REGULATING SUSTAINABLE FINANCE IN THE DARK

Dirk A. Zetzsche[*] *& Linn Anker-Sørensen*[**]

ABSTRACT

Analyzing the revised EU Sustainable Finance Strategy disclosed in two steps in April and July 2021, we identify as core issues of any sustainability-oriented financial regulation a lack of data on profitability of sustainable investments, a lack of broadly acknowledged theoretical insights (typically laid down in standard models) into the co-relation and causation of sustainability factors with financial data, and a lack of a consistent application of recently adopted rules and standards. The three factors together hinder as of now a rational, calculated approach to allocating funds with a view to sustainability which we usually associate with 'finance'. These deficiencies will be addressed once (1) the EU's sustainability taxonomy is implemented by most issuers of financial products, (2) several years of taxonomy-based reporting by issuers and originators of financial products is made available, and (3) these data have been used for validating emerging new sustainable finance benchmarks and models for investment and risk management. Until that day (which we expect to be at least five years from now), relying on Roberta Romano's famous adage, regulators seeking to further sustainability by legal means, effectively 'regulate in the dark.'

In order to avoid undesirable and unforeseeable effects of regulation, we argue against any regulation addressing capital requirements, mandating sustainability risk modelling or the inclusion of sustainability factors in investment or remuneration policies. Adopting such rules in the current premature state risks that Europe will not be able to rely on the capital markets to finance the sustainability transformation as planned.

Instead, regulators should focus on enhancing expertise on the side of intermediaries and supervisors alike. In particular, regulators shall introduce smart regulation tools, such as sandboxes, innovation hubs, and waiver programmes benefiting early adopters of sustainable finance modelling/models, utilizing approaches developed in other fields of experimental financial regulation (in particular Fintech and RegTech).

Keywords: Sustainable Finance, Financial Regulation, Data, EU Sustainable Finance Strategy 2021, EU Green Deal.

[*] Professor of Law, ADA Chair in Financial Law (Inclusive Finance), Faculty of Law, Economics and Finance, and Coordinator, House of Sustainable Governance & Markets, University of Luxembourg.

[**] PhD (University of Oslo), lecturer-in-law (University of Oslo); Ernst & Young Tax & Law Norway, Head of Decentralized Finance.

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Contents

I. Introduction 3
II. The SFAP 2018: A Nudging Approach 5
1. Six building blocks 5
2. Defining sustainability 7
3. SFAP : Unveiling Unsustainable Conduct 9
III. The Sustainable Finance Strategy 2021 – What is to come? 13
1. Green Deal – what is in for SF? 13
2. Revised Sustainable Finance Strategy 14
3. AIFMD II review 17
a) Sustainability Reporting 18
b) Investment decisions 18
c) Quantitative risk management 19
4. From nudging to mandatory ? 19
IV. The State of Ignorance 20
1. Lack of Expert Consensus 20
2. Lack of Data Linking Sustainability and Finance 23
3. Lack of Consistent Application 27
4. Regulatory Risks in the Dark 30
5. Factoring in Transition Risk 32
V. Regulating in the Dark 33
1. Three Principles for Financial Regulation in the Dark 34
2. Principles vs. Proposals 34
a) Sustainable Intermediary Set-up 35
(1) Fitness & Properness 35
(2) Governance 36
(3) Remuneration 37
b) Sustainable Operating Business ? 38
c) Sustainable Prudential Requirements ? 39
3. Enhancing "test-and-learn" through Smart Regulation 41
VI. Conclusion 42

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I. INTRODUCTION

Furthering the transformation of the EU economy into a sustainable one is high on the political agenda. As the latest political commitments underline, the EU Commission appointed in late 2019 has promised to implement a Green Deal Action Plan[1] and adopted a Strategy for financing the transition into a sustainable economy in two steps on 21 April 2021 and 6 July 2021 (hereafter Sustainable Finance Strategy),[2] with a view to accelerating the efforts which the previous EU Commission had proposed as the Sustainable Finance Action Plan in March 2018 (hereafter SFAP 2018).[3]

This paper analyses what type of financial regulation should be adopted under the EU Green Deal and the Sustainable Finance Strategy 2021. We find that the main issue in regulating financial intermediaries with a view to furthering sustainable finance by legal means concerns in some respects the lack of data on profitability of sustainable investments, in other respects a lack of broadly acknowledged theoretical insights (typically laid down in standard models) into the co-relation and causation of sustainability factors with financial data, and in a third respect an inconsistent and partly incomplete application of sustainability-oriented financial regulation. In addition, we may add a transition risk as the unknown impact of rules yet to be adopted and often yet to be written. All of this supports the provocative thesis that regulators, aiming at securing the sustainable transformation of the EU economy, effectively regulate in the dark.

Regulators are (and shall be) concerned with how asymmetric information creates moral hazard and adverse selection and how this potentially leads to the mis-allocation of resources and excessive risk-taking that can undermine investor protection and financial stability. For that purpose, regulators must have an in-depth understanding of how sustainability-oriented financial legislation affects the functioning of financial intermediation and investment streams; regulators cannot achieve their mission if they regulate continuously in the dark. This is all the more

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[1] *See* EUROPEAN COMMISSION, THE EUROPEAN GREEN DEAL (11 Dec. 2019), COM/2019/640 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN.

[2] For a detailed discussion of the European Commission's work programme announced per 21 April 2021 and 6 July 2021, see infra, at III.

[3] *See* EUROPEAN COMMISSION, ACTION PLAN: FINANCING SUSTAINABLE GROWTH (3 Mar. 2018), COM/2018/097 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097.

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true if sustainability-oriented financial regulation shall eventually guide capital flows into sustainable assets, as a contribution to the transformation of the EU economy into a sustainable economy.

As such, we encourage regulators to focus on shedding light on the darkness. Regulators shall focus on the proper implementation of the EU Sustainability Taxonomy, the disclosure rules adopted throughout the SFAP 2018, and focus on where disclosures are non-standardized and patchy at best, such as in the field of the EU Non-Financial Disclosure Directive. Given the lack of a factual basis for regulation, we argue against any heavy-handed approach meddling with the organisation, operations or governance of financial intermediaries *for now*. Any regulation addressing capital requirements, mandatory risk modelling, inclusion of sustainability factors in investment models or remuneration schemes is premature.

We further propose regulatory steps aimed at enhancing expertise, including (1) the development of proportionate training strategies for intermediaries *and* regulators, (2) where the available data warrant the efforts, the development (as opposed to mandatory application) of and experimentation with investment and risk models, and (3) smart regulation tools utilized in the FinTech domain, such as sandboxes, innovation hubs, and waiver programmes.

The paper is structured as follows. Pt. II summarizes the policy measures taken under the SFAP 2018, which took a careful approach reflecting the uncertain definition as well as the lack of insights about the profitability of sustainable investment strategies. This stance can be understood as a “nudging” approach – pressing financial intermediaries to deal with sustainable investments through streamlined definitions, enhanced disclosure rules and the notion of unsustainable investments as risk, but refraining from forcing intermediaries to invest sustainably.

Pt. III then analyses what the EU Green Deal and the revised Sustainable Finance Strategy promise to bring for EU financial intermediaries. The consultation on the renewed SF strategy and the AIFMD II review as well as the Sustainable Finance Strategy 2021 hints in the direction of a *mandatory* sustainability-tailored modification to basic financial law principles such as the best investor interest, suitability definitions, portfolio composition, risk management and prudential requirements.

Pt. IV lays out that any facts-based approach to regulation suffers from data shortages on the link between sustainability factors and financial performance as well as a lack of theoretical insights (typically laid down in models) into co-relation and causation of sustainability factors with established financial data. Further, for now the recently adopted rules are inconsistently applied, and will remain so for the next few years to come, until consistent, uniform sustainability-oriented reporting standards have been adopted across all financial sectors; thus, any data-based analysis or testing of new models for the time being will lack a reliable database of at

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least grossly comparable data.

Pt. V asks what regulators *should* focus on, given what we already know about sustainable finance and financial regulation. It analyses which rules are most suitable to achieve progress in the field of sustainable finance while avoiding unwanted effects when regulators regulate in the dark. Pt. VI concludes.

II. THE SFAP 2018: A NUDGING APPROACH

The SFAP 2018 aims at a sustainability transformation of the European economy, through essentially three measures: initial state funding shall be leveraged through financial markets, and this leverage shall be facilitated by measures of law, partly nudging and partly forcing EU financial intermediaries to undertake steps that could further the transformation.[4] This paper focuses on the legal elements of the SFAP's strategy.

1. Six building blocks

With regard to legal measures, the SFAP 2018 comprises six building blocks.

At the heart stands the Taxonomy Regulation (EU) 2020/852,[5] introducing a joint terminology and standardized approach to "environmental sustainability". The taxonomy is cross-sectoral, in that it calls for obedience in all parts of the financial services value chain but also covers issuers of corporate bonds as well as large stock corporations and limited liability companies.[6]

There are also four legislative measures which all aim at enhanced, harmonized and comparable disclosures relating to sustainability.

These measures comprise the following:

- The cross-sectoral Sustainable Finance Disclosure Regulation (EU) 2019/2088,[7] introducing mandatory disclosure for financial market participants and financial advisers on sustainability factors

[4] See SFAP 2018, supra note 2, at 2.3.

[5] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, OJ L 198, 22.6.2020, p. 13-43.

[6] See Article 1(2) Taxonomy Regulation (EU) 2020/852.

[7] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector, OJ L 317, 9.12.2019, p. 1–16.

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defined by the Taxonomy Regulation (hereafter SFDR) to all EU financial law legislation

- The revised Benchmark Regulation (EU) 2019/2089,[8] adding provisions on sustainability benchmarks to the EU rules on benchmark providers
- The proposed revisions to EU product distribution rules (in IDD II, MiFID II), demanding that sustainability factors are considered when the suitability of a product for clients is assessed by insurance distributors and investment firms[9]
- The proposed revision of Directive 2014/95/EU on non-financial reporting ('NFRD').[10]

Finally, under the SFAP 2018 the European Commission considers legislative measures on the set-up and operational conditions of financial intermediaries, with a view to embedding sustainability risks into financial intermediaries' risk management[11] and combatting undue short-termism.[12]

Methodically speaking, the Taxonomy Regulation aims at answering the question "what is sustainability?", while the disclosure obligations shall help identify "who acts sustainably" or "which product is

[8] Regulation (EU) 2019/2089 of the European Parliament and of the Council of 27 November 2019 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks, OJ L 317, 9.12.2019, p. 17–27.

[9] See SFAP 2018, supra note 2, at 2.5. The SFAP 2018 resulted in two legislative proposals, yet the proposals have not been adopted by the old European Commission, leaving this work strand for the new European Commission appointed in late 2019.

