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The EU Taxonomy's (Potential) Effects on the Banking Sector and Bank Lending to Firms

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Abstract: One of the key pillars of the European Green Deal is a renewed sustainable finance strategy to finance sustainable growth and to channel private investments towards projects that support the transition to a climate-neutral economy. The aim of this policy is to make the private sector take into account sustainability-related non-financial factors when making financing and investment decisions. Within this framework, the EU Taxonomy provides a uniform definition and classification system of environmentally sustainable economic activities. In addition, the EU Taxonomy itself provides the basis for further legislation and regulation. Banks as the main financiers of firms in Europe and therefore important players in directing capital flows towards sustainable projects are thus targeted with several requirements based on the Taxonomy. The question then is how banks' lending to firms is affected by these regulatory changes and whether an impact on the greening of firms' economic activities can be achieved. The existing literature provides evidence that firms' environmental, social and governance (ESG) risks, profiles and performance influence their loan conditions, but it is unclear whether better funding conditions lead to reduced carbon emissions or "greener" activities at the firm level.

Keywords: EU taxonomy, banks, bank lending, sustainable finance

1 Introduction

This article discusses how the EU Taxonomy may affect the banking sector and, in turn, banks' lending to firms. In 2019, the EU adopted its Green Deal with the aim to promote more sustainability in investments and, ultimately, achieve carbon neutrality in 2050.[1] One of the key pillars of the Green Deal is a renewed sustainable

1 Comprehensive information on the European Green Deal including the European Commission's official document communicating the Green Deal (COM (2019) 640 final) can be found on the

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finance strategy (COM (2021) 390 final) to finance sustainable growth and to channel private investments towards projects that support the transition to a climate-neutral economy. This means that sustainability-related, non-financial factors should be taken into account by the private sector when making financing and investment decisions. Within this framework, the EU Taxonomy (Regulation (EU) 2020) provides a uniform definition and classification system of environmentally sustainable economic activities. Together with related measures such as the non-financial reporting rules, banking regulations, the disclosure rules when offering sustainable financial products and the planned European Green Bond Standard (Clifford Chance 2022; Proposal for a Regulation COM (2021) 391 final), it thereby aims to increase transparency and to ensure an equal playing field and legal certainty for all firms in the EU.

2 Effects on the Banking Sector

To achieve its goal of directing capital flows into sustainable economic activities, the EU lays down a variety of requirements on financial intermediaries. Several of these requirements are based on the EU Taxonomy so that banks will need to collect the necessary sustainability data from their borrowers.[2]

First of all, banks have to report according to the Non-Financial Reporting Directive (NFRD, Directive 2014/95/EU) and the forthcoming Corporate Sustainability Reporting Directive (CSRD, Proposal for a Directive COM (2021) 189 final).[3] Non-financial reporting aims to increase the transparency and accountability on ESG issues. Thereby, investors are better guided in directing their capital flows towards sustainable projects and companies. The NFRD was adopted in 2014 and covers large EU companies with more than 500 employees that are of public interest (listed companies, banks, insurance companies). The CSRD will considerably broaden the range of covered companies from around 11,000 to around 50,000 by additionally including smaller listed companies and all large companies that exceed

European Commission's webpage (https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en). Brühl (2021) provides a detailed overview of the EU's green finance strategy, regulations and instruments.

2 This article focuses on the Taxonomy-related requirements. AFME (2021), for instance, provides a more comprehensive overview of the disclosure requirements regarding ESG criteria and risks for banks in Europe.

