexity and nonlinearity that they display, rendering them resistant to any traditional quantification of financial exposures. This microprudential approach has seen policymakers focusing on the identification rather than evaluation of climate change risks. However, recent developments, including the obligation for banks to publish their Green Asset Ratio under the Taxonomy Regulation, EBA's guidance on evaluating climate risk, and the legislative proposals embedded in the new banking package (CRR III / CRD VI) may be hinting towards new *credit guidance* era in financial regulation.

Keywords: sustainable finance, Action Plan on Financing Sustainable Growth, Taxonomy Regulation, Sustainable Finance Disclosure Regulation, climate change risk, prudential regulation, Banking Package 2021

Abstract 5
A. THE EUROPEAN SUSTAINABLE FINANCE FRAMEWORK – A HISTORIC OVERVIEW AND INTRODUCTION 10
1. The Paris Agreement, the United Nations Sustainable Development Agenda and the call for a *sustainable* finance 10
1.1. The Paris Agreement 10
1.2. The United Nations 2030 Sustainable Development Agenda 10
1.3. The call for sustainable finance 11
2. The Capital Market Union Action Plan and the High Level Expert Group Sustainable Finance 12
3. The Action Plan on Financing Sustainable Growth (the SFAP) 13
3.1. Overarching objectives of the SFAP 13
3.2. The ten concrete actions proposed by the Commission 14
3.3. Implementation of the SFAP 14
4. The EU Green Deal, the Green Deal Investment Plan and the Just Transition Mechanism 15
4.1. The European Green Deal 15
4.2. The Green Deal Investment Plan and the Just Transition Mechanism 16
5. The 2030 Climate Target Plan, Fit-for-55 and the European Climate Law 17
5.1. The 2030 Climate Target Plan 17
5.2. Fit-for-55 package 19
5.3. The European Climate Law 19
6. The 2021 Commission's revised Sustainable Finance Strategy 20

B. CLASSIFICATION OF ENVIRONMENTALLY SUSTAINABLE ACTIVITIES – THE TAXONOMY REGULATION (TR) 23
1. Subject matter and scope of the Taxonomy Regulation – the environmental objectives 23
1.1 Introductory remarks 23
1.2 The importance of a unified taxonomy system and the system of rules set out under the TR 23
1.3 Subject matter of the Taxonomy Regulation 25
1.4 The environmental objectives of the Taxonomy Regulation 25
1.5 Scope entities – mandatory users 27
1.5.1 National (and EU) legislative or other measures adopted by states (TR Article 4) 27
1.5.2 Financial market participants that make available financial products marketed as environmentally sustainable (TR Articles 5 – 7) 28
1.5.3 (Large) undertakings that are subject to NFRD non-financial disclosure obligations (TR Article 8) 28
2. Criteria for determining whether economic activities qualify as environmentally sustainable 28
2.1 Substantial contribution to environmental objectives 29
2.1.1 General considerations – enabling and transitional activities 29

2.1.1.1 Enabling activities (TR art. 16) 30
2.1.1.2 Transitional activities (TR art. 10 para 2) 30
2.1.2 Substantial contribution to climate change mitigation 31
2.1.3 Substantial contribution to climate change adaptation 32
2.1.4 Substantial contribution to the sustainable use and protection of water and marine resources 32
2.1.5 Substantial contribution to the transition to a circular economy 33
2.1.6 Substantial contribution to pollution prevention and control 34
2.1.7 Substantial contribution to the protection and restoration of biodiversity and ecosystems 34
2.2 No significant harm to any other environmental objective 35
2.3 Compliance with minimum safeguards 36
2.4 Compliance with Technical Screening Criteria 36
2.4.1 General considerations when formulating TSCs 37
2.4.2 Requirements for the Technical Screening Criteria 37
2.4.3 Current progress and future developments for remainder TSCs 38
3. Disclosure requirements for environmentally sustainable investments 39
3.1 Disclosure rules supplementing the SFDR (TR Art. 5 – 7) 39
3.1.1 Considerations and relation to the disclosure framework of the SFDR 39
3.1.2 Disclosure of environmentally sustainable investments in pre-contractual disclosures and in periodic reports (TR Art. 5) 40
3.1.3 Disclosure of financial products that promote environmental characteristics in pre-contractual disclosures and in periodic reports (TR Art. 6) 41
3.1.4 Transparency of other financial products in pre-contractual disclosures and in periodic reports (TR Art. 7) 41
.... 42
3.2 Disclosure rules on non-financial reporting (TR Art. 8) 42
3.2.1 Considerations and relation to the disclosure framework of the NFRD 42
3.2.2 Non-financial reporting requirements of TR Art. 8 42
3.2.3 Delegated Act setting out detail of Article 8 disclosures and application thereof– rules specific to credit institutions 43

C. DISCLOSURE FRAMEWORK FOR FINANCIAL COMPANIES – THE SUSTAINABLE FINANCE DISCLOSURE REGULATION 45
1. Subject matter and scope of the SFDR – nature of disclosure obligations 45
1.1 Introductory remarks 45
1.2 Governed entities 45
1.3 Scope of the SFDR 46
2. Sustainability disclosures at entity (firm) level 48
2.1 Transparency of sustainability risk policies on the website (SFDR Article 3) 48
2.2 Transparency of adverse sustainability impacts on the website (SFDR Article 4) 48
2.2.1 Disclosure obligations for financial market participants 48

2.2.2 Disclosure obligations for financial advisers 49
2.2.3 Level 2 regulation pending 49
2.3 Transparency of remuneration policies in relation to the integration of sustainability risks (SFDR Article 5) 50
3. Sustainability disclosures at products (fund) level 50
3.1 Precontractual disclosures on the integration of sustainability risks at product level (SFDR Art.6) 50
3.1.1 Financial market participants 50
3.1.2 Financial advisers.. 51
3.2 Precontractual and periodic disclosures of adverse sustainability impacts risks at product level (SFDR Art. 7) 51
3.3 Additional disclosure obligations as regards financial products that promote environmental or social characteristics (SFDR Art. 8) 51
3.3.1 Article 8 - Transparency of the promotion of environmental or social characteristics in pre-contractual disclosures... 52
3.3.2 Article 10 - Transparency of the promotion of environmental or social on websites52
3.3.3 Article 11 - Transparency of the promotion of environmental or social characteristics in periodic reports 52
3.3.4 Additional requirements under Taxonomy Regulation Article 6 53
3.4 Additional disclosure obligations as regards financial products with sustainable investment objectives (SFDR Art. 9) 53
3.4.1 Article 9 - Transparency of sustainable investments in pre-contractual disclosures.. 53
3.4.2 Article 10 - Transparency of sustainable investments on websites 54
3.4.3 Article 11 - Transparency of sustainable investments in periodic reports. 54
3.4.4 Additional requirements under Taxonomy Regulation Article 5 55
3.5 Disclosure obligations for other financial products..................................... 55
3.6 Sustainability disclosures in marketing 55

D. THE IMPACT OF SUSTAINABLE FINANCE ON EU'S MICROPRUDENTIAL FRAMEWORK FOR BANKS 56
1. Introductory remarks 56
2. Climate change as a source of financial risk 58
2.1 Definition of ESG factors and ESG risks 58
2.1.1 ESG factors 58
2.1.2 ESG risks and double materiality 59
2.2 Drivers of environmental risks (focus on climate change) and their transmission channels 60
2.2.1 Physical risks and their transmission channels 60
2.2.2 Transition risks and their transmission channels 60
2.2.3 Interaction between physical and transition risks and potentially systemic importance.. 61
2.3 Inherent impediments in calculating climate related risks 62
3. The microprudential approach to sustainability and climate change risks........ 64

3.1 Integrating sustainability and climate change risks into the existing microprudential regulatory framework of banks 65
3.1.1 ESG considerations in Pillar 1 65
3.1.2 ESG considerations in Pillar 2 65
3.1.2.1 Portfolio alignment method 66
3.1.2.2 Risk framework method 67
3.1.2.3 Exposure method 67
3.1.3 ESG considerations in Pillar 3 68
3.2 The supervisor's view 69
3.2.1 Supervisory expectations relating to the climate related and environmental risk management and disclosures 69
3.2.1.1 Expectations relating to business models and strategy 69
3.2.1.2 Expectations relating to governance and risk appetite 69
3.2.1.3 Expectations relating to risk management 70
3.2.1.4 Expectations relating to disclosures 70
3.2.2 ECB's survey and assessment 70
3.2.3 Way forward – ECB's EU-wide climate stress test 72
3.3 The EU banking package 2021 72
3.3.1 The proposed amendments 73
3.3.2 EU 2021 Banking Reform Package - Way forward 76
3.4 An assessment of integration of climate change risks in the current microprudential framework – towards a new era of regulation? 76
3.4.1 Fundamental uncertainty and the need to *assess* climate related risks 76
3.4.2 A framework that is disincentivizing banks 77
3.4.3 An uneven level- playing field between institutions 78
3.4.4 Towards a new approach? 78
Sources 80

A. THE EUROPEAN SUSTAINABLE FINANCE FRAMEWORK – A HISTORIC OVERVIEW AND INTRODUCTION

1. The Paris Agreement, the United Nations Sustainable Development Agenda and the call for a *sustainable* finance

1.1. The Paris Agreement

Climate change is widely seen as one of the greatest challenges of the 21st century. On 12 December 2015, after six years of international negotiations, global leaders from around the world adopted, during the meeting of the 21st Conference of Parties (or **COP 21**) held in Paris under the auspices of the United Nations Framework Convention on Climate Change (hereinafter the **UNFCCC**), an international agreement, pursuant to which the 195 UNFCCC participating member states and the European Union pledged to, amongst others, limit global warming to well below 2°C and to purse efforts to limit it to 1.5°C above pre-industrial levels (hereinafter the **Paris Agreement**). The Paris Agreement, which, as of November 2021, has been ratified by 193 of the 197 signatory member states[1], is the first universal binding multinational agreement under which virtually all nations committed to undertake ambitious efforts to stop global warming and to mitigate the effects of climate change. At the heart of the Paris Agreement and the achievement of its climate goals is the obligation of the signatory states to prepare, communicate, revise (on a five year basis) and maintain their nationally determined contributions (hereinafter the **NDCs**)[2],[3].

1.2. The United Nations 2030 Sustainable Development Agenda

In parallel, on 25 September 2015, the 193 members of the United Nations General Assembly adopted the United Nations 2030 Agenda for Sustainable Development[4] which included a set of seventeen interlinked goals addressing key global challenges, such as those relating to poverty, environmental degradation and climate change, colloquially known as **Sustainable Development Goals** or **SDGs** and designed to be a "*blueprint to achieve a better and more sustainable future for all*" (hereinafter the **UN 2030 Sustainable Development Agenda**). Amongst those are goals for "*Affordable and Clean*

[1] As of November 2021, only Yemen, Libya, the Islamic Republic of Iran and Eritrea have not ratified the Paris Agreement. Information on signatory member states available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en

[2] Article 4 paragraph 2 of the Paris Agreement requires each Party to "*prepare, communicate and maintain successive nationally determined contributions that is intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions*".

[3] A central element for implementing the Paris Agreement, the NDC's, are each Party's national climate plans that highlight climate actions, including climate related targets, policies and measures that governments aim to implement in response to climate change, as a contribution to global climate action.

[4] The 2030 Agenda for Sustainable Development was adopted pursuant to the United Nations General Assembly Resolution A/RES/70/1, available here: https://sustainabledevelopment.un.org/index.php?page=view&type=111&nr=8496&menu=35

Energy for all", "*Sustainable Cities*" and "*Climate Action*", (Goals 7, 11 and 13, respectively)[5].

1.3. The call for sustainable finance

The above international framework put the notion of sustainability, defined as "*meeting the needs of the present without compromising the ability of future generations to meet their own needs*"[6], at the forefront of the global strategy needed to tackle climate change and to mitigate its catastrophic consequences. In this context, there has been broad acknowledgement of the key role that the financial sector has to play in (i) enabling the transition to an environmentally sustainable economy in line with the Paris Agreement climate targets and (ii) building financial resilience to environmental risks. Accordingly, Article 2 of the Paris Agreement states:

> *"This Agreement, in enhancing the implementation of the Convention[7], including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by: […]*
> *(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development."*

When read in line with the Sustainable Development Goals, the above-mentioned consistency that finance flows ought to have with "*a pathway towards low greenhouse gas emissions and climate-resilient development*"[8] constitutes the cornerstone of the notion of sustainable finance, generally defined as the process of taking due account of environmental, social and governance (hereinafter the **ESG**) considerations in investment decision-making, leading to increased investments in longer-term and sustainable activities[9].

In this regard, environmental considerations refer to climate change mitigation, adaptation and the environment more broadly, whilst social considerations refer to issues of inequality, inclusiveness and wealth allocation disparities. Those considerations, which are often intertwined, since climate change often exacerbates existing systems of inequality, are traditionally by-passed in the short-termism that is embedded in finance, which is characterized by a focus on near-term profits of investments and a short-lived

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[5] The remaining SDGs are: (1) "*No Poverty*", (2) "*Zero Hunger*", (3) "*Good Health and Well-being*", (4) "Quality Education", (5) "*Gender Equality*", (6) "*Clean Water and Sanitation*", (8) "*Decent Work and Economic Growth*", (9) "*Industry, Innovation and Infrastructure*", (10) "*Reduced Inequality*, (12) "*Responsible Consumption and Production*", (14) "*Life Below Water*", (15) "*Life on Land*", (16) "*Peace, Justice and Strong Institutions*" and (17) "*Partnerships to achieve the Goals*".

[6] This is the official definition used by the United Nations, in accordance with the report titled "Our Common Future", which was published in 1987 by the World Commission on Environment and Development, also known as the United Nations Brundtland Commission, available here: https://digitallibrary.un.org/record/139811?ln=en

[7] i.e. the UNFCCC.

[8] As per the Paris Agreement.

[9] Communication from the Commission "Action Plan: Financing Sustainable Growth" 8.3.2018, COM (2018) 97 final, page 3.

scope of traditional corporate strategies. In contrast, a more *sustainable* finance requires bringing the long-term consequences of financial practices into today's decisions. Consequently, sustainable finance bridges the gap between (i) the universal consensus on the need to address climate change and to develop growth sustainably, and (ii) the unparalleled and untapped potential of the financial industry sector, being the key driver of growth and provider of funding for economic activities, in order to enable a transition to a more sustainable economy.

2. The Capital Market Union Action Plan and the High Level Expert Group Sustainable Finance

Sustainability and the transition to a safe, climate-neutral, climate-resilient, resource-efficient and circular economy are crucial to ensuring the long-term competitiveness of the Union economy[10], and are at the heart of the European Union project, as highlighted by the overarching sustainability-related goals enshrined in the Treaty on the European Union (**TEU**)[11] and the Treaty on the Functioning of the European Union (**TFEU**).

Accordingly, the Commission communication of 22 November 2016 "*on the next steps for a sustainable European future*" [12] linked the SDGs to the Union's policy framework to ensure that all Union actions and policy initiatives, both within the Union and globally, would take the SDGs into account. In its conclusions of 20 June 2017, the Council confirmed the commitment of the Union and its Member States to the implementation of the 2030 Agenda in a full, coherent, comprehensive, integrated and effective manner, in close cooperation with partners and other stakeholders[13].

In line with its commitments under the UN 2030 Sustainable Development Agenda and the Paris Agreement, the European Union grasped from early on the importance that the financial system and the private financial sector has to play in enabling the shift towards a greener, fairer and more sustainable economy. However, reorienting private capital to more sustainable investments required a comprehensive reform of the financial system. This was considered necessary in order for the EU to develop more sustainable economic growth, ensure the stability of the financial system and foster more transparency and long-termism in the economy[14] – those principles were also embedded at the core of the EU's Capital Markets Union project[15].

[10] Taxonomy Regulation, Recital (4).

[11] In particular, article 11 of the TFEU stipulates that "Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development". For more on this topic, see Javier Solana, "*The Power of the Eurosystem to Promote Environmental Protection*"(2019), 30, European Business Law Review 547.

[12] Communication from the Commission "Next steps for a sustainable European future European action for sustainability" 22.11.2016, COM(2016)739 final, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A739%3AFIN

[13] The relevant press release is also available here: https://www.consilium.europa.eu/en/press/press-releases/2017/06/20/agenda-sustainable-development/

[14] Communication from the Commission "Action Plan: Financing Sustainable Growth" 8.3.2018, COM (2018) 97 final, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018DC0097

[15] For a more comprehensive analysis of the Capital Markets Union see **Gortsos Ch. (2020),** p. 144 et seq and **Gortsos Ch. (2022)**.

Consequently, in the context of the Capital Markets Union Action Plan[16] and in particular by way of its Communication dated 14 September 2016[17], the European Commission established in December 2016 the High Level Expert Group on Sustainable Finance (hereinafter the **HLEG**), comprised of twenty senior experts from civil society, the finance sector and academia, with the mandate to develop an overarching and comprehensive EU strategy on sustainable finance, addressing climate-related and environmental risks. On 31 January 2018, the HLEG published its final report (hereinafter the **HLEG Final Report**)[18] offering a comprehensive vision on how to build a sustainable finance strategy for the EU, at the heart of which were the following two imperatives: (1) improving the contribution of finance to sustainable and inclusive growth by funding society's long-term needs; and (2) strengthening financial stability by incorporating ESG factors into investment decision-making. In its Final Report, the HLEG proposed eight key recommendations, several cross-cutting recommendations and actions targeted at specific sectors of the financial system[19].

The reason for which the mandate to formulate an EU-wide strategy on sustainable finance was integrated under the auspices of the Capital Markets Union project is embedded in the synergies that exist between the two projects: a well-integrated and efficient capital market can act as a catalyst for effective allocation of capital towards sustainable investments, whilst the momentum of the sustainable finance policy agenda brings to light the importance of (and urgency of the efforts in building) a truly single and sustainable market for capital in the European Union. Noteworthy in this regards is the evidence that suggests that capital markets, such as green bond or equity markets, may be more effective in accelerating the financing of the transition, when compared to traditional credit markets[20].

3. The Action Plan on Financing Sustainable Growth (the SFAP)

3.1. Overarching objectives of the SFAP

Heavily relying on the recommendations of the HLEG Final Report, the European Commission adopted, by way of its Communication dated 8 March 2018, the Action Plan on Financing Sustainable Growth (hereinafter the **2018 SFAP** or **SFAP**), formulating the EU's strategy for sustainable finance[21]. The overarching aim of the formulated

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[16] Communication from the Commission "Action Plan on Building a Capital Markets Union" 30.9.2015, COM(2015) 468 final, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0468

[17] Communication from the Commission "Capital Markets Union – Accelerating Reform" 14.9.2016, COM (2016) 601 final, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016DC0601

[18] HLEG Final Report also available here: https://ec.europa.eu/info/publications/180131-sustainable-finance-report_en

[19] Chapters III, IV and V of the HLEG Final Report, respectively.

[20] For more on this, Ralph De Haas and Alexander Popov, 'Finance and decarbonisation: why equity markets do it better', *Research Bulletin* No. 64, 27.11.2019, available here https://www.ecb.europa.eu/pub/economic-research/resbull/2019/html/ecb.rb191127~79fa1d3b70.en.html

[21] Communication from the Commission "Action Plan: Financing Sustainable Growth" 8.3.2018, COM(2018) 97 final, available at: https://eur-lex.europa.eu/legal-

sustainable finance strategy was to: (i) reorient capital flows towards sustainable investment in order to achieve sustainable and inclusive growth; (ii) mainstream sustainability in risk management, by managing financial risks stemming from climate change, resource depletion, environmental degradation and social issues; and (iii) foster transparency and long-termism in financial and economic activity[22].

3.2. The ten concrete actions proposed by the Commission

The above three overarching aims were translated into ten concrete actions – reforms to be undertaken by the European Commission, including:

(1) establishing an EU classification system for sustainable activities (**Action 1**);

(2) creating standards and labels for green financial products (**Action 2**);

(3) fostering investment in sustainable projects (**Action 3**);

(4) incorporating sustainability when providing financial advice (**Action 4**);

(5) developing sustainability benchmarks (**Action 5**):

(6) better integrating sustainability in ratings and market research (**Action 6**);

(7) clarifying institutional investors' and asset managers' duties (**Action 7**);

(8) incorporating sustainability in prudential requirements (**Action 8**);

(9) strengthening sustainability disclosure and accounting rule-making (**Action 9**); and

(10) fostering sustainable corporate governance and attenuating short-termism in capital markets (**Action 10**).