[10] See SFAP 2018, supra note 2, at 4.1. A consultation preparing the revision was then performed under the new European Commission appointed in late 2019; See also proposed amendments to the NFRD: Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 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.

[11] See SFAP 2018, supra note 2, at 3. The Juncker EU Commission collected feedback in consultations. The implementation was left to the new Commission. See, for instance, *ESMA's technical advice to the European Commission on integrating sustainability risks and factors in MiFID II*, https://www.esma.europa.eu/sites/default/files/library/esma35-43-1737_final_report_on_integrating_sustainability_risks_and_factors_in_the_mifid_ii.pdf; *ESMA's technical advice to the European Commission on integrating sustainability risks and factors in the UCITS Directive and AIFMD*, https://www.esma.europa.eu/sites/default/files/library/esma34-45-688_final_report_on_integrating_sustainability_risks_and_factors_in_the_ucits_directive_and_the_aifmd.pdf.

[12] See SFAP 2018, supra note 2, at 4.2.

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sustainable"? respectively. Finally, the review of the set-up and business conduct rules shall ensure that financial intermediaries act sustainably, yet the previous European Commission did not present (draft) legislation on this matter.

2. *Defining sustainability*

While details will not be laid out in this paper,[13] the definition of sustainability provided in Article 3 of the Taxonomy Regulation rests on a positive criterion, a negative criterion, compliance with a set of minimum legal safeguards and compliance with delegated acts which provide for technical screening criteria.

The positive criterion is that a financial product described as being sustainable needs to substantially contribute to one of six environmental objectives defined in Article 9 of the Taxonomy Regulation and in the modes prescribed by Articles 10-16 of the Taxonomy Regulation. This objective could include for instance climate change mitigation (e.g., furthering carbon neutrality in energy production), climate change adaptation, or the protection or restoration of biodiversity and ecosystems.

If such substantial contribution is given, calling a financial product sustainable further requires that the same conduct does not create significant harm ("the DNSH rule") to one of the other environmental objectives in line with Articles 9, 17 of the Taxonomy Regulation. For instance, if the furthering of carbon neutrality comes at the expense of biodiversity it would not qualify as sustainable under the Taxonomy Regulation.

The third set of criteria is inherently legal. Under Article 18 of the Taxonomy Regulation, conduct must not be called sustainable if it comes with a violation of the OECD Guidelines for Multinational Enterprises (addressing for instance, supply chain issues),[14] the UN Principles for Business and Human Rights[15] the Declaration of the International Labour Organisation on Fundamental Principles and Rights at Work, and the International Bill of Human Rights providing minimum standards for labour, work safety and social insurance.[16]

Finally, pursuant to Article 18 of the Taxonomy Regulation, issuers

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[13] For a detailed analysis, see Technical Expert Group, Taxonomy: Final report of the Technical Expert Group on Sustainable Finance (Mar. 2020), https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf.

[14] OECD Guidelines for multinational enterprises, https://www.oecd.org/corporate/mne/.

[15] UN Human Rights, Guiding Principles on Business and Human Rights, https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf.

[16] ILO Declaration on Fundamental Principles and Rights at Work, https://www.ilo.org/declaration/lang--en/index.htm.

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must comply with technical screening criteria issued as so-called Level 2-legislation by the European Commission. These screening criteria fill the broad terms used throughout the Taxonomy Regulation with details; they will apply from 1 January 2022 for climate-related objectives[17] and from 1 January 2023 for the other environmental objectives. For that reason, the European Commission's Technical Expert Group has provided sample tables for economic activities aiming at the furthering of climate change mitigation and climate change adaptation, based on the EU's NACE (*Nomenclature des Activités Économiques dans la Communauté Européenne*) industry classification system,[18] as well as a number of other industry classification systems. This is a precondition for the second step of the SFAP 2018 concept, namely disclosure of three basic figures for each of these economic activities: turnover, capital expenditure (CapEx)[19] and operating expenditures (OpEx).[20] CapEx figures help to analyse in which assets a company has invested and will invest in the future (i.e., in the environmental context, they give an indication of a company's strategy), while OpEx indicates the company's current activities. Turnover is then used as primary way of aggregating from an economic activity to a company level. The result of that process should be some %-figure indicating the taxonomy compliance of any given issuer.

While starting with climate-related objectives, the four elements of the definition make it clear that a mere focus on climate change is insufficient to lead to the qualification of a product as sustainable. The sustainability definition requires a broader view considering all ESG factors. This broad approach brings the EU sustainability definition closer to the UN Principles for Sustainable Development which also go far beyond mere environmental concerns. However, it also comes with a challenge: where everything is connected with everything and eventually with financial output, drafting theoretical models describing causation and connection between multiple factors becomes an extremely complex and difficult task; further, data shortages in merely one of the many sectors

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[17] See Commission Delegated Regulation (EU) __/__ supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council 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, published 21 April 2021.

[18] See Technical Expert Group, supra note 13, at 56-63.

[19] Under IAS 16, a capital expenditure (capex) is a payment for goods or services recorded, or capitalised, on the balance sheet instead of expensed on the income statement.

[20] Operating expenses (OpEx) are shorter-term expenses required to meet the ongoing operational costs of running a business. See Technical Expert Group, supra note 13, at 28.

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covered by the sustainability definition challenge the validation of the overall model. We will get back to that issue infra, at IV.

Notwithstanding the former, the Taxonomy Regulation is an ambitious project pursuing a clear vision: if a) all issuers would fully disclose data in line with the Taxonomy Regulation, and b) all intermediaries process these data using models that integrate financial and sustainability data, while c) their clients (investor or beneficiaries) prefer taxonomy-compliant financial products over non-compliant products, the Taxonomy Regulation would steer capital flows into environmentally sustainable economic activities, as defined by the Taxonomy Regulation.

3. SFAP : Unveiling Unsustainable Conduct

While an empirical assessment of the SFAP is not yet available given the early stage of its implementation, we can already identify that the SFAP's main objective is to make sustainable investment "the new normal" :[21] Given that from 2031 to 2050, annual average investments between €1.2 to 1.5 trillion will be necessary to meet the '80% greenhouse gas (GHG) reduction scenarios' contained in the European Commission's long-term vision 'A Clean Planet for all'[22] (aiming at a carbon-neutral economy), nothing less will do to achieve these ambitious goals than turning sustainable investments from something niche into the new mainstream. This requires putting EU financial markets in a position where investors have a good understanding of the market's depth and liquidity with regard to products defined as sustainable investments.

To come closer to that objective, the SFAP's core mission is the clarification of terminology so as to ensure that investors can compare sustainable investments and measure their success – by comparing these investments with non-sustainable investments. This addressed one of the main deficiencies in any sustainable finance assessment: the fact that few understood what, exactly, a sustainable investment was,[23] and in turn how

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[21] The EU Commission uses the term "mainstream investment". For the term used in this paper, see BakerMcKenzie, Sustainable Finance: From Niche to New Normal, 2019.

[22] *See* EUROPEAN COMMISSION, IN-DEPTH ANALYSIS IN SUPPORT OF THE COMMISSION COMMUNICATION*,* COM(2018) 773, https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf

[23] On the divergence of sustainability ratings, see, e.g., Doni & Johannsdottir2019 at 440 (arguing on the differences in "scope, coverage and methodology" among different ESG rating providers); Berg et al. 2020 (on the importance of considering original or rewritten data of ESG rating providers: the same providers may change methodology over the years that can significantly change ESG firms ratings impacting empirical research and investment decisions); Dorfleitner et al. 2015, 465 (comparing three of the most used ESG rating approaches, the authors find a clear lack of convergence in ESG measurement); Berg et al. 2020 (comparing six of the

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profitable truly sustainable investments could be.[24] The legal definition of the term sustainability was a crucial step towards comparability, yet, not necessarily accuracy. For the purpose of *comparability* of financial products, whether the definition is 100% accurate, and whether the definition leads to truly sustainable investments, is a lesser concern – more important is that the definition is consistently applied throughout the EU financial sector – and potentially beyond.

A second focus point of the SFAP 2018, particularly through the Sustainable Finance Disclosure Regulation (SFDR), is enhancing disclosure. For sure, the SFDR is not lightweight and severely impacts financial market participants and financial advisers which need to review, among others, their risk and remuneration policies as well as amend all product-related disclosures (prospectuses etc.).

As laid out in Table 1 below, financial market participants (which cover all financial intermediaries issuing financial products) need to reveal whether and how they integrate sustainability risks in their investment decisions and remuneration policies, but also whether and how they consider the impact of their decisions on sustainability factors. Further disclosure items relate to the methodologies used for assessing the former, as well as to reliance on indices and the factual basis for relying on terms such as sustainability and carbon reduction throughout the development, investment and marketing of a given financial product.

Table 1: SFDR rules for financial market participants

Topic & Article SFDR	What to disclose	Mode
Investment (art 3(1), 6(1)(a))	Policies on the integration of sustainability risks in the investment decision-making process	Website, precontractual

most relevant ESG rating providers, the authors find evident divergences in “scope of categories, different measurement of categories, and different weights of categories”).

[24] Regarding divergent results of studies on profitability of sustainable investments (independent of the asset class), *see* e.g., Cunha et al. (2019), 688-689 (the authors analyze “the performance of sustainable investments in developed and emerging stock markets from 2013 to 2018“ by using “global, regional and country-level sustainability indices as benchmarks” and comparing them with “respective market portfolios”, conclude that given the discordant results, conclusions cannot be drawn yet; however, there is increasing hope for investors to obtain higher risk-adjusted returns if engaging in sustainable investments in certain geographies); Friede et al. (arguing that 90% of the studies surveyed show a nonnegative correlation between ESG and corporate financial performance); *but see also* Fiskerstrand et al. 2019 (showing no significant relation between ESG and stock returns in the Norwegian stock market); on sustainable investing and higher financial returns, see, e.g., Filbeck et al. 2016 (analyzing socially responsible investing hedge funds compared to conventional hedge funds); on sustainable investing and lower financial performance in mutual funds, see, e.g., El Ghoul & Karoui2017; Riedl & Smeets2017.