3 This paragraph builds on information from EY (2022). Companies already covered by the NFRD will have to start reporting according to the new CSRD rules in their 2025 reports (on 2024 data), large companies newly covered by the CSRD in their 2026 reports (on 2025 data) and affected small and medium-sized enterprises (SMEs) in their 2027 reports (on 2026 data).

at least two out of three criteria (250 employees, 40 million EUR in revenue, 20 million EUR in total assets) as well as non-EU companies with substantial activity in the EU market. The CSRD will also require companies to disclose more sustainability-related information than before and this information will need to be digitally tagged and assured by an external party. The sustainability of companies' activities is thereby assessed and measured based on the definitions and standards set by the EU Taxonomy. The concept of double-materiality ensures that companies do not only report how sustainability issues affect themselves but also how they impact society and the environment.

At the same time, in the beginning of 2022 the European Banking Authority (EBA) released standards setting out requirements for the 150 largest banks in the EU with regard to reporting sustainability risks within their pillar 3 prudential disclosures (EBA/ITS 2022). In general, pillar 3 disclosures shall provide additional information to market participants on banks' risk management objectives and policies and banks' risks such as their global systemic importance or ESG risks. Besides reporting various key figures and information on the financed greenhouse gas emissions, exposures to assets with high climate risks and exposures to economic activities with high greenhouse gas emissions, from 2023 or 2024 onwards (depending on the exposure) banks will have to report two new ratios directly based on the Taxonomy.

The Green Asset Ratio (GAR) is a bank's Taxonomy-aligned economic activities and sustainable investments as a share of total assets. However, those assets not classified as Taxonomy-aligned include both assets that are not aligned with the Taxonomy and assets for which it is not possible to assess their sustainability, e.g., because they are not covered by the Taxonomy or the NFRD/CSRD. Therefore, many banks, those with a focus on lending to SMEs in particular, cannot meaningfully calculate their GAR. To provide further information on the extent to which banks finance sustainable activities, the Banking Book Taxonomy Alignment Ratio (BTAR) explicitly includes exposures to enterprises not covered by the NFRD/CSRD. The challenge for banks then is to collect the required data bilaterally from their clients or to estimate missing data. Nevertheless, a pure focus on GAR would provide banks with the incentive to grant loans only to firms covered by the NFRD/CSRD and discourage them from accompanying firms outside the scope of the NFRD/CSRD in their efforts to transition to carbon-neutrality (Rinke and Messner 2022).

When selling financial products, banks also fall under the Sustainable Finance Disclosure Regulation (SFDR; Regulation (EU) 2019/2088). which aims to improve transparency and prevent greenwashing in the market for sustainable investment products. For financial products with a sustainable investment objective, banks

need to report the share of Taxonomy-aligned investments to inform customers about the sustainability and related risks of financial products in a comparable way.

Once the legislative process is concluded, the European Green Bond Standard is expected to define criteria for so-called green bonds, i.e. bonds that finance sustainable projects.[4] In particular, bonds that are issued as "European Green Bonds" will be required to solely finance Taxonomy-aligned economic activities. Such a regulation will be important for banks that want to fund themselves via green bonds to potentially benefit from cheaper financing conditions.[5]

3 (Potential) Effects on Bank Lending to Firms

Banks are important in the financing of firms in Europe where 99% of firms are SMEs which rely for 70% of their external funding on banks (Euler Hermes 2019; Kraemer-Eis et al. 2021). Therefore, it is essential to understand the effects of new regulatory measures such as the EU Taxonomy on banks' lending behavior.

The existing literature provides evidence that firms' ESG risks, profiles and performance influence their loan conditions (e.g., Becchetti, Salustri, and Scaramozzino 2019; Hoepner et al. 2016; Housten and Shan 2022; Kleimeier and Viehs 2021). Degryse et al. (2022) show that, after the ratification of the Paris Agreement, green banks reward green firms with lower interest rates compared to browner firms. However, these studies do not link differences in funding conditions to actual efforts by firms to reduce their carbon emissions or to (further) "green" their economic activities. Yet, Meo and Karim (2022) provide country-level evidence of a negative relationship between green finance and carbon emissions. Fatica, Panzica, and

4 In July 2021, the European Commission proposed a Regulation on a voluntary European Green Bond Standard (Proposal for a Regulation COM (2021) 391 final) to ensure that the respective bonds adhere to stringent sustainability requirements thereby protecting investors from greenwashing. In May 2022, the European Parliament put forward several changes to the Commission's proposal which, in the next step, will be negotiated with the Council and the Commission. Clifford Chance (2022) provides an extensive overview of the planned European Green Bond Standard while covering other related aspects of the EU's sustainability legislation.

