

EU Green Taxonomy Data – A first Vendor Survey

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Authors in alphabetical order:

Andreas G.F. Hoepner ^{a,b}
andreas.hoepner@ucd.ie

Corresponding author: Fabiola I. Schneider ^{b, c}
Fabiola.Schneider@dcu.ie

^a Michael Smurfit Graduate Business School and UCD Lochlann Quinn School of Business, University College Dublin, Carysfort Avenue, Blackrock, Co., Dublin, Ireland.

^b European Commission Platform on Sustainable Finance, Brussels, Belgium.

^c Dublin City University Business School, Collins Avenue, Whitehall, Dublin 9, Co. Dublin, Ireland.

Abstract

This paper aims to explain key concepts of the EU Taxonomy for Sustainable Activities, a common classification system established to clarify which investments are environmentally sustainable. Additionally, it provides insight on the compliance of corporate activities with the EU Taxonomy's criteria based on a first survey on market data.

The survey issued to corporate data providers covered both Eligibility and Alignment of firms' economic activities as per EU Taxonomy. The variable Eligibility provides the percentage share of activities of a company which can be assessed against the EU Taxonomy. The variable Alignment gives the percentage share of a firm's activities that is substantially contributing to at least one of the environmental objectives set by the European Commission as well as fully passing Do No Significant Harm criteria on all other environmental objectives and passing Minimum Social Safeguards tests.

Preliminary data from this first data vendor survey suggests that mean Alignment of company revenue currently ranges in the low single digits. Mean Eligibility in the same context, was at least above 20 per cent. The results raise important questions on whether mid cap firms may have advantages over large cap firms and if the business model of the assessor influences the assessment outcome.

Recommendations for further improvement of the policy and suggestions for future research are provided.

1. What is the EU Taxonomy on Sustainable Activities?

As of the 12th of July 2020, Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, namely the EU Taxonomy of Sustainable activities (henceforth “EU Taxonomy”), is in force. It is part of the EU Action Plan on Financing Sustainable Growth and directly links to existing legislation such as the EU Green Bond Standard¹. The European Commission aims to redirect capital flows into sustainable activities by providing this common classification system. The reporting tool has the ambition to act as a transition instrument and inventory for the future. The EU Taxonomy can be interpreted as a dictionary defining a list of economic activities qualifying as sustainable with regard to defined environmental criteria.

One important caveat on *activities* is that the EU Taxonomy does not take an entity perspective. Instead, alignment with the EU Taxonomy will be expressed as a share of the sum of an entity’s activities, i.e. company A’s activities are 20% EU Taxonomy-aligned. Given the scope of large companies, most will engage in more than one activity resulting in non-binary classification.

This reporting tool with mandatory disclosure applies to large public companies. Its scope includes revenues, operating expenses (“OpEx”) and capital expenditure (“CapEx”); thereby not only providing insights into the past or current state of an entity but also its future trajectory.

Due to being anchored in official EU Regulation, the EU Taxonomy is legally binding and automatically and uniformly applies to all EU countries, without needing to be transposed into national law.

The specific regulation mandates the EU Taxonomy to be science-based and dynamic in its design. Therefore, the European Commission appointed an expert panel to provide advice on the EU Taxonomy, the Platform on Sustainable Finance. The over 50 members come from a range of

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0391>

backgrounds, including corporations, Non-Governmental Organizations (NGOs), lobby groups and some members appointed in personal capacity².

Checking for Eligibility of an activity is the first step of the EU Taxonomy assessment process for an economic activity. It establishes whether there are criteria established to assess the sustainability of the respective activity. If a company's activities are 80% eligible it means 20% of the company's activities are not assessable in terms of their sustainability (yet).

The next step, for those 80%, is then to assess EU Taxonomy Alignment by applying the so-called Technical Screening Criteria, which are published in Delegate Acts by the European Commission. This step evaluates whether the eligible activities make a "Substantial Contribution" (SC) to one of the six environmental objectives as set in the original EU Taxonomy Regulation. Besides two climate objectives, "Climate Change Adaptation" and "Climate Change Mitigation", these include "Biodiversity & Ecosystems", "Water & Marine Resources", "Circular Economy", and "Pollution Prevention"³. It is important to note that these are all equally weighted. In this aspect, the EU Taxonomy is the most ambitious among others under development around the globe.

Subsequently, the activity additionally needs to pass the "Do No Significant Harm" (DNSH) criteria and "Minimum Social Safeguards" (MSS). The former reflects the equally weighted nature of the different EU Taxonomy objectives: It is not sufficient to substantially contribute to one, at the same time none of the other ones may be significantly harmed. These two additional requirements echo the complex and multidimensional nature of sustainability. In total there are four steps for an activity to be considered sustainable as part of the EU Taxonomy, as visualised in Figure 1⁴.