3.3. Implementation of the SFAP

Within a few years, major progress was made in implementing the political decisions and commitments mirrored in the 2018 SFAP. Without foreshadowing the analysis to follow in sections B, C and D of this paper, the Commission has delivered a fast-paced implementation process, by putting in place, since 2018, the three building blocks of the European sustainable financial framework, those being (i) a classification system, or 'taxonomy', of sustainable activities, established by virtue of the Taxonomy Regulation and its implementing acts (**Section B**), (ii) a disclosure framework for financial companies, established by virtue of the Sustainable Finance Disclosure Regulation (**Section C**) as well as a disclosure framework for non-financial companies, already operative since 2014 by virtue of Directive 2014/95/EU (the **Non-Financial Reporting Directive** or **NFRD**)[23], the latter being soon to be replaced by the Corporate Sustainability

content/EN/TXT/?uri=CELEX%3A52018DC0097. Press release available at: https://ec.europa.eu/commission/presscorner/detail/en/IP_18_1404 .

[22] COM (2018) 97 final, page 2.

[23] Under the NFRD Directive (Directive 2014/95/EU), large listed companies, banks and insurance companies with more than 500 employees are required to public reports on the policies they implement in relation to: environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery and diversity on company boards. The principal aim of the current NFRD

Reporting Directive proposed by the Commission[24], and (iii) investment tools, including benchmarks, standards and labels, established *inter alia* by virtue of the Climate Benchmark Regulation and to be implemented by the European Green Bond Regulation, once the latter will be adopted. In addition to the measures adopted in the context of implementing the SFAP, EU policy makers have tackled sustainability concerns, and particularly climate change concerns, using the existing European microprudential framework for banks (**Section D**)[25].

4. The EU Green Deal, the Green Deal Investment Plan and the Just Transition Mechanism

4.1. The European Green Deal

Amidst the hefty task of implementing the 2018 SFAP and as a testament of its commitment to comply with the Paris Agreement greenhouse gases emission reduction pledge, the European Commission presented, by way of its Communication dated 11 December 2019, the European Union's new growth strategy, called the **European Green Deal**[26], with the overarching objective to transform the EU into a fairer and more prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.

Constituting an integral part of the European Commission's strategy to implement the UN 2030 Sustainable Development Agenda, the European Green Deal included a dedicated roadmap with deeply transformative policies covering all sectors of the EU economy, from transport, infrastructure and energy, to food, agriculture, buildings, construction and industries, including steel, cement, textiles and chemicals. The major cornerstones of the European Green Deal strategy were:

(1) reducing greenhouse gas emissions by at least 50% (and towards 55%) by 2030 compared to 1990 levels;
(2) decarbonizing the energy system;
(3) transforming the industry towards a resource efficient circular economy;
(4) promoting energy and resource efficiency in housing and renovation;

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is to enable investors, consumers and other stakeholders to evaluate the nonfinancial performance of those large companies and to encourage the latter to develop a more responsible approach to business.

[24] On 11 December 2019, in its Communication on the European Green Deal, the Commission announced its intention to review the NFRD, which was followed by a public consultation launched by the Commission on 20 February 2020 to collect stakeholders' views on a possible revision of the provisions of the NFRD. Building on the work of the European Financial Reporting Advisory Group (EFRAG) which was mandated to elaborate the NFRD' s revised provisions, the Commission presented, on 21 April 2021, its proposal for a Corporate Sustainability Reporting Directive (CSRD) which aims to revise the existing rules of the NFRD and to bring sustainability reporting on a par with financial reporting.

[25] For a high-level overview and presentation of the EU Sustainable Finance framework, see **Bruhl, V. (2021).**

[26] Communication from the Commission "The European Green Deal" 11.12.2019, COM (2019) 640 final, available here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0640&from=EN .For the press release, see here: https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691

(5) achieving zero pollution for air, water and land;
(6) accelerating the shirt fo a sustainable and smart mobility system;
(7) designing a fair, healthy and environmentally friendly food system ("*from farm to fork*"); and
(8) preserving and restoring ecosystems and biodiversity.

4.2. The Green Deal Investment Plan and the Just Transition Mechanism

Meeting these objectives and achieving the transition to a sustainable economy meant significant investment efforts across all sectors – it was estimated that reaching the then current 2030 climate and energy targets alone would require €260 billion of additional annual investments, or about 1.5% of 2018 GDP, by 2030[27]. According to the President of the European Commission, Ursula von der Leyen**,** "*The Green Deal comes with important investment needs, which we will turn into investment opportunities. The plan that we present today, to mobilize at least €1 trillion, will show the direction and unleash a green investment wave*".

The proposed financing of the EU Green Deal is set out in the **European Green Deal Investment Plan**, which was announced by the European Commission with its Communication dated 14 January 2020[28], comprising of two principal financing streams, totalling to at least €1 trillion, and aimed both at mobilizing EU funding and creating an enabling framework in order to stimulate the public and private investments needed for the transition to a climate-neutral, green, competitive and inclusive economy. Over half of the budget, €528 billion, will come directly from the EU budget and the EU Emissions Trading System[29], whilst the remainder will be sourced through the InvestEU Programme[30], which combines €279 billion from the public and private sectors until 2030 and €114 billion from national co-financing[31].

In parallel, the **Just Transition Mechanism** was proposed, as a tool to ensure that the transition to a climate-neutral economy would occur "*in a fair way, leaving no one*

[27] COM (2019) 640 final, page 15.
[28] Communication from the Commission "Sustainable Europe Investment Plan, European Green Deal Investment Plan" 14.1.2020, COM(2020) 21 final, available here: https://ec.europa.eu/commission/presscorner/detail/en/fs_20_48 . For the press release, available here: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_17 .
[29] The EU Emission Trading System, or EU ETS, is the world's first and largest international emission trading system (i.e carbon market), originally set up in 2005 pursuant to Directive **2003/87/EC** of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC (the **EU ETS Directive**).
[30] Also known until 2021 as the European Fund for Strategic Investments (EFSI) or colloquially referred to as the "Junker Plan", the InvestEU Programme is an initiative of the European Investment Bank Group and the European Commission established pursuant to Regulation 2017/2015 and aimed at boosting the economy through mobilizing private financing for strategic investments. It currently consists of the **InvestEU Fund**, the **InvestEU Advisory Hub** and the **InvestEU Portal**, and will run between 2021 and 2027, with the aim to trigger at least €650 billion in additional investments. For more information: https://ec.europa.eu/commission/presscorner/detail/en/MEMO_19_2135
[31] COM(2020) 21 final, pp. 5 (figure 3) and 6.

behind"[32]. Relevant, in this regard, is the statement made by Executive Vice-President for the European Green Deal, Frans Timmermans: "*The necessary transition towards climate-neutrality is going to […] require more efforts from citizens, sectors and regions that rely more on fossil fuels than others. The Just Transition Mechanism will help support those most affected by making investments more attractive and proposing a package of financial and practical support worth at least €100 billion. This is our pledge of solidarity and fairness*".

Consequently, the Just Transition Mechanism was established to provide targeted and exclusive support to help mobilize at least €100 billion over the period 2021 – 2027 in **the most affected regions**, consisting of **three** main sources of financing: (i) a **Just Transition Fund,** comprising of €7.5 billion funds, available to Member States provided they identify the eligible territories through dedicated territorial just transition plans and further provided they would match each Just Transition Fund euro with funds from the European Regional Development Fund[33] and the European Social Fund Plus[34], (ii) a dedicated just transition scheme under the **InvestEU Fund**[35], to mobilize up to €45 billion of investments, mostly aimed at attracting private investments, and (iii) a public sector loan facility with the European Investment Bank, backed by the EU budged, aimed to mobilize between €25 and €30 billion of investments, used for loans to the public sector.

5. <u>The 2030 Climate Target Plan, Fit-for-55 and the European Climate Law</u>

5.1. The 2030 Climate Target Plan

Less than a year from its Communication on the European Green Deal[36], and ahead of the UNFCCC's 26th Conference of Parties meeting in Glasgow in November 2021, the European Commission announced, during its annual State of the Union address, its plan to further reduce EU greenhouse gas emissions **by at least 55% compared to 1990 levels by 2030,** as opposed to the existing climate target for 2030 of lower greenhouse gas emissions by at least 40% compared to 1990 levels[37], pursuant to its Communication

[32] Press release on the Green Deal Investment Plan available here: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_17 .

[33] The European Regional Development Fund (ERDF) aims to strengthen economic, social and territorial cohesion in the European Union by correcting imbalances between its regions. For more information see: https://ec.europa.eu/regional_policy/en/funding/erdf/

[34] The European Social Fund+ (ESF+), created by merging the existing European Social Fund with the EU Fund for European Aid to the Most Deprived (FEAD) and the EU Programme for Employment and Social Innovation (EaSI) in 2021, is the European Union's main financial instrument for supporting employment in the member states of the European Union as well as promoting economic and social cohesion. For more see: https://ec.europa.eu/esf/main.jsp?catId=62&langId=en

[35] See supra in page 8, footnote 24.

[36] COM (2019) 640 final.

[37] The EU's existing climate target for 2030 to reduce emissions domestically by at least 40% compared to 1990 was set in 2014, in the context of an EU objective to achieve GHG emission reductions of 80-95% in 2050 (for more, see European Council (21 and 24 October 2014), Conclusions on 2030 Climate and Energy Policy Framework) – this GHG target was incorporated in the EU's **NDC's** to the Paris Agreement, and was implemented by three EU pieces of legislation, notably the **EU ETS Directive**, the Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (the **Effort Sharing**

dated 17 September 2020 (the **2030 Climate Target Plan**)[38]. This ambitious commitment for the next decade was perceived as a necessary precondition in order for the EU to successfully reach climate neutrality by 2050[39].

The new climate and emission targets under the 2030 Climate Target Plan was based on a comprehensive **Impact Assessment**[40] of the social, economic and environmental impacts of the further emission reduction target, which demonstrated that the proposed course of action is both realistic and feasible, as it showed that "*the EU is on track to surpass its current 2030 emissions reduction target of at least 40%, in particular thanks to ongoing process in deploying renewable energy across Europe*". The new proposed policy also underlined the EU's continued global leadership ahead of the UNFCCC's 26th Conference of Parties meeting in Glasgow [41].

With its 2030 Climate Target Plan, the EU Commission presented, in addition to the (i) Communication[42] and the (ii) accompanying Impact Assessment[43], (iii) an EU-wide Assessment of National Energy and Climate Plans, inviting the European Parliament and European Council to confirm the 55% target as the EU's new NDC's under the Paris Agreement and to submit this to the UNFCCC by the end of the year[44] and (iv) an amendment to the proposed European Climate Law (as defined below) in order to include

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Regulation), and Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (the **Land Use, and Use Change and Forestry Regulation** or **LULUCF**).

[38] Communication from the Commission "**Stepping up Europe's 2030 climate ambition, Investing in a climate-neutral future for the benefit of our people**" 17.9.2020, COM(2020) 562, final, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2020:562:FIN

[39] Climate neutrality, meaning the goal of achieving net zero emission of greenhouse gases, was first set out in November 2018 in the Commissions' Communication "**A Clean Planet For All**", which was the Commission's long-term strategic vision for a prosperous, modern, competitive and climate neutral EU, in line with the Paris Agreement climate objectives of well below 2°C and in any event 1.5°C . The strategy, which amongst others called for the EU to achieve net zero greenhouse gas emissions by 2050, was endorsed by the European Parliament on 14 March 2019 and by the European Council on 12 December 2019.

[40] Commission Staff Working Document Impact Assessment accompanying the Communication from the Commission "Stepping up Europe's 2030 climate ambition, Investing in a climate-neutral future for the benefit of our people", 17.9.2020, SWD(2020) 17, final, also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020SC0176

[41] In this regard, Ursula **von der Leyen**, President of the European Commission said: *""We are doing everything in our power to keep the promise that we made to Europeans: make Europe the first climate neutral continent in the world, by 2050. Today marks a major milestone in this journey. With the new target to cut EU greenhouse gas emissions by at least 55% by 2030, we will lead the way to a cleaner planet and a green recovery. Europe will emerge stronger from the coronavirus pandemic by investing in a resource-efficient circular economy, promoting innovation in clean technology and creating green jobs."*

[42] COM(2020) 562, final.

[43] SWD (2020) 17, final.

[44] On 18 December 2020, the European Council transmitted its submission of the NDC of the EU and its member states to the UNFCCC. Under the revised and enhanced NDC's, the EU and its Member States, acting jointly, are committed to a binding target of a net domestic reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990. Press release: https://www.consilium.europa.eu/en/press/press-releases/2020/12/18/paris-agreement-council-transmits-ndc-submission-on-behalf-of-eu-and-member-states/

the 2030 emissions reduction target of at least 55% as a stepping stone to the 2050 climate neutrality goal.

5.2. Fit-for-55 package

In delivering its 2030 Climate Target Plan, the EU commission also presented, by way of its Communication dated 14 July 2021[45], a series legislative proposals[46], in order to make its policies fit for delivering the updated 2030 greenhouse gas emissions net reduction target of 55% below 1990 levels, including the review of the EU ETS Directive[47], the Effort Sharing Regulation[48], the Land Use, Land Use Change and Forestry Regulation[49], the Energy Efficiency Directive[50], the Renewable Energy Directive[51] and the CO2 Emissions Performance Standards for Cars and Vans Regulation[52] (hereinafter the "**Fit for 55 Package**").

5.3. The European Climate Law

In furtherance to the policy measures proposed under the 2030 Climate Target Plan, on 30 June 2021, the European Parliament and the Council adopted, in accordance with the ordinary legislative procedure, Regulation (EU) 2021/1119 "*establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999*" ('**European Climate Law'**)[53], enshrining its new climate targets of at least a 55% reduction in greenhouse gas emissions by 2030 compared to 1990 levels and net zero by 2050. The European Climate law was published in the Official Journal on 9 July 2021 and entered into force on 29 July 2021 and is of particular importance as it forms the legal basis for the EU-wide commitment to become climate-neutral by 2050.

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[45] Communication from the Commission "**Fit for 55: delivering the EU's 2030 Climate Target on the way to climate neutrality**", 14.7.2021, (COM2021) 550 final, also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0550

[46] More information available at: https://ec.europa.eu/clima/eu-action/european-green-deal/delivering-european-green-deal_en

[47] **EU ETS Directive** also available here https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32003L0087 .

[48] For more information on the Effort Sharing Regulation and its proposed amendment, see: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3543 .

[49] For more information on the Land Use, and Use Change and Forestry Regulation (**LULUCF**) and its proposed amendment, see: https://ec.europa.eu/clima/eu-action/forests-and-agriculture/land-use-and-forestry-regulation-2021-2030_en .

[50] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (the **Energy Efficiency Directive**), also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012L0027 .

[51] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (the **Renewable Energy Directive**) also available here: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32018L2001 .

[52] Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO2 emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (the **CO2 Emissions Performance Standards for Cars and Vans Regulation**) also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02019R0631-20210301 .

[53] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('**European Climate Law'**) also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1119

6. The 2021 Commission's revised Sustainable Finance Strategy

With its Communication dated 6 July 2021[54], the European Commission adopted a renewed strategy for financing the transition to a sustainable economy (the **Renewed Sustainable Finance Strategy**), an ambitious and comprehensive package of measures to help improve the flow of capital towards financing the transition to a sustainable economy, by proposing action in four number of areas: *transition finance, inclusiveness, resilience and contribution of the financial system and global ambition*[55]. By enabling investors to re-orient investments towards more sustainable technologies and businesses, the proposed measures will be instrumental in reaching the EU's climate and environmental targets. The Renewed Sustainable Finance Strategy builds on the 2018 SFAP[56], the Platform on Sustainable Finance[57] transition finance report[58] and a consultation held from April to July 2020[59], whilst it also complements other initiatives under the European Green Deal and the Fit-for-55 Package.

In addition to adopting its Renewed Sustainable Finance Strategy, on 6 July 2021, the EU Commission ***(i)*** published a legislative proposal on European green bonds (the **EuGB Regulation**)[60], which will lay the foundation for a common framework of voluntary rules regarding the use of the "European Green Bond" (**EuGB**) designation for bonds that pursue environmentally sustainable objectives as defined by the Taxonomy Regulation[61], and ***(ii)*** adopted the delegated act supplementing Article 8 of the Taxonomy Regulation, specifying the content, methodology and presentation of the information that financial and non-financial undertakings must publish pursuant to the Non-Financial Reporting Directive concerning the proportion of environmentally sustainable activities in their business, investment or lending activities[62].

The Renewed Sustainable Finance Strategy **reinforces the vital role that sustainable finance and the financial sector has to play** in (i) meeting the Paris Agreement and the UN's 2030 Agenda for Sustainable Development goals, now enshrined in the EU Climate

[54] Communication from the Commission "Strategy for Financing the Transition to a Sustainable Economy" 6.7.2021, COM(2021) 390 final, also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0390
[55] For the press release see here: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3405
[56] COM(2018) 97 final.
[57] The Platform on Sustainable Finance is a permanent expert group of the European Commission that was established under article 20 of the Taxonomy Regulation, in order to assist the Commission in the development of sustainable finance policies, including the EU taxonomy. More information on the Platform on Sustainable Finance is available here: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance/platform-sustainable-finance_en
[58] The Platform on Sustainable Finance report on transition finance is available here: https://ec.europa.eu/info/files/210319-eu-platform-transition-finance-report_en
[59] More information available here: https://ec.europa.eu/info/consultations/finance-2020-sustainable-finance-strategy_en
[60] Text of the proposal for a Regulation on European green bonds (COM/2021/391 final) also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0391
[61] Fore a more detailed analysis of the European Commission's proposal for a common Green Bond Standard, See **Maragopoulos N. (2021)**.
[62] **See infra, section** B.

Law with the pledge for Europe to become the first climate-neutral continent by 2050 and to reduce its greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, and in (ii) mobilizing the investment required in meeting those targets, the scale of which is unprecedented.

Whilst recognizing the major progress already made towards laying the foundations of the sustainable finance framework, the Commission contends that "*work remains to be done*", whilst the change in the global context and the constantly evolving understating of what is needed to meet the sustainability goals call for a "*new phase of the EU's sustainable finance strategy*". Consequently, the Renewed Sustainable Finance Strategy identifies **four main areas**[63] where the following **six actions are proposed**, in order for the financial system to fully support the transition to a truly sustainable economy:

(1) **Action 1 – developing a more comprehensive framework and help the financing of intermediary steps towards sustainability.** In this regard, the Commission will *(i)* consider options to extend the Taxonomy Regulation by recognizing economic activities performing at an intermediate level of environmental performance, (ii) adopt the remaining Delegated Acts containing the technical screening criteria for the four environmental objectives under the TR, (iii) work on new technical screening criteria which will be adopted under the Taxonomy Regulation and will cover more economic activities including agriculture and certain energy activities and (iv) in addition to those published along with the Renewed Sustainable Finance Strategy, consider proposing a general framework for sustainability labels for financial instruments, including other bond labels such as transition or sustainability-linked bonds, an Environmental, Social and Governance (**ESG**) Benchmark Label.

(2) **Action 2 – Improving the inclusiveness of sustainable finance**. In this regard, the Commission will (i) work with European Banking Authority (**EBA**) in assessing measures to increase the access of citizens and small and medium-sized enterprises (**SMEs**) to sustainable finance advisory services, (ii) work on the identification of insurance protection gaps through the European Insurance and Occupational Pensions Authority's (**EIOPA**) natural disaster dashboard and initiate a Climate Resilience Dialogue with all relevant stakeholders, (iii) and publish a report on a social taxonomy.

(3) **Action 3 – enhancing economic and financial resilience to sustainability risks**. In this regard, the Commission will *(i)* with regard to financial reporting standards, cooperate with international accounting bodies and the European Securities and Markets Authority (**ESMA**) to consider how financial reporting standards can best capture relevant sustainability risks, (ii) propose amendments to the Capital Requirements Regulation and Capital Requirements Directive IV to ensure the consistent integration of sustainability risks in risk management systems of banks, including climate change stress tests by banks, (iii) propose amendments in the

[63] Namely, (i) transition finance, (ii) inclusiveness, (iii) resilience and contribution of the financial system and (iv) global ambition.

Solvency II Directive to consistently integrate sustainability risks in the risk management of insurers, including climate change scenario analysis, (iv) strengthen long-term financial stability through closer cooperation on financial stability risk assessment, regular stress tests, an assessment of macro-prudential tools and a study dedicated to risks stemming from environmental degradation and biodiversity loss.