5 Green finance products are designed to enable investors to specifically promote sustainable projects and thus enact their green preferences in the economy. These products shall provide more favorable financing terms for sustainable projects and, thereby, give them a competitive advantage over conventional alternatives. Indeed, a nascent theoretical literature links investor preferences to a lower risk premium (referred to as the greenium) for green assets (e.g., Baker et al. 2018; Berg and Kölbel 2019; Pástor, Stambaugh, and Taylor 2021; Pedersen, Fitzgibbons, and Pomorski 2021; Zerbib 2022). However, empirically it is still not clear whether environmental preferences impact asset returns (e.g., Karpf and Mandel 2018; Zerbib 2019; Larcker and Watts 2020).

Rancan (2021) and Bedendo, Nocera, and Siming (2021) document that, after issuing green bonds, banks redirect their lending to firms from less polluting industries, but they do not quantify the actual climate impact of this portfolio rebalancing. Benincasa, Kabas, and Ongena (2022) and Reghezza et al. (2022), in turn, show that climate-oriented regulatory policies influence the cross-border flow of credit.

Sautner et al. (2022) is the first study on the effects of the EU Taxonomy on bank lending using syndicated loan data and information on firms' Taxonomy-aligned revenue shares. They show that already between 2005 and 2018, i.e., before the introduction of the EU Taxonomy, firms with a higher share of Taxonomy-aligned revenues received cheaper loans. In essence, banks already had priced in at least some of the intended effects of the Taxonomy. A study of the price effects of the actual introduction of the EU Taxonomy will be informative of the relative size of the pre-introductory effect. Given that the relevant delegated acts were only published in the end of 2021 and that there is substantial time-lag in the availability of the necessary data on firms, the effects of the actual introduction of the EU Taxonomy on bank lending to firms as well as its effect on the greening of firms' economic activities remain to be seen. The latter aspect will be of utmost importance to assess the effectiveness of the EU Taxonomy in facilitating the transition towards a net-zero economy.

To fully conceive the consequences of the EU Taxonomy on the bank-firm lending relationship, the information barriers that exist for firms, SMEs in particular, when applying for loans under the changing regulatory framework need to be assessed. A recent survey among family firms shows that they have major concerns about how to manage the transition to fulfilling the new reporting requirements (von Schickfus et al. 2021). To establish the necessary processes to provide reports about their climate/environmental impact, which can be seen as an investment, they first of all need to know which information will be required by banks and financiers. In a second step, they need to implement the necessary procedures to gather and process the information. Hainz, Wackerbauer, and Sitteneder (2021) suggest that, for SMEs in particular, non-financial information should be allowed to be disclosed without burdensome reporting requirements within the main bank relationship to take advantage of the long-term relationships between banks and firms. The EU Taxonomy regulation at least recognizes such challenges and has exempted financial institutions' SME portfolios from the reporting requirements until 2024.

4 Discussion

The capability of green financial intermediation to accelerate the transition to a carbon neutral economy hinges on the segmentation within capital and credit