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		disclosure (prospectus, KID)
Investment (art 4(1))	Where principal adverse impacts of investment decisions on sustainability factors are expected, 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 (as well as the reasons for doing so if they do not consider such adverse impacts)	Website
Remuneration (art. 5(1))	How remuneration policies are consistent with the integration of sustainability risks	Website
Financial product (art. 6(1)(b), 7)	The results of the assessment of the likely impacts of sustainability risks on the returns of the financial products they make available (and reasons explaining why they deem such risks not relevant if applicable) as well as details on the information gathering and assessment process	Pre-contractual disclosure
Financial product (art. 8(1))	If a financial product promotes ESG characteristics, information on how those characteristics are met and if an index has been designated as a reference benchmark, and information on whether and how this index is consistent with those characteristics	Pre-contractual disclosure
Financial product (art. 9(1),(2),(3); 10; 11)	A financial product has sustainable investment or carbon reduction as its objective, how that objective is to be attained (including methodology), and if an index has been designated as a reference benchmark, information on how the designated index is aligned with that objective and an explanation as to why and how the designated index aligned with that objective differs from a broad market index	Website, Pre-contractual disclosure, periodic reports
Marketing (art. 13)	Ensure consistency with mandatory disclosures of the SFDR	

If sustainability factors are disclosed in a harmonized, comparable way by the product originators (that is financial market participants), regulators can then mandate that these disclosures are read, assessed and used in the remaining parts of the financial services value chain. In line with this, intermediaries involved in the distribution of financial products through investment advice and the provision of life insurance products shall disclose certain sustainability information to end investors.[25] The SFDR implements this requirement with the same catch-all disclosure approach it foresees for financial market participants (see Table 2).

Table 2: SFDR rules for financial advisers

[25] See SFAP 2018, supra note 2, at 2.5.

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Topic & Article SFDR	What to disclose	Mode
Advice (art 3(2), 6(2)a)	Policies on the integration of sustainability risks in their investment advice or insurance advice	Website, precontractual disclosure (KID, prospectus)
Advice (art. 4(5))	Information as to whether they consider in their investment advice or insurance advice the principal adverse impacts on sustainability factors (as well as the reasons for doing so if they do not consider such adverse impacts)	Website
Remuneration (art 5(1)	How remuneration policies are consistent with the integration of sustainability risks	Website
Financial product (art 6(2)(b))	The result of the assessment of the likely impacts of sustainability risks on the returns of the financial products they advise on (and the reasons explaining why they deem such risks not relevant if applicable).	Pre-contractual disclosure
Marketing (art 13)	Ensure consistency with mandatory disclosures of the SFDR	

The SFDR certainly comes at a cost for financial intermediaries given disclosure is never without its financial drawbacks and many questions need to be answered to ensure a consistent application.[26] And regardless of whether the definition applied under the SFDR furthers truly sustainable investments, the enhanced disclosure with regard to sustainability factors and methodologies applied by financial intermediaries serves a purpose in itself. These disclosures are 'nudging'[27] intermediaries to deal with sustainability as a topic, as well as investors to consider sustainability to a greater extent than previously – whether a product is sustainable or not will thus be an issue confronting the prospective investor. In turn, they can review whether the product is profitable *and* sustainable, and have all the means to determine their investment preference with regard to those products.

Beyond additional disclosures, the SFAP 2018 refrains from a 'going-all-in' approach. Even if implementing legislation under the SFDR would ask for a quantification of sustainability risks for disclosure purposes, financial intermediaries are not required to integrate the quantification of sustainability risks in their risk models. Moreover, the SFAP 2018 refrains

[26] For further details, see Busch 2020; Hooghiemstra 2020.

[27] See Thaler & Sunstein2008. *See also* Enriques & Gilotta2015 (discussing the function of market disclosure as a 'soft-form substitute of more substantive regulations', dubbed 'stealth substantive regulation'). *But see also* Gentzoglanis2019 (arguing that firms preferring a non-regulated or less regulated state of operations will comply with a set of disclosure requirements in order to avoid 'substantive' regulation.).

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from sanctions in the case of an intermediary tailoring its portfolio in entire disregard of sustainability concerns as long as the intermediary explains why it is doing so. Further, its implementation lacks details: in a financial world each risk requires careful considerations on how to manage it, and unsustainable conduct could create risks; yet regulators do not review whether the risk assessment is in fact correct (from their point of view). So far, each intermediary's own view matters – which will most likely result in a huge variety of risk assessments regarding sustainability factors. When it comes to details, the SFAP 2018 remains silent on what conclusions financial intermediaries could or should draw from *particular* sustainability assessments in terms of risk modelling, investment decisions, capitalization, and remuneration.

We do not understand this self-limitation aspect of the SFAP 2018 as a deficiency, but rather as part of its merits: The 'nudging' approach stands in contrast to any approach 'mandating' sustainability – understood as the forcing of investors to invest into sustainable products.[28] As we will lay out below, refraining from mandating sustainability is almost cogent given the current state of ignorance prior to the market-wide adoption of, application of, as well as reporting of data defined by the Taxonomy Regulation.

III. THE SUSTAINABLE FINANCE STRATEGY 2021 – WHAT IS TO COME?

1. *Green Deal – what is in for SF?*

Building on the SFAP 2018, the new European Commission appointed in late 2019 committed to an even more ambitious Green Deal in December 2019.[29] Along with it came an even more ambitious plan to utilize private investments concluding that efforts must be stepped up and an even more comprehensive and ambitious strategy is necessary.

The EU's Green Deal promises to:

- Activate (even) more capital to transform the EU economy, with an EU Green Bond Standard (GBS) at the core[30]
- Utilize public-private partnerships to leverage public investments into sustainable transformation
- Set up additional EU programmes aiming at financing the transformation.

[28] See e.g. Mancini 2020.

[29] EC, Green Deal, supra note 1.

[30] See European Commission, Sustainable Europe Investment Plan European Green Deal Investment Plan, COM (2021) 21 final, at 10.

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The EU Green Deal expresses the move from a high importance topic to a super-high importance topic on the political agenda. Along with this super-high priority came the need to enhance speed and deliver faster results with regard to the sustainability transformation.

2. *Revised Sustainable Finance Strategy*

The EU Green Deal agenda started with two consultations: the first comprised a consultation on the proposed review of the Non-Financial Disclosure Directive which focused on enhancing disclosures and rendering disclosures of listed companies on sustainability issues more comparable by implementing the EU Sustainability Taxonomy.[31] While the former is in line with the SFAP 2018's nudging approach through enhanced disclosure across all sectors of the economy, the EU Commission initiated a new consultation on the Renewed Sustainable Finance Strategy[32] in March 2020 to identify how to accelerate the sustainability transformation. The renewed strategy shall focus on three items:[33]

"1. Strengthening the foundations for sustainable investment by creating an enabling framework, with appropriate tools and structures. Many financial and non-financial companies still focus excessively on short-term financial performance instead of their long-term development and sustainability-related challenges and opportunities. (…)

2. Increased opportunities to have a positive impact on sustainability for citizens, financial institutions and corporates. This second pillar aims at maximising the impact of the frameworks and tools in our arsenal in order to "finance green". (…)

3. Climate and environmental risks will need to be fully managed and integrated into financial institutions and the financial system as a whole, while ensuring social risks are duly taken into account where relevant."

The related discussion document raises a number of issues including:

- How to further green funds?[34]

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[31] See European Commission, Consultation strategy for the revision of the Non-Financial Reporting Directive (Feb. 2020); European Commission, Summary Report of the Public Consultation on the Review of the Non-Financial Reporting Directive 20 February 2020 - 11 June 2020, Ref. Ares(2020)3997889 - 29/07/2020.

[32] European Commission, Consultation Document The Renewed Sustainable Finance Strategy 4 (Mar. 2020), https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/2020-sustainable-finance-strategy-consultation-document_en.pdf.

[33] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at 4.

[34] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at

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2021

- Should retail investors be asked about sustainability preferences? [35]
- How to enhance consumers' sustainable finance literacy?[36]
- What should be done to counter short-termism? [37]
- Which role does passive index investing play in the context of sustainable finance? [38]
- How to adapt rules on the asset managers' "fiduciary duties, the investors' best interest, the prudent person rule guiding investment decisions of financial intermediaries, risk management and internal structures and processes in sectorial rules to directly require financial intermediaries to consider and integrate adverse impacts of investment decisions on sustainability factors (negative externalities)."[39]

In particular, the last set of items tests the water for a fundamental policy change. While the SFAP 2018 relied on the idea of nudging, the revised strategy consultation document examines whether a much stricter strategy is feasible: a mandatory push towards sustainability primarily through the means of increased disclosure.

The consultation resulted in a new Sustainable Finance Strategy disseminated in two steps on 21 April 2021 and 6 July 2021.[40]

The four key components announced in 21 April 2021, meant to "help drive a greener, fairer, and more sustainable Europe and support the implementation of the Sustainable Development Goals", include:

- Enhancing EU taxonomy while allowing for certain investments that assist in achieving environmental objectives that do not qualify under the strict terms of the taxonomy's do no significant harm (DNSH) principle.

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[35] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at 20, 35.

[36] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at 21.

[37] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at 17.

[38] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at 19.

[39] EU COM, Consultation Document Renewed SF Strategy, supra note 32, at 33.

[40] European Commission, *EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal*, COM/2021/188 final (21 April 2021); European Commission, *Strategy for Financing the Transition to a Sustainable Economy*, COM/2021/180 final (6 July 2021).

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- Expanding sustainability-related disclosures by introducing a Corporate Sustainability Reporting Directive (CSRD) and revising the Non-Financial Reporting Directive, so that approximately 50,000 companies will be subject to reporting, compared to 11,000 firms previously,
- Ensuring reflection on sustainability preferences in insurance and investment advice through amendments to MiFID II's and the Insurance Distribution Directive's distribution rules, as a top up to the financial risk-oriented suitability assessment
- Adding sustainability considerations in product governance as well as financial intermediaries' fiduciary duties. In particular, asset managers, insurance and reinsurance undertakings, and investment firms will need to consider sustainability risks such as the impact of climate change and environmental degradation on the value of investments in their investment decisions.

In this context, the European Commission proposed six Delegated Acts[41] which if adopted require sustainability risks to be included in all financial intermediaries' activities and, where required under Article 4 SFDR, to take into account principal adverse impacts on sustainability factors when complying with the due diligence requirements set out in the sectoral legislation. Even more detailed, the Delegated Acts require sustainability risks to be considered as part of the intermediaries' investment processes, their conflicts of interest policy as well as their risk management.[42] These items together are understood by the European

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[41] European Commission, Proposal for a Commission Delegated Directive amending 1) Directive 2010/43/EU as regards the sustainability risks and sustainability factors to be taken into account for Undertakings for Collective Investment in Transferable Securities (UCITS); 2) Delegated Regulation (EU) No 231/2013 as regards the sustainability risks and sustainability factors to be taken into account by Alternative Investment Fund Managers; 3) Delegated Regulations (EU) 2017/2358 and (EU) 2017/2359 as regards the integration of sustainability factors, risks and preferences into the product oversight and governance requirements for insurance undertakings and insurance distributors and into the rules on conduct of business and investment advice for insurance-based investment products; 4) Delegated Directive (EU) 2017/593 as regards the integration of sustainability factors into the product governance obligations; 5) Delegated Regulation (EU) 2015/35 as regards the integration of sustainability risks in the governance of insurance and reinsurance undertakings; 6) Delegated Regulation (EU) 2017/565 as regards the integration of sustainability factors, risks and preferences into certain organisational requirements and operating conditions for investment firms (all proposals as of 21 April 2021).