So far, data on both Eligibility and Alignment of firms is scarce. On the one hand, this is due to the lack of company disclosure specific to the EU Taxonomy criteria. This is expected to gradually become better over time. Secondly, there are further issues regarding the treatment of companies

² The authors of this paper are both involved in the Platform on Sustainable Finance as part of the Data and Usability Subgroup.

³ Notably this does not include any social objectives. A separate social taxonomy is under development by the European Commission but still in the conceptual phase.

⁴ See also the final report of the Platform on Sustainable Finance Subgroup 5 (Data and Usability).

base outside of the European Union. These will not be directly subject to mandatory European reporting requirements.

Data vendors can play a crucial role in filling reporting gaps. The data vendors which provided responses to the underlying survey of this paper all use different methodologies and approaches. Usually these are not publicly disclosed. For an example see MSCI's guide⁵. It refers to its existing metrics such as the MSCI Sustainable Impact Metrics, Green Bond Methodologies, ESG Metrics, and Business Involvement Screening criteria. Frequently, ESG controversy screening is referenced for proxying passing DNSH and MSS.

Moody's points towards corporate reporting for their data collection, which is validated and complemented through direct engagement with companies by Moody's analysts⁶. Similarly, ImpactCubed points to issuer level data as disclosed by the firm themselves as well as ImpactCubed's own dedicated estimates and models⁷. Bloomberg provides a table which contrasts reported and estimated data and for example for Eligibility outlines the mapping of the Bloomberg Industry Classification (BICS) against the NACE codes using in the EU Taxonomy⁸.

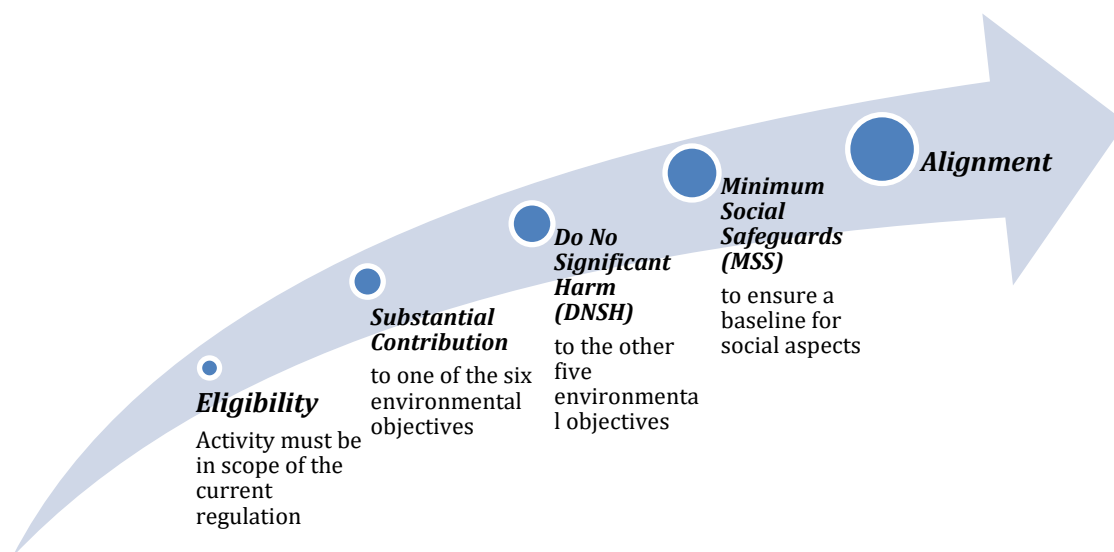


Figure 1: Step by Step Process to EU Taxonomy Alignment for an Activity

⁵ See "EU Taxonomy" as part of the MSCI Sustainable Finance Solutions found here: <https://www.msci.com/our-solutions/esg-investing/sustainable-finance-solutions/eu-sustainable-finance-package>.

⁶ See here for Moody's EU Taxonomy data offer: <https://esg.moody's.io/regulatory-data-solutions>.

⁷ See here for ImpactCubed's EU Taxonomy solution: <https://www.impact-cubed.com/regulatory-solutions>.

⁸ See here for Bloomberg's explainer: <https://assets.bbhub.io/professional/sites/10/EU-Taxo-Fact-Sheet.pdf>.

In the following the paper will first explain the design of the vendor survey which was carried out. Subsequently, its results are explained and visualised. Moreover, implications are outlined, and policy recommendations provided. Lastly, this paper finishes with an overall conclusion.

2. The first data vendor survey: Design

The first data vendor survey commenced in October 2021 with the intention to better understand where the market currently stands with regards to EU Taxonomy reporting.

It was carried out by the authors of this paper, in relation to their engagement on the Platform on Sustainable Finance. Participation was encouraged through an open call. This means all types of data providers, established commercial data vendors as well as smaller niche players, were invited to submit a response.