(4) **Action 4 – increasing the contribution of the financial sector to sustainability**. In this regard, the Commission will (i) improve financial institutions' disclosures of sustainability targets and transition planning, examine to what extent more guidance could ensure that voluntary pledges are credible and monitor progress, (ii) ask EIOPA to assess the need to review the fiduciary duties of pension funds and investors to reflect sustainability impacts as part of investment decision making processes, including stewardship and engagement activities by 2022, and (iii) take action to improve the reliability and comparability of ESG ratings and further assess certain aspects of ESG research, to decide on whether an intervention is necessary.

(5) **Action 5 – monitoring an orderly transition and ensuring the integrity of the EU financial system**. In this regard, the Commission will (i) monitor greenwashing risks, and assess and review the current supervisory and enforcement toolkit available to Competent Authorities, to ensure that supervisory powers, capabilities and obligations are fit for purpose, with the support of the European Supervisory Authorities, (ii) develop a robust monitoring framework to measure capital flows and assist Member States in assessing the investment gap and measuring the progress made by their financial sectors by 2023, (iii) strengthen cooperation among all relevant public authorities, including Member States, the ECB, the ESRB, the European Supervisory Authorities and the European Environment Agency, to work towards a common approach to monitor an orderly transition and ensure the double materiality perspective is consistently integrated across the EU financial system (by 2022) and (iv) establish a Sustainable Finance Research Forum to foster knowledge exchange between researchers and the financial community.

(6) **Action 6 – setting a high level of ambition in developing international sustainable finance initiatives and standards and supporting EU partner countries**. In this regard, the Commission will seek an ambitious consensus in international forums, mainstream the concept of double materiality, stress the importance of disclosure frameworks, and agree on objectives and principles for taxonomies and support low- and middle-income countries in scaling up their access to sustainable finance by developing a comprehensive strategy and by promoting sustainability-related financial instruments.

B. CLASSIFICATION OF ENVIRONMENTALLY SUSTAINABLE ACTIVITIES – THE TAXONOMY REGULATION (TR)

1. Subject matter and scope of the Taxonomy Regulation – the environmental objectives

1.1 Introductory remarks

On June 18th, 2020, the European Parliament and the Council adopted, in accordance with the ordinary legislative procedure[64] and on the basis of Article 114 TFEU, Regulation (EU) 2020/852 "on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088" (hereinafter the "**Taxonomy Regulation**" or "**TR**")[65], which entered into force on 12 July 2020,[66] is binding in its entirety and directly applicable in all Member States[67] and is consistent with the principles of subsidiarity and proportionality[68]. It constitutes, along with the Regulation (EU) 2019/2088 "on sustainability-related disclosures in the financial services sector", (hereinafter the **'Sustainable Finance Disclosure Regulation'** or "**SFDR**") [69] and Regulation (EU) 2019/2089 "amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks" (hereinafter the "**Low Carbon Benchmarks Regulation"**)[70], the three building blocks of the European sustainable finance framework which has gradually been adopted since 2018 on the basis of the European Commission's 2018 SFAP[71].

As a foreword, in accordance with its title, the TR establishes "a *framework to facilitate sustainable investment*", by, amongst others, establishing a classification system for environmentally sustainable economic activities at EU level. In this sense, the TR sets out criteria for determining whether an economic activity qualifies as environmentally sustainable for the purposes of establishing the degree to which an investment is environmentally sustainable as well.

1.2 The importance of a unified taxonomy system and the system of rules set out under the TR

Achieving the SDGs in the Union requires the channeling of capital flows towards sustainable investments, and in view of the scale of the challenge, the financial system should be gradually adapted in order to support the sustainable functioning of the

[64] **Article 289(1) TFEU.**
[65] The TR is also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R0852
[66] TR, Article 27(1).
[67] TR, Article 27(1), last sentence.
[68] TR, recital (6)
[69] The Sustainable Finance Disclosure Regulation is also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R2088&qid=1639337344787
[70] The Low Carbon Benchmarks Regulation is also available here: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019R2089
[71] For a more detailed analysis of the TR, see **Gortsos, Ch. (2021).**

economy. To that end, sustainable finance needs to become mainstream and consideration needs to be given to the sustainability impact of financial products and services[72].

Making available financial products that pursue environmentally sustainable objectives ***is an effective way*** *of channeling private investments into sustainable activities* (and as such of achieving the SDGs as well as the Paris Agreement targets). In that regard, requirements for marketing financial products or corporate bonds as environmentally sustainable investments aim to enhance investor confidence and awareness of the environmental impact of those financial products.

In order to meet their overarching aim of protecting investors, these requirements must (1) *be on the basis of an assessment of* ***what activity is environmentally sustainable*** and (2) *be uniform through the EU.* Divergent national labelling requirements and classification systems for determining which investments qualify as sustainable would discourage investors from investing across borders, in light of the difficulty in comparing different investment opportunities and would create barriers to the functioning of the internal market with regard to the raising of funds for sustainability projects.

To avoid market fragmentation and harm to the interests of consumers and investors as a result of diverging notions of environmentally sustainable economic activities, national and EU requirements that financial market participants or issuers have to comply with, in order to market financial products or corporate bonds as environmentally sustainable, should build on the uniform criteria for environmentally sustainable economic activities. A classification of environmentally sustainable economic activities at Union level should enable the development of future Union policies in support of sustainable finance, including Union-wide standards for environmentally sustainable financial products and the eventual establishment of labels that formally recognize compliance with those standards across the Union.

In light of the above, the 2018 SFAP's laid down as one of its three key objectives *to reorient capital flows towards sustainable investment*, in order to achieve sustainable and inclusive growth. In relation to this, the Commission considered that the channeling of private investments (capital flows) towards more sustainable activities wou*ld have to be underpinned by a* ***shared, uniform and holistic understanding of the environmental sustainability of activities and investments*** and recognized the establishment of a classification system (i.e taxonomy[73]) for a unified definition of sustainable activities as the most important and urgent action to be adopted – not surprisingly, the 2018 SFAP's Action 1 called for the establishment of an EU-wide taxonomy[74].

[72] TR recital 10.

[73] A taxonomy is the practice and science of categorization or classification. A taxonomy (or taxonomical classification) is a scheme of classification, especially a hierarchical classification, in which things are organized into groups or types.

[74] COM(2018) 97 final, page 4.

1.3 Subject matter of the Taxonomy Regulation

Accordingly, the TR establishes criteria for determining whether an **economic activity qualifies as environmentally sustainable** for the **purposes** of establishing the degree to which **an investment** is environmentally sustainable[75], in order to facilitate sustainable investment. In that respect, the term 'environmentally sustainable investment' is defined to mean an investment in one or more economic activities that qualify as environmentally sustainable under the TR.

In addition to setting out the criteria for determining whether an economic activity qualifies as environmentally sustainable, the TR sets **a disclosure framework** which supplements the rules on sustainability-related disclosures established under the SFDR, the purpose of which is to lay down harmonized rules for financial market participants and financial advisers on transparency with regard to the integration of sustainability risks and the consideration of adverse sustainability impacts in their processes and the provision of sustainability-related information with respect to financial products.

Lastly, the TR introduced additional requirements on entities subject to an obligation to publish non-financial information under Art. 19a or 29a of Directive 2013/34/EU (known as '**Non-Financial Reporting Directive'**)[76]. These entities should disclose information about how and to what extent their activities are related to economic activities qualifying as environmentally sustainable, as per the Taxonomy Regulation, the content and methodologies of which shall be further described in delegated acts adopted by the Commission.

1.4 The environmental objectives of the Taxonomy Regulation

The classification system laid down in the TR is harbored around six environmental objectives[77], which constitute the basis upon which **an economic activity** can qualify as environmentally sustainable and, consequently, the degree to which a financial investment can be characterized as environmentally sustainable.

As a foreword, an economic activity can qualify as environmentally sustainable under the TR if (i) it *substantially contributes* to (at least) one of the environmental objective, as those are set out below and described in TR Articles 10 - 16[78], (ii) it *does not significantly harm* any other environmental objective in accordance with TR Article 17[79], (iii) is carried out in compliance with certain minimum social safeguards set out under the TR Article 18[80] and (iv) it complies with the particular requirements set under the applicable

[75] TR, Article 1 (1).
[76] 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 also available here https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095
[77] TR, Article 9.
[78] See below, points 2.1.1 – 2.1.7.
[79] See below, point 2.2.
[80] See below, point 2.3.

technical screening criteria (TSCs) set out in the Commission's delegated acts, which supplement the TR[81].

The six environmental objectives, the substantial contribution to and the lack of a significant harm to which are certain of the cumulative preconditions in order for an economic activity to qualify as environmentally sustainable, are exhaustively listed in article 9 of the TR and are the following:

(a) **climate change mitigation[82]** - this environmental objective should be interpreted in accordance with relevant Union law, including Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide[83]**;**

(b) **climate change adaptation[84]**- this environmental objective should be interpreted in accordance with relevant Union law and the Sendai Framework for Disaster Risk Reduction 2015–2030[85];

(c) the **sustainable use and protection of water and marine resources** - this environmental objective should be interpreted in accordance with the sectoral legislative acts laid down in recital (26) and the Commission Communications of 18 July 2007 on "Addressing the challenge of water scarcity and droughts in the European Union", of 14 November 2012 on "A Blueprint to Safeguard Europe's Water Resources" and of 11 March 2019 on "European Union Strategic Approach to Pharmaceuticals in the Environment" [86]**;**

(d) the **transition to a circular economy[87]** - this environmental objective should be interpreted in accordance with relevant Union law in the areas of the circular economy, waste and chemicals laid down in recital (27) and with the Commission Communications of 2 December 2015 on "Closing the loop – An EU action plan for the Circular Economy" and of 16 January 2018 on "A European Strategy for Plastics in a Circular Economy";

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[81] See below, point 2.4.

[82] According to **TR Article 2 point (5), "climate change mitigation'** means the process of holding the increase in the global average temperature to well below 2 °C and pursuing efforts to limit it to 1,5 °C above pre-industrial levels, as laid down in the Paris Agreement.

[83] TR Recital (24).

[84] According to **TR Article 2 point (6), "climate change adaptation"** means the process of adjustment to actual and expected climate change and its impacts.

[85] TR Recital (25).

[86] TR Recital (26).

[87] According to TR Article 2 point (9) "circular economy" means the economic system whereby the value of products, materials and other economic resources is maintained for as long as possible, enhancing their efficient use in production and consumption, thereby reducing the environmental impact of their use, minimizing waste and the release of hazardous substances at all stages of their life-cycle, including through the application of the waste hierarchy. Waster hierarchy is defined in Article 4 of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 "on waste and repealing certain Directives (the Waste Framework Directive), also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0098

(e) **pollution [88]prevention and control**[89] - this environmental objective should be interpreted in accordance with relevant Union law in the areas of the circular economy, waste and chemicals laid down in recital (29); and

(f) the **protection and restoration of biodiversity**[90] **and ecosystems**[91] - this environmental objective should be interpreted in accordance with relevant Union law in the areas of the circular economy, waste and chemicals laid down in recital (30).

1.5 Scope entities – mandatory users

The field of application of the Taxonomy Regulation includes three groups of users: ***(i)*** Member States, ***(ii)*** Financial Market Participants (**FMPs**) providing financial products ***(iii)*** and undertakings that are subject to the obligations to publish a non-financial statement or a consolidated non-financial statement pursuant to articles 19a or 29a of the Non-Financial Reporting Directive.

1.5.1 National (and EU) legislative or other measures adopted by states (**TR Article 4**)

Following its entry into force, when adopting legislative or other measures setting out requirements for FMPs[92] or issuers[93] in respect of financial products[94] or corporate bonds that are made available as environmentally sustainable, Member States will have to base their national legislation on the Taxonomy Regulation. They cannot provide deviating definitions for environmental activities or objectives, but they can keep already existing labelling schemes in place or develop new ones, provided they comply or are made compliant with the Taxonomy Regulation. The Taxonomy Regulation is therefore a common framework that ensures that the underlying definitions and requirements are the same, while still allowing the specifics to be filled in by initiatives coming from Member States or the industry itself.

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[88] According to **TR Article 2 point (12),** "**pollution**" means (i) the direct or indirect introduction of pollutants into air, water or land as a result of human activity, (ii) in the context of the marine environment, pollution as defined in point 8 of Article 3 of Directive 2008/56/EC and (iii) in the context of the water environment, pollution as defined in point 33 of Article 2 of Directive 2000/60/EC;

[89] This environmental objective should be interpreted in accordance with the sectoral legislative acts laid down in **recital (29) TR**.

[90] According to **TR Article 2 point (15),** "**biodiversity**" means the variability among living organisms arising from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and includes diversity within species, between species and of ecosystems

[91] According to **TR Article 2 point (13**), "**ecosystem**" means a dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit

[92] The term 'financial market participant' is defined with reference to Article 2, point (1) SFDR and includes a manufacturer of a pension product to which a Member State has decided to apply that legislative act in accordance with Article 16 thereof.

[93] The term 'issuer' is defined with reference to Article 2, point (h) of the Prospectus Regulation (Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017, OJ L 168, 30.6.2017, pp. 12-82).

[94] The term 'financial product' is defined (TR, Article 2, point (3)) with reference to Article 2, point(12) SFDR, meaning all of the following: a portfolio which is managed in accordance with Article 2, point (6); an alternative investment fund (AIF); an 'insurance-based investment product'(IBIP); a pension product; a pension scheme; an undertaking for collective investment in transferable securities (UCITS); or a 'pan-European Personal Pension Product' (PEPP). It is noted that bank lending is not covered either by this definition or by the TR (and the SFDR) in general **(Gortsos Ch. (2021)).**

1.5.2 Financial market participants that make available financial products marketed as environmentally sustainable (**TR Articles 5 – 7**)

Next to the Member States' and the EU legislators, the financial market participants themselves are bound by the classification (and disclosure) rules set out in the TR, when offering their financial products. Financial market participants are defined under the TR on the basis of the relevant definition provided under the SFDR[95], and in general terms include those financial participants that develop and offer financial products, which are also defined by reference to the relevant definition under the SFDR and include portfolio management, investment and mutual funds, insurance-based investment products, UCITS, PEPPs, pension products and pension schemes. Not explicitly covered in the TR scope are retail banking products such as mortgages or loans, securitizations, venture capital or private equity. While they do not fall under the scope of mandatory users, their providers can still use the Taxonomy Regulation on a voluntary basis.

1.5.3 (Large) undertakings that are subject to NFRD non-financial disclosure obligations (**TR Article 8**)

Certain companies also fall within the scope of the Taxonomy Regulation. The companies covered are those which are subject to the requirement to publish non-financial statements according to the NFRD Articles 10a and 29a. 42 This requirement only applies to large public-interest companies with more than 500 employees, which covers approximately 6.000 companies and groups in Europe, including most listed companies, banks and insurance companies[96].

2. Criteria for determining whether economic activities qualify as environmentally sustainable

For the purposes of establishing the degree to which an investment is environmentally sustainable, an economic activity qualifies as environmentally sustainable if the following four criteria are met cumulatively:

(a) it substantially contributes to one or more environmental objectives in accordance with Articles 10-16; hence, a direct link is established between the environmental objectives and the substantial contribution of economic activities to them[97];

(b) it does not significantly harm any other environmental objective in accordance with Article 17[98];

(c) it is carried out in compliance with the safeguards laid down in Article 18[99];

[95] SFDR Article 2 point (1).

[96] However, the Commission is proposing to extend the scope of the Non-Financial Reporting Directive under a recent proposal for a Corporate Sustainability Reporting Directive (**CSRD**). If adopted, the CSRD would extend the scope of the regime to all large companies (listed or not) and all listed companies (except for listed micro-enterprises)

[97] See below, points 2.1.1 through 2.1.7.

[98] See below, point 2.2.

[99] See below, point 2.3.

(d) it complies with applicable technical screening criteria (**TSC**) set out in the Commission's delegated acts, which supplement the TR[100];

2.1 Substantial contribution to environmental objectives

2.1.1 General considerations – enabling and transitional activities

For each of the environmental objectives listed above, the TR lays down uniform criteria in order to determine whether an economic activity contributes substantially to the respective objective[101]. The criteria differ accordingly to the environmental objectives at question, as there is no uniform definition of "substantial" that can be applied to every activity.

For the criteria to be up to date[102], based on scientific evidence and based on input from experts as well as relevant stakeholders, the conditions for '*substantial contribution'* (as well as for '*significant harm'*) should be specified with more granularity for different economic activities and should be updated regularly. For that purpose, the substantial contribution criteria set out in the TR must be further implemented by granular and calibrated technical screening criteria set for different economic activities should be established by the Commission on the basis of technical input from Platform on Sustainable Finance and adopted in the form of delegated acts (the **TSCs**). The TR also mandates the Commission to create TSCs for the determination, for each respective environmental objective, of whether an economic activity does harm to the other objectives.

In this regard, the Commission adopted on 4 June 2021 the TSCs on the environmental objectives of climate change adaptation and climate change mitigation, by virtue of the Commission Delegated Regulation (EU) 2021/2139 "*supplementing the EU Taxonomy Regulation by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives*" (the "**EU Taxonomy Climate Delegated Act**")[103], which was recently published in the official journal[104]. The TSCs for the remainder environmental objectives remain pending.

Although the TR requires activities to be substantially contributing to one of the six environmental objectives, as a de minimis precondition for those to qualify as

[100] See below, point 2.4.
[101] As those uniform criteria are laid down inTR articles 10 – 16.
[102] Given the specific technical details needed to assess the environmental impact of an economic activity and the fast- changing nature of both science and technology, the criteria for environmentally sustainable economic activities should be adapted regularly to reflect such changes.
[103] See below in 2.4.3.
[104] OJ L 442, 9.12.2021, p. 1–349

environmentally sustainable, it has introduced two deviations from the necessity for activities to substantially contribute to one of the objectives, by recognizing two additional categories of economic activities that may, under certain conditions, be considered as Taxonomy eligible, even if they do not substantially contribute to the environmental objective as per the relevant TR criteria reviewed below: *enabling activities* and *transitional activities*.

2.1.1.1 Enabling activities (**TR art. 16**)

An economic activity may be taxonomy-eligible and qualify as contributing substantially to one or more of the environmental objectives of the TR even if it in itself does not make a contribution to one of the environmental objectives, if it directly enables other activities to make a substantial contribution to one or more of those objectives[105]. In order to qualify as *enabling*, such activities must ***(i)*** not lead to a lock-in of assets that undermine long-term environmental goals, considering the economic lifetime of those assets, and ***(ii)*** should have a substantial positive environmental impact, on the basis of life-cycle considerations. The underlying idea behind those safeguards is to allow for deviation from low-carbon activities, but always with the goal of keeping activities as sustainable as possible. While for now a specific enabling activity might be the overall best option, new technological developments could quickly change this, which is why the Taxonomy Regulation wants to avoid the long-term lock-in of those assets. This deviation applies for all environmental objectives.

2.1.1.2 Transitional activities (**TR art. 10 para 2**)

The TR also recognizes *transitional activities* as taxonomy-eligible, for the purposes of the environmental objective of climate change mitigation[106]. Those are defined as activities, for which there are currently no technologically and economically feasible low-carbon alternatives[107]. Even though they do not contribute substantially to one of the environmental objectives of the TR, those economic activities should nevertheless qualify as contributing substantially to climate change mitigation provided that (i) their greenhouse gas emissions are substantially lower than the sector or industry average, (ii) they do not hamper the development and deployment of low-carbon alternatives and (iii) they do not lead to a lock-in of assets incompatible with the objective of climate-neutrality, considering the economic lifetime of those assets[108].

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[105] TR Art 16 and TR recital (42).

[106] However, it is argued that the same structure could also be applied to other environmental objectives.

[107] TR recital (41).

[108] The rationale behind this deviation is to promote the most environmentally friendly options within certain industries, which are critical to the economy, but urgently need to reduce their environmental impact. An example given is the production of ***cement***, which is very carbon-intensive and yet essential to the building industry. If all cement production would be excluded from the Taxonomy Regulation, as there is no low-carbon method yet, **there would be fewer incentives** for the industry to invest in the technology with the best environmental performance, which is especially crucial for highly emitting and economically important sectors. Therefore, an activity which corresponds to the best environmental performance within a highly emitting industry can be taxonomy-compliant in order to incentivize a change in that industry.

The technical screening criteria for such transitional economic activities should ensure that those transitional activities have a credible path towards climate-neutrality, and should be adjusted accordingly at regular intervals.

