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SFDR, one year on: The Trends and Anatomy of Article 8 & 9 funds

One year on from the launch of the first stage of the European Sustainable Finance Disclosure Regulation (SFDR), SFDR funds are growing significantly compared to non-ESG counterparts. Flows into Article 8 & 9 funds have significantly outpaced non-ESG, despite the latter representing nearly 2x the number of funds. Based on fund holdings analysis, **this acceleration of flows into SFDR ESG funds will lead to significant impacts on capital flows** away from currently perceived non-ESG friendly sectors towards more ESG friendly sectors in Utilities, Renewables and Industrials, currently most overweight today. Once Article 8 & 9 funds reach critical mass and maturation, we envisage greater differentiation in ESG strategies will open the investable universe for owning companies and sectors in transition (oil & gas, high-carbon industries, etc). Given Article 8 and 9 funds must report alignment to the EU Taxonomy we see inevitable Taxonomy adoption becoming a major catalyst for owning such companies and sectors, helping provide critical capital towards improving sustainable outcomes.

Client feedback indicates significant confusion and difficulty in interpreting and addressing SFDR reporting requirements–we assess Article 8 and 9 funds to explore how major funds are tackling key requirements of SFDR, including Art. 8 & 9 classification; Principal Adverse Impacts; Do No Significant Harm; Good Governance; and reference benchmarks. **Reviewing the implications of the SFDR regulation, disclosure requirements and analysing the various approaches taken across asset managers shows, in a good way, that not all Article 8 or 9 funds are created equal.**

Executive Summary - The new age

Article 8 funds must explain how they promote environmental & social objectives.

Article 9 funds must define how they make 'sustainable investments' as a core objective of the fund, while doing no significant harm to environmental or social objectives.

Across 30 large asset managers, **the penetration of Article 8 and 9 funds has risen from 48% to 66% over the span of a year**

One year on from the launch of the first stage of the European Sustainable Finance Disclosure Regulation (SFDR), SFDR funds are growing significantly. Flows into Article 8 & 9 funds have meaningfully outpaced Article 6 (or 'not stated'), amounting to ~US$902bn into Article 8 & 9 vs ~US$601bn for non-ESG since January 2019 during, despite the latter representing nearly 2x the number of funds.

The increasing penetration and growing AUM of SFDR Article 8 and 9 funds will lead to significant impacts on capital flows and company valuations, given ESG fund holdings differ significantly from non-ESG counterparts. The current movement towards Article 8 & 9 funds comes with notable shifts away from sectors such as Oil, Gas & Consumable Fuels, Metals & Mining and Tobacco, which are significantly underweight in Art. 8 & 9 funds, towards sectors including Water Utilities, Independent Power and Renewable Electricity Producers and Electrical Equipment, which are more overweight in Art. 8 & 9 funds. Once classified as an Article 8 or 9, funds will also need to report fund exposure to the EU Taxonomy, which we see becoming hugely influential to how ESG funds compete and credentialise themselves as green - leading to notable implications for companies' cost of capital and valuations.

While SFDR does not currently preclude Art. 8 or 9 funds from owning any company or sector, the marketing pressure to exclude or underweight certain sectors is likely to remain strong initially, before an eventual period of fund differentation. Once Art.8 & 9 penetration reaches critical mass, we believe we will see greater differentiation in ESG fund strategies such as engagement, transition and improver strategies. This could boost ESG fund ownership for companies / sectors in transition (eg. oil & gas, high-carbon intensive sectors, etc.), while providing necessary capital to help improve sustainability outcomes. We see the EU Taxonomy providing a potential catalyst to ESG fund ownership for transitional companies that meet the performance criteria and can label their revenue or capex as green.

Difficulty and confusion remains for how to address SFDR reporting requirements — we assess Article 8 and 9 funds to explore how major funds are tackling key requirements of SFDR, including 1) classifying Article 8 and 9 funds; 2) incorporating Principal Adverse Impacts (PAIs); 3) conducting Do No Significant Harm analysis; 4) ensuring Good Governance; 5) selecting and disclosing reference benchmarks, and 6) addressing EU Taxonomy reporting.