At the time of the survey only the delegated act related to the two climate objectives⁹ was adopted. Thus, this survey covers only substantial contribution to the “Climate Change Mitigation” and “Climate Change Adaptation” objectives. The additional DNSH criteria cover all environmental objectives as published at the time.

The survey is designed to cover both Eligibility as well as Alignment, with granular steps in between that capture passing DNSH as well as MSS criteria. This set up allows to assess where and to what extent eligible firms that engage in substantially contributing activities gradually drop out due to not passing either of the additional criteria.

The survey covers Eligibility and Alignment of revenue, OpEx and CapEx. Especially the latter is of high importance as it provides insights into companies’ future path; CapEx is forward-looking.

Given the four steps – Eligibility, Substantial Contribution, DNSH, MSS – over these three measures, the survey contained 12 questions. Participants were asked to provide responses for a universe consisting of 200 firms, the sum of the top-50¹⁰ large European companies, mid-sized European companies, large non-European companies as well as mid-sized non-European

⁹ At the time of this study, only the Climate Delegate Act has been adopted. This means, only criteria for the two climate objectives were officially applicable yet.

¹⁰ By size.

companies. Having a universe with these four subcategories allows to assess whether there are systematic biases for either larger or smaller firms, and European or non-European firms.

3. What the data says: Preliminary evidence from literature and this first data vendor survey

Despite Lucarelli, Mazzolui, Rancan, and Severini (2020) reporting over 160 000 papers in EU Taxonomy-related areas, there is very little literature on the EU Taxonomy itself as it only has been published in March 2020. A Scopus search results in only 27 hits for articles using the term “Taxonomy”, out of which the majority is from 2022¹¹. The majority of these papers is qualitative, looking at taxonomies as an instrument (Becchetti, Cordella, and Morone, 2022; Dusík and Bond, 2022) or the links to ESG ratings (Dumrose, Rink, and Eckert, 2022;) and specific asset classes such as fixed income (Edenhofer, Klein, Lessmann, and Wilkens, 2022; Esposito, Mastromattei, and Molocchi, 2021; Gibson, Popescu, Hitaj, Petuccio, and Benetoo, 2020).

Quantitative research revolving around the EU Taxonomy is even more scarce. Alessi and Battiston (2022) estimate overall low (2.8%) Alignment numbers for financial portfolios of euro area investors in 2022. Furthermore, two working papers are worth mentioning in the context of this survey. Specific to revenue Alignment, Bassen, Kordsachia, Lopatta and Tan (2022) demonstrate that higher Alignment correlates with positive stock market effects, especially if the EU Taxonomy related performance is higher than existing ESG ratings. Complementarily, Sautner, Yu, Zhon and Zhou (2022) find that firms with higher revenue Alignment paid lower interest rates on the syndicated loan market.

In Q4 2021 dozens of data vendors were invited to submit responses to a first EU Taxonomy survey consisting of 12 questions on EU Taxonomy Eligibility, Substantial Contribution, Substantial Contribution and DNSH full pass, and Substantial Contribution, DNSH full pass and MSS full pass related to the two climate objectives¹². The last category equals EU Taxonomy Alignment as outlined in Figure 1. For each of those four steps, vendors were asked to provide their data on revenues, CapEx and OpEx for the given 200 firm universe.

¹¹ This includes at least three papers which are a direct response to other papers in this list.

¹² At the time of this study, only the Climate Delegate Act has been adopted. This means, only criteria for the two climate objectives were officially applicable yet.

Nine vendors were able to provide responses to at least one question. These vendors were guaranteed anonymity of their individual responses, which is why results are only presented at the aggregate level. The following vendors participated: Bloomberg, Clarity AI, Iceberg, ImpactCubed, ISS, LSEG, Moody’s, MSCI, and Sustainalytics¹³. Responses including “potential” substantial contribution or “partial” pass of DNSH or MSS were disregarded.

Figure 2 relates to the first question of the survey, on revenue Eligibility. The x-axis represents each of the 200 companies of the given universe. The y-axis here indicates the number of vendors that provided data for the respective firm on the x-axis with regard to revenue Eligibility. All companies have revenue Eligibility data from at least six vendors.