[42] See COMMISSION DELEGATED REGULATION (EU) …/... supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council 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

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Commission as a collective description of the intermediaries' fiduciary duties, broadly understood.[43] In light of these proposals, asset owners and asset managers will have no choice but to include sustainability risks, and when they are larger organisations subject to Article 4 (3) and 4) SFDR, sustainability factors as well, into their overall activities.

The Sustainable Finance Strategy announced in 6 July 2021 integrates the measures announced in 21 April 2021 and complements the former by focusing on the links between financial intermediation and the real economy. With regard to financial regulation, the following additional measures are noteworthy:

- Improving the taxonomy framework and furthering the financing of intermediary steps towards sustainability, by acknowledging investments crucial for transition and expanding the EU regulation on labelling and indices to include new sectors and financial products (Action item 1).
- Enhancing the inclusiveness of sustainable finance by streamlining definitions and supporting the issuance of green loans and mortgages as well as continuing the work on a social taxonomy (Action item 2).
- Focusing on sustainability risk to further economic and financial resilience, by promoting work on financial reporting standards, including sustainability risks in credit ratings, modifying capital requirements for credit institutions and insurance undertakings, and complementing the risk management environment for sustainability risks with macro-prudential and environmental tools (Action item 3).
- Enhancing financial supervision and cooperation among all relevant public authorities to monitor greenwashing and capital flows, furthering knowledge exchange between researchers and the financial industry, and supporting and promoting international sustainable finance initiatives and standards Action items 5 and 6).

3. *AIFMD II review*

The consultation document on the review of the Directive on Alternative Investment Fund Managers 2011/61/EU (AIFMD II) which was initiated in October 2020[44] indicates what including sustainability risk and

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harm to any of the other environmental objectives, C/2021/2800 final

[43] European Commission, *EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal*, COM/2021/188 final (21 April 2021), at 13.

[44] European Commission, Consultation document: Public consultation on the

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factors could mean, in practice. The AIFMD II consultation document provides an entire section on ESG investing and sustainability, with reporting to regulators, investment decision and quantitative risk management being the key concerns.[45]

a) Sustainability Reporting

As to the AIFMR Regulatory Reporting template the consultation inquires whether a more detailed form of portfolio reporting, in particular on sustainability-related information, should become mandatory.[46] This could include risk exposures, the impact of sustainability risk on returns, or vice versa. Examples of enhanced reporting obligations include those on sustainability-related data, in particular on exposure to climate and environmental risks, and physical and transition risks (e.g., shares of assets for which sustainability risks are assessed; types and magnitudes of risks; forward-looking, scenario-based data, etc.).

b) Investment decisions

Several questions deal with adding sustainability as mandatory criteria to guide investment decisions.[47] These questions lead us to ask, for instance, whether:

- Regulation shall require integrating into the investment decision processes of any AIFM the assessment of non-financial materiality, i.e., potential principal adverse sustainability impacts? (Q91)
- AIFMs, when considering investment decisions, should be required to take account of sustainability-related impacts beyond what is currently required by EU law (such as environmental pollution and degradation, climate change, social impacts, human rights violations) alongside the interests and preferences of investors? (Q93)
- The EU Taxonomy Regulationshould play a role when AIFMs are making investment decisions, and in particular those regarding sustainability factors? (Q94)
- Other sustainability-related requirements or international principles beyond those laid down in Regulation (EU) 2020/852 should be considered by AIFMs when making investment decisions? (Q95)

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review of the alternative investment fund managers directive (AIFMD), 22 October 2020, https://ec.europa.eu/info/files/2020-aifmd-review-consultation-document_en.

[45] See AIFMD II, supra note 44, at 77 et seq.

[46] See AIFMD II, supra note 44, at 49.

[47] See AIFMD II, supra note 44, at 77 et seq.

Electronic copy available at: https://ssrn.com/abstract=3871677

2021

c) Quantitative risk management

As a third set of questions, the AIFMD II review asks whether the adverse impacts on sustainability factors shall be integrated in the quantification of sustainability risks (Q92).

4. *From nudging to mandatory ?*

The Sustainable Finance Strategy 2021 and the AIFMD II review bear the same signature: while the SFAP 2018 with the SFDR and EU Taxonomy Regulation as key measures, was characterized by enhanced disclosure and 'nudging', the Sustainable Finance Strategy 2021 and AIFMD II – with some details yet to be determined – are harbingers of a heavy-handed mandatory push towards sustainable investment.

For instance, if the best interest of investors is defined from a sustainability, rather than risk-to-profitability, point of view, or at least a combination of the former, we would expect a fundamental change in the discretion exercised by asset managers in investment policies; given that asset management requires procedural guidelines for asset allocation and risk management, intermediaries will need to apply models in which one or the other dimension is prioritized if in conflict. In a similar way, if sustainability risks need not only to be assessed from a qualitative perspective, but these risks must be quantified and the quantification must be embedded into risk models, the investment decision may be influenced as much by sustainability aspects as it is by profitability factors.

Such a step may be justified if incentivising market actors through nudging has not resulted in a satisfactory sustainability-orientation of market actors and financial products. Yet, one wonders on which basis this insight has been created, given that the SFAP measures have not even been fully implemented by the time the Sustainable Finance Strategy 2021 was released? We will thus examine whether the time is ripe for such a shift from nudging to mandating sustainable finance in the next section. We are inspired to ask that question by the joint letter of the three European Supervisory Authorities (ESAs) to the EU Commission on the consultation on the revised strategy issued on 15 July 2020.[48] First, the ESAs proposed to establish a publicly accessible, single EU data platform covering both financial and ESG information in order to grant to market participants equal and timely access to publicly reported information. Second, the ESAs demanded the development of a robust and proportionate regulatory framework to promote efficient risk management and a long-term perspective in financial decision making. Third, regulation shall aim to ensure that investors and consumers can buy and use sustainable financial

[48] ESAs, Letter to the European Commission, Public consultation on a Renewed Sustainable Finance Strategy (15 July 2020), https://www.esma.europa.eu/sites/default/files/library/2020_07_15_esas_letter_to_evp_dombrovskis_re_sustainable_finance_consultation.pdf.

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products in a safe and transparent way. Finally, the ESAs stressed the need to align EU policy action with other regulators and policy bodies active on a global scale, such as IOSCO, BCBS, IAIS and others, to prevent potential negative spillovers from policy fragmentation and limiting arbitrage opportunities.

The difference between the strict approach in the EU Commission's Sustainable Finance Strategy 2021 and the four ESA priorities is obvious: the ESAs do not stress the need for including sustainability factors and sustainability risks in all of the intermediaries' activities, nor demand defining fiduciary duties in that light. So, why do regulators with insights from implementing the SFAP 2018 take this cautious approach?

IV. The State of Ignorance

To assess the ambitions of the Sustainable Finance Strategy 2021, it is crucial to put the proposed policy steps into the context of sustainable finance research, which is what we know and what we do not know about sustainable finance.

A closer look reveals that the core issue of any sustainability-oriented regulation comprises in some respect the lack of data on the profitability of sustainable investments, and in other respects a lack of broadly acknowledged theoretical insights (typically laid down in standard models) into the co-relation and causation of sustainability factors with financial data. Both together hinder as of now a rational, calculated approach to allocating funds with a view to sustainability which we usually associate with 'finance': with regard to the nexus of financial and sustainability factors, a rational, data-driven approach to investing is at its infancy.

Three main factors contribute to this state of ignorance: in some respects, the lack of consensus among experts, in other respects the lack of data and finally the lack of a consistent, skilful application of existing tools.

1. Lack of Expert Consensus

Research results on some of the most important matters of sustainable finance are inconclusive, probably for two reasons.

First, we often find sustainability experts with little or no finance expertise actively promoting certain sustainable *finance* ratings and portfolio reviews. These non-financial experts are of little help in achieving the consensus necessary for practical applications of *finance* knowledge.

Second, there is a mismatch between the very detailed climate data and the highly stylized damage functions economists write about so as to speculate about how climate change and other sustainability factors alter

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macroeconomic and growth opportunities,[49] ending up with an enormous variety of results.

The uncertainty extends to the very basics of finance, and thus investment. So, questions unanswered equivocally so far include:
(1) *How* in detail sustainability and which sustainability factors in particular impact on firm and macroeconomic profitability and in which way;[50] the uncertainty even relates to smaller questions such as whether warm weather impacts on firms' productivity[51]
(2) How investors respond to sustainability risks, i.e., whether there is something like a greenium for sustainable conduct[52]

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[49] Cf. Barnett et al. 2020 (assessing models to integrate both climate and emissions impacts, as well as uncertainty in the broadest sense, in social decision-making).

[50] See, e.g., Friede (2020), 1276-1278 ; OECD2020; further, see supra note 24 on results of studies regarding sustainability and financial performance. Some of the more recent studies include Balachandran & Nguyen2018 (suggesting a causal influence of carbon risk on firm dividend policy); Balvers et al. 2017; (stating that financial market information can provide an objective assessment of losses anticipated from temperature changes if the model considers temperature shocks as a systematic risk factor); Colacito et al. 2019 (finding that seasonal temperature rises have significant and systematic effects on the U.S. economy).

[51] Choi et al. 2020 (finding that stocks of carbon-intensive firms underperform firms with low carbon emissions in abnormally warm weather, since retail investors tend to sell that stock, indicating a premium for low-carbon firms in that environment) *versus* Addoum et al. 2020 (not finding evidence that temperature exposures significantly affect establishment-level sales or productivity, including among industries traditionally classified as "heat sensitive.").

[52] *See*, on the one hand, Larcker & Watts 2020 (finding that in real market settings investors appear entirely unwilling to forgo wealth to invest in environmentally sustainable projects. When risk and payoffs are held constant and are known to investors ex-ante, investors view green and non-green securities by the same issuer as almost exact substitutes. Thus, the greenium is essentially zero); Murfin Spiegel 2020 (finding limited price effects to rising sea levels); Baldauf et al. 2020 (stating that house prices reflect heterogeneity in beliefs about long-run climate change risks rather than the severity of the risk itself).

against Eichholtz et al. 2019; (arguing in favour of a premium for corporate environmental (ESG) performance based on commercial real estate investments); Krueger et al. 2020; (arguing that institutional investors believe climate risks have financial implications for their portfolio firms); Alok et al. 2020 (finding that managers within a major disaster region underweight disaster zone stocks to a much greater degree than distant managers, indicating a bias); Painter2020 (finding that counties more likely to be affected by climate change pay more in underwriting fees and initial yields to issue long-term municipal bonds compared to counties unlikely to be affected by climate change); Bernstein et al. 2019 (finding that homes exposed to sea level rise (SLR) sell for approximately 7% less than observably equivalent unexposed properties equidistant from the beach); Huynh & Xia, *Climate Change News Risk and Corporate Bond Returns*, J. FIN. QUANT. (Sep. 2020, in press), https://doi.org/10.1017/S0022109020000757 (finding that investors are willing to pay a premium for better environmental performance); Hartzmark & Sussman 2019; (presenting "causal evidence" from fund inflows that investors market

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(3) Whether investors "are willing to pay" for sustainable investments, that is when they forego profits when investing in ESG products[53]
(4) How investment decisions impact on sustainability factors,[54] i.e., whether investor preferences actually make a difference with regard to de-browning or greening the planet.