Potential impending minimum Art. 8 and 9 fund standards and any exclusion requirements could threaten ESG fund innovation and lead to a 'divestment dilemma' that restricts capital from companies that need to transition the most. Strict interpretations or minimum standards that restrict the investable universe, are likely to hurt rather than help global sustainability initiatives, in our view. Instead, the promoted transparency of SFDR could help to lead to market-self policing allowing clients to decide on the credibility of Article 8 and 9 funds, which reduces greenwashing, while still allowing for innovative strategies to evolve (eg. transition or improver strategies).

A word on our analysis and ESG fund holdings data

The recent release of RePowerEU: Joint European action for more affordable, secure, and sustainable energy on the back of recent geopolitical events focuses on security of supply, while accelerating the transition to renewables. It does not delay the phase out of coal and nuclear, and we expect capital markets to forge ahead in their push towards ESG investing, in alignment with RePowerEU. The measures announced do not undermine, but could rather accelerate the efforts of the EU Green Taxonomy or SFDR.

Our ESG fund holdings data is backward looking and may not be reflective of the growing debate around ownership of certain sectors including oil & gas companies or defense companies in ESG funds going forward.

SFDR is setting a clear direction of travel for ESG AUM

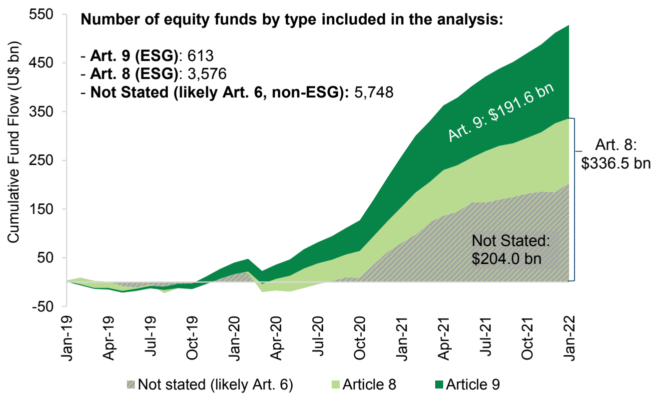
The Sustainable Finance Disclosure Regulation (SFDR) is a disclosure and transparency focused regulation for the asset management industry, requiring funds sold into and created in Europe to be classified as either ESG (Art. 8 or 9) or non-ESG (Art. 6). SFDR requires ESG funds to define how they promote 'E&S characteristics' (Article 8 funds) or make 'sustainable investments' as a core objective of the fund (Article 9). The regulation is currently intentionally vague on the form of what can be considered an Article 8 or 9 fund, and instead focuses on the transparency and function of the ESG components of the financial product, which offers great flexibility for asset managers to define ESG funds as they see fit - yet with new strict disclosure requirements around the ESG strategy, process, data used, limitation, etc. **While the regulation is intended to be a disclosure and transparency regulation first and foremost rather than a fund labeling scheme, many managers are facing difficulty in marketing non-ESG funds (Article 6), which is putting pressure on asset managers to shift nearly all assets towards Article 8 or 9 funds. This has the potential to drive significant shifts in capital flows for sectors and companies that fit in or out of ESG funds, something we explore later in this report under 'Holdings analysis of Article 8 and 9 funds'.**

SFDR has led to pressure on all funds to transition into ESG funds - with impending MiFID II amendments to add further pressure

Asset managers are facing growing demand for ESG funds from 1) end clients and 2) fund distribution platforms, critical gate keepers to flows, **putting mounting pressure on AMs to launch or relabel funds as Art. 8 or 9 in order to capture the rising pool of ESG AUM. From our industry conversations, we continue to hear that asset managers find it difficult to sell and market non-ESG (Article 6) funds.** This demand and pressure for ESG funds are set to grow further under MiFID II sustainability suitability criteria coming into effect Aug 2022, which will require wealth advisors to ask retail clients whether they would like to incorporate sustainability preferences alongside their investment objectives.