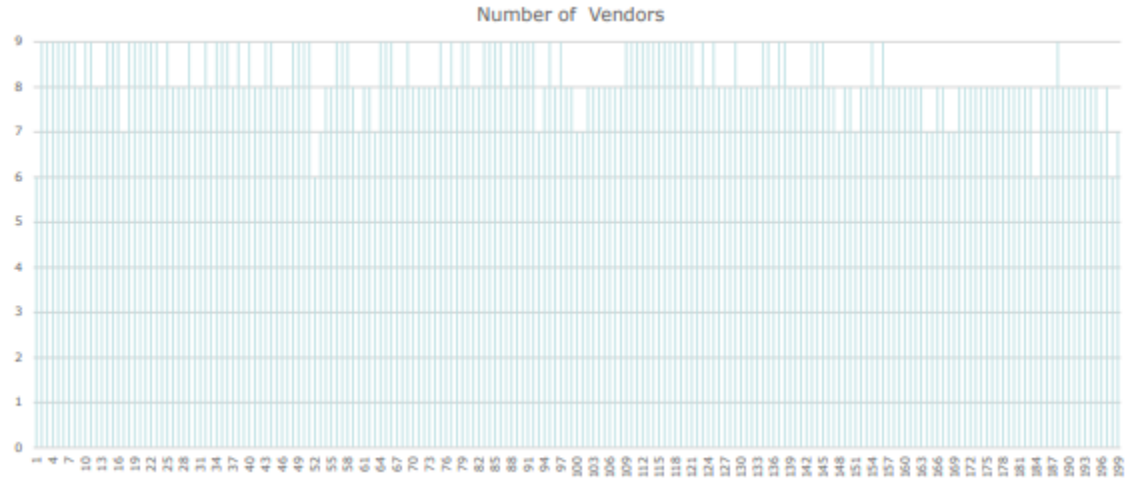


Figure 2: Number of vendors that submitted data for revenue Eligibility

¹³ Carbone4 focuses on GHG data, Fitch only covers green bond issuers and S&P expected to be ready in Q2 2022.

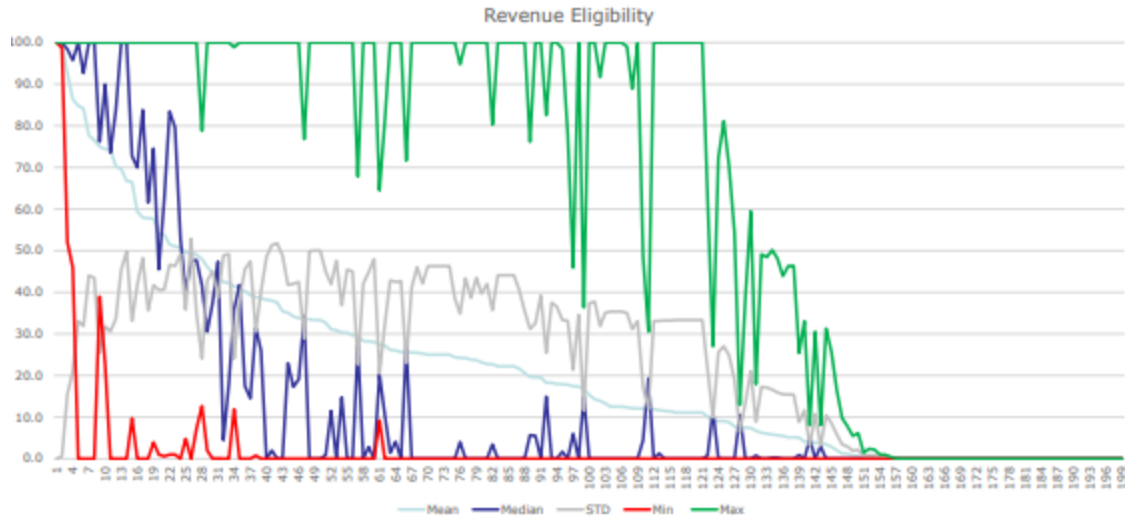


Figure 3: Revenue Eligibility within the company universe

Figure 3 visualises mean, median, standard deviation and minimum and maximum value for revenue Eligibility with regard to the two climate objectives of each company in the considered universe. Companies are ranked according to the mean Eligibility from left to right. It becomes obvious that very few companies have a mean of complete (100%) Eligibility. Around 50 companies are rated 0% Eligible by all vendors who provided data for the respective company, as visible in the right-hand quarter of the graph. The median drops a lot steeper and is more volatile than the mean. For around half the companies the maximum and minimum values are the complete opposite – while one vendor submitted 100% Eligibility another provided 0%.

In an additional analysis, the four company groups are plotted separately, see Figure 4.