The deficiencies addressed by the Sustainable Finance Action Plan so far – the remarkable variation with regard to sustainability ratings,[55] and the lack of conformity of ESG, and that sustainability indices are far from uniform und unambiguous -,[56] complete the picture. In line with these academic insights, the ESAs aire general concerns about the lack of "clear and appropriate taxonomy and labels"[57] on ESG terms.

At the core of this inconclusiveness lies a lack of broadly acknowledged theoretical insights (typically laid down in generally accepted standard models) into the co-relation and causation of sustainability factors with financial data.

For sure, finance researcher and investment professionals are different constituencies. Nevertheless the fact that the top finance journals, beyond corporate social responsibility (as too broad a topic to discuss here),[58] so far have published few sustainability-related articles, is supporting our claim that a lack of an expert consensus slows down the

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wide value sustainability).

[53] Riedl Smeets 2017 (finding that investors are willing to forgo financial performance in order to invest in accordance with their social preferences); Joliet & Titova 2018 (arguing that SRI funds add some SRI factors to make investment decisions, and thus more than financial fundamentals matter); Rossi et al. 2019; (analysing retail demand for socially responsible products and finding that social investors are willing to pay a price to be socially responsible while individuals who consider themselves financially literate are less interested in SR products than others); Gutsche & Ziegler2019 (arguing that a left-/green political orientation correlates with the willingness to pay for certified sustainable investments).

[54] See, e.g., Busch et al. (2016), 311 (arguing that the long-term impact of investment strategies may depend on multiple factors and that the consequences of the ESG integration strategies are still uncertain on several aspects) *against* Pedersenet al. 2020 (seeking to model the impact of ESG preferences, trying to define the "ESG-efficient frontier" and showing the costs and benefits of responsible investing.); Bender et al. 2019 (analysing metrics for capturing climate-related investment considerations).

[55] See the references supra note 23.

[56] See, e.g., Jebe 2019, 685 (arguing on the necessity of merging and harmonizing ESG and financial information disclosure).

[57] See ESAs, ESAs, July Letter, supra note 48.

[58] In the years 2016 to 2020, we identified 39 articles in the Top 10 Finance Journals on corporate social responsibility.

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sustainability transformation. As the editors of the prominent *Review of Financial Studies* state in 2020:

> "Even though questions such as pricing and hedging of [climate-related] risks, the formation of expectations, and financial innovations are natural ones for financial economists to tackle, little research has been published to date in our top finance journals.'[59]

A reason for this sorry state may be the long review and acceptance periods in those journals. In effect, top-rated research often deals with datasets where the latest series is at least five years old.

Assuming that at least three years of sustainability disclosures need to be assessed leads us to conclude that the first research on the measures adopted under the SFAP 2018 (with the SDFR, benchmark reforms and the Taxonomy Regulation only adopted in 2019 and 2020, and coming into force January 2022 and 2023) will be available in 2030 – which coincides with the year when politics has promised to deliver results. We conclude that at least until 2030, the SFAP measures will lack support by standard models and empirical testing. This means the following: until 2030 regulators will lack a scientific basis for drafting rules and standards; while this is often the case, in principle, with regard to minor legislative steps, the extraordinary risk with regard to sustainable finance follows from the fact that regulators seek to transform the financial intermediation function of the whole financial services values chain. The task is enormous, and so are the risks of getting it wrong entirely.[60]

2. *Lack of Data Linking Sustainability and Finance*

For achieving consensus among finance experts, the availability of data is an important factor as this allows for the empirical validation of theoretical models.

A closer look reveals that, while data on some sustainability factors such as climate data are abundant, we often miss data that help explain the crucial link between these sustainability factors and financial fundamentals.[61] This assessment, based on research and the state of the law,

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[59] Hong et al. 2020.

[60] The Global Financial Crisis of 2007-09 was evidence of the large impact of unwanted effects stemming from rules relating to interest rates, mortgage credit criteria, derivatives, securitization techniques and accounting rules on society. Compared to the SFAP and Sustainable Finance Strategy 2021, the rules that may have collectively contributed to the Global Financial Crisis were relatively minor in scope. By that comparison, if the Sustainable Finance Strategy 2021 gets it wrong, we would expect value destruction of an enormous size.

[61] See e.g. Bender et al. 2019, 191-213 (reviewing data characteristics for metrics such as carbon intensity, green revenue, and fossil fuel reserves, highlighting their coverage and distributional characteristics; even though the data can illuminate risk factors to include in a corporate or investment strategy, we lack a financial adaptation strategy

Electronic copy available at: https://ssrn.com/abstract=3871677

is confirmed by the July 2020-letter of the three ESAs:

> "The current shortage of high-quality data renders it challenging for both firms and investors to identify, assess and measure sustainability risks and opportunities, therefore, to take measures accordingly. (…) Moreover, the comparability and reliability of ESG data will only improve if clear and sufficiently granular taxonomies for "green", "brown" and "social" activities are developed and consistently implemented by the financial sector, together with common and uniformly enforced ESG-related disclosure standards for companies."[62]

We identify four reasons for this data shortage. The first reason is that many entities have not yet reported both types of data in a consistent and periodically reliable fashion. This is partly due to the discretion corporations and financial intermediaries have been granted under the previous non-disclosure regime. Research suggests there is insufficient disclosure as to sustainability factors on the side of intermediaries. For instance, a Frankfurt School UCITS study of 2020[63] showed that 28 out of 101 "green" UCITS did not disclose sufficient data to assess whether they are compliant with the upcoming taxonomy requirements; disclosures on cash flows of the remainder often currently cannot uniformly be classified by the taxonomy standards. Where important sustainable financial intermediaries do not disclose data, data processing does not result in solid results. In such an environment, we do not even need to think about disclosures of traditional financial intermediaries, such as non-green UCITS, AIF and investment firms acting as portfolio managers. The ESAs' proposal to set up a single EU Data Platform[64] covering both financial and ESG information, while reducing the costs of sustainability research, will not provide a fundamental change in the short term given that only data *which are reported by issuers and intermediaries* can be made available via that Platform, and only if that happens in a more or less standardized manner would such data be useful for data-driven analysis.[65]

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building on such data).

[62] ESAs, ESAs, July Letter, supra note 48.

[63] See Malte Hessenius et al., EUROPEAN COMMISSION, TESTING DRAFT EU ECOLABEL CRITERIA ON UCITS EQUITY FUNDS (June 2020), Climate Company and Frankfurt School of Finance & Management, https://op.europa.eu/en/publication-detail/-/publication/91cc2c0b-ba78-11ea-811c-01aa75ed71a1/language-en/format-PDF/source-137198287.

[64] See ESAs, July Letter, supra note 48.

[65] This basic insight is supported by research on corporate carbon disclosures. See, for instance Liesen et al. 2017 (arguing that financial markets were inefficient in

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Note that the former describes the status quo on the eve of the coming into force of the revised Benchmark Regulation as well as the SFDR in 2021, requiring enhanced disclosures by institutional investors and asset managers on how they integrate sustainability risks in the investment decision or advisory process (see II.3). The situation will indeed improve over time; yet this will take time, and improvement will not be noticeable generally and in all respects. For instance, under the SFDR, consistent with the SFAP's nudging approach, even products non-compliant with the EU Taxonomy may be marketed as sustainable – if only the intermediary explains how it got to this conclusion.[66]

The second reason for inadequate data so far is that any study up to the adoption of the revised Benchmark Regulation and the Taxonomy Regulation lacked authority as to the indices and terms used.[67] That is: where data on the past *are* available, they often do not provide the basis of an expert consensus for lack of a harmonized legal framework in place when these were reported. This technical deficiency will vanish over time, yet what we expressed in the context of modelling applies: it will take years until data are generated and reported in the way prescribed by the SFAP measures.

The third reason may be that the SFAP 2018 measures, from a finance perspective, lack additional factors necessary to establish the link between sustainability factors and financial fundamentals. For instance, if the investor type has some influence on the social benefit to be expected, as some research suggests,[68] calculating the impact of sustainable investment faces limitations given that data on investors in and their exposures to a given asset are often not transparent. The EU shareholder disclosure rules on listed companies only provide transparency as to larger institutional investors (depending on implementation in the Member States between 0.5% and 5%). Meanwhile, the SRD II has increased transparency with

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pricing publicly available information on carbon disclosure and performance; mandatory and standardised information on carbon performance would consequently not only increase market efficiency but result in better allocation of capital within the real economy).

[66] Article 9 and 10 SFDR do not limit "sustainable" investments and products to products in line with the sustainability definition of the Taxonomy Regulation. While Article 25 of the Taxonomy Regulation inserts some references to the Taxonomy Regulation (in particular, the DNSH principle), financial market participants can still include another explanation on how the sustainability objective is to be attained by other means, as long as this information is accurate, fair, clear, not misleading, simple and concise.

[67] See references supra n 23 and 56.

[68] Chowdhry et al. 2018; (studying joint financing between profit-motivated and socially motivated investors); Barber et al. 2021; (finding that losses due to social commitments vary with investor types, with investors subject to legal restrictions (e.g., Employee Retirement Income Security Act) exhibiting lower losses than publicly and NGO-sponsored vehicles).

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regard to the ESG orientation of asset owners and asset managers. Again, the SRD II has just come into force in 2019 – so sufficient data for empirical testing of models will not be available until 2024 – and shareholder data are only made available to the issuer (in contrast to the public). Not even adding the fact that alternative ways to generate exposure to an asset – from bonds, via joint ventures, to certain derivatives – often evade existing shareholder disclosure rules.[69]

The fourth and final reason is that European politics started to implement its SFAP at the back end of the financial services value chain, while information flows need to start at the front end, that is the real economy:

(1) the SFDR, adopted first in 2019, covers the financial intermediation chain; while (2) Article 1(2) of the Taxonomy Regulation adopted in June 2020 (hence, after the SFDR), covers beyond financial market participants subject to the SFDR, listed companies that issue "sustainable" (usually green) bonds as well as large undertakings which are public-interest entities with more than 500 employees during the financial year. Yet, the Taxonomy Regulation will not come fully into force until 2023. In turn, reliable data from the real economy will not be available until 2025 or later. But even then, we should not expect wonders. In the beginning, many issuers will have only partial information at hand, given that the NACE methodology has so far not been the basis of intra-corporate reporting and further, some data may be impossible to get, if part of a group's activities are outside the EU where different laws apply. Under these circumstances we should not expect "complete" reporting, that is truly good disclosures within the next decade. At least until the disclosures triggered by the Taxonomy Regulation have reached the required quality, and been tested and adopted in models, the incomplete disclosures of financial intermediaries at the back end of the financial services chain and deficient information intermediation by benchmark providers will render any market-based transformation of the EU economy a major challenge as markets need decent information.