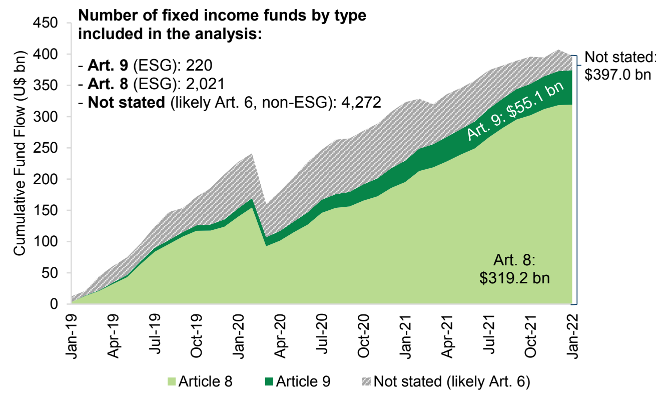
Flows into Article 8 & 9 funds have significantly outpaced Article 6 (or 'not stated') despite the latter representing nearly 2x the number of funds, providing a clear signal to asset managers. Cumulative flows into Article 8 & 9 (labeled as of Feb '22) for both Equity and Fixed Income funds reached ~US$902bn between Jan '19 and Jan '22 (latest avail.), while 'Not Stated' counterparts (likely Article 6) saw inflows of only ~US$601bn during the same period. This was despite the number of Article 6 Equity and Fixed Income funds standing at nearly 2x ESG funds, at 5,748 vs. 3,576 for Article 8 and 613 for Article 9 on the equity funds side, and 4,272 vs. 2,021 for Article 8 and 220 for Article 9 on the fixed income funds side.

Exhibit 1: Cumulative fund flow of Article 8 & 9 Equity funds have outgrown non-ESG counterparts by >2x
Cumulative fund flow of European Equity funds by type (U$bn), Jan 2019 - Jan 2022



Source: Morningstar, Goldman Sachs Global Investment Research

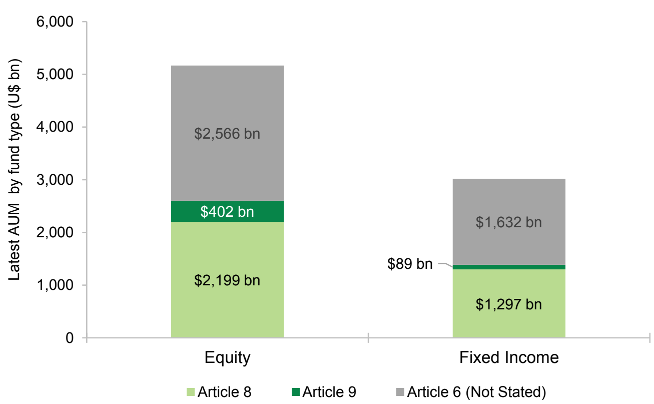
Exhibit 2: Article 8 & 9 Fixed Income cumulative flows have grown since '19, albeit to a lesser degree than non-ESG peers
Cumulative fund flow of European Fixed Income funds by type (U$bn), Jan 2019 - Jan 2022