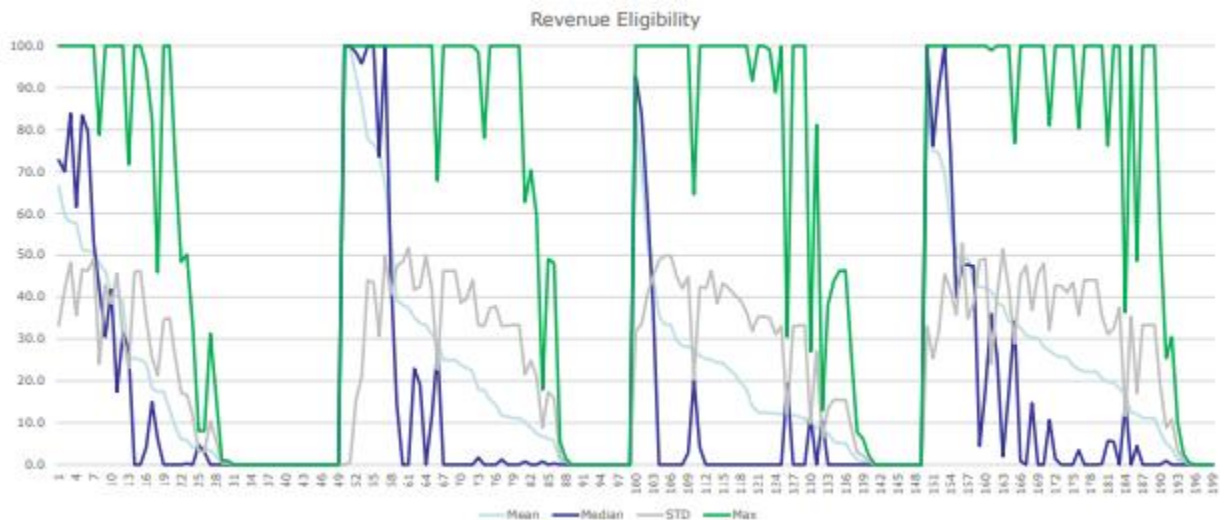


Figure 4: Revenue Eligibility with regard to the two climate objectives sorted by group (from left to right): EU Large, EU Mid, NonEU Large, and, NonEU Mid

The mean revenue Eligibility for the four groups is as follows (left to right in Figure 4): EU Large (16.6), EU Mid (26.1), NonEU Large (17.0), NonEU Mid (27.3). It becomes obvious that the mean is substantially higher for mid cap firms than for large cap. The difference between EU and NonEU is much less emphasised.

Figure 5 plots all data points on revenue Eligibility submitted by the data vendors individually. This allows for assessing vendor deviation and data consistency.

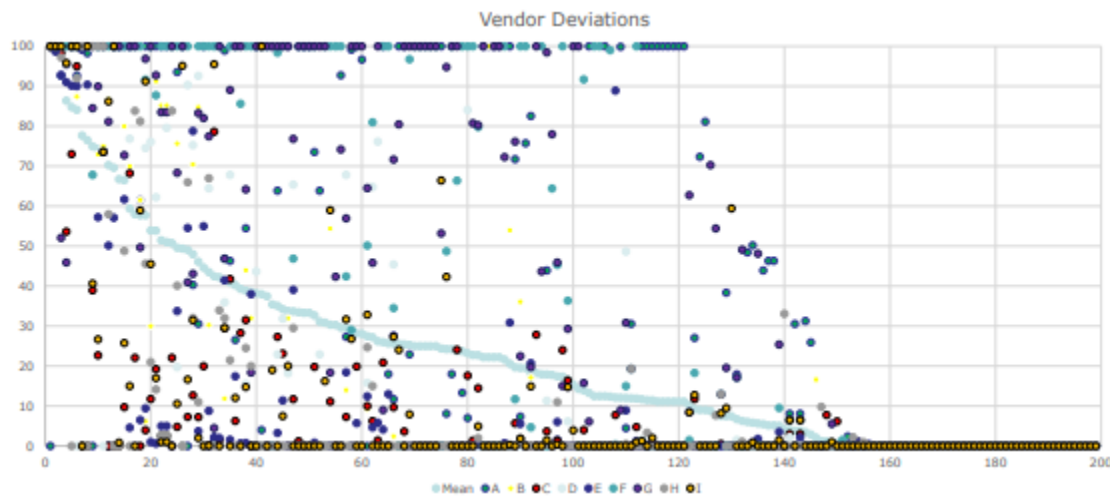


Figure 5: Vendor deviation in Revenue Eligibility data

It becomes obvious that Vendor A has a much higher mean compared to the other participants. One conceivable explanation is a commercial conflict of interest due to the business model of certain vendor types. A possibly similar phenomenon has been described by Li et al. (2022) for ESG ratings: Higher ratings were issued to existing paying clients of Moody's and S&P by raters Vigeo Eiris and RobecoSAM after their respective acquisition by Moody's and S&P, with the effect being stronger in line with the intensity of business ties to the acquirer.