In addition, smaller companies and other important contributors to the "real economy" such as larger unlisted companies (including firms held by families, private equity investors and sovereign wealth funds) are not covered by the Taxonomy Regulation. While this treatment may be justified politically if these firms in fact "pollute less" than large firms,[70] from a data

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[69] Other lack of data may relate to factors taking place in the future. This pertains, for instance, to political risk such as future rule making. For instance, climate policy uncertainty in some countries (like in the U.S. under former President Trump) makes it difficult for investors to quantify the impact of future climate regulation. See Ilhan et al. 2021 (arguing that climate policy uncertainty makes it difficult for investors to quantify the impact of future climate regulation).

[70] See Shive & Forster et al. 2020 (finding that private firms pollute less than

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perspective the privilege of "less polluting firms" would result in an adverse selection bias, and as such trigger a potential over-engineering of economy-wide SFAP measures based on these biased data. Furthermore, smaller firms can be indirectly covered due to the fact that eventually all financial intermediaries directly or indirectly invest in such entities, and are required to disclose their sustainability weighted portfolio. Hence, an argument for an ongoing nudging approach to those entities not covered by the Taxonomy Regulation still applies, if they want to be considered as interesting investment objects in particular for institutional investors.

In this context, it is crucial to speed up the review and expansion of the Non-Financial Disclosure Directive (NFDD) as promised in the Sustainable Finance Strategy 2021. Again, after the review firms will need time to implement and adjust their disclosures, so the full impact of taxonomy-based information on markets will not be observed, analysed or *understood*, until some years later, possibly in the 2030s.

3. *Lack of Consistent Application*

Regulators have started thinking about how to accelerate data gathering and transmission. For instance, the ESAs have proposed a number of legislative steps all aimed at enhanced, better and standardized disclosures, for instance through (1) legally binding minimum requirements of what ESG ratings measure and on the related methodologies, (2) EU-level supervision of ESG rating providers, (3) ratings to focus on assessing creditworthiness, (4) developing methodologically robust and reliable ESG benchmarks, (5) specific labels for retail sustainable financial products, and (6) standardisation and labelling for green bonds and green securitization.[71]

In light of the data shortage, the ESAs' demand for supervisory convergence is more important than it seems at first sight because the more streamlined sustainability reporting is around the globe, and the more third country regulators ask for the same disclosures, the more datafication of information processing is likely to occur and the better this information can be used across the EU/EEA. Yet, regardless of which steps are being taken, each of them will take time and not deliver results until several years from now.

Both aspects together hint at a third deficiency: the lack of consistent application of existing and newly adopted reporting standards. The inconsistent application is to a lesser extent a result of the unfitness or unwillingness of the financial intermediaries, issuers and services providers

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public firms).

[71] We are aware of other data gathering exercises by regulators worldwide. For instance, the Bank of England undertakes a large data gathering since 2015. See www.bankofengland.co.uk/climate-change for an overview of the various initiatives all aiming at adding data-driven insights on sustainability risk.

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subject to the new legislation. Instead, the inconsistent application is evidence of the enormous size of the challenge. A consistent application and reporting under the standards just reported requires nothing less than:

(1) The adoption of entirely new scoring and reporting frameworks under both the revised Benchmark Regulation (leading to indices aiming at “de-browning” in pursuit of the Paris accord) and the entirely new Taxonomy Regulation (identifying “Green” investment expenditures)

(2) The integration of these standards in generally accepted reporting tools and standards (such as IFRS) and other legal measures to narrow down discretion in sustainability reporting to the extent possible

(3) On the side of reporting entities, the necessity to build expertise and to make decisions accordingly, prior to useful disclosures (for instance, management must allocate different parts of the firm to different NACE codes)

- to have software tools in place that collect, aggregate and report the data requested under the new frameworks (for instance, accounting systems must be adapted for sustainability purposes) in a granular manner

(4) On the side of information intermediaries (including benchmark providers), the necessity:

- to build expertise prior to the development and implementation of a useful scoring methodology (including the development and testing for consistency of new scoring models)
- to have software tools for data aggregation and analysis in place

(5) On the side of financial intermediaries (including asset managers), the necessity:

- to build expertise prior to the integration of the scores into investment decisions and risk management (including the development and testing for consistency of new portfolio and risk management models)
- to have software tools for data aggregation, analysis and application in place

(6) On the side of supervisors of reporting entities, information and financial intermediaries, the necessity:

- to build expertise prior to issuing supervisory guidelines
- to develop and implement data-driven supervisory tools, and
- to have sufficiently qualified and skilled staff for rigid enforcement.

With regard to all of these steps and all the participants listed supra from (1) to (6), the implementing projects have just begun.

In turn, a consistent application of measures just adopted is in fact years away – and equally long will the state of ignorance most likely to persist in the absence of uniform sustainability-oriented reporting any data-driven analysis or testing of new models for the years to come will lack a reliable database of at least grossly comparable data.

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2021

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4. *Regulatory Risks in the Dark*

Financial regulation aims, in principle, at ensuring investor protection, securing transparency, market efficiency and market integrity, as well as systemic risk prevention,[72] all with a view to avoiding externalities. With the SFAP as well as the Sustainable Finance Strategy 2021, the EU seeks to make use of financial regulation to factor environmental and partially social externalities into the investment decisions of financial intermediaries. This is not the place to discuss the general difficulties in widening the objectives of financial regulation; suffice here to say that these externalities were, for long, the domain of (other) fields of public law, in particular environmental, tort and tax laws. We stress this aspect to emphasize our main argument that regulators have little experience with sustainability-oriented financial regulation, meaning an increased risk of getting it wrong.

In light of the issues just raised, we see challenges for all three dimensions of financial regulation: sustainability-conscious retail investors could get hurt following marketing of apparently sustainable products with an uncertain risk- and profitability-profile to them. Sustainability indices, ratings and other metrics may come to inconsistent results,[73] leading institutional investors towards less standardized and thus less comparable and potentially less reliable approaches. The former may undermine societal support for the sustainability transformation. Market efficiency may suffer if, due to insufficient data, untested models and inconsistent application of the law, capital flows to less productive uses. Large-scale capital misallocation based on unreliable models may also destabilize the financial system, for instance if the pension portfolios of the future are characterized by large-scale, under-performing asset classes due to the unknown financial effects of sustainability-oriented investments. Depending on how large the issues become, the former may delay the aspired transformation towards a sustainable economy or even bring it to a halt altogether.

This is all the more so since there is a potential domino effect on the horizon. In other words, more and more legislation and disclosure rules build now on the EU Taxonomy Regulation: the International Financial Reporting Standards (IFRS), the Non-Financial Reporting Standards the European Financial Reporting Advisory Group is asked to develop, as well as disclosure and accounting frameworks from accounting firms, law firms and other consultants will draw on the Taxonomy. If the EU Taxonomy turns out to trigger disastrous effects on some parts of the European economy, this could put the whole sustainability transformation project into

[72] See Moloneyet al. 2015.

[73] See on governance of metrics Chiu 2021 (this volume).

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doubt.

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5. *Factoring in Transition Risk*

Beyond the externalities that 'unmastered' financial regulation can create, further externalities that should keep regulators on their toes could stem from the transition toward the new sustainable financial order: managing the transition in the new world of sustainable finance poses a formidable challenge in itself.

Firstly, understanding, implementing and integrating the Taxonomy Regulation as well as the Benchmark Regulation into disclosures and operating processes, such as investment and risk management models takes time and money. In particular, small and medium financial intermediaries may well wait until software vendors come up with standard approaches on which to rely – which require the former first to develop, program and market such approaches.

To make the size of the challenge easier to assess, as of now only three out of 101 "green" UCITS studied by the Frankfurt School qualify as green under the Taxonomy Regulation. In turn, 98 other "green" UCITS need to make adjustments. These adjustments are not limited to their disclosures, but rather a huge portfolio reallocation is required. As of now, given that we have no reliable data on the profitability of sustainable products under the Taxonomy Regulation and we may experience, at least in the beginning, a shortage of assets compliant with the Taxonomy Regulation, this portfolio reallocation could potentially result in huge losses for investors. While, of course, this very shortage could also be the reason to adapt to the Taxonomy Regulation faster, this swift transformation may reach its factual limits given the data shortage (see above), in which case the shortage of TR-compliant assets may create opportunities for mis-selling and fraud.

Secondly, the transformation requires the use of new models, many of which have not been tested with abundant data (as most financial models today) simply due to data shortages (see above). To test these models, we need to create data pools sufficient for a five-year modelling span. Even if we apply some backward testing (hoping these data are available), it becomes apparent that regulators face two alternatives: either they ask for the use of models utterly insufficiently tested when put to use (meaning model risk from bad specifications, programming or technical errors, or data or calibration errors, resulting in the potentially large scale reallocation of funds into the "wrong" assets from an economic perspective); or they need to accept that the transformation to reliable models will take five years *after the disclosure starts*; the latter meaning operational adjustments.

Thirdly, the EU's taxonomy is in itself untested. Some glitches, such as the notion that weapon production could qualify as sustainable business under the Taxonomy, have become apparent – and have been remedied – during the legislative process leading to the adoption of the L2 Delegated Acts. However, in a piece of legislation as complex as the Taxonomy

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Regulation, other deficiencies will certainly become more apparent over time. The fact that any regulatory command has limits, downsides and deficiencies is nothing new to lawyers. Hence, the larger the scope of a piece of regulation, the greater the need for thorough debate and analysis ahead of its adoption. In light of this, given that the EU Taxonomy and Sustainable Finance Strategy 2021 cover the whole economic sector while the legislative process was short, particular caution is warranted. In turn, regulators shall assume that they know less about the unwanted effects of the regulation than what is seen on the surface. Similar to the facts on which the SFAP is grounded, the hidden and potentially unwanted effects of the taxonomy lie in the dark. This is also why the Taxonomy in itself can best be described as a dynamic disclosure regime where input from regulated entities will support in the assessment of the extent to which the goals of the Paris Agreement can be met under the current suggested labels for 'green' and 'brown' activities. When more data are gathered and compared, the measurements in the Taxonomy will be adjusted accordingly.[74] Hence, the Taxonomy will function as a reciprocal tool that will balance the data received from regulated entities with the overarching goal of securing and not transgressing further planetary boundaries.[75]

The transition risks reinforce the data shortage pointed out above: no data can yet include all the physical, legal or transition risks that come about as a consequence of the new sustainable financial order because these risks are yet to crystalize. Whether the Taxonomy will function as the correct tool and inhibit the necessary methodology for ongoing adjustments, remains to be seen.