In order not to widen the scope of the TR too much, thereby undermining the overall goals of the Taxonomy Regulation, the transition category of transitional activities does not apply to those fields where other more environmentally friendly alternatives exist as a commercially feasible alternative.

2.1.2 Substantial contribution to climate change mitigation

An economic activity shall qualify as contributing substantially to climate change mitigation where it contributes substantially to the stabilization of greenhouse gas concentrations in the atmosphere,[109] at a level which prevents dangerous anthropogenic interference with the climate system consistent with the long-term temperature goal of the Paris Agreement of limiting the global temperature increase to 1.5 degrees Celsius above pre-industrial levels[110].

This contribution to the stabilization of greenhouse gas concentrations in the atmosphere can be achieved through the avoidance or reduction of greenhouse gas emissions or the increase of greenhouse gas removals, including through process innovations or product innovations, by[111]:

(a) generating, transmitting, storing, distributing or using renewable energy in line with Directive (EU) 2018/2001;
(b) improving energy efficiency;
(c) increasing clean or climate-neutral mobility;
(d) switching to the use of sustainably sourced renewable materials;
(e) increasing the use of environmentally safe carbon capture and utilisation (**CCU**) and carbon capture and storage (**CCS**) technologies that deliver a net reduction in greenhouse gas emission;
(f) strengthening land carbon sinks, including through avoiding deforestation and forest degradation, restoration of forests, sustainable management and restoration of croplands, grasslands and wetlands, afforestation, and regenerative agriculture;
(g) establishing energy infrastructure required for enabling the decarbonisation of energy systems;
(h) producing clean and efficient fuels from renewable or carbon-neutral sources; or

[109] 'Greenhouse gas' means a greenhouse gas listed in Annex I to **Regulation (EU) No 525/2013** of the European Parliament and of the Council of 21 May 2013 "on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change (…)" (OJ L 165, 18.6.2013, pp. 13-40) (TR, Article 2, point (7)).

[110] TR recital (24) and TR article 10.
[111] TR article 10.

(i) enabling any of the above activities in accordance with Article 16 (enabling activities)[112].

Additionally, according to TR Art. 10 para 2, an economic activity for which there is no technologically and economically feasible low carbon alternative, may qualify as a transitional activity and as such be considered as contributing substantially to climate change mitigation, if it supports the transition to a climate neutral economy consistent with a pathway to limit the temperature increase to 1.5 C above pre-industrial levels and (i) has GHG emission levels corresponding to the industry's best performance, (ii) does not hamper the development of low-carbon alternatives and (iii) does not lead to a lock-in of carbon-intensive assets, when considering their economic lifetime.

The above uniform criteria for the substantial contribution to climate change mitigation have been described in granular detail for more than 80 climate change mitigation activities covering a range of industries and sectors in Annex I of the EU Taxonomy Climate Delegated Act.

2.1.3 Substantial contribution to climate change adaptation

An economic activity meets this criterion where that activity (i) includes adaptation solutions, which either substantially reduce the risk of the adverse impact of the current and expected future climate on that economic activity *or* substantially reduce that adverse impact, without increasing the risk of an adverse impact on people, nature or assets, or (ii) provides adaptation solutions which satisfy the conditions set out in Article 16 and, in addition, contribute substantially to preventing or reducing the risk of the adverse impact of the current and the expected future climate on people, nature or assets, without increasing the risk of an adverse impact on them[113].

The above uniform criteria for the substantial contribution to climate change adaptation have been described in granular detail for more than 100 climate change adaptation activities covering a range of industries and sectors in Annex II of the EU Taxonomy Climate Delegated Act.

2.1.4 Substantial contribution to the sustainable use and protection of water and marine resources

An economic activity shall qualify as contributing substantially to the sustainable use and protection of water and marine resources where that activity either contributes substantially to achieving the good status of bodies of water (including bodies of surface water and groundwater) or to preventing the deterioration of bodies of water that already have good status, or contributes substantially to achieving the good environmental status

[112] See infra under note 2.1.1.1.
[113] TR Article 11.

of marine waters or to preventing the deterioration of marine waters that are already in good environmental status, by[114]:

(a) protecting the environment from the adverse effects of urban and industrial waste water discharges, including from contaminants of emerging concern such as pharmaceuticals and microplastics, for example by ensuring the adequate collection, treatment and discharge of urban and industrial waste waters;
(b) protecting human health from the adverse impact of any contamination of water intended for human consumption by ensuring that it is free from any micro-organisms, parasites and substances that constitute a potential danger to human health as well as increasing people's access to clean drinking water
(c) improving water management and efficiency, including by protecting and enhancing the status of aquatic ecosystems, by promoting the sustainable use of water through the long-term protection of available water resources, inter alia, through measures such as water reuse, by ensuring the progressive reduction of pollutant emissions into surface water and groundwater, by contributing to mitigating the effects of floods and droughts, or through any other activity that protects or improves the qualitative and quantitative status of water bodies;
(d) ensuring the sustainable use of marine ecosystem services or contributing to the good environmental status of marine waters, including by protecting, preserving or restoring the marine environment and by preventing or reducing inputs in the marine environment
(j) enabling any of the activities listed in points (a) to (d) of this paragraph in accordance with Article 16 (enabling activities)[115].

2.1.5 Substantial contribution to the transition to a circular economy

An economic activity qualifies as substantially contributing to the transition to a circular economy, including waste prevention, re-use and recycling, where that activity[116]:
(a) uses natural resources (such as sustainably sourced bio-based and other raw materials) in production more efficiently, including by reducing the use of primary raw materials or increasing the use of by-products and secondary raw materials or by resource and energy efficiency measures;
(b) increases the durability, reparability, upgradability or reusability of products, in particular in designing and manufacturing activities or increases the recyclability of products,;
(c) substantially reduces the content of hazardous substances and substitutes substances of very high concern in materials and products throughout their life cycle, including by replacing such substances with safer alternatives and ensuring traceability;;

[114] TR article 12.
[115] See infra under note 2.1.1.1.
[116] TR Article 13.

(d) prolongs the use of products or prevents or reduces waste generation, including the generation of waste from the extraction of minerals and waste from the construction and demolition of buildings;
(e) increases preparing for the re-use and recycling of waste or increases the development of the waste management infrastructure needed for prevention, for preparing for re-use and for recycling,
(f) minimises the incineration of waste and avoids the disposal of waste, including landfilling, in accordance with the principles of the waste hierarchy or
(g) enables any of the activities listed in points (a) to (f) of this paragraph in accordance with Article 16.

2.1.6 Substantial contribution to pollution prevention and control

An economic activity qualifies as substantially contributing to the *pollution prevention and control* where that activity (a) prevents or (if that is not practicable) reduces pollutant emissions into air, water or land, other than greenhouse gasses, (b) prevents or minimizes any adverse impact on human health and the environment of the production, use or disposal of chemicals; (c), improves levels of air, water or soil[117] quality in the areas where the economic activity takes place, while also minimizing any adverse impact on human health and the environment or the risk thereof; and (d) cleans up litter and other pollution[118]; or *finally*, enables any of the above activities in accordance with Article 16 (enabling activities)[119].

2.1.7 Substantial contribution to the protection and restoration of biodiversity and ecosystems

Finally, an economic activity meets this criterion where it substantially contributes to protecting, conserving or restoring biodiversity or to achieving the good condition of ecosystems,[120] or to protecting ecosystems already in good condition, through[121]:
(a) nature and biodiversity conservation, including achieving favourable conservation status of natural and semi-natural habitats and species, or preventing their deterioration where they already have favourable conservation status, and protecting and restoring terrestrial, marine and other aquatic ecosystems in order to improve their condition and enhance their capacity to provide ecosystem services;
(b) sustainable land use and management, including adequate protection of soil biodiversity, land degradation neutrality and the remediation of contaminated sites;

[117] 'Soil' means the top layer of the Earth's crust situated between the bedrock and the surface, composed of mineral particles, organic matter, water, air and living organisms (TR, Article 2, point (11)).

[118] TR Article 14.
[119] See infra under note 2.1.1.1.
[120] 'Good condition' means, in relation to an ecosystem, that this is in good physical, chemical and biological condition or is of a good physical, chemical and biological quality with self-reproduction or self-restoration capability, in which species composition, ecosystem structure and ecological functions are not impaired (TR, Article 2, point (16)).

[121] TR Article 15.

(c) sustainable agricultural practices, including those that contribute to enhancing biodiversity or to halting or preventing the degradation of soils and other ecosystems, deforestation and habitat loss;
(d) sustainable forest management, including practices and uses of forests and forest land that contribute to enhancing biodiversity or to halting or preventing degradation of ecosystems, deforestation and habitat loss; or
(e) enabling any of the activities listed in points (a) to (d) of this paragraph in accordance with Article 16 (enabling activities)[122].

2.2 No significant harm to any other environmental objective

Substantially contributing to one of the environmental objectives of Art. 10-16 of the TR, as those are further described in detail in the TSCs, is not sufficient for an economic activity to the Taxonomy-aligned – the activity must also meet the "*do no significant harm*" principle, referred to in Article 2 point (17) of the SFDR, and not significantly harm any of the other environmental objectives, i.e it shall not qualify as environmentally sustainable if it causes more harm to the environment than the benefits it brings. This is in order to avoid that investments qualify as environmentally sustainable in cases where the economic activities benefitting from those investments cause harm to the environment to an extent that outweighs their contribution to an environmental objective. The "do no significant harm" principle, initially referred to in SFDR, is further specified for each of the six environmental objectives in article 17 of the TR in accordance with which, an economic activity shall be considered as significantly harming[123]:

(a) climate change mitigation, where that activity leads to significant greenhouse gas emissions;
(b) climate change adaptation, where that activity leads to an increased adverse impact of the current climate and the expected future climate, on the activity itself or on people, nature or assets
(c) the sustainable use and protection of water and marine resources, where that activity is detrimental to the to the good status or the good ecological potential of bodies of water, including surface water and groundwater or to the good environmental status of marine waters;
(d) the circular economy, including waste prevention and recycling, where the activity leads to significant inefficiencies in the use of materials or in the direct or indirect use of natural resources such as non-renewable energy sources, raw materials, water and land at one or more stages or products' life cycle, or leads to a significant increase in the generation, incineration or disposal of waste, with the exception of the incineration of non-recyclable hazardous waste;
(e) pollution prevention and control, where that activity leads to a significant increase in the emissions of pollutants into air, water or land, as compared with the situation before the activity started;

[122] See infra under note 2.1.1.1.
[123] TR Article 17.

(f) the protection and restoration of biodiversity and ecosystems, where that activity is significantly detrimental to the good condition and resilience of ecosystems or detrimental to the conservation status of habitats and species, including those of Union interest[124].

When assessing an economic activity against the criteria set out above, both the environmental impact of the activity itself and the environmental impact of the products and services provided by that activity throughout their life cycle shall be taken into account, in particular by considering the production, use and end of life of those products and services[125].

For each of the environmental objectives, the TR mandates the Commission to adopt a delegated act and adopt technical screening criteria for determining whether an economic activity in respective of which technical screening criteria have been established, causes significant harm to one or more fo the remainder objectives. In this regard the EU Taxonomy Climate Delegated Act has set out TSCs to determine whether economic activities substantially contributing to climate change mitigation and adaptation significantly harm the remaining objectives.

2.3 Compliance with minimum safeguards

While the Taxonomy Regulation focuses on environmental objectives, sustainable finance in general also includes social and governance aspects. As such, in order to qualify as sustainable under the Taxonomy Regulation, economic activities shall also be compliant with the "minimum safeguards" referred to in Article 18 TR, i.e if they are accrued out in alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the declaration on Fundamental Principles and Rights at Work of the International Labour Organisation (ILO), the eight fundamental conventions of the ILO and the International Bill of Human Rights. When complying with those minimum safeguards, undertakings should adhere to the principle of '*do no significant harm'* referred to in the Sustainable Finance Disclosure Regulation and take into account the regulatory technical standards adopted pursuant to that Regulation that further specify that principle.

2.4 Compliance with Technical Screening Criteria

While the Taxonomy Regulation provides the broader framework, more detailed criteria are necessary to establish which activities are environmentally sustainable. Given the specific technical details needed to assess the environmental impact of an economic activity and the fast- changing nature of both science and technology, the criteria for

[124] TR Article 17 (1) items (a) – (f).
[125] TR Article 17 (2).

environmentally sustainable economic activities should be adapted regularly to reflect such changes[126].

Pursuant to articles 10(2), 11(2), 12(2), 13(2), 14(2) and 15(2), the TR mandates the Commission to develop in more details the conditions under which different types of economic activities of different industries and sectors qualify as *contributing substantially* to each environmental objective. The Commission shall also develop, for each relevant environmental objective, TSCs for determining whether an economic activity causes significant harm to one or more of those objectives[127].

For the purpose of proposing the TSCs, the Commission is assisted by the Platform on Sustainable Finance and advised by the Expert Group on Sustainable Finance. When adopting the proposed TSCs, the Commission must act on the basis of its delegated powers under TR Article 23 and ensure that the proposed technical screening criteria meet the requirements set out in TR Article 19 (point 2.4.2 below). The TSCs on climate change mitigation and adaptation have been issued, will start to partially be applicable from January 1, 2022 and are described further in section 2.4.3 below. The delegated acts on the other four objectives should be adopted by 31 December 2021 (and to apply from 1 January 2023).

2.4.1 General considerations when formulating TSCs

When establishing and updating the technical screening criteria, the Commission should consult with and rely on the technical input of the Platform on Sustainable Finance and to ensure that the TSCs are based on scientific evidence, respect the principle of technological neutrality, build on existing market practices and EU legislation and take into account life cycle impacts whilst it shall also avoid unnecessary administrative burden and compliance costs, by ensuring that those TSCs provide for sufficient legal clarity, are practical and easy to apply. It shall also ensure that the establishment of the TSCs will not give rise to stranded assets or result in inconsistent incentives or have any other adverse impact on financial markets.

To ensure that investments are channelled towards economic activities that make the greatest positive impact on the environmental objectives, the Commission should give priority to the establishment of technical screening criteria for the economic activities that potentially contribute most to the environmental objectives.

2.4.2 Requirements for the Technical Screening Criteria

According to the provisions of TR Article 19, The TSCs must:

[126] TR recital 38.
[127] TR, Articles 10(3), point (b), 11(3), point (b), 12(2), point (b), 13(2), point (b), 14(2), point (b) and 15(2), point (b).

(a) identify the most relevant potential contributions to the given environmental objective while respecting the principle of technological neutrality, considering both the short- and long-term impact of a given economic activity;
(b) specify the minimum requirements that need to be met to avoid significant harm to any of the relevant environmental objectives, considering both the short- and long-term impact of a given economic activity;
(c) be quantitative and contain thresholds to the extent possible, and otherwise be qualitative;
(d) where appropriate, build upon Union labelling and certification schemes, Union methodologies for assessing environmental footprint, and Union statistical classification systems, and take into account any relevant existing Union legislation;
(e) where feasible, use sustainability indicators as referred to in Article 4(6) of Sustainable Finance Disclosure Regulation;
(f) be based on conclusive scientific evidence and the precautionary principle enshrined in Article 191 TFEU;
(g) take into account the life cycle, including evidence from existing life-cycle assessments, by considering both the environmental impact of the economic activity itself and the environmental impact of the products and services provided by that economic activity;
(h) take into account the nature and scale of the economic activity, including whether it is an enabling or a transitional activity as referred to in Articles 16 and 10(2), and sector that they refer to;
(i) take into account the potential market impact of the transition to a more sustainable economy, including the risk of certain assets becoming stranded as a result of such transition, as well as the risk of creating inconsistent incentives for investing sustainably; and
(j) cover all relevant economic activities within a specific sector and ensure that those activities are treated equally if they contribute equally towards the environmental objectives set out in Article 9 of this Regulation, to avoid distorting competition in the market,

whilst, when an economic activity is either an enabling or a transitional activity, the TSCs shall clearly indicate that.

2.4.3 Current progress and future developments for remainder TSCs

On 21 April 2021, the European Commission published the text of the EU Taxonomy Climate Delegated Act[128] which sets out the technical screening criteria under which certain economic activities qualify as contributing substantially to climate change mitigation and climate change adaptation and for determining whether those economic activities cause significant harm to any of the other relevant environmental objectives, on

[128] Following the consultation from 20 November 2020 until 18 December 2020 on the initial draft of the Delegated act, during which 46.591 submissions were received by stakeholders, in the context of which intense dialogue was held and objections were raised as regards, amongst others, the exclusion of natural gas and nuclear power from the list of activities that could be classified as environmentally sustainable.

the basis of Articles 10(3) and 11(3) of the TR. The Delegated Act was adopted by the European Commission in June 2021 and was published in the official Journal on December 9th, 2021 (Delegated Regulation EU 2021/2139 of 4 June 2021), while it will come into effect and start being applicable as of 1 January 2022.

The technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives laid down in TR Article 9 are set out in Annex II of the EU Taxonomy Climate Delegated Act, whilst those for climate change adaptation are set out in Annex II. The EU Taxonomy Climate Delegated Act covers and assesses the environmental performance of almost 80 climate change mitigation activities and almost 100 climate change adaptation activities, including do-no-significant-harm criteria across six environmental objectives. For the climate change mitigation objective, technical screening criteria have been set out for over 85 activities across nine sectors, namely:

(a) forestry;
(b) environmental protection and restoration activities;
(c) manufacturing;
(d) energy;
(e) water supply, sewerage, waste management and remediation;
(f) transport;
(g) construction and real estate activities;
(h) information and communication; and
(i) professional, scientific and technical activities.

whilst for the climate change adaptation objective, additional sectors to those listed above have also been included such as financial and insurance activities, education, human health and social work activities as well as arts, entertainment and recreation. Agriculture and certain energy sectors were not included in the adopted EU Taxonomy Climate Delegated Act, and as such, shall be further regulated pursuant to an additional act. In addition, future delegated acts will focus on activities making a substantial contribution to the other four environmental objectives.

3. Disclosure requirements for environmentally sustainable investments

3.1 Disclosure rules supplementing the SFDR (TR Art. 5 – 7)

3.1.1 Considerations and relation to the disclosure framework of the SFDR

To avoid harming investor interests, fund managers and institutional investors that make available financial products should disclose how and to what extent they use the criteria for environmentally sustainable economic activities to determine the environmental

sustainability of their investments[129]. Such information should enable investors to understand the proportion of the investments underlying the financial product in environmentally sustainable economic activities as a percentage of all investments underlying that financial product, thereby enabling investors to understand the degree of environmental sustainability of the investment.

Where the investments underlying the financial product are in economic activities that contribute to an environmental objective, the information to be disclosed should specify (i) the environmental objective or objectives to which the investment underlying the financial product contributes, as well as (ii) how (iii) and to what extent the investments underlying the financial product fund environmentally sustainable economic activities. Where financial market participants do not take the criteria for environmentally sustainable investments into account, they should provide a statement to that end. To avoid the circumvention of the disclosure obligation, that obligation should also apply where financial products are marketed as promoting environmental characteristics

In light of the above, the TR lays down disclosure requirements for environmentally sustainable investments, which supplement the rules on sustainability-related disclosures laid down in the SFDR, in order to enhance transparency and to provide an objective point of comparison by financial market participants to end investors on the proportion of investments that fund environmentally sustainable economic activities. In particular, the TR supplements the rules on disclosures (transparency) in pre-contractual disclosures (see below section 3.1.2) and the rules on disclosures (transparency) in periodic reports laid down in the SFDR (below section 3.1.3)[130].

3.1.2 Disclosure of environmentally sustainable investments in pre-contractual disclosures and in periodic reports **(TR Art. 5**)

Where a financial product[131] as referred to in Article 9(1), (2) or (3)[132] of Regulation (EU) 2019/2088 (i.e a financial product that has sustainable investments as its objective[133]) invests in an economic activity that contributes to an environmental objective within the meaning of point (17) of Article 2 of that Regulation[134], the information to be disclosed

[129] TR recital (18)
[130] For a more detailed analysis of the specific disclosure rules of the SFDR, as supplemented by TR Articles 5-7, see below section C.
[131] As those are defined in SFDR Art. 2 (12).
[132] Article 9(1) SFDR refers to financial products whose objective is sustainable investment and contain an index designated as a reference benchmark; Article 9(2) refers to financial products with the same objective, but no index has been designated as a reference benchmark; Article 9(3) refers to financial products whose objective is a reduction in carbon emissions.
[133] According to SFDR Art. 2 (17), a sustainable investment means "an investment in an economic activity that contributes to an environmental objective or an investment in an economic activity that contributes to a social objective, provided that such investments do not significantly harm any of those objectives and that the investee companies follow good governance practices, in particular with respect to sound management structures, employee relations, remuneration of staff and tax compliance".
[134] According to SFDR Art. 2 (17), an environmental objective may indicatively be an objective "as measured, for example, by key resource efficiency indicators on the use of energy, renewable energy, raw materials, water and land, on the production of waste, and greenhouse gas emissions, or on its impact on biodiversity and the circular economy"

in accordance with Articles 6(3)[135] and 11(2)[136] of that Regulation shall include the following:

(a) the information on the environmental objective or environmental objectives set out in TR Article 9 to which the investment underlying the financial product contributes; and

(b) description of how and to what extent the investments underlying the financial product are in economic activities that qualify as environmentally sustainable under Article 3[137] of this Regulation. This description shall specify the proportion of investments in environmentally sustainable economic activities selected for the financial product, including details on the proportions of enabling and transitional activities referred to in TR Article 16 and TR Article 10(2), respectively.