	A	B	C	D	E	F	G	H	I
A	1.00								
B	0.35	1.00							
C	0.12	0.49	1.00						
D	0.04	0.55	0.38	1.00					
E	0.27	0.73	0.55	0.54	1.00				
F	0.11	0.39	0.40	0.59	0.35	1.00			
G	0.32	0.34	0.30	0.41	0.32	0.66	1.00		
H	0.21	0.60	0.55	0.55	0.68	0.39	0.31	1.00	
I	0.15	0.55	0.57	0.42	0.64	0.36	0.33	0.50	1.00

Table 1: Correlation Matrix of Vendors

Table 1 shows the correlation of each vendor pair. Correlation ranges from a minimum of 4% (Vendor A and D) to 73% (Vendor B and E).

For CapEx and OpEx Eligibility only one vendor submitted data.

For revenue Alignment, i.e. Substantial Contribution as well as full pass on DNSH and MSS, up to four vendors provided data (see Figure 6).

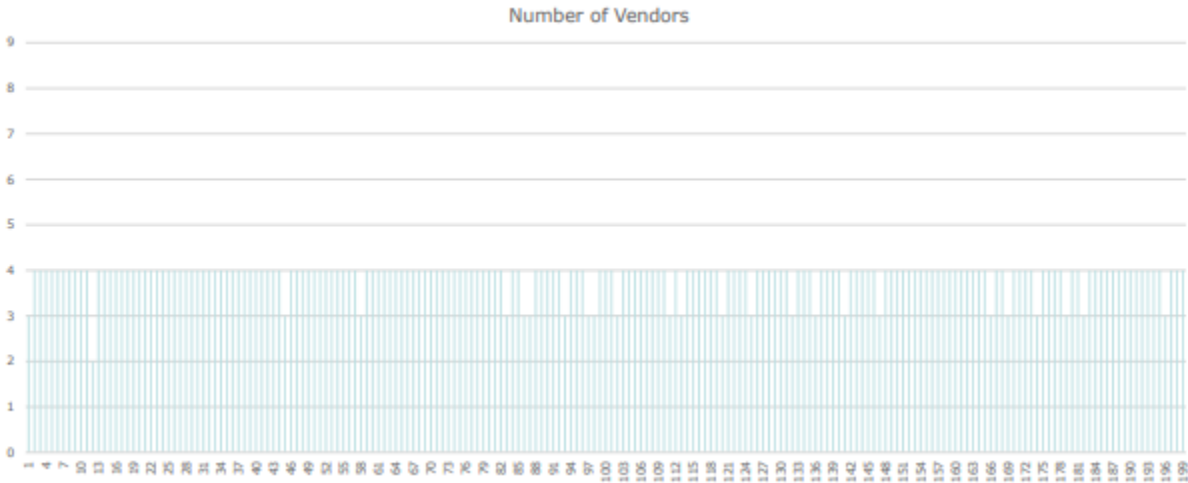


Figure 6: Number of vendors that submitted data for revenue Alignment

Figure 7 visualises revenue Alignment with regard to the two climate objectives for the given company universe. The overall mean comes to 2.9%, with individual vendor means ranging from 0.1% to 5.4%¹⁴.

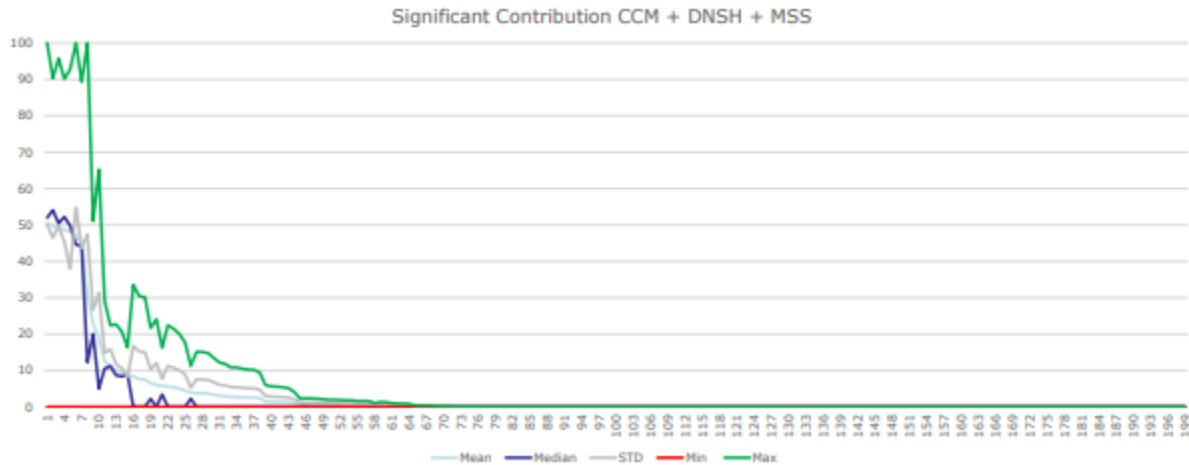


Figure 7: Revenue Alignment within the company universe

Figure 8 provides the split of revenue Alignment by company group. The mean revenue Alignment for the four groups is as follows (left to right in Figure 8): EU Large (0.7), EU Mid (5.8), NonEU Large (1.9), NonEU Mid (3.2). Similar to revenue Eligibility a substantial difference in mean between large cap and mid cap is noted. The difference between EU and NonEU is larger compared to revenue Eligibility.