Source: Morningstar, Goldman Sachs Global Investment

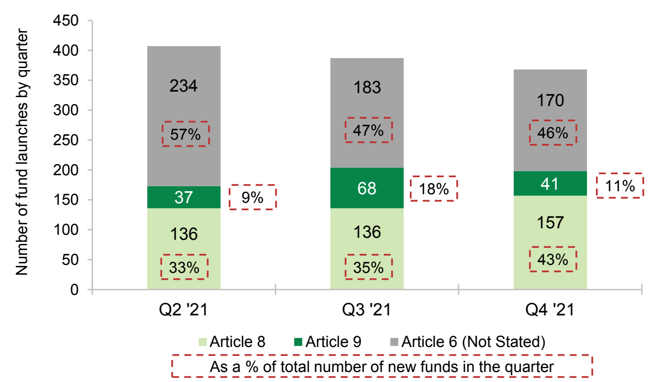
This sends a clear market signal for asset managers to launch and or relabel funds as ESG (Art. 8 & 9) to attract flows. Since the regulation came into effect on March 10, 2021, 429 new Article 8 funds and 146 new Article 9 funds were launched in the EU across equity and FI. In Q4 '21, newly launched Article 8 & 9 funds represented 54% of total newly launched funds in the region (Exhibit 4). However, the majority of Article 8 / 9 funds have been relabeled. According to Morningstar, post March 10, 2021, ~1,800 funds were relabeled to a "greener" tag (from Article 6 to Article 8/9, or from Article 8 to Article 9). **This trend in relabeling funds is corroborated by our industry conversations, where clients have difficulty selling Article 6 funds with some stating end-clients have threatened to take redemptions on Article 6 funds.**

Exhibit 3: Article 8 & 9 funds account for ~$4tn USD...
Breakdown of AUM in the EU, Jan 2022



Source: Morningstar, Goldman Sachs Global Investment Research

Exhibit 4: ... and are taking up a growing portion of new fund launches
Breakdown of new fund launces in the EU, Q2 '21 - Q4 '21



Source: Morningstar, Goldman Sachs Global Investment Research

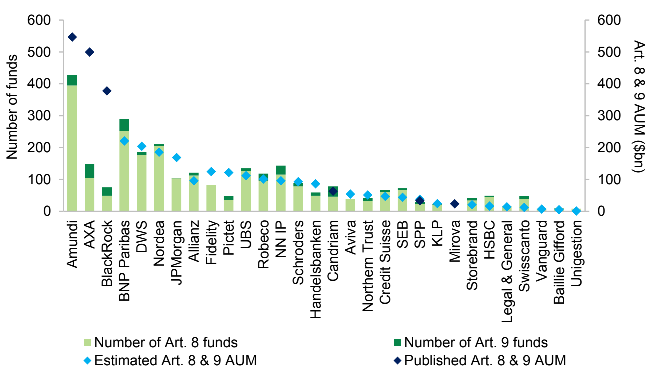
SFDR is leading to further penetration of ESG across all asset managers, with some already at 100%. Taking a sample of 30 asset managers[1], we find a wide range in how much of the total fund assets in scope of SFDR asset managers are classifying as

[1] Morningstar covers 91% of funds avilable for sale in the EU.

article 8 and 9, from a low of 4% to a high of 100%. Across 30 large asset managers, **penetration of Article 8 and 9 funds has risen from 48% to 66% over the span of a year** (Exhibit 6)**.** Looking within ESG funds of the selected pool, Article 8 makes up the vast majority of ESG funds (avg. 84%) while Article 9 funds remain rare (16%). *We recognize that not all asset managers have made final decisions on SFDR fund classifications, so results are likely to change as firms release additional information, particularly where initial percentages may be low.*

Exhibit 5: Number of funds and AUM classified under Article 8 and 9 vary by a large extent...

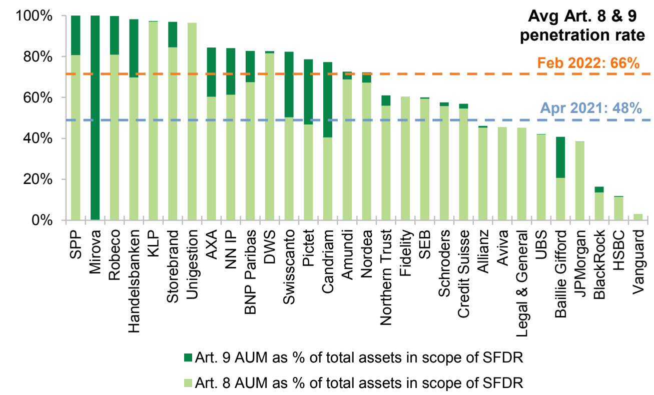
Number of funds and AUM (USD$bn) classified as Article 8 or 9 under SFDR for select asset managers