3.1.3 Disclosure of financial products that promote environmental characteristics in pre-contractual disclosures and in periodic reports (**TR Art. 6**)

Where a financial product as referred to in Article 8(1) [138]of Regulation (EU) 2019/2088 promotes environmental characteristics, the disclosure requirements of TR Article 5 (as analysed above) shall apply *mutatis mutandis*.

For financial products that neither promote environmental characteristics nor qualify as environmentally sustainable investments within the meaning of the SFDR, the TR also introduces in this case a requirement to include a statement confirming that the investments underlying the product do not fully take into account the EU criteria for environmentally sustainable economic activities. For those products, the disclosures required in periodic reporting (SFDR Art. 11(2)) and the precontractual disclosures (SFDR Art.. 6 (3)) shall be accompanied by the following statement: "*The "do no significant harm" principle applies only to those investments underlying the financial product that take into account the EU criteria for environmentally sustainable economic activities. The investments underlying the remaining portion of this financial product do not take into account the EU criteria for environmentally sustainable economic activitie*s."

3.1.4 Transparency of other financial products in pre-contractual disclosures and in periodic reports (**TR Art. 7**)

[135] SFDR Art. 6(3) establishes precontractual disclosures at product level.

[136] SFDR Art. 11(2) establishes disclosures at product level in periodic reports.

[137] Namely, the extent to which the activities (i) substantially contribute to one or more environmental objectives of TR Art. 9, do not significantly harm any other of the environmental objectives of TR Art. 9, are carried out in compliance with the minimum safeguards of TR Art. 18 and comply with the applicable technical screening criteria adopted by the Commission in relation to the relevant environmental objective(s).

[138] Article 8(1) SFDR refers to financial products which promote, inter alia, environmental or social characteristics, or a combination thereof, provided that the companies in which the investments are made follow good governance practices

Where a financial product is not subject to Article 8(1) or to Article 9(1), (2) or (3) of the SFDR, the information to be disclosed in accordance with the provisions of sectoral legislation referred to in Articles 6(3) and 11(2) of the SFDR shall be accompanied by the following statement: "*The investments underlying this financial product do not take into account the EU criteria for environmentally sustainable economic activities"*.

3.2 Disclosure rules on non-financial reporting (TR Art. 8)

3.2.1 Considerations and relation to the disclosure framework of the NFRD

In addition to the disclosure obligations supplementing the sustainability-related disclosures established under the SFDR, laid down in TR Articles 5-7 and described above, the TR also imposes additional disclosure requirements to entities that are subject to an obligation to publish non-financial information under Art. 19a or 29a of the Non-Financial Reporting Directive. TR Article 8(1) requires undertakings that are subject to Articles 19a or 29a of Non-Financial Reporting Directive[139] to disclose how and to what extent their activities are associated with environmentally sustainable economic activities.

At present, the Non-Financial Reporting Directive applies to "large public interest entities" (large PIEs) – that is, those which have more than 500 employees; a balance sheet total of EUR 20 million and/or net turnover of EUR 40 million; and which are one of the following types of entities: (i) EU entities that have transferable securities admitted to trading on an EU regulated market; (ii) EU credit institutions; (iii) EU insurance undertakings; and (iv) EU entities that are designated by Member States as public-interest entities. However, the Commission is proposing to extend the scope of the Non-Financial Reporting Directive under a recent proposal for a Corporate Sustainability Reporting Directive (CSRD)[140]. If adopted, the CSRD would extend the scope of the regime from large PIEs to all large companies[141] (listed or not) and all listed companies (except for listed micro-enterprises).

3.2.2 Non-financial reporting requirements of TR Art. 8

TR Article 8(2) requires non-financial undertakings to disclose information on:

(a) the **proportion of** their **turnover** derived from products or services associated with economic activities that qualify as environmentally sustainable under TR Articles 3 and 9; and

(b) the **proportion** of their **capital expenditure** and the proportion of their **operating expenditure** related to assets or processes associated with economic **activities that**

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[139] Which include both financial undertakings (ie, asset managers, credit institutions, investment firms, insurance undertakings or reinsurance undertakings) and non-financial undertakings.

[140] Text of the proposal for a Directive "amending Directive 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" also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189

[141] "Large companies" for these purposes means companies exceeding two out of three of the following criteria: a balance sheet total of EUR 20 million; net turnover of EUR 40 million; and an average number of employees during the financial year of more than 250.

qualify as environmentally sustainable under TR Articles 3 and 9; (**'key performance indicators'**).

TR Article 27 states that the reporting requirements in Article 8 should apply (i) from 1 January 2022, as regards the first two environmental objectives (climate change adaptation and mitigation) of the Taxonomy Regulation, and (ii) from 1 January 2023, to the other four environmental objectives (water; circular economy; pollution control; and biodiversity).

3.2.3 Delegated Act setting out detail of Article 8 disclosures and application thereof– rules specific to credit institutions

The provision of Article 8(2) of Regulation (EU) 2020/852, however, does not specify equivalent key performance indicators for financial undertakings, that is credit institutions, asset managers, investment firms and insurance and reinsurance undertakings. Further, in accordance with TR Article 8 paragraph 4, the specificities of the content and presentation of the non-financial undertakings' KPIs remained to be adopted by the Commission pursuant to a Delegated Act.

As such, and in accordance with its mandate under TR Article 8 paragraph 4, the Commission adopted on 7 July 2021, a Delegated Regulation "specifying the content and presentation of information to be disclosed by undertakings subject to Articles 19a or 29a of the Non-Financial Reporting Directive concerning environmentally sustainable economic activities, and specifying the methodology to comply with that disclosure obligation", which aims to specify the key performance indicators for financial undertakings and to also specify the content and presentation of the information to be disclosed by all undertakings.

As regards financial undertakings, the Delegated Regulation acknowledges that the three key performance indicators for non- financial undertakings laid down in Article 8(2) of Regulation (EU) 2020/852, i.e turnover, capital expenditure and operating expenditure, are irrelevant for assessing the environmental sustainability of financial activities (including lending, investment and insurance) and are therefore not appropriate to demonstrate to what extent the economic activities of financial undertakings are - Taxonomy-aligned. As such, the Delegated Regulation proposes tailored key performance indicators and disclosures thereof specific for asset managers, credit institutions, investment firms, as well as insurance and reinsurance undertakings, and certain common rules for all financial undertakings.

Particularly for **credit institutions**, the Delegated Regulation requires a number of key performance indicators (KPIs)[142], on the basis of the various activities undertaken by such entities. Specifically:

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[142] See European Banking Authority (2021).

(a) As regards the main activity of credit institutions, i.e the provision of financing to and investments in the real economy, the main key performance indicator for credit institutions that are subject to the disclosure obligations laid down in Articles 19a and 29a of the Non-Financial Reporting Directive should be the green asset ratio (**GAR**), which shows the proportion of exposures related to Taxonomy-aligned activities compared to the total assets of those credit institutions. The GAR should relate to the credit institutions' main lending and investment business, including loans, advances and debt securities, and to their equity holdings to reflect the extent to which those institutions finance Taxonomy-aligned activities.

(b) As regards other commercial services and activities performed by credit institutions, other than the provision of financing, it is proposed that banks that are subject to the disclosure obligations laid down in Articles 19a and 29a of the Non-Financial Reporting Directive be obliged to disclose the proportion of the fees and commission income derived from such commercial services and activities that are associated with Taxonomy-aligned economic activities of their clients.

(c) As regards the management of underlying assets or the provision of financial guarantees, which lead to off-balance sheet exposures, it is proposed that credit institutions that are subject to the disclosure obligations laid down in Articles 19a and 29a of the Non-Financial Reporting Directive disclose the proportion of Taxonomy-aligned activities in the underlying assets that they manage or in the obligations the performance of which they guarantee.

(d) Lastly, credit institutions that are subject to the disclosure obligations laid down in Articles 19a and 29a of the Non-Financial Reporting Directive should also disclose separately the overall composition of their total assets, including their trading book, and any trends and limits in terms of climate and environmental risks.

In view of the entry into force and application of EU Taxonomy Climate Delegated Act by the end of 2021 and material difficulties for assessing compliance of economic activities in 2022 with technical screening criteria laid down in that Delegated Regulation for the previous reporting year, the application of this Regulation in 2022 should be limited to certain elements and qualitative reporting, with the remaining provisions starting to apply from 1 January 2023 for non- financial undertakings and from 1 January 2024 for financial undertakings. Moreover, the key performance indicators of credit institutions related to their trading book and commission and fees for other commercial services and activities than the provision of financing should apply from 1 January 2026.

C. DISCLOSURE FRAMEWORK FOR FINANCIAL COMPANIES – THE SUSTAINABLE FINANCE DISCLOSURE REGULATION

1. Subject matter and scope of the SFDR – nature of disclosure obligations

1.1 Introductory remarks

Although the EU financial services sector has long been a subject of granular regulatory disclosure rules and fiduciary duties, a robust and harmonized regulatory regime of sustainability-related disclosure rules and fiduciary duties, was, until very recently, lacking[143]. In the absence of such a harmonized regime on sustainability-related disclosures at EU level, divergent national disclosure standards and market-led practices that are spurred by commercially-driven priorities make it difficult for end investors to compare different financial products, create an uneven playing field for such products, thereby furthering market fragmentation, and erect additional barriers and exacerbate inefficiencies within the internal market[144]. Consequently, it is to no surprise that the SFAP's Actions no. 9 and no. 7 called for "*strengthening sustainability-related disclosures*" and "*clarifying sustainability-related fiduciary duties*", respectively.

In line with the above, on 27 November 2019 the European Parliament and the Council adopted in accordance with the ordinary legislative procedure (Article 289(1) TFEU) and on the basis of Article 114 TFEU, Regulation (EU) 2019/2088 "on sustainability-related disclosures in the financial services sector" (commonly referred to as the '**Sustainable Finance Disclosure Regulation'** or **SFDR**), which entered into force on 10 March 2021, is binding in its entirety and directly applicable in all Member States and is consistent with the principles of subsidiarity and proportionality. The purpose of the SFDR is to lay down a harmonized set of regulatory sustainability-related (i) disclosure rules and (ii) fiduciary duties, with the overarching objective of strengthening protection for end investors by improving disclosures to them and as such enabling them to make informed investment decisions. Accordingly, the SFDR aims to reduce information asymmetries in principal-agent relationships with regard to (i) integration of sustainability risks, (ii) the consideration of adverse sustainability impacts and (iii) the promotion of environmental or social characteristics and sustainable investments by putting in place precontractual and periodic disclosures to end-investors (principals) by financial market participants or financial advisers (agents)[145].

1.2 Governed entities

As regards the entities under its scope, the SFDR imposes transparency obligations on financial market participants and financial advisers. **Financial market participants** are overall defined as those entities that manufacture financial products, whilst **financial**

[143] For an in-depth analysis of the SFDR, see **Busch D. (2021).**
[144] SFDR Recital (9).
[145] SFDR, recital (10).

advisers are those entities that provide investment advice or insurance advice[146]. More specifically:

(a) **Financial market participants** are (1) insurance undertakings making available insurance-based investment products (IBIP), (2) investment firms providing portfolio management, (3) institutions for occupational retirement provision (IORP), (4) manufacturers of pension products, (5) alternative investment fund managers (AIFM), (6) pan-European personal pension product (PEPP) providers, (7) managers of qualifying venture capital funds registered in accordance with Article 14 of Regulation (EU) No. 345/2013, and (8) credit institutions providing portfolio management; whilst

(b) **Financial advisers** are (1) insurance intermediaries providing insurance advice with regards to IBIPs, (2) insurance undertakings providing insurance advice with regards to IBIPs, (3) credit institutions providing investment advice, (4) investment firms providing investment advice, (5) AIFMs providing investment advice in accordance with point (b)(i) of Article 6(4) of Directive 2011/61/EU and (6) UCITS management companies providing investment advice in accordance with point (b)(i) of Article 6(3) of Directive 2009/65/EC.

In the context of the SDFR, financial products are defined as (a) portfolios managed in accordance with point (8) of Article 4(1) of Directive 2014/65/EU; (b) alternative investment funds (AIFs); (c) IBIPs; (d) pension products; (e) a pension schemes; (f) UCITS; or (g) PEPPs.

Lastly, it should be noted that financial market participants and financial advisers based outside of the EU, who market (or intend to market) their financial products to clients in the EU under Article 42 of the Alternative Investment Fund Managers Directive (AIFMD), will also need to follow the SFDR disclosures.

1.3 Scope of the SFDR

The overarching aim of the SFDR is to facilitate investors to distinguish and compare the sustainability of the investments underlying financial products, thereby enabling them to make informed investment decisions. It does so by requiring financial market participants and financial advisers to disclose the degree to which the financial products that they make available have environmental and/or social characteristics, invest in sustainable investments or have sustainable objectives.

In this context, the SFDR imposes on financial market participants and financial advisers specific firm-level disclosures and product-level disclosures, in order to achieve **more transparency** regarding how the latter integrate sustainability risks and principal adverse

[146] Where such entities carry out activities of both financial market participants and financial advisers concurrently, such entities should be deemed to be financial market participants where they act in the capacity of manufacturers of financial products, including portfolio management, and should be deemed to be financial advisers where they provide investment or insurance advice

impacts into their investment decisions[147] and investment or insurance advice[148]. In this regard, the following three clarifications are needed:

(a) **Sustainability Risks** are defined in the SFDR as environmental, social or governance events or conditions which could cause a negative material impact on the value of the investment[149];

(b) **Principal Adverse Impacts** should be interpreted as any negative effects that investment decisions or advice could have on sustainability factors[150], whilst

(c) **Sustainability Factors** are defined in the SFDR as environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters[151].

In addition, the SFDR aims to help investors to choose between financial products by classifying funds into three distinct categories, according to the degree to which sustainability is a consideration. Accordingly, the SFDR recognizes the following three categories of financial products, each of which entails specific disclosure obligations:

(a) **Article 9 financial products** – those are financial products that have sustainable investment[152] as their core objective (commonly referred to as **Dark Green products**).

(b) **Article 8 financial products** – those are financial products that promote environmental and/or social characteristics, and may invest in sustainable investments, but do not have sustainable investing as a core objective (commonly referred to as **Light Green products**).

(c) **Financial products that are neither article 9 or article 8 products**.

Lastly, it should be noted that the Regulation maintains the requirements for financial market participants and financial advisers to act in the best interest of end investors – however in order to comply with their duties set out thereunder, financial market participants and financial advisers should integrate in their processes, including in their due diligence processes, and should assess on a continuous basis, not only all relevant financial risks but also including all relevant sustainability risks that might have a relevant material negative impact on the financial return of an investment or advice[153].

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[147] As regards financial market participants.
[148] As regards financial advisers.
[149] SFDR art. 2 para 22
[150] SFDR recital 20
[151] SFDR art. 2 para 24
[152] The SFDR defines sustainable investment as an investment in an economic activity that contributes to an environmental or social objective, provided that the investment does not significantly harm any environmental or social objective and that the investee companies follow good governance practices
[153] SFDR recital 12.

2. Sustainability disclosures at entity (firm) level

The first type of sustainability disclosures established under the SFDR are those that must be taken at an entity level (in contrast to sustainability disclosures taken at a financial product level). Consequently, the entities covered by the SFDR are subject to the following entity-level sustainability disclosures:

(a) disclosure obligations **regarding the integration of sustainability risks into investment activities** (under point 2.1 below);
(b) disclosure obligations **regarding the consideration and integration of principal adverse of their investment decisions on sustainability factors** (under point 2.2 below);
(c) disclosure obligations **regarding the integration of sustainability risks in the remuneration policies** (under point 2.3 below).

2.1 Transparency of sustainability risk policies on the website (SFDR Article 3)

Both financial market participants and financial advisers **must** publish on their websites information about their policies on the integration of 'sustainability risks in their investment decision-making process (financial market participants) and in their investment advice or insurance advice (financial advisers). Financial market participants and financial advisers must ensure that the (above) published information which they have to disclose in accordance with SFDR Art. 3 is kept up to date. Where a financial market participant amends such information, a clear explanation of such amendment shall be published on the same website[154].

2.2 Transparency of adverse sustainability impacts on the website (SFDR Article 4)

2.2.1 Disclosure obligations for financial market participants

Financial market participants **must** publish and maintain on their websites:

(a) ***where they consider principal adverse impacts*** of investment decisions on sustainability factors, a **statement on due diligence policies with respect to those impacts**, taking due account of their size, the nature and scale of their activities and the types of financial products they make available; or
(b) ***where they do not consider adverse impacts*** of investment decisions on sustainability factors, **clear reasons** for why they do not do so, including, where relevant, information as to whether and when they intend to consider such adverse impacts.

Where they do consider principal adverse impacts of investment decisions on sustainability factors, financial market participants must include at least the following information in their statements **on due diligence policies with respect to** principal adverse impacts of investment decisions on sustainability factors:

[154] SFDR art. 12 (1)

(a) information about their policies on the identification and prioritisation of principal adverse sustainability impacts and indicators;
(b) a description of the principal adverse sustainability impacts and of any actions in relation thereto taken or, where relevant, planned;
(c) brief summaries of engagement policies in accordance with Article 3g of Directive 2007/36/EC, where applicable;
(d) a reference to their adherence to responsible business conduct codes and internationally recognised standards for due diligence and reporting and, where relevant, the degree of their alignment with the objectives of the Paris Agreement.

Considering the above, it seems in principle that financial market participants have a choice not to consider adverse impacts of investment decisions on sustainability factors (provided they give clear reasons for it). However, from 30 June 2021, financial market participants exceeding either on their balance sheet dates or, where they are parent undertakings of a large group, on their group balance sheet dates, the size criterion of an average number of 500 employees during that financial year, must publish and maintain on their websites the statement on their due diligence policies with respect to the principal adverse impacts of investment decisions on sustainability factors.

2.2.2 Disclosure obligations for financial advisers

Similarly, financial advisers must publish and maintain on their websites:
(a) **information** as to whether, taking due account of their size, the nature and scale of their activities and the types of financial products they advise on, **they consider in their investment (or** insurance) **advice** the principal adverse impacts on sustainability factors; or
(b) **information** as to why they do not to consider adverse impacts of investment decisions on sustainability factors in their investment advice or insurance advice, and, where relevant, including information as to whether and when they intend to consider such adverse impacts.

Contrary to financial market participants, financial advisers do in fact have the choice not to consider adverse impacts of investment decisions on sustainability factors in their investment or insurance advice, - in that case, they must publish and maintain on their websites information as to why they do not do so, including where relevant, information on whether and when they intend to consider such adverse impacts.

2.2.3 Level 2 regulation pending

The disclosure rules set out above will be fleshed out in greater detail in RTSs to be adopted by the Commission and drawn up jointly by the ESAs. More precisely, the ESAs must jointly develop draft RTSs49 on the (a) content, (b) methodologies and (c) presentation of information in respect of the sustainability indicators in relation to adverse impacts (i) on the climate and other environment-related adverse impacts (by 30 December 2020); and (ii) in the field of social and employee matters, respect for human rights, anti-corruption and anti-bribery matters (by 30 December 2021).

2.3 Transparency of remuneration policies in relation to the integration of sustainability risks (SFDR Article 5)

Both financial market participants and financial advisers must include in their remuneration policies information on how those policies are consistent with the integration of sustainability risks, and publish that information on their websites. The information must be included in remuneration policies that financial market participants and financial advisers are required to establish and maintain in accordance with sectoral legislation[155]. Financial market participants and financial advisers must ensure that the (above) published information which they have to disclose in accordance with SFDR Art. 5 is kept up to date. Where a financial market participant amends such information, a clear explanation of such amendment shall be published on the same website[156].