¹⁴ The vendor with the highest mean did not submit data for Substantial Contribution as a standalone value, only in combination with DNSH/MSS. When this vendor is omitted, the overall mean decreases to 2.3%.

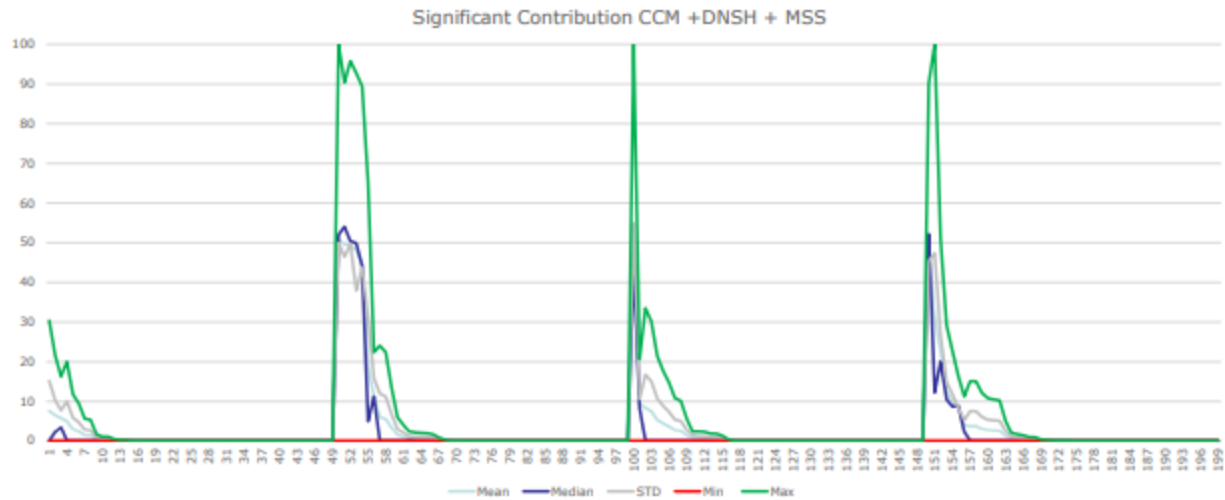


Figure 8: Revenue Alignment with regard to the two climate objectives sorted by group (from left to right): EU Large, EU Mid, NonEU Large, and, NonEU Mid

For CapEx and OpEx Alignment only one vendor submitted data.

4. Recommendations

a. Further research

Based on this preliminary survey we make the following recommendations. One key aspect will be to analyse to what extent the current EU Taxonomy framework benefits mid cap firms versus large cap firms. Moreover, an analysis of to what extent the business model of the vendor – namely whether the rated corporation or the investor pays for the rating - impacts the average EU Taxonomy Eligibility and Alignment assessment. Relatedly, it will be interesting to analyse the drivers of the large variation in vendor correlations between 4% and 73%. A second survey, to monitor whether this divergence has decreased - and if there is a continued grouping in correlation with certain types of vendor business models - would be most informative in this regard. Lastly, it will be crucial to survey the numbers of vendors planning to offer EU Taxonomy Alignment services based on CapEx and OpEx instead of just revenue.

b. Policy recommendations

Financial conflict of interest from data providers and rating agencies is a common phenomenon known from fields such as ESG ratings (Li, Lou and Zhang, 2022) and credit ratings (Strier, 2008). Commercial ties between the rated firm and the rating issuer can obstruct a fair and objective

evaluation outcome – this relates to revenue beyond from the pure rating process itself. Generally, we strongly recommend an “investor-paid” model to avoid revenue stemming from the EU Taxonomy compliance evaluation process. Moreover, to ensure investors can rely on accurate EU Taxonomy data, we recommend mandatory disclosure of all data vendors’ financial relations with the firms they produce Eligibility and Alignment data for. Should this disclosure reveal substantial revenue dependence for the data vendor it may be conceivable to implement a maximum threshold over which a data vendor is not allowed to sell the evaluation of the respective firm. This would ensure investors can rely on independent analysis of EU Taxonomy compliance. Given that there is a broad range of data providers already offering or looking to offer EU Taxonomy data there will be no issues with data supply shortage for investors. On the contrary, limiting who is independent enough to provide objective analysis may reduce the risk of “EU Taxonomy compliance” shopping.