Source: Morningstar, Company data, compiled by Goldman Sachs Global Investment Research

Exhibit 6: ... while pentration of Article 8 and 9 funds rose to 66% vs. 48% one year ago

Article 8 and 9 Fund Assets as a percentage of total assets in scope of SFDR



Source: Morningstar, compiled by Goldman Sachs Global Investment Research

Dissecting Article 8 and 9 ESG funds

Classifying funds remains one of the most pressing challenges to comply with SFDR, as the regulatory language remains vague for defining Article 8 and 9 criteria. The flexibility of SFDR Article 8 and 9 designations remains underappreciated and is a feature we see as a positive for promoting innovation amongst ESG financial products, while still providing needed transparency to the ESG product space — allowing for end-clients to determine an ESG funds credibility. We analyze the latest SFDR disclosures and ESG fund prospectuses from selected EU asset managers and provide our views on interpreting the underlying disclosure requirements. According to our industry conversations the regulation remains intentionally vague, allowing for great flexibility in how asset managers address key components of SFDR such as 'promote E&S considerations', 'sustainable investments', 'do-no-significant-harm', and 'good governance'.

Looking into fund prospectuses, **we see a range of classification approaches and fund strategies taken by firms, varying in complexity, which is contributing to the difference in outcomes, most notably within Article 8.** At a high level there remains notable differences in how common ESG strategies are employed across Article 6, 8, and 9 funds. Unsurprisingly, we see a greater intensity of Article 9 funds integrating ESG factors, incorporating engagement strategies, and incorporating impact strategies. Notably, Article 8 and 9 funds employee exclusions across 83% and 90% of funds, respectively, significantly higher than Article 6 funds at 27% - the most common exclusions include tobacco, thermal coal, and controversial weapons. **Amongst both Article 8 and 9 funds, environmental strategies (or low carbon) remain dominant, while social strategies are deployed at a fraction of their environmentally focused counterparts.** For example, in Article 9 funds, community development strategies are deployed in 19% of funds, with only 5% deploying gender & diversity strategies vs. 37% employing environmental or 47% employing low carbon / fossil-free strategies.

EMSA's Sustainable Finance Roadmap indicates upcoming efforts to create minimum sustainability criteria, or a combination of criteria for financial products that disclose under Article 8 and ensure consistent guidance across member state regulators.

Exhibit 7: Overview of ESG strategies used among Article 6, 8, and 9 equity funds

	Total count of funds by type	ESG Incorporation	ESG Engagement	Impact Fund Overall	ESG Benchmark	Low Carbon/ Fossil-Fuel Free	Environmental	Gender & Diversity	Community Development	Exclusions - Overall	Applied exclusion themes					
											Alcohol	Controversial Weapons	Gambling	Nuclear	Thermal Coal	Tobacco
# of Art. 6 equity funds by strategy	**5,748**	279	279	1,336	92	94	27	2	13	1,562	107	1,394	154	63	697	578
As % of total # of Art. 6 equity funds	*100%*	*5%*	*5%*	*23%*	*2%*	*1.6%*	*0.5%*	*0.0%*	*0.2%*	*27%*	*2%*	*24%*	*3%*	*1.1%*	*12%*	*10%*
# of Art. 8 equity funds by strategy	**3,576**	1,914	2,073	884	392	742	145	16	76	2,953	558	2,609	870	484	2,199	2,234
As % of total # of Art. 8 equity funds	*100%*	*54%*	*58%*	*25%*	*11%*	*21%*	*4%*	*0.4%*	*2.1%*	*83%*	*16%*	*73%*	*24%*	*14%*	*61%*	*62%*
# of Art. 9 equity funds by strategy	**613**	526	429	442	96	286	224	32	114	550	161	482	246	159	456	472
As % of total # of Art. 9 equity funds	*100%*	*86%*	*70%*	*72%*	*16%*	*47%*	*37%*	*5%*	*19%*	*90%*	*26%*	*79%*	*40%*	*26%*	*74%*	*77%*