V. Regulating in the Dark

All in all, as an intermediate result, regulators regulate, and enforce the regulations, to a large extent in the dark. Yet the alternative is not refraining from any sustainability-oriented financial regulation altogether; the legislative train has left the station at high speed and any call for a halt is unrealistic and potentially undesirable, given the factual pressure created by climate change and other indicators of a sustainability crisis.[76]

Yet, in light of the darkness surrounding them, we ask regulators to carefully choose which policy steps they prioritize and in which order. How regulators shall prioritize and where they spend their scarce resources is the

[74] See Article 20 Taxonomy Regulation, providing a mandate for a permanent expert group: the Platform on sustainable finance.

[75] On the objective of adhering to planetary boundaries see Rockström et al. 2009; Steffen et al. 2015.

[76] Ibid.

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topic of this section.

1. *Three Principles for Financial Regulation in the Dark*

If regulators regulate in the dark, the best advice for them is to aim at avoiding any harm to the sustainability transformation project by unexpected, if not undesirable and unwanted effects of the newly adopted financial regulation and move forward with care, caution and readiness to adjust adopted regulation quickly instead. While responding to uncertain facts with sunset clauses as suggested by Roberta Romano[77] has remained a mere theoretical option, the regular 5-year reviews of EU financial law at least enable revisions of undesirable rules when their downsides become apparent; in a similar vein, we welcome the regulators' and market participants' close scrutiny of the new sustainable finance order.

Beyond caution, regulating in the dark requires, from the outset, a focus on illuminating the darkness rather than quack legislation through incorporating experimentation and case-by-case assessments.[78] Further, cost-style comply or explain approaches, proportionality clauses and principles in contrast to rules are the preferred style of regulation when regulating in the dark.

We argue that the following three elements of a regulatory policy are suitable to further the cause.

First and foremost, regulators should support all efforts that assist in *creating expertise* on all sides of the sustainable finance value chain, including intermediaries and supervisors alike.

Second, regulators shall focus on the *consistent application of existing rules* rather than expanding into new, untested fields. In the context of the SFAP 2018, which means regulators shall focus on supporting consensus and creating comparable datasets through disclosure. On the contrary, any meddling with the set-up and the operating business before sufficient data and models are available risks unwanted effects of regulation.

Third, regulators must ensure they *retain the openness of the regulatory framework to innovation*, given that much of what is known on sustainable finance may turn out, with hindsight, to be a myth, while some myth may turn out to be the truth.

2. *Principles vs. Proposals*

The three principles face repercussions as to whether it is desirable to regulate the organisation, operations and prudential rules relating to

[77] See Romano, 1, 25, 38-56.

[78] Ibid, at 28.

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financial intermediaries.

a) Sustainable Intermediary Set-up

(1) Fitness & Properness

For now, financial supervisory authorities assess key executives of a financial intermediary in two ways: whether they are experienced in running a financial intermediary (fitness) and whether they are law-abiding, trust-worthy people (properness).

What fitness implies depends on the intermediary – asset management is different from banking and insurance. Financial supervisory authorities will appreciate any executive that has detailed expertise with the type of intermediary they are going to work for.

The question is what the sustainability transformation does to the fitness test. At least for now few executives will be sustainability experts. Yet, over time this question will disappear because if sustainable investment is the new normal, then leading any intermediary will come with sustainability matters on a day-to-day basis. The question then is how to accelerate the transformation.

Shall the law require the executives to be trained in sustainability matters or the firm to have a certain number of sustainability experts (similar to accounting experts of today) or shall the law, like the UK Senior Managers Regime, require the board to appoint a sustainability officer? The answer is twofold. On the one hand, financial regulation already requires the training of board members.[79] No doubt, these provisions apply to any new development of relevance to the firm. For instance, for intermediaries where technology is important (as is more or less for all intermediaries) special care shall be taken when training board members and appointing a chief technology officer.[80] The same principle applied to sustainability would then result in sustainability-trained boards and the appointing of a sustainability officer.

[79] See Titel IV of the Joint ESMA and EBA Guidelines on the assessment of the suitability of members of the management body and key function holders under Directive 2013/36/EU and Directive 2014/65/EU (CRD IV and MiFID II), at ¶41 ('Institutions need to provide sufficient resources for induction and training of members of the management body. Receiving induction should make new members familiar with the specificities of the institution's structure, how the institution is embedded in its group structure (where relevant), and business and risk strategy. Ongoing training should aim to improve and keep up to date the qualifications of members of the management body so that at all times the management body collectively meets or exceeds the level that is expected. Ongoing training is a necessity to ensure sufficient knowledge of changes in the relevant legal and regulatory requirements, markets and products, and the institution's structure, business model and risk profile.'). Similar provisions requiring induction and training of the governing body can be found in all EU regulations, see for instance Article 21 (d) AIFMD Implementing Regulation (L2),

[80] See Buckley et al. 2020.

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The risk of quack governance, however, is real. Because we see other issues of social or economic importance that would also warrant attention. For instance, we could envision a gender officer, a globalization officer, and so on. If we followed through with this approach, the executive suite would be comprised of a lot of special functions each with separate agendas. This stands in contrast to the principle that – before and after the Sustainability Transformation – the board and the executive suite as a whole shall have the expertise necessary to deal with important matters of the firm.[81] The former is particularly true if sustainable investment is the new mainstream. In other words, the chief operating, investment, risk and technology officers all must understand the implications of sustainability for their business model – *in addition to having solid finance skills*. In creating this expertise, small and large firms face entirely different constraints.

Thus, we propose to encourage creating sustainability expertise on the board as much as the executive level by asking the intermediaries to draft *firm-specific* sustainability development strategies (which may or may not include training and coaching) – yet beyond that, to refrain from details.

(2) Governance

For several years, an expected or perceived short-termism has guided EU policymakers' rulemaking. Most notably, short-termism due to conflicts of interests in the asset management services chain were the reason rules on financial intermediaries by way of SRD II were imposed.[82] The same argument now comes back in the context of the sustainability transformation. For instance, the ESAs demand

> '[t]o ensure a more forward-looking perspective, robust corporate governance arrangements that support a sound risk management and risk culture at all levels as well as an effective strategy setting and oversight by management bodies are key.'

Governance concerns were guiding regulators already prior to the SFAP. Governance rules have been implemented into all pieces of EU financial legislation, starting with CRD IV,[83] but not stopping there. This prompts the question: what more could be done?

This is not to say that a system once adopted cannot be improved. Yet, any regulatory reform in the financial sector should be based on facts rather than politically-driven assumptions. In the absence of clear-cut

[81] See Enriques & Zetzsche 2014.

[82] See Ch. Ib of Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement, OJ L 132, 20.5.2017, p. 1–25.

[83] See Enriques & Zetzsche, supra note 81, at 217.

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governance failures in the regulated sector[84] showing deficiency of the fairly new EU governance rules, we encourage the situation to be first assessed prudently *with a focus on understanding the interaction between governance and sustainability factors* prior to regulating in the dark; again, given the fairly recent coming into force of SRD II (2019) any assessment prior to 2024 would be a mere political façade.

With regard to sustainability, a further difficulty appears: the link to environmental and supply chain rules[85] all of which are currently under revision by EU institutions. Taking the combination of the various rules – company law, financial law, environmental and other ESG rules – into account, the verdict of 'short-termism' cannot be issued without a very careful assessment which cannot start prior to the facts on how legislation just adopted impacts on markets have been gathered and analysed.

(3) Remuneration

Disclosures on the impact of sustainability factors on remuneration policies are required already by the SFDR (see II.3.). In fact, EU financial regulation has a history of tampering with executive pay,[86] following the logic that management will follow financial incentives.

However, that logic runs the risk of getting it wrong. Already in the absence of sustainability concerns, drafting sound remuneration schemes is a (legal) challenge. This challenge does not become easier with sustainability due to a lack of historical data, experience and expertise on all sides concerned, including the board of directors, executives and remuneration consultants.

For instance, if management is granted a bonus for a larger stake in sustainable products, we would expect management to shift investments around. Now factor in the uncertainty as to whether sustainable products are profitable and the lack of data which render professional, quantitative investment and risk management a challenge. In extreme cases, if we get it wrong, this could mean unhedged risks and huge losses which if we are unlucky could lead to the failure of the financial institution.

These factors together make any cross-sectoral mandatory remuneration requirements regarding sustainability a game too risky to play. After all, financial intermediaries are thinly capitalized, hence the costs of failure will fall on clients, investors and society at large. And in the

[84] Note that the Wirecard scandal is not evidence to the contrary. Wirecard, under German law, was not regulated at the top level. Further, many important subsidiaries were not regulated. See Langenbucher et al., What are the wider supervisory implications of the Wirecard case? (2020), Study requested by the ECON Committee.

[85] Of course, one could think to rewrite the limited liability rule, a basic principle of company law (or adopt similar radical proposals). Cf. on limited liability in the context of environmental laws Akey & Appel 2020. But the argument against quack legislation aired herein is all the truer for tampering with basic governance features.

[86] See CRD IV, arts. 92-96.

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world of asset management, any management decision directly impacts on the value of the investors' portfolio.

However, we acknowledge one exemption: if an intermediary *organisation* (in contrast to a financial product which are already regulated by Article 8 and 9 of the SFDR) frames itself as being sustainable (such as zero carbon) to attract clients, such an organisation should penalize managers if in fact the organisation does not meet the sustainability factors it has publicly usurped for itself (for instance, if it is *de facto* not carbon neutral). Such a penalty would align clients' expectations with managerial incentives.

While the ESAs' letter from July 2020 seems to go further, a closer look reveals that this is not the case: while demanding a robust regulatory framework (which every regulator must insist upon) the ESAs state that:

> 'the work that the ESAs are conducting based on the mandates attributed to them in the area of sustainable finance *may inform further potential legislative changes*. In this context, we note the importance of assessing the impact of newly implemented legislation before taking additional legislative steps.'

In simple terms, the ESAs ask for a break to assess what the SFAP 2018 has achieved, to test and learn in the existing environment. We second that.

b) Sustainable Operating Business ?

A sustainability-oriented regulation of the operating business must be handled with even greater care because of the potential impact on the intermediary's operational results, that is profit and cash-flow, and the financial stability issues associated with getting it wrong.