markets with regard to browner and greener investments. In other words, green finance products shall provide more favorable financing terms for sustainable projects and, thereby, give them a competitive advantage over conventional alternatives. However, Krahnen, Rocholl, and Thum (2021) argue that it cannot be taken for granted that green preferences result in real economic consequences. They point out that there is no causal link between the type of funding and a firm's investment decisions. Their reasoning is based on the long-recognized fact in theoretical research on corporate finance that the type of funding is irrelevant for the investment decision (Modigliani-Miller theorem; Modigliani and Miller 1958). Feldhütter and Pedersen (2022) provide an ESG-Modigliani-Miller model incorporating investors that care about ESG issues. They show that a firm's capital structure and the labeling of its securities as green or brown are indeed irrelevant for the firm's investment decisions if capital markets are perfect (i.e., prices are linear in cashflows and in ESG) and ESG is additive (i.e., under any capital structure, the CO_2 emissions that are attributed to the individual financing instruments add up to the firm's actual total emissions). Empirically, however, Feldhütter and Pedersen (2022) find evidence against the ESG-Modigliani-Miller showing that a firm can lower its cost of capital by issuing green bonds. Importantly, this finding does not imply that an investment in green financial instruments necessarily decreases the overall carbon emissions of a firm.[6]

While financial markets are generally perceived to be better at financing the innovative high-risk projects needed for the transition to a net-zero economy, an advantage of bank loans may be that linking funding and investment can more easily be achieved and monitored. In any case, further research is urgently needed to assess the actual climate impact of green bonds, green loans and, more generally, green financial products.

The existing evidence that already greener firms receive better loan conditions begs the question whether, and, if necessary, how browner firms that are willing to make investments to green their activities can be supported to do so. The plans of the EU Commission to extend the Taxonomy to capture firms' efforts to transition towards more sustainable economic activities (transition finance) are therefore highly necessary and welcome. Equally important will be the timely adjustment of the

6 The lower cost of capital may just mean that some investors consider green bonds as fully green without making the remaining securities browner. Feldhütter and Pedersen (2022) provide an intuitive example: a firm's assets consist of half wind turbines and half coal. If the firm is fully funded with equity, it would be evaluated as half green and half brown. But if the wind turbines are funded by green bonds, it seems that some investors evaluate them as fully green and the rest which is funded by equity as half green and half brown, which "allows the firm to get rid of half its carbon emissions on paper in this hypothetical example – without actually reducing its real emissions!" (p. 4).

Taxonomy to keep the original promise of a dynamic instrument that takes new developments into account. It remains to be seen whether the political processes at the EU-level are adequate to maintain such a complex instrument in the longer run. Alternatively, the EU could provide the regulatory framework for non-financial data collection and provision and leave an assessment of the data to market participants.

While the EU's sustainable finance strategy aims at leveraging the financial sectors' ability to support and accelerate the transition towards a net-zero economy, the plethora of new regulations creates a considerable compliance burden on banks and firms. The banking industry has identified several challenges in applying the new rules. Data availability, quality, granularity, comparability and standardization are an issue, for exposures to SMEs and retail clients and when mapping information into the Taxonomy classification in particular, as well as operational considerations such as the increased documentation, monitoring and time together with the adaptation of internal information processes needed to fulfil the new requirements (Raux and Fischer 2021). However, an explicit estimation of the related costs for banks is missing from the literature.[7] While it is certainly very challenging and likely impossible to provide comprehensive cost-benefit analyses of the new sustainability regulations, it would be informative to better understand the administrative and compliance costs that arise at banks and other financial intermediaries as well as at firms to make the regulations as efficient as possible and increase the likelihood of their success. Furthermore, it would be useful to understand if and to what extend different players on financial markets are affected differently by the regulatory burden to assess whether the new regulations may implicitly favor market-based or bank-based funding.

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7 The European Commission estimates the aggregate Taxonomy-related administrative costs for firms already covered by the NFRD to be between 280 million and 875 million EUR for one-off costs and between 140 million and 350 million EUR per year acknowledging the uncertainty of such estimates (SWD (2021) 152 final). ISICI, a think tank based on the Channel Islands, estimates that the implementation of sustainable finance regulations will lead to an incremental operating cost of 36 billion EUR to 48 billion EUR per year for the financial industry across the EU27 (ISICI 2022).

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