Article 6 = (Not Stated)

Source: Morningstar, Goldman Sachs Global Investment Research

Principal Adverse Impact (PAI), Do No Significant Harm (DNSH) and Governance disclosure strategies follow suit with a wide range of strategies, while Taxonomy disclosures remain limited due to lack of data. Some asset managers don't consider

PAI yet as regulatory rules are unfinished, only apply DNSH to partial investments and/or assess governance on a qualitative basis. Others conduct multi-level monitoring of all mandatory PAIs with a thorough engagement process, apply DNSH criteria across all investments with detailed disclosures and use a multi-step assessment reflecting widely recognized industry-established norms with remediation efforts for companies that lack sufficient data. **We have begun to see early fund-level reporting examples of the Taxonomy, however the majority of funds have yet to disclose Taxonomy alignment given fund-level reporting requirements start Jan 1, 2023.**

In this section, we assess the spectrum of approaches used across different asset managers for 1) overall fund classification strategy; 2) Principal Adverse Impact identification; 3) Do No Significant Harm analysis; 4) Good Governance assessment; and 5) Benchmark selection.

Interpreting the requirements - qualifying Article 8 or 9 ESG funds

When it comes to classifying funds under Article 8 or 9, SFDR offers great flexibility for asset managers to self define, stating:

- **Article 8 ('light green') -** The financial product **promotes, among other characteristics, environmental or social characteristics**, or a combination of those characteristics, provided that the companies in which the investments are made follow good governance practices. For Article 8 funds, promoting E/S characteristics can be achieved without any sustainable investments, or through sustainable investment, which are defined via the three methods below.

Article 8 and 9 funds must make pre-contractual disclosures AND periodic and website based disclosures.

- **Article 9 ('dark green') -** The financial **product has sustainable investment as its objective,** and Article 9 funds need to specify in pre-contractual disclosures how they will attain such objective and how they ensure investments 'do-no-significant-harm'. **There are effectively three ways to define "sustainable investment" under article 9:**
    a. an environmental objective, as covered by the EU Taxonomy
    b. an environmental objective that falls outside the Taxonomy, where asset managers can define the environmental objective as they see fit
    c. or a social objective, defined as the asset managers see fit (given a social Taxonomy is not yet finalised.

Exhibit 8: Overview of key steps and disclosures for qualifying Article 8 and 9 funds

Step 1. Fill in the template and indicate the strategy

Does this financial product have a sustainable investment objective? *[tick and fill in as relevant, the percentage figure represents the minimum commitment to sustainable investments]*

Art. 9 funds

Must have at least one of the two minimum commitment figure >0%

☐ **Yes**

☐ It will make a minimum of **sustainable investments with an environmental objective**: ___%

1 ☐ in economic activities that qualify as environmentally sustainable under the EU Taxonomy

2 ☐ in economic activities that do not qualify as environmentally sustainable under the EU Taxonomy

3 ☐ It will make a minimum of **sustainable investments with a social objective**: ___%

☐ **No**

☐ It **promotes Environmental/Social (E/S) characteristics** and while it does not have as its objective a sustainable investment, it will have a minimum proportion of ___% of sustainable

1 ☐ with an environmental objective in economic activities that qualify as environmentally sustainable under the EU Taxonomy

2 ☐ with an environmental objective in economic activities that do not qualify as environmentally sustainable under the EU Taxonomy

3 ☐ with a social objective

4 ☐ It promotes E/S characteristics, but **will not make any sustainable investments**

Art. 8 funds

Can be 0%, i.e., the fund does not have a minimum commitment

If the fund does have sustainible investments, can disclose actual share in periodic report

Step 2. Define approach

For Art. 9 funds:

What sustainability indicators are used to measure the attainment of the sustainable investment objective of this financial product?