3. Sustainability disclosures at products (fund) level

Financial market participants and financial advisers must also comply with a series of disclosure obligations established at a financial product level, which are laid down in articles 6 – 12 of the SFDR. As a foreword, the different sustainability disclosures required at a financial product level are categorized as follows:

(a) **Precontractual disclosures** relating to the **integration of sustainability risks** in the management of the product (SFDR Art. 6) (below under point 3.1);

(b) **Precontractual** and **periodic** reporting **disclosures** on the **adverse sustainability impact of the investment** (SFDR Art. 7) (below under point 3.2);

(c) **Additional precontractual and periodic disclosures** in respect to Light Green Products and Dark Green Products (SFDR Art. 8 and 9 respectively) (below under point 3.3 and 3.4).

3.1 Precontractual disclosures on the integration of sustainability risks at product level (SFDR Art.6)

3.1.1 Financial market participants

Financial market participants shall include descriptions of the following in pre-contractual disclosures:

(a) the manner in which sustainability risks are integrated into their investment decisions; and

[155] In particular Directives 2009/65/EC, 2009/138/EC, 2011/61/EU, 2013/36/EU, 2014/65/EU, (EU) 2016/97 and (EU) 2016/2341.

[156] SFDR art. 12 (1).

(b) the results of the assessment of the likely impacts of sustainability risks on the returns of the financial products they make available.

Where financial market participants deem sustainability risks not to be relevant, the descriptions referred to in the first subparagraph shall include a clear and concise explanation of the reasons therefor.

3.1.2 Financial advisers

Financial advisers shall include descriptions of the following in pre-contractual disclosures:

(a) the manner in which sustainability risks are integrated into their investment or insurance advice; and

(b) the result of the assessment of the likely impacts of sustainability risks on the returns of the financial products they advise on.

Where financial advisers deem sustainability risks not to be relevant, the descriptions referred to in the first subparagraph shall include a clear and concise explanation of the reasons therefor.

The pre-contractual information must be disclosed to end investors in accordance with the applicable sectoral legislation, through a broad spectrum of precontractual disclosure instruments, ranging from elaborate documents such as prospectuses to very concise documents such as key information documents (KIDs).

3.2 Precontractual and periodic disclosures of adverse sustainability impacts risks at product level (SFDR Art. 7)

For financial market participants who chose (or are obliged[157]) to provide transparency of adverse impact of sustainability risks at entity level in accordance with article 4 of the SFDR, the precontractual disclosures on the integration of sustainability risks must also include, for each financial product they make available, the following information, by 30 December 2022:

(a) a clear and reasoned explanation of whether, and, if so, how a financial product considers principal adverse impacts on sustainability factors; and

(b) a statement that the information on principal adverse impacts on sustainability factors is available in the information to be disclosed in the periodic reports.

Financial market participants who chose (provided they may chose) not to provide transparency of adverse impact of sustainability risks at entity level in accordance with article 4 of the SFDR must include for each financial product a statement that the financial market participant does not consider the adverse impacts of investment decisions on sustainability factors and the reasons therefor.

3.3 Additional disclosure obligations as regards financial products that promote environmental or social characteristics (SFDR Art. 8)

[157] i.e those above the 500 employees criterion

The various disclosure obligations as regards financial products that promote environmental or social characteristics are found in **SFDR A**rticles 8 (in conjunction with art. 6), 10 and 11, as well as article 6 of the Taxonomy Regulation.

3.3.1 Article 8 - Transparency of the promotion of environmental or social characteristics in pre-contractual disclosures

Where a financial product **promotes**, among other characteristics, **environmental or social characteristics**, or a combination of those characteristics, **provided** that the **companies in which the investments are made follow good governance practices**, the precontractual information that financial market participants and financial advisers must disclose, pursuant to SFDR Article 6(1) and (3), shall include the following:

(a) information **on how those characteristics are met**; and
(b) if an index has been designated as a reference benchmark, inf**ormation on whether and how this index is consistent with those characteristics**.

Financial market participants shall include in the information to be disclosed pursuant to Article 6(1) and (3) an indication of where the methodology used for the calculation of the index referred to in paragraph 1 of this Article is to be found.

3.3.2 Article 10 - Transparency of the promotion of environmental or social on websites

Financial market participants shall publish and maintain on **their websites** the following information for **each** financial product referred to in Article 8(1):

(a) a description of the environmental or social characteristics it promotes;
(b) information on the methodologies used to assess, measure and monitor the environmental or social characteristics, including its data sources, screening criteria for the underlying assets and the relevant sustainability indicators used to measure the environmental or social characteristics;
(c) the precontractual information referred to in Articles 8;
(d) the information in periodic reports referred to in Article 11.

The information to be disclosed pursuant to the above must be clear, succinct and understandable to investors. It shall be published in a way that is accurate, fair, clear, not misleading, simple and concise and in a prominent easily accessible area of the website

3.3.3 Article 11 - Transparency of the promotion of environmental or social characteristics in periodic reports

Where financial market participants make available a financial product as referred to in Article 8(1), they shall include a description of the extent to which environmental or social characteristics are met in periodic reports. The way this information will be disclosed is

the same as article 6 (3) and stated above [158]. For the purposes of periodic reporting information, financial market participants may use the information in management reports in accordance with Article 19 of the Non-Financial Reporting Directive or the information in non-financial statements in accordance with Article 19a of that Directive where appropriate.

3.3.4 Additional requirements under Taxonomy Regulation Article 6

Where a financial product as referred to in Article 8(1) of SFDR promotes **environmental characteristics**, the information to be disclosed as part of the SFDR's (i) precontractual disclosures and (ii) periodical reporting shall also include:

(a) the information on the environmental objective or environmental objectives set out in Article 9 TR (i.e adaptation, mitigation, pollution, circular economy, marine resources and bioversity) to which the financial product contributes;
(b) a description of how and to what extent the investments underlying the financial product are in economic activities that qualify as environmentally sustainable under Article 3 of the Taxonomy Regulation, and
(c) be accompanied by the following statement: "'The "do no significant harm" principle applies only to those investments underlying the financial product that take into account the EU criteria for environmentally sustainable economic activities. The investments underlying the remaining portion of this financial product do not take into account the EU criteria for environmentally sustainable economic activities".

3.4 Additional disclosure obligations as regards financial products with sustainable investment objectives (SFDR Art. 9)

The various disclosure obligations as regards financial products that have sustainable investments are their core objectives are found in articles 9 (in conjunction with art. 6), 10 and 11, as well as article 5 of the Taxonomy Regulation.

3.4.1 Article 9 - Transparency of sustainable investments in pre-contractual disclosures

Where a financial product has sustainable investment as its objective and an index has been designated as a reference benchmark, the precontractual information to be disclosed (per Article 6(1) and (3) SFDR) shall include the following:

(a) information on how the designated index is aligned with that objective;
(b) an explanation as to why and how the designated index aligned with that objective differs from a broad market index.

[158] SFDR art. 11(2)).

Where a financial product has sustainable investment as its objective and no index has been designated as a reference benchmark, the information to be disclosed pursuant to Article 6(1) and (3) shall include an explanation on how that objective is to be attained.

Financial market participants shall include in the information to be disclosed pursuant to Article 6(1) and (3) an indication of where the methodology used for the calculation of the indices referred to in paragraph 1 of this Article and the benchmarks referred to in the second subparagraph of paragraph 3 of this Article are to be found.

3.4.2 Article 10 - Transparency of sustainable investments on websites

Financial market participants shall publish and maintain on their websites the following information for **each** financial product referred to in Article 9:

(a) a description of the sustainable investment objective;
(b) information on the methodologies used to assess, measure and monitor the impact of the sustainable investments selected for the financial product, including its data sources, screening criteria for the underlying assets and the relevant sustainability indicators used to measure the overall sustainable impact of the financial product;
(c) the precontractual information referred to in Article 9;
(d) the information in periodic reports referred to in Article 11.

The information to be disclosed pursuant to the above must be clear, succinct and understandable to investors. It shall be published in a way that is accurate, fair, clear, not misleading, simple and concise and in a prominent easily accessible area of the website

3.4.3 Article 11 - Transparency of sustainable investments in periodic reports

Where financial market participants make available a financial product as referred to in Article 9, they shall include the following information in periodic reports:

(a) the overall sustainability-related impact of the financial product by means of relevant sustainability indicators; or
(b) where an index has been designated as a reference benchmark, a comparison between the overall sustainability- related impact of the financial product with the impacts of the designated index and of a broad market index through sustainability indicators.

The way this information will be disclosed is the same as article 6 (3)[159]. For the purposes of periodic reporting information, financial market participants may use the information in management reports in accordance with Article 19 of the Non-Financial Reporting Directive or the information in non-financial statements in accordance with Article 19a of that Directive where appropriate.

[159] SFDR art 11(2)

3.4.4 Additional requirements under Taxonomy Regulation Article 5

Where a financial product as referred to in Article 9(1), (2) or (3) of SFDR **invests in an economic activity that contributes to an environmental objective**, the information to be disclosed as part of the SFDR's (i) precontractual disclosures and (ii) periodical reporting shall also include:

(a) the information on the environmental objective or environmental objectives set out in Article 9 TR (i.e adaptation, mitigation, pollution, circular economy, marine resources and bioversity) to which the investment underlying the financial product contributes;

(b) a description of how and to what extent the investments underlying the financial product are in economic activities that qualify as environmentally sustainable under Article 3 of this Regulation. This description must specify the proportion of investments in environmentally sustainable economic activities selected for the financial product, including details on the proportions of enabling and transitional activities referred to in Article 16 and Article 10(2), respectively, as a percentage of all investments selected for the financial product.

3.5 Disclosure obligations for other financial products

Where a financial product is neither an Article 8(1) or an Article 9(1), (2) SFDR product, the information to be disclosed in accordance with the provisions of sectoral legislation referred to in Articles 6(3) and 11(2) of SFDR shall be accompanied by the following statement: *'The investments underlying this financial product do not take into account the EU criteria for environmentally sustainable economic activities*.'

3.6 Sustainability disclosures in marketing

Without prejudice to stricter sectoral legislation, in particular Directives 2009/65/EC, 2014/65/EU and (EU) 2016/97 and Regulation (EU) No 1286/2014, financial market participants and financial advisers must ensure that their marketing communications do not contradict the information disclosed pursuant to the above.

D. THE IMPACT OF SUSTAINABLE FINANCE ON EU'S MICROPRUDENTIAL FRAMEWORK FOR BANKS

1. Introductory remarks

Banking regulation and supervision have a key role to play in realizing the EU's climate change objectives and transforming Europe into the first climate-neutral continent[160]. As stipulated in the 2018 SFAP and the European Green Deal, the transition to climate neutrality will necessitate an unprecedented level of capital, which public investment alone cannot meet – banks will therefore have a critical role to play in financing this transition[161].

In its effort to enable this transition, the EU has implemented an ambitious plan to promote sustainable finance with an overhaul of legislative proposals, central amongst which are the Taxonomy Regulation, aiming to create a common ground for determining the environmental impact of different economic activities, and the SFDR, laying down disclosure obligations for financial intermediaries when manufacturing or promoting products that are marketed as sustainable. These efforts aim to "*green*" the financial system by seeking to steer capital to financial products and economic activities that are considered sustainable[162].

The EU's approach to promoting sustainable finance and tackling climate change also includes a second prong, which seeks to deal with these issues using the existing microprudential framework of banks[163], namely the three–pillar approach of the Basel Accords framework adopted by the Basel Committee on Bank Supervision (BCBS) and implemented in the EU by virtue of the Capital Requirements Regulation[164] and the Capital Requirements Directive[165][166]. In broad terms, the call for microprudential regulation of banks is justified amongst others by the risk-transformation nature of their activities and their prevalent role as financiers of the real economy - consequently,

[160] For more on climate change and banking law, see Kern Alexander, *Principles of Banking Regulation* (Cambridge University Press, 2019), pp. 347-372;
[161] For a general overview of the necessity and methods of incorporating sustainability into banking regulation, see Kern Alexander & Paul Fisher, *Banking Regulation and Sustainability* (2018), available at SSRN: https://ssrn.com/abstract=3299351.
[162] As this is defined pursuant to the TR and SFDR.
[163] This analysis focuses on the microprudential framework of banks – there is however an equally important systemic dimension of climate change related risk, which is addressed by macroprudential authorities (ESRB). For more on the macroprudential treatment of climate change related risks, see **Grünewald, S. (2020).**
[164] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.
165 Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC
[166] For an in-depth assessment of the EU's microprudential approach to climate risk, see Agnieszka Smolenska and Jens van't Klooster, *A risky bet: should the EU Choose a Microprudential or a Credit Guidance Approach to Climate Risk?* (European Banking Institute, Working Paper Series, 2021), available at SSRN: https://ssrn.com/abstract=3949541 .

"*regulators have strong levers to shape bank lending by ensuring that banks accurately monitor exposures (risk management) and hold enough capital to offset potential losses (capital requirements*)"[167]. However, in order to incorporate sustainability concerns, and particularly climate change related concerns into the existing microprudential framework of banks, it is necessary to first conceptualize is the various sustainability-related risks[168] as sources of financial risk.

Climate change in particular affects the financial system through two main channels[169]: the ***physical risk transmission channel***, representing the economic costs and financial losses due to the increasing frequency and severity of climate-related weather events (e.g., storms, floods and heat waves); and the ***transition risk transmission channel***, which relates to risks associated with the uncertain financial impacts that could result from changes in climate policy, technological breakthroughs or shifts in market preferences and social norms during the adjustment to a low-carbon economy. Physical and transition risks can impact financial institutions directly, through their counterparties or invested assets (exposures to sovereigns, corporations and households that experience climate-related shocks) – or indirectly, through the effects of climate change on the wider economy and negative feedback effects within the financial system.

After a detailed overview of how sustainability and climate change related risks in particular are conceptualized as sources of financial risk, as well as the inherent impediments in assessing climate change related risks in section 2 , the main elements of the microprudential approach, as developed so far[170], are analyzed in section 3.1. Subsequently, the supervisor's (ECB) view on how climate and environmental concerns should be incorporated into the risk management of banks is described in section 3.2, followed by, *in fine*, a presentation of the most recent legislative proposals for an amendment of the existing microprudential regulatory framework (**the 2021 Banking Reform Package**) in section 3.3. Lastly, an assessment of the existing microprudential regulatory approach to tackle climate change concerns is proposed (section 3.5)[171], hinting towards the emergence of a different type of approach, in relation to climate change and sustainable finance, which has been described in literature as the *credit guidance approach*.

[167] **Smolenska, A. & van't Klooster, J. (2021)**.

[168] This article focuses narrowly on climate change-related financial risk as one specific type of environmental, social and governance (ESG) risk.

[169] For more on climate change being a key risk driver for the banking sector, see "ECB Banking Supervision: Assessment of risks and vulnerabilities for 2021" available here: https://www.bankingsupervision.europa.eu/ecb/pub/ra/html/ssm.ra2021~edbbea1f8f.en.html

[170] Namely by virtue of the recent 2019 CRD V /CRR II reform package.

[171] For additional analysis of the assessment of the current European framework on sustainable finance, see **Zetzsche D. & Anker-Sorensen, L. (2021), Zetzsche, S., Bodellini, M. and Consiglio, R. (2021), Smolenska, A. & van't Klooster, J. (2021).**

2. Climate change as a source of financial risk

As stated above, a precondition to incorporate sustainability concerns into existing microprudential framework of banks is the understanding and acknowledgement of sustainability - related risks, namely environmental, social and governance (**ESG**) risks as sources of financial risk. While this report focuses narrowly on climate change-related financial risk as one specific type of environmental risk, the below analysis clarifies some elementary definitions as regards all ESG risks, their underlying factors, the (negative) materialization of which they constitute (the **ESG factors**), the drivers of these risks as well as the way with which these risk drivers impact institutions, known as "transmission channels". The below section of this report analyses the definitions proposed by EBA in its report published on 23 June 2021[172], which was issued in the context of the several mandates that the agency received on how to include ESG risks into the three pillars of the banking prudential framework.

2.1 Definition of ESG factors and ESG risks

2.1.1 ESG factors

While there is general agreement that ESG factors represent the main three pillars of sustainability, most international frameworks and standards refrain from establishing a single definition of ESG factors, thereby complicating their consistent understanding and management. However, based on the commonalities of the available frameworks that refer to ESG factors, they display one or more of the following intrinsic features:

(a) they are traditionally considered as non-financial;
(b) they have an inherent uncertainty as regards their impact;
(c) they constitute negative economic externalities;
(d) they are realized through a multitude of patterns within the value chain;
(e) they display an increased sensitivity to changes in public policies[173].

ESG factors are materially relevant to financial institutions to the extent that financial institutions can both be *impacted by* (*outside-in perspective*) or have an *impact on* ESG factors (*inside-out perspective*), either positively or negatively. To illustrate this double-ended impact relationship between ESG factors and financial institutions:

financial institutions can be impacted by ESG factors through the physical effects of climate change on their premises (*outside-in perspective*), or have an impact on ESG factors, for example through their CO_2 emissions (*inside-out perspective*);

[172] The EBA Report "on management and supervision of ESF risks for credit institutions and investment firms", EBA/REP/2021/18, also available here: https://www.eba.europa.eu/eba-publishes-its-report-management-and-supervision-esg-risks-credit-institutions-and-investment
[173] EBA/REP/2021/18, page 27.

more importantly, financial institutions can be impacted by ESG factors through **their core business activities**, meaning through their counterparties and invested assets, for example by financing an energy-intensive counterparty, which is affected by the policies implemented for climate change mitigation (*outside-in perspective*), or by providing a loan to a counterparty with business activities that are polluting the environment (*inside-out perspective).* By having an effect the bank's counterparty or invested asset, ESG factors impact the affected counterparty's risk profile and as such impact the bank's credit risk and balance sheet.

In view of the above, ESG factors can be defined ***as environmental, social or governance matters that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign or individual*** [174]. Although, as stated they may have positive impacts as well (which can be used for evaluating opportunities for financial and non financial undertakings), relevant form a micro-prudential risk analysis perspective are their negative impacts – in that context, ESG factors can (negatively) impact financial institutions through a series of **risk drivers.** The causal chains that explain how these risk drivers impact institutions through their counterparties and invested assets are called **transmission channels.**[175]

2.1.2 ESG risks and double materiality

In line with the above proposed definition of ESG factors, which may have positive or negative impacts on financial institutions thought their core business activities, ESG risks are defined as the *materialization of the negative impact of ESG factors*. The latter may impact financial institutions negatively by materialising through financial risk categories (such as credit, market, operational, liquidity and funding risks), which are primarily affected by an institution's exposure to its counterparties and invested assets, thereby affecting institutions' financial performance. As such, from a prudential perspective, ESG risks for institutions can be defined ***as the risks of any negative financial impact on the institution stemming from the current or prospective impacts of ESG factors on its counterparties or invested assets***[176].

Institutions can be impacted by (outside-in perspective) ESG risks through their counterparties and invested assets, whilst the latter may be impacted by (outside-in perspective) or have an impact on (inside-out perspective) ESG factors. Specifically:

(a) The outside-in perspective may arise from the impact of ESG factors on a company's economic and financial activities throughout their entire value chain (both upstream and downstream), affecting the value (returns) of such activities (financial materiality);

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[174] EBA/REP/2021/18, page 31.
[175] EBA/REP/2021/18, page 33.
[176] EBA/REP/2021/18, page 33.

(b) The inside-out perspective may arise from the impact of a company’s economic and financial activities on ESG factors, which could in turn become financially material when this impact affects the value (returns) of the company’s activities (environmental and social materiality),
And together constitute the “double materiality” principle.

2.2 Drivers of environmental risks (focus on climate change) and their transmission channels

Environmental factors are related to the quality and functioning of the natural environment and of natural systems, and include factors such as climate change, biodiversity, energy consumption, pollution and waste management.

Climate-related risks, the microprudential treatment of which constitutes the focus of this analysis, are the most widely researched and recognised type of environmental risk. Climate-related risks are the financial risks posed by the exposure of institutions to counterparties that may potentially contribute to or be affected by climate change, and they can give rise to negative financial impacts through two types of risk drivers, **physical risks** and **transition risks, each of which can** impact institutions via transmission channels.

2.2.1 Physical risks and their transmission channels

Physical risks are typically defined as risks which arise from the physical effects of climate change and environmental degradation. They can be acute - if they arise from climate and weather-related events and an acute destruction of the environment (e.g., storms, floods and heat waves), or chronic - if they arise from progressive shifts in climate and weather patterns or a gradual loss of ecosystem services (e.g., ocean acidification and rising sea levels).