Sustainability-oriented investment and risk models are in their infancy, with multiple questions awaiting answers.[87]

In light of the foregoing analysis, investment and risk management is a field where data shortage and a lack of established models come together. With a reliable data trail missing, backward testing is out of the question. Yet, since supervisors who themselves lack data do not know

[87] See Engle et al. 2020 (researching a model to hedge climate risk, and discussing multiple directions for future research on financial approaches to managing climate risk); Fernando et al. 2017 (distinguishing between environmental risk and "greening" a firm, and arguing that institutional investors shun stocks with high environmental risk exposure, which we show have lower valuations, as predicted by risk management theory. These findings suggest that corporate environmental policies that mitigate environmental risk exposure create shareholder value, while "greening" as such does not).

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which model is right or wrong, they can hardly impose or assess details of investment portfolio and risk modelling. This renders any demand for a robust sustainability risk assessment and mandatory consideration of these risks[88] less convincing.

At the same time, keeping the status quo does not seem a sensible approach.

We hold that a prudent approach would ask financial intermediaries to:

- Consider the risks from unsustainable conduct in their risk management policies *where robust data support the assumption that certain risks could be material*, and
- Develop risk models for these cases *for experimental purposes* for the time being, *to model* the impact of sustainability factors on virtual portfolios.

These two steps would improve sustainability risk management expertise in the financial sector proportionate to the improvement of the data quality, yet avoid the risk that enhanced risk management requirements enhance model risk in a world where regulators and intermediaries alike know that the data pools are deficient.

Any mandatory requirement, such as the embedding of a sustainability factor into investment strategies and risk models must thus be restricted to cases where the data situation *justifies* such a requirement. For the rest, which at the beginning may form the vast majority, a test-and-learn approach is of the essence. That does not mean we shall not further sustainability, as a policy objective, and encourage the link between sustainability factors and finance to be further examined, yet the tools shall be such of experimentation and learning rather than mandatory law.

c) Sustainable Prudential Requirements ?

A crucial part for regulating the operational business concerns the prudential requirements, in particular minimum capital requirements, limitations on financial intermediaries' investment portfolio, liquidity or loan portfolio diversification standards, mandatory insurance for certain risk types, as well as other restrictions intended to limit the type of risks a financial intermediary may undertake.

The complexity of building sophisticated sector-wide prudential rules are well known from the several generations of creating and (re-)shaping the Basel rules (in the EU: the CRR, as well as in a lighter form the IFD). These various editions came with several financial crises in between, so caution when amending capital requirements with a

[88] See ESAs, ESAs, July Letter, supra note 48.

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sustainability angle is certainly justified. Consider that these experiences have been gathered in light of near-to-complete financial datasets. The same efforts for sustainability factors where we lack these datasets add up to an insurmountable risk. This is particularly true in light of Mark Carney's concept titled "Tragedy of the Horizon" whereby financial institutions bear the costs of implementation today while benefits accrue to future generations of clients. How to allocate costs and set incentives in such an environment does not come easy.

How to tackle the challenge? (1) Against the learned and well-reasoned opinion of influential commentators,[89] we encourage regulators to refrain from any detailed sector-wide CRR-style rule tied to model results for any type of financial services for now. (2) At the same time, regulators should ask financial intermediaries to develop their own models to the extent that the data quality on certain sectors allows it, and capitalize risks on a case-by-case basis. Such model development should be both supported and scrutinized by standard setters and financial services authorities, so that the limits of these models as well as how one model outcome compares to another is well understood. For instance, an insurance company covering storm risks should slowly but surely increase risk provisioning; a bank engaging with clients whose main business relates to oil shall take into account the effects of environmental legislation and taxation on their clients' business; and an asset manager investing in real estate in the Maldives shall consider the rising sea level. All this factoring in of sustainability risk is necessary and sound, and already provided for in Article 3 SFDR as well as sectoral risk management rules. In particular, banks shall consider sustainability risks in their Own Risk Assessments as part of the Internal Capital Adequacy Assessment Process (ICAAP), while regulators are encouraged to enforce these rules on a case-by-case basis, utilizing institution-specific reviews and, where necessary, capital surcharges based on CRR Pillars 2 and 3 to cover additional sustainability risks. Regulators seeking to avoid the large-scale impact of sustainability risks on financial institutions[90] have already quite a strong position utilizing existing risk management rules.[91]

Beyond that, regulators shall refrain from tying mandatory capital surcharges to unsustainable products and services for the time being; this is not a sign of disrespect of the importance of sustainability, but rather – in line with a market-based transformation – markets first need time to figure

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[89] See the discussion in Alexander & Fisher 2019 , 15-20 (arguing that sustainability risks, collectively, are of systemic dimensions); see also Alexander 2014 , 16-17.

[90] See Alexander & Fisher (2019), 7-34 (arguing that sustainability risks, collectively, are of systemic dimensions).

[91] See Kivisaari (2021), 75, 88-91, 98-100. See also Alexander (2014).

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out how to combine sustainability and profitability. As was pointed out above (IV.1.) it will take some years to understand that nexus properly; drafting rules prior to understanding this nexus represents regulatory hazard. In a world where for the most part pension funds and other intermediaries serving retail beneficiaries provide the funding, only a *profitable* market-based sustainability strategy is truly sustainable.

Again, we encourage regulators to wait until we have insights where this learning curve leads to, and focus on disclosure and facilitating experimentation instead.

3. Enhancing "test-and-learn" through Smart Regulation

The common conclusion of our view on the three fields – intermediary set-up, operations and prudential rules – is that regulators shall, first, implement the taxonomy across sectors, second, ensure reporting based on that taxonomy, third, collect data (and ensure data platforms, comparability etc.), fourth, assess data with some representative time series, and *finally*, draft rules and standards on the organisation, operations, and prudential requirements of intermediaries.

However, until that date, regulators shall not sit idle, but are best advised to further a "test-and-learn" approach across the financial industry with regards to all aspects of sustainability risks and impacts of finance on sustainability factors.

With regard to furthering experimentation, regulating sustainability innovation is not entirely different from regulating other innovations, such as financial and regulatory technologies (FinTech and RegTech), for which the need for smart regulation where regulators retain flexibility and openness to innovation while keeping risks under control, is recognized.[92] This is particularly true given that the level of uncertainty and the dynamics of change/progress are similarly pronounced in the area of sustainable investing and fintech. In turn, the regulatory challenges seem, to some extent, to be quite comparable. Waiver programmes, sustainability innovation hubs, regulatory sandboxes and partnerships between financial intermediaries (as experts in finance) and sustainability research centres could work particularly well for certain sustainability matters where regulators and intermediaries lack experience, including risk models, remuneration schemes and portfolio composition.

Such tools could be implemented to benefit early adopters of sustainable finance modelling, under the condition that the elements underlying the models are made available to the public to incentivize the experts' discussion. In a similar vein, regulators could grant some leeway

[92] Cf. Brummer & Yadav (2019), 248–49 (arguing that innovation poses a challenge for regulators since regulators are expected to warrant financial innovation, simple rules and market integrity at the same time, with limited resources); Zetzsche et al. 2017; Buckley et al. 2020; Zetzsche et al. 2020; Enriques & Ringe.

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for various modes of portfolio compositions in terms of investment limits or the provision of new types of sustainability data (previously undisclosed), and even grant prudential benefits for firms that come up with innovative, theoretically grounded models of sustainability risk, as long as these models are being made available to the public to ensure sound discussion among experts.

While many of these approaches will not stand the test of time, the more experts discuss approaches and the more data are being reported which may be included in modelling, the faster we expect the data gap to being closed, risk, governance and remuneration models to be developed, and the consensus to be established that is necessary to make sustainable finance the new mainstream.

VI. CONCLUSION

Sustainable investments are of paramount importance to ensure the sustainability transformation of the European economy. Yet, at the moment we lack in some respects data, in other respects broadly acknowledged theoretical insights (typically laid down in standard models) on the co-relation and causation of sustainability factors with financial data, and in a third respect a consistent application of recently adopted sustainability disclosure rules. The three together hinder as of now a rational, calculated approach to allocating funds with a view to sustainability which we usually associate with 'finance'. With regard to the nexus of financial and sustainability factors a rational, data-driven approach to investing is at its infancy.

While the Taxonomy Regulation's definition of sustainable investments creates legal certainty and can lead to the comparability of sustainability-related disclosures, the implementation of the taxonomy resulting in valuable datasets necessary for empirical assessment and financial modelling will require years. Prior to the availability of these datasets, financial market participants, regulators and investors are subject to transition risk at an enormous scale, given that much of the sustainability agenda within the EU financial markets stands on hollow ground, meaning its regulatory premises are not data-driven, but rather policy-driven. We thus welcome that the first step of the EU's sustainability agenda focused on defining sustainable investments, enhancing comparability and sustainability-related disclosures as these measures all address the core issue in sustainable finance: the lack of data. We also applaud that the SFAP 2018 did not go beyond "nudging", that is encouraging sustainable investments, without forcing investors towards sustainability in circumstances where the profitability of sustainable investments and the link between sustainability factors and financial factors is not sufficiently

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understood. Because a large-scale, long-term *unprofitable* sustainable investment is in itself unsustainable.

Important for the future regulatory strategy is the insight that the effects of the SFAP 2018 have not yet been absorbed. Important building blocks such as the Taxonomy Regulation have just been adopted and in many cases are not yet in force. Despite major investments on all sides, regulators and financial intermediaries are at the early stage of understanding and applying the taxonomy. Even in the best of all possible scenarios, the full absorption of the taxonomy in data creation, financial modelling, testing and transposition in lending and investment strategies will take years.

Yet, the same data shortage that has hindered investors to assess and identify sustainable *and* profitable products also prevents financial supervisory authorities from applying a prudent *mandatory* regulatory strategy: If a regulator cannot identify a conduct as « right », that is where regulators effectively fly in the dark, and it is unwise to prohibit certain other conduct by naming it « wrong », as the latter would reduce the options for diversification and increase the risk of unwanted effects.

In turn, sustainable regulation of sustainable finance must aim at generating data and expertise on sustainability factors and sustainable products on the side of both regulators and financial intermediaries, in an effort to prepare the ground for a mature and profitable sustainable investment market. For this purpose, we encourage learning from regulating financial technologies (FinTech), where the same issue is prevalent and a number of pro-innovative « smart regulation » tools have been adopted, such as waiver programmes, regulatory sandboxes, innovation hubs, and restricted licenses. Besides efforts aiming at generating expertise and data, regulators must refrain from meddling with the organisation and operating business of intermediaries for now. Fields particularly vulnerable to quack regulation include the following: a) remuneration models, b) investment strategies, and c) prudential rules, including politically-driven capital surcharges for unsustainable investments.

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