Our second recommendation revolves around reflecting on DNSH. We propose that rather than the current static and sector specific criteria – which often from a usability perspective are very difficult to implement (Hoepner & Schneider, 2022) – a set of sector agnostic and dynamic Key Performance Indicators (KPI) should be adopted. This KPI-based approach would mirror the approach taken by the Substantial Contribution assessment as per EU Taxonomy annexes and would be in line with the EU Taxonomy Regulation which calls for a dynamic tool. Dynamic sustainability classifications are key for governmental interoperability (Hoepner, Paliabelos, and Rogelj, 2021). Besides being easier to operationalise, a sector agnostic approach has the additional benefit of limiting the power of lobbying groups, which generally act as sector-based organisations.

Lastly, we suggest revising NACE codes in their current form as the basis for activity mapping of firms. This may be able to address the bias against large cap firms in Alignment.

The current approach allows for self-classification of firms’ activities against existing industrial activities as recommended by the Central Statistics Office (CSO): NACE Codes¹⁵. These have

¹⁵ NACE is an acronym derived from the French title 'Nomenclature générale des Activités économiques dans les Communautés Européennes'.

been established by the European Communities in the 1960s¹⁶. Besides obvious problems with economic activities developing over time as the economy embraces innovation, the self-classification raises problems. We strongly advise to apply the Precautionary Principle¹⁷ when mapping a firm's activities. This means that rather than a one-to-one mapping, where one activity of a firm is mapped to one NACE code, a one-to-many mapping is applied. The latter would result in the maximum of NACE codes getting associated with a firm rather than the minimum. This in turn means assessment against a broad range of criteria rather than just a singular set.

Given that there is no official mapping or method for mapping, the self-classification gives plenty of leeway to firms in identifying which NACE codes they want to report against. This allows for a firm to pick the NACE code associated with the set of criteria most favourable for them – similar to greenwashing, we run risk of NACE-washing. This is particularly worrisome given that there is no regulation on changing NACE code self-classification, meaning a firm could report against a different set of criteria each year.

For the bias observed in this survey, favouring small- and mid-cap firms, the one-to-many mapping may reduce the divergence. Naturally, larger firms have more activities while smaller firms may be able to just report against a single NACE code. For DNSH assessment, where many firms drop out of alignment, a single set of criteria is easier to meet than a multitude.

Overall, while we see the use of static, self-classified NACE codes for activity mapping generally critical, we strongly advocate for applying the Precautionary Principle as well as disclosing self-classified competitors besides the self-classified NACE code mapping for each firm. The latter would further encourage a broad view on one's own activities, motivated by not appearing to operate as a monopoly. This would enhance overall transparency, comparability, and quality of activity mapping.

Generally, our recommendation is to design and implement the EU Taxonomy and its criteria aligned to the Precautionary Principle. This means that while criteria should be applied flexibly

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<https://stats.oecd.org/glossary/detail.asp?ID=1713#:~:text=Nomenclature%20generale%20des%20Activites%20economiques,which%20is%20used%20by%20Eurostat.>

¹⁷ Rooted in Article 191 of the Treaty on the Functioning of the European Union, this principle calls for when in doubt, erring on the side of the planet [not on the side of commercial interest].

for EU Taxonomy Eligibility (resulting in figures in the larger range of the possible), strict application is needed for EU Taxonomy Alignment.

5. Conclusion

This paper aims to explain key concepts of the EU Taxonomy for Sustainable Activities and provides first insights on compliance with the EU Regulation from a data vendor survey.

The EU Taxonomy for Sustainable Activities is part of the EU Action Plan on Financing Sustainable Growth and is supposed to promote Green investment by establishing a common language and definition of environmentally sustainable economic activities. Preliminary data from a first data vendor survey suggests that mean revenue Alignment (the percentage-share of activities that fulfils the criteria set by the EU Taxonomy) assessed against the first Climate Delegated Act currently ranges in the low single digits. Mean Eligibility (the percentage-share of activities for which environmental criteria exist) was at least above 20 per cent.

Especially the low Alignment figure is neither surprising nor undesirable as it reflects the current gap to where the economy needs to transition with regard to environmental sustainability. Yet the results raise important questions on whether mid cap firms may have advantages over large cap firms and if the business model of the assessor influences the assessment outcome. It will be crucial to repeat this exercise when the criteria for the outstanding environmental objectives have been adopted and the market has further matured.

We note a potential divergence in correlation of vendors based on their business model and call for disclosure of financial ties with assessed firms for every data vendor who sells EU Taxonomy related corporate assessments.

We recommend the application of the Precautionary Principle for the implementation of the EU Taxonomy. This means that while implementation should encourage high Eligibility figures, the Alignment assessment must remain stringent. We advocate for revising NACE codes as the basis for activity mapping and recommend dynamic, sector agnostic Do No Significant Harm criteria.

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