Below is an example of how environmental factors, and specifically climate change, can give rise to physical risk drivers, impacting institutions’ balance sheets and revenues through a number of transmission channels: climate change-driven biodiversity loss and lack of a healthy ecosystem leads to reduced agricultural activities and food production of a financial institution’s counterparty engaged in farmland activities, affecting its profitability and as such increasing its credit risk, the impact of which is transmitted to the balance sheet of the institution.

2.2.2 Transition risks and their transmission channels

Transition risks are the other main category of risk drivers of environmental risks in general and Climate-related risks specifically. They generally refer to the uncertainty related to the timing and speed of the process of adjustment to an environmentally sustainable economy, which may be affected by amongst others changes in climate policy, technological breakthroughs or shifts in market preferences and social norms during the adjustment process.

The European Commission's 'Guidelines on non-financial reporting: Supplement on reporting climate-related information' [177], which give a definition of **transition risks** in the context of climate risk, refer to a number of underlying risk drivers:

(a) policy risks, for example as a result of energy efficiency requirements, carbon-pricing mechanisms which increase the price of fossil fuels, or policies to encourage sustainable land use;

(b) legal risks, for example the risk of litigation for failing to avoid or minimise adverse impacts on the climate, or failing to adapt to climate change;

(c) technology risks, for example if a technology with a less damaging impact on the climate replaces a technology that is more damaging to the climate;

(d) market risks, for example if the choices of consumers and business customers shift towards products and services that are less damaging to the climate;

(e) reputational risks, for example the difficulty of attracting and retaining customers, employees, business partners and investors if a company has reputation for damaging the climate.

2.2.3 Interaction between physical and transition risks and potentially systemic importance

Whilst traditionally assessed separately due to the complexity involved in each case, physical and transition risks interact closely with each other and can be better understood if viewed as part of the same framework, due to their interplay and interconnectivity. The magnitude and distribution of both physical and transition risks will depend on the level and timing of mitigation measures and whether the transition occurs in an orderly fashion or abruptly. In this regard, four broad future scenarios of interconnected physical and transition risk have been identified in literature[178]:
"

(1) Early and measured action to mitigate climate change would limit, but not eliminate, both physical and transition risk ('soft landing').

(2) Delayed and weak action would lead to higher and potentially catastrophic physical risk, without necessarily entirely eliminating transition risk ('hot house earth').

[177] Communication from the Commission "Guidelines on on non-financial reporting: Supplement on reporting climate-related information" (2019/C 209/01) Article 2.3 (2) also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019XC0620%2801%29 .
[178] **Grünewald, S. (2020),** page 5.

> (3) Delayed action followed by strong action would likely lead to both high physical risk and high transition risk ('too little too late').
>
> (4) Sudden, yet sufficient action to meet climate goals will limit physical risk, but cause high transition risk ('hard landing')[179]."

The above four scenarios highlight the trade-offs that exist between physical and transition risks: – on the one hand, physical risks should reasonably be expected to decrease, the further transition policies are implemented. However, an abrupt transition policy change can severely increase transition risks due to the related disruption. If on the other hand no action is taken, transition risk will be low, but the delayed reaction will trigger a much bigger physical risk. In this regard, a recent analysis published by the European Systemic Risk Board shows that the macroeconomic costs of delaying action for too long are significant and banks might be adversely affected, particularly in a transition risk scenario of an abrupt tightening of policies aimed at mitigating climate change[180].

Each of these scenarios bears the risk of giving rise to what a recent study by the BIS and the Banque de France refers to as '*green swan events*'[181]. Green swan events are climate-related events that could potentially disrupt the financial system. They differ from "black swans events'"[182] in that (i) despite the high uncertainty on the timing and intensity of climate change impacts on the financial system, there is certainty about the necessity to act, (ii) they are not just potentially disruptive to the financial system, but pose a global existential threat, and (iii) exhibit complexity of a higher order than black swans, as they could produce chain reactions with fundamentally unpredictable environmental, geopolitical, social and economic outcomes.

2.3 Inherent impediments in calculating climate related risks

The above highlights the potentially systemic nature of risks posed by climate change and the concluding remark that climate change may be a threat to financial stability. Whilst this may well be addressable in the realm of monetary policy (and hence under the mandate of central banks), following the old proverb "that which is measured can be managed" (Carney (2015)), present at hand is an obvious task for financial regulation and supervision to ensure that climate-related risks become integrated into financial stability monitoring and prudential supervision.

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[179] **Grünewald, S. (2020),** page 5.

[180] For more on this, see "Positively green: Measuring climate change risks to financial stability", European Systemic Risk Board, June 2020.

[181] Bolton et. Al, "The Green swan: Central banking and financial stability in the age of climate change". January 2020, BIS & Banque de France.

[182] The concept of black swan was developed by Nassim Nicholas Taleb (2007). Black swans events are: (i) unexpected and rare, thereby lying outside the realm of regular expectations; (ii) their impacts are wide-ranging or extreme; (iii) they can only be explained after the fact. They can vary from a terrorist attack to a disruptive technology or a natural catastrophe and are difficult to fit into probability distribution. As such, they cannot be predicted by relying on backward-looking probabilistic approaches assuming normal distributions (eg value-at-risk (VaR) models). The existence of black swans calls for alternative epistemologies of risk.. It is contested that the same applies for green swans.

However, when asked the question of "*how to measure climate risk*", it becomes apparent that the task is faced with a significant challenge, which the EBA report further specifies in the following six aspects of ESG risks:

(a) **Level of uncertainty**: climate change is characterized by deep uncertainty: assessing the physical risks of climate change is subject to uncertainties related to climate patterns themselves, whilst transition risks are also subject to deep or radical uncertainty with regard to issues such as the policies that will be implemented, account taken of their timing, nature and scope.

(b) **Insufficient data**: the scarcity of relevant, comparable, reliable and user-friendly data, is another major challenge that limits the understanding of the potential impacts of ESG risks on the performance of financial assets. And even where available (such as in the case of large corporate undertakings), ESG data are not easily translatable to financial performance. More consistent and coherent ESG-related reporting by companies could help to enhance the quality and availability of ESG data. In this regard, the Commission has published its proposal for a Corporate Sustainability Reporting Directive[183], which now requires more granular ESG-related disclosures from a wider range of companies[184].

(c) **Methodological constrains**: traditional approaches to risk management are based on historical data and assumptions. The fundamental financial concept of value-at-risk (VaR) captures losses that can be expected with a 95–99% level of confidence and over a relatively short-term horizon. Capital requirements are also typically calculated (through estimated probability of default risk, exposure at default and estimated loss given default) on a one-year horizon and based on credit ratings that largely rely on historical track records of counterparties. ESG factors on the other hand are frequently not reflected in these data. As a result, traditional approaches to risk management consisting in extrapolating historical data based on assumptions of normal distributions are largely irrelevant to assess future climate-related risks, as both physical and transition risks are characterised by deep uncertainty and nonlinearity.

(d) **Complexity, non-linearity and tipping points**[185]: both the climate and the economy are complex interactive systems, in which the outcome of a specific event depends on the feedback from other parts of the system, which are susceptible to

[183] Text of the proposal for a Directive "amending Directive 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" also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189

[184] For more on data challenge that is inherent in the current sustainable finance framework and certain policy recommendations, see **Och. M (2020)** and **Zetzsche, S., Bodellini, M. and Consiglio, R. (2021).**

[185] Tipping points' are commonly understood as critical thresholds at which small perturbations can lead to large and long-term qualitative changes of the state or future development of a system. See Lenton et al (2008).

discontinuities and tipping points. As regards the latter, both the physical risks and the transition risks of climate change are prone to tipping points, after which change becomes irreversible. These tipping points can create complex chain reactions and cascade effects, which in turn could generate unpredictable environmental, geopolitical, social and economic dynamics.

(e) **Time-horizon mismatch** between 'traditional' management tools and the timeframe for the materialisation of ESG – the latter cover unusually long time horizons of several decades[186], whilst traditional strategic planning horizons of financial and non-financial institutions are much shorter.

(f) **Multi-point impact of ESG risks for financials** - ESG risks can impact the financial position of institutions in multiple ways, given that they impact different financial categories. For instance, physical deterioration of areas in which some economic activities operate (e.g. agriculture, construction) may lead to higher credit losses, if an institution is exposed to those activities via lending activities, or losses in market value, where the exposure is in the form of trading activities – such losses impact on the capital adequacy and, thus, prudential soundness of an institution. Moreover, ESG risks can impact corporates when assessed by credit rating agencies that take ESG factors into account, thereby resulting in higher risk weights of the affected exposures. ESG risks can also impair the valuation of collateral, or cause an outflow of capital, after the occurrence of a natural disaster.

3. The microprudential approach to sustainability and climate change risks

As noted above, the EU's policy to address the question of how to incorporate ESG in the financial system includes a second approach, which aims to green the banking system through the already existing microprudential framework governing banks. This approach aims to ensure climate change risks are adequately factored-in the banks' balance sheet and mostly, to ensure that banks adequately manage climate change related risks. Embedded in this approach is the treatment of ESG risks (and in particular, climate change related risks) as a threat to banks' capital and as a financial risk. The conceptualization of climate change risks (but more broadly, ESG risks) as sources of financial risks, as well as the inherent difficulties in doing so, has been addressed above in section 2. The below analysis now turns to examine how climate change related risks were incorporated into the three pillars of banking supervision in the recent revision of the Capital Requirements package of 2019 (CRD V/ CRR II) and how the supervisor expects banks to incorporate climate and environmental concerns into their risk management processes and business strategies. It then looks at the recent legislative proposals (CRD VI/ CRR III) and concludes with an assessment of the existing framework, which hints to a potentially new direction in the realm of microprudential regulation for banks.

[186] Indicatively, the 2030 and 2050 horizon applicable to the EU sustainable finance framework.

3.1 Integrating sustainability and climate change risks into the existing microprudential regulatory framework of banks

We now turn to analyze how the most recent revision of the Capital Requirements package of 2019 (CRD V/ CRR II) incorporated climate change risks into the three pillars of bank supervision.

The approach follows the structure developed at the global level of the Basel Accords' three pillars. Under Pillar I, the regulatory framework sets the bank's minimum capital requirements, determined by the bank's risk-weighted assets and in light of specific credit, trading and operational risks it faces. Pillar II establishes the supervisory framework within which public authorities assess the banks' internal risk management and governance. Finally, Pillar III subjects the banks to specific disclosure requirements.

3.1.1 ESG considerations in Pillar 1

In Pillar I, there are no specific prudential capital requirements such as a dedicated risk weighting for assets exposed to climate change-related risks. Instead, Art. 501c CRR II provides that the EBA should carry out an analysis of whether such treatment is warranted by June 2025. To this end, the EBA shall assess:

> " (a) methodologies for the assessment of the effective riskiness of exposures related to assets and activities associated substantially with environmental and/or social objectives compared to the riskiness of other exposure;
> (b) the development of appropriate criteria for the assessment of physical risks and transition risks, including the risks related to the depreciation of assets due to regulatory changes;
> (c) the potential effects of a dedicated prudential treatment of exposures related to assets and activities which are associated substantially with environmental and/or social objectives on financial stability and bank lending in the Union"[187].

EBA shall submit a report on its findings to the European Parliament, to the Council and to the Commission by 28 June 2025, on the basis of which, the Commission shall, if appropriate, submit to the European Parliament and to the Council a legislative proposal.

3.1.2 ESG considerations in Pillar 2

Pillar 2 was more concrete with regard to the inclusion of ESG risks. According to art. 98(8) of CRD5, the EBA was asked to assess, by June 28th 2021, the potential inclusion of ESG risks in the supervisory review and evaluation process (SREP) performed by competent authorities. For this purpose, the EBA was asked to include in its assessment:

> " (a) the development of a uniform definition of ESG risks, including physical risks and transition risks; the latter shall comprise the risks related to the depreciation of assets due to regulatory changes;

[187] CRR II art. 501c

(b) the development of appropriate qualitative and quantitative criteria for the assessment of the impact of ESG risks on the financial stability of institutions in the short, medium and long term; such criteria shall include stress testing processes and scenario analyses to assess the impact of ESG risks under scenarios with different severities;

(c) the arrangements, processes, mechanisms and strategies to be implemented by the institutions to identify, assess and manage ESG risks;

(d) the analysis methods and tools to assess the impact of ESG risks on lending and financial intermediation activities of institutions."

Accordingly, in its report published on 23 June 2021[188], the EBA proceeded with a number of recommendations. First, it defined ESG risks as "*risks that stem from the current or prospective impacts of ESG factors on their counterparties or invested assets, i.e. the risks arising from the core activities of institutions*"[189], whilst clarifying that those (ESG risks) do not constitute new categories of risk but materialize through the traditional categories of financial risks (credit risk, market risk, operational and reputational risks, liquidity and funding risks)[190].

The report further identified three methodological approaches for assessing ESG risk, without however prescribing the use of one particular approach (whilst also seeing merit in the application fo a combination thereof). The report also recommended to extend the time horizon of the supervisory process to 10 years. Building on the EBA's analysis, the European Commission made a series of legislative proposals in October 2021 (**the 2021 Banking Reform Package**), which are analysed further in section 3.3 below.

3.1.2.1 Portfolio alignment method

At the core of this methodological approach lies the concept of ***alignment***. The key principle behind this approach is for institutions, investors and supervisors to understand how far portfolios are aligned with globally agreed (climate) targets – specifically, how far an institution would need to change its portfolio and activities in order to align with the Paris Agreement 2˚C scenario.

It looks directly at the ultimate goal of global efforts on climate change and explicitly defines the portfolio changes that would be required by institutions to contribute to this. Two examples of such method are the Paris Agreement Capital Transition Assessment (PACTA) tool developed by the 2 Degrees Investing Initiative (2DII)[191] and the United

[188] EBA/REP/2021/18.
[189] As has been analysed in detail above.
[190] For more, see under section 2 above.
[191] The tool combines institution level portfolio information on corporate exposures, a database on the technology mix and production plans of individual companies, and technology mix scenarios developed by the International Energy Agency (IEA) in order to assess an institution's alignment with the Paris Agreement Targets (bringing the rise in temperature to well below 2 degrees).

Nations Environmental Program Finance Initiative (UNEP FI) Principles for Responsible Banking (PRB)[192].

3.1.2.2 Risk framework method

In contrast to the alignment method, the risk framework method focuses on the sensitivity of portfolios and the impact climate change has on the real risk of the exposures. It is a tool that enables institutions to manage their risks internally and allocate their portfolios in the most risk-effective way, taking into account climate risk, rather than providing explicit guide for institutions on how they would have to shift their portfolios to align to global climate targets. As such, it is a risk-driven approach, focused on resilience rather than alignment.

The most developed risk framework methods in the context of climate risk categorized into two approaches:

a) **climate stress tests**[193] - constituting fully fledged scenarios mapping out possible future developments of transition and physical variables, and the related changes in macro and financial variables. The scenarios are then translated into changes in portfolio risk attributes.

b) **climate sensitivity analysis** – assessment of changes in portfolio risk attributes by changing financial model projections on the basis of exposures into "green" versus "non green".

3.1.2.3 Exposure method

This tool assesses how individual exposures and counterparties perform on ESG factors – it is a tool that institutions can apply directly to the assessment of individual counterparties and individual exposures, even in isolation. The basic principle of this approach is to directly evaluate the performance of an exposure in terms of its ESG attributes, which can then be used to complement the standard assessment of financial risk categories.

Whilst crucial for both the assessment of and signaling to counterparties, and hence an important component for creating a more sustainable economy, ESG evaluations need to be applied with care. A high level of awareness and a thorough understanding of the rationale and reasoning behind the rating outcomes is of the utmost importance to ensure

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[192] The aim of this framework is to align banks' business strategies with the goals expressed in the SDGs and the Paris Agreement. A key difference in this framework compared to the PACTA approach is that it takes into account all three components of ESG, not only the environmental component.

[193] Recent examples of stress tests: (i) **De Nederlandsche Bank** (DNB) Stress test on energy transition risk for the financial system 2018 (**t**he first climate stress test conducted by a competent authority) (ii) **Bank of England (BoE)** Biennial exploratory scenario on the financial risks from climate change 2021 and (iii**)** L'Autorité de contrôle prudentiel et de Résolution **(ACPR)** Pilot exercise on climate-related risks, launched on 17 July 2020**. The European Central Bank (ECB)** is currently conducting an EU - Economy-wide climate stress test, which is still underway, covering approximately 4 million companies worldwide and 2,000 banks in the euro area, over a period of 30 years into the future. More on **ECB**'s stress test here: https://www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210318~3bbc68ffc5.en.html#short

an effective and appropriate application of ESG evaluations. Most common methodologies used in the market include:

(a) ESG ratings provided by specialized rating agencies;
(b) ESG evaluations provided by credit rating agencies (e.g. S&P ESG evaluation);
(c) ESG evaluation models developed by banks in-house for their own assessment;
(d) ESG scoring models developed by asset managers and data providers, which are publicly available.

3.1.3 ESG considerations in Pillar 3

Finally, as regards Pillar III, the CRR II / CRD V package was most clear, by imposing standardized mandatory risk disclosure requirements on large financial instructions. According to Art. 449a CRR II, from 28 June 2022, large institutions which have issued securities that are admitted to trading on a regulated market of any Member State, will be obliged to disclose information on physical and transition risks, initially on an annual basis and then on a biannual basis. Article 434a CRR II mandated the EBA to develop draft implementing technical standards (ITS) specifying these disclosure requirements in a way that conveys sufficiently comprehensive and comparable information for users of that information to assess the risk profile of institutions.

Accordingly, the EBA launched a consultation process regarding the delegated implementation that will granularly set out the specificities of such Pillar 3 disclosures on ESG risk (**Implementing Technical Standards**, **ITS**). In March 2021, the EBA issued its first consultation paper[194] on the draft ITS relating to the prudential disclosures on ESG risks in accordance with art. 449a CRR II, proposing tables and templates in order to guide institutions in their disclosure of qualitative information on ESG risks, quantitative information on climate change related risks, including transition and physical risks and quantitative information and KPIs on climate change mitigating measures, including the green asset ratio (**GAR**) on taxonomy-aligned activities and other mitigating actions[195].

In particular,

a) in the case of climate change transition risk, the EBA proposes that institutions should disclose information on exposures towards sectors that highly contribute to climate change, with a breakdown on the one hand of exposures towards fossil fuel and other carbon related sectors and on the other hand of taxonomy aligned exposures.
b) In the case of climate change physical risk, institutions should start working on the identification of those exposures towards sectors and geographies exposed to climate change events linked to physical acute and chronic risks

[194] Available here: https://www.eba.europa.eu/eba-launches-public-consultation-draft-technical-standards-pillar-3-disclosures-esg-risks
[195] For more information on GAR, see section B, 3.2.3 of this report.

c) Finally, institutions should disclose quantitative information on the actions that they are putting in place to mitigate climate change related risks, including information on taxonomy-aligned actions (GAR) and on other mitigating actions.

3.2 The supervisor's view

3.2.1 Supervisory expectations relating to the climate related and environmental risk management and disclosures

In order to inform the 114 SSM-supervised banks of the European Banking Union on how supervisors will henceforth interpret the microprudential framework, the ECB published in November 2020 its Guide on on climate-related and environmental risks[196], outlining thirteen supervisory expectations from institutions that concern inter alia, the bank's business strategy, management expertise and incentive structures, as well as the disclosure of risk to investors. The guide aims to both outline how the ECB – in light of the various initiatives taken at EU level in the area of climate change – intends to incorporate concerns for greening the banking system in its supervisory actions and serve as an important reference point for other supervisors, including the national supervisors in the Banking Union and others across the EU[197]. The ECBs supervisory expectations are set out below.

3.2.1.1 Expectations relating to business models and strategy:

(a) Institutions are expected to understand the impact of climate-related and environmental risks on the business environment in which they operate, in the short, medium and long term, in order to be able to make informed strategic and business decisions;
(b) When determining and implementing their business strategy, institutions are expected to integrate climate-related and environmental risks that impact their business environment in the short, medium or long term.