For Art. 8 funds:

What sustainability indicators are used to measure the attainment of each of the environmental or social characteristics promoted by this financial product?

Step 3. Specify process on DNSH, PAI consideration and Governance assessments

Art. 8 & 9 funds need to disclose

- How did the sustainable investments not cause significant harm to any E or S objective?
- How does the financial product consider principal adverse impact on sustainability factors?
- What is the policy to assess good governance practices of investee companies?

For Art. 8 funds:

The DNSH disclosure is only applicable to those funds that make sustainable investments

Step 4. Disclose on EU Taxonomy

Art. 8 & 9 funds need to disclose

- How and to what extent investments qualify as environmentally sustainable under the EU Taxonomy?
    - Report both Taxonomy eligibility and alignment, including breakdown of investments in transitional and enabling activities
    - In the periodic reports, also indicate how did the Taxonomy alignment level compare to the previous periods

Numbered orange circles point to strategies allowed for Article 8 & 9 funds

Source: European Commission, Goldman Sachs Global Investment Research

Exhibit 9: Website product disclosure requirements for Article 8 and 9 funds

Article 32 & Article 45

Website product disclosure for financial products referred to in Article 8(1) and Article 9(1), (2) and (3) of Regulation (EU) 2019/2088

Article 8

a) Summary
b) No sustainable investment objective
c) Environmental or social characteristics of the financial product
d) Investment strategy
e) Proportion of investments
f) Monitoring of environmental or social characteristics
g) Methodologies
h) Data sources and processing
i) Limitations to methodologies and data
j) Due diligence
k) Engagement policies
l) where an index is designated as a reference benchmark for the purpose of attaining the environmental or social characteristics promoted by the financial product, 'Designated reference benchmark

Article 9

a) Summary
b) No significant harm to the sustainable investment objective
c) Sustainable investment objective of the financial product';
d) Investment strategy
e) Proportion of investments
f) Monitoring of sustainable investment objective
g) Methodologies
h) Data sources and processing
i) Limitations to methodologies and data
j) Due diligence
k) Engagement policies
l) Attainment of the sustainable investment objective

Source: European Commission

Suggested minimum criteria for Article 8 and 9 products from NGOs

On Feb 21, 2022, a group of NGOs and consumer organisations, including the WWF and ShareAction, jointly published a position paper, setting out recommendations for minimum criteria for Article 8 and 9 products under the SFDR. **Proposed minimum criteria for Article 8 & 9 funds include:**

1) mandating a minimum proportion of the EU Taxonomy alignment for products pursing an environmental objective;

2) developing a measurable and time-bound engagement and escalation strategy and disclose outcomes;

3) setting minimum exclusions for Article 8 and ensuring more ambitious exclusions for Article 9 products; and,

4) building an impact measurement framework to help evidence the impact of Article 9 funds in the real economy (including encouraging or enabling company adoption of sustainability practices).

Additionally, the group also suggested broadening the scope of SFDR to include all financial instruments, and strengthening the EU and national supervisory authorities' enforcement and supervisory powers with regard to Article 8 & 9 compliance.

Article 8 Funds strategy overview - assessing existing approaches

Frustration over simplistic Article 8 funds mount. Given the low threshold for achieving Article 8 status, which can include simple exclusions, and which appears currently acceptable according to the EU Commission, many asset managers have called for minimum standards, or are promoting a new market-defined label of **Article 8 +** funds which incorporate a 'sustainable investment' objective in addition to 'promoting E&S considerations'. Morningstar, which maintains its own designation of ESG funds based on fund prospectus language, has removed over 1,200 funds with $1.4tn in AUM from its