3.2.1.2 Expectations relating to governance and risk appetite:

(a) The management body is expected to consider climate-related and environmental risks when developing the institution's overall business strategy, business objectives and risk management framework and to exercise effective oversight of climate-related and environmental risks;
(b) Institutions are expected to explicitly include climate-related and environmental risks in their risk appetite framework;
(c) Institutions are expected to assign responsibility for the management of climate-related and environmental risks within the organisational structure in accordance with the three lines of defence model
(d) For the purposes of internal reporting, institutions are expected to report aggregated risk data that reflect their exposures to climate-related and environmental risks with

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[196] For more on the Guide: https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr201127~5642b6e68d.en.html
[197] **Smolenska, A. & van't Klooster, J. (2021)** page 12.

a view to enabling the management body and relevant sub-committees to make informed decisions.

3.2.1.3 Expectations relating to risk management:

(a) Institutions are expected to incorporate climate-related and environmental risks as drivers of existing risk categories into their risk management framework, with a view to managing, monitoring and mitigating these over a sufficiently long-term horizon, and to review their arrangements on a regular basis. Institutions are expected to identify and quantify these risks within their overall process of ensuring capital adequacy

(b) In their credit risk management, institutions are expected to consider climate-related and environmental risks at all relevant stages of the credit-granting process and to monitor the risks in their portfolios

(c) Institutions are expected to consider how climate-related and environmental events could have an adverse impact on business continuity and the extent to which the nature of their activities could increase reputational and/or liability risks

(d) Institutions are expected to monitor on an ongoing basis the effect of climate-related and environmental factors on their current market risk positions and future investments, and to develop stress tests that incorporate climate-related and environmental risks.

(e) Institutions with material climate-related and environmental risks are expected to evaluate the appropriateness of their stress testing, with a view to incorporating them into their baseline and adverse scenarios

(f) Institutions are expected to assess whether material climate-related and environmental risks could cause net cash outflows or depletion of liquidity buffers and, if so, incorporate these factors into their liquidity risk management and liquidity buffer calibration.

3.2.1.4 Expectations relating to disclosures

(a) For the purposes of their regulatory disclosures, institutions are expected to publish meaningful information and key metrics on climate-related and environmental risks that they deem to be material, with due regard to the European Commission's "Guidelines on non-financial reporting: Supplement on reporting climate-related information"[198].

3.2.2 ECB's survey and assessment

After publishing its guide, the ECB requested 112 Single Supervisory Mechanism (SSM) institutions with combined total assets of €24 trillion to conduct a self-assessment of their current practices against the thirteen supervisory expectations and to submit implementation plans detailing how and when they would bring their practices into line with the Guide. On November 2021, the ECB published it's a report on the state of climate

[198] Communication from the Commission "Guidelines on on non-financial reporting: Supplement on reporting climate-related information" (2019/C 209/01) Article 2.3 (2) also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019XC0620%2801%29

and environmental risk management in the banking sector, the main takeaways of which are the following[199]:

(a) None of the institutions are close to fully aligning their practices with the supervisory expectations;

(b) Virtually all institutions that performed a thorough materiality assessment expect climate and environmental risk to have a material impact on their risk profile in the coming three to five years - They view credit risk, operational risk and business model risk as being most sensitive to climate and environmental risk drivers;

(c) While steps are being taken to adapt policies and procedures, few institutions have put in place climate and environmental risk practices with a discernible impact on their strategy and risk profile - less than one-fifth have included dedicated key risk indicators on climate and environmental risk in their risk appetite statement. Some institutions have started measuring and monitoring the alignment of their portfolios, defining indicators and considering how to both align their financing with the Paris Agreement while avoiding an excessive build-up of transition risks – in line with the EBA's suggestion on portfolio alignment tool.

(d) Most institutions have a blind spot for physical risks and other environmental risk drivers, such as biodiversity loss and pollution - While institutions' materiality assessments demonstrate that both physical and transition risks are as often found to be material, their risk management practices for physical risks are less advanced than for transition risk. Institutions have generally started with collecting data and developing capabilities for transition risks.

(e) Virtually all institutions developed implementation plans to further improve their practices, but the quality of those plans varies considerably in terms of alignment with expectations and adequacy.

All in all, institutions have started paving the way, but the pace of progress remains slow in most cases - many institutions will not have practices in place that are aligned with the ECB supervisory expectations in the near future. More than half of the institutions will not have completed their plans by the end of 2022.

However, ECB also identified a set of good practices. Two-thirds of banks have made meaningful progress in integrating climate-related risks into their credit risk management, through measures such as enhanced due diligence procedures or new phasing-out criteria to limit financing activities highly exposed to climate-related risks. Likewise, banks are starting to assess energy label certifications when evaluating real estate collateral, although most don't yet include the results in their lending and monitoring practices.

[199] For more on this, "The state of climate and environmental risk management in the banking sector " ECB Report, published 22 November 2021, available here: https://www.bankingsupervision.europa.eu/press/pr/date/2021/html/ssm.pr211122~6984de0ae5.en.html

Lastly, supervisory dialogue with each institution was conducted by Joint Supervisory Teams between August and September 2021. Accordingly, all institutions received a feedback letter outlining the main shortcomings as well as an overview of peer benchmarking. For some institutions, a qualitative requirement may be communicated as part of the 2021 Supervisory Review and Evaluation Process (**SREP**).

3.2.3 Way forward – ECB's EU-wide climate stress test

In the course of 2022 the ECB will conduct a thematic review of institutions' climate and environmental risk management practices and a supervisory stress test as it gradually integrates climate and environmental risks into its Supervisory Review and Evaluation Process (SREP) methodology. This integration will eventually influence institutions' Pillar 2 requirements.

Supervisors are also currently investigating banks' climate and environmental risk disclosures. The ECB will publish its findings in an updated report on climate and environmental disclosures[200] in the first quarter of 2022, together with individual feedback to the banks. As a next step, the ECB will conduct a full review of how prepared banks are to manage climate and environmental risks, with deep dives into their incorporation into strategy, governance, and risk management. The review will take place in the first half of 2022, in tandem with the ECB's supervisory stress test on climate-related risks. Banks will receive a request for information towards the end of 2021.

3.3 The EU banking package 2021

On 27 October 2021, the European Commission adopted the much anticipated package of legislative proposals relating to the review of the CRR, the CRD and BRRD (the "**2021 Banking Reform Package**")[201]. The overall aim of the 2021 Banking Reform Package is to (1) contribute to sustainability and the transition to climate neutrality; (2) ensure stronger resilience of EU banks by finalizing the implementation of the Basel III rules; and (3) provide stronger tools for supervisors overseeing EU banks, and as such ensuring sound management of EU banks and better protecting financial stability.

Whilst the package primarily aims at ensuring a stronger resilience of EU banks to potential future economic shocks by finalizing the implementation of the Basel III rules (also known as Basel IV in the market), it is also intended to contribute to the transition to climate neutrality – in this regard, the proposal includes amendments to the CRR (CRR

[200] For more on this see "ECB report on institutions' climate-related and environmental risk disclosures" published in November 2020.

[201] For more on the 2021 Banking Reform Package, see here: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5401

III)[202] and CRD (CRD V)[203], heavily relying on the recommendations made by EBA in its June 2021 report[204] - the present analysis shall focus on those elements.

In line with the Commission's commitments to accelerate the efforts to transform the EU economy into a sustainable one, as those are laid down in the Commissions renewed Sustainable Finance Strategy, the proposed 2021 Banking Reform Package puts forward the priority to strengthen the resilience of the banking sector in relation to ESG risks. The rationale behind the proposal described below is the acknowledgment that the ability of banks to **identify and manage sustainability risks and absorb financial losses arising from them** is **key** for financial stability and for the resilience of the economy as Europe transitions towards climate neutrality.

Better integrating climate and environmental risks into EU rules already started in the context of the last banking package (CRR II / CRD V)[205].The Banking Package proposal reinforces the need for ESG risks to be consistently included in banks' risk management systems and in supervision, by proposing to **require** banks to **systematically identify**, **disclose** and **manage** ESG risks as part of their risk management, with accompanying disclosure rules that will be proportionate to the size of credit institutions. The proposal provides specifically for (1) widening the scope of ESG disclosures to cover *all institutions* (as opposed to only large listed institutions having to do so[206] until now), (2) empowering supervisory authorities to incorporate ESG in the SREP and in the stress-testing they conduct, (3) requiring stress testing of ESG risks to be conducted regularly by banks and (4) requesting institutions to have robust governance management arrangements and to set up concrete plans signed off by the management body to deal with ESG risks[207].

3.3.1 The proposed amendments

Set out below are the main elements of the EU 2021 Banking Reform Package purported to improve the financial sector's resilience and its contribution to sustainability.

(1)Introduction of uniform definitions

With the proposed **Art. 4 para 1 points 52d to 52i CRR**, the Commission introduces several general definitions for types of ESG risks (aligned with the definitions proposed

[202] Draft Proposal for a Regulation "amending Regulation (EU) No 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor" **(COM/2021/664 final)** also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664

[203] Proposal for a Directive "amending Directive 2013/36/EU as regards supervisory powers, sanctions, third-country branches, and environmental, social and governance risks, and amending Directive 2014/59/EU" (**COM/2021/663 final**) also available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0663&qid=1635624189886

[204] EBA/REP/2021/18.

[205] As analysed above under section 3.1.

[206] Under existing article 449a of CRR II.

[207] Q&A of EC in relation to 2021 EU banking package, also available at: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_5386

by EBA in its June report), the introduction and use of which is essential in order to improve the way ESG risks are measured and managed and by this to improve the possibilities for the markets to monitor and assess the banks' activities.

(2)Business strategies, processes and governance

According to the proposed amendment to articles **73, 74 76 CRD**, institutions will be required to appropriately identify and manage in particular ESG risks as part of their internal governance arrangements and capital needs. The EBA's recommendation to extend the supervisory process' time horizon to 10 years was taken into consideration by the proposals by requiring institutions to include short, medium and long-term horizons of ESG risks in strategies and processes for evaluating internal capital needs as well as adequate internal governance.

Recently added **Article 87a CRD**, introducing the oversight over institutions' management of ESG and in particular climate-related risks, in view of the severity of the challenge the latter pose to the financial system. Regular climate stress tests are also introduced, in order for institutions to test their resilience to long-term negative impacts of ESG factors, both under baseline and adverse scenarios within a given timeframe, starting with climate related factors. IN this regard, competent authorities shall ensure that institutions include a number of ESG scenarios reflecting potential impacts of environmental and social changes and associated public policies on the long-term business environment[208].

In order to facilitate the implementation fo the new rules, the EBA must adopt guidelines to set out (i) minimum standards and reference methodologies for the identification, measurement, management and monitoring of environmental, social and governance risks, (ii) the content of the plans to be prepared by institutions in order to address and internally stress test resilience and long-term negative impacts to the ESG risk, (iii) qualitative and quantitative criteria for the assessment of the impact of environmental, social and governance risks on the financial stability of institutions in the short, medium and long term and (iv) criteria for setting the baseline and adverse scenarios used in the stress testing, including the parameters and assumptions to be used in each of the scenarios and specific risk.

(3)Requirements for the management body

Article 76 CRD is amended in order to include obligations weighing on the institutions' management bodies, which will have to develop specific plans and quantifiable targets to monitor the risks arising in the short, medium and long term from the misalignment of the business model and strategy of the institution with the relevant EU policy objectives or broader ESG transition trends.

[208] 87a (3) of proposed CRR.

Furthermore, according to the proposed addition of **article 91 CRD**, in order for the management body to understand the potential impact of ESG risks on the institutions' business model, its members must collectively and individually be *suitable*, both by knowledge and skills, to understand and assess ESG factors.

(4) Disclosure of risks

Article 430 CRD is amended in order to include in the list of supervisory reporting disclosure information of institutions "*their exposure to ESG Risks*". The rationale behind this proposal is the imperative necessity for competent authorities to have at their disposal granular, comprehensive and comparable data from all institution, in order to conduct an effective supervision.

In order to generate the aforementioned comprehensive data needed by the competent authorities, the proposed amendment to article **499a CRR III** now extends this supervisory reporting obligation to all institutions ("Institutions shall disclose information on ESG risks, including physical risks and transition risks"). In this regard, the EBA "shall develop draft implementing technical standards specifying uniform disclosure formats for ESG risks, as laid down in Article 434a, ensuring that they are consistent with and uphold the principle of proportionality.' For small and non-complex institutions, the formats shall not require disclosure of information beyond the information required to be reported to competent authorities in accordance with Article 430(1), point (h)."

(5) Supervisory reviews

The Commission empowers competent authorities to incorporate ESG risk in the Supervisory Review and Evaluation Process (**SREP**). The EBA has been asked to issue guidelines regarding the integration of ESG risks in the SREP process. On 28 June 2021, the EBA launched a public consultation on its revised Guidelines on common procedures and methodologies for the SREP and supervisory stress testing, which however did not cover the issue of the incorporation of ESG risks in the SREP.

(6) Adjustments to capital requirements for ESG-related assets**?**

At present, the Commission explores this idea but does not yet have a sufficient data basis for the evaluation of whether capital requirements can or even should be adjusted for green or brown assets.

With the banking reform of CRR II / CRD V, the EBA was tasked, by virtue of article 501c CRR II, to explore and report on (by 28th June 2025) possible options for applying a dedicated prudential treatment of exposures subject to impacts from environmental and social factors, e.g. the possibility of a targeted calibration of risk weights for items associated with particularly high exposure to climate risk. A key issue of the legislative proposal is the suggestion to bring forward by two years the EBA's mandate to assess the

justification for a dedicated prudential treatment of assets exposed to ESG risks. The EBA has to formulate an opinion by 28 June 2023. Based on this analysis as well as the ongoing work at international level, the Commission will decide whether to propose any adjustments to the current capital requirements.

3.3.2 EU 2021 Banking Reform Package - Way forward

The CRR III and CRD VI proposals will now follow the ordinary legislative procedure to become binding EU law. After being discussed by the European Parliament and the Council, a publication in the Official Journal of the EU can be expected for 2023 at the earliest. Furthermore, the proposals also foresee additional time for banks and supervisors to properly implement the reform in their processes, systems and practices. The rules are expected to apply from 1 January 2025.

3.4 An assessment of integration of climate change risks in the current microprudential framework – towards a new era of regulation?

Having reviewed the current microprudential treatment of ESGs, as well as its proposed amendment (under section 3.3 above), we now turn to assess certain of its inconsistencies and potential shortcomings. In conceptualizing climate change as a source of risk, regulators have focused on the identification of risks, but been more hesitant to regulate their evaluation. This approach may be justified by the inherent uncertainty embedded in the physical and transition risks of climate change (below in section 3.4.1), which precludes any accurate assignment of probabilities of financial loss resulting from climate change risks. It may also be explained by the legislators' unwillingness to address the inevitable question of who decides how to deal with future events that are currently unknown[209], a question which inevitably leads to issues of legality, legitimacy and accountability for regulators and supervisors alike.

It is supported by literature that, as it currently stands, the current microprudential framework may give banks an incentive to downplay risk, for which existing levels of uncertainty leave ample room (below in section 3.4.2) , whilst it may also favor large financial institutions and give rise to an unlevelled playing field amongst financial institutions (below in section 3.4.3). The assessment concludes with a proposition for a new era of microprudential regulation (3.4.4).

3.4.1 Fundamental uncertainty and the need to *assess* climate related risks

The rationale in addressing climate change and sustainability considerations in the context of the microprudential framework is to limit the bank's exposure to financial risk. The first step in this direction is the identification of relevant risks – however, merely asking banks to identify risks does not suffice. Essential for shaping bank lending is to

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[209] **Smolenska, A. & van't Klooster, J. (2021)**, page 13.

also *evaluate* risk. However, although regulators have on occasion taken a stance on how climate and ESG related risks should be assessed, they refrain from specifying how banks should quantify exposures to climate change risk and adapt their business decisions in the light of potential climate-related losses.

A possible explanation for the regulator's reluctance to address the evaluation of climate change related risks may be twofold. On the one hand, assessing climate change related risks is a challenge, due to the inherent difficulty in calculating risks stemming from climate change (both physical and transition), as this is analysed detail in section 2 of this paper. The resulting unsurpassable uncertainty that is embedded in climate change related risks precludes translating climate related exposures into accurate probabilities of losses and as such any obvious inclusion of climate related risks into the existing microprudential framework.

Admittedly, remaining silent on the evaluation of climate related risks and leaving the decision on how to evaluate those largely to financial instructions (subject to SREP review) appears to be an easier task for regulators, allowing them to bypass the inevitable question of who decides how to deal with future events that remain largely unknown. Should the evaluation of climate related risks be left to banks themselves or should regulators provide more substantive input into the framework in order to specify how banks should evaluate climate change risks? In the first scenario, regulators will incentivise banks to develop better internal capacities to evaluate and manage climate change related risks and be tasked with enforcing the rules on ESG management and disclosure, whilst taking an agnostic approach on what methodologies are appropriate. However, any such approach that depends on banks assigning probabilities to climate change risks themselves, is plagued by the inevitable incentive for banks to downplay risk.

3.4.2 A framework that is disincentivizing banks

In the absence of a clearer approach on how to evaluate risks, incorporating the ESGs into the existing microprudential approach leaves banks being responsible for assigning probabilities to climate risks on the basis of their internal policies – however, banks lack the methodologies and skills to assess and evaluate climate change related risks, amongst others due to methodological contains that preclude extrapolating data from historical records, due to the novelty of climate change and its physical and transition transmission channels. All this is further exacerbated by the lack of sufficient raw ESG data[210] and the fundamental uncertainty embedded in both physical and transitional elements of climate change. In the absence of specific guidance, on the part of the regulators, on how to evaluate ESG risks, deference to given to banks to adopt their own internal processes, giving them clear incentives to downplay risk. In the absence of more stringent mandatory risk-modelling practices, banks have no incentive to move away from their short-term

[210] For more on the lack of and inconsistencies in available data, see **Och. M (2020)** and **Zetzsche, S., Bodellini, M. and Consiglio, R. (2021).**

business strategy approach, which inevitably leads them to underestimate risk in order to keep their cost of capital low.

3.4.3 An uneven level- playing field between institutions

The current microprudential approach also risks undermining fair competition within the EU's banking sector. Transition policies implemented throughout the EU will inevitably differ, from member state to member state, rendering it necessary to allow competent supervisors to adapt the applicable ESG risk framework to the locally applicable circumstances[211]. This differentiation between member states may lead however to a race to the bottom[212] between the different supervisory standards, allowing certain banks, and particularly large banks, to appear as formally compliant with the applicable supervisory standards, due to their capacity to support large compliance costs and conducting large stress tests, whilst smaller institutions may be left behind.

3.4.4 Towards a new approach?

Having analysed how regulators have started to conceptualized climate change as a source of financial risk, and how they have tried incorporating such risks into the existing regulatory framework by strengthening the microprudential rulebook, by way of the 2019 CRR II / CRD V reform and the 2021 Banking Reform Package, we conclude by referencing the possible emergence of a different approach in the microprudential treatment of climate change risk, one in which regulators provide fine-grained guidance on how banks should evaluate climate risk and on which actions should be taken in response, instead of merely shaping the identification of risk and supervising banks' risk management practices.

Hints of the emergence of this approach, described in literature as a *credit guidance approach*[213], are already prevalent in a series of EU policy actions described above, such as the EBA's granular guidance on how banks should evaluate climate related risks (i.e the three methodological approaches to evaluating climate change risks presented in the EBA's June 2021 report[214]), or the mandatory disclosure requirements established by the SFDR, as the latter has been supplemented by the Taxonomy Regulation, particularly the bank's obligation to publish the GAR (green asset ratio), in accordance with the TR art. 8 and its delegated acts. Under these examples, we see regulators go above merely specifying the risks that banks should consider in their risk management practises, and instead, shift their attention to and promote certain types of lending, on the basis of whether investments are too risky (i.e non-sustainable, non-Taxonomy aligned, non-

[211] **Smolenska, A. & van't Klooster, J. (2021)**, page 13, 17.
[212] For a general presentation of the race to the bottom rationale, in the context of the US federal state (for which it may be supported that it presents similarities with the European Union project), see Revesz, Richard L., "The Race to the Bottom and Federal Environmental Regulation: A Response to Critics" (1997). *Minnesota Law Review, 2179.*
[213] For more on this, see **Smolenska, A. & van't Klooster, J. (2021)**.
[214] EBA/REP/2021/18.

green). If this is indeed the path to be expected from the EU policymakers in the coming years, then regulators and supervisors alike will be faced with inevitable political questions, tapping into issues of their mandate and accountability. If however, the EU is to set to become first net-zero continent by 2050, meeting its commitments under the Paris Agreement and UN 2020 Sustainable Development Agenda, and paving the way for a new generation of finance as a global leader for change, these may be choices that it will inevitably have to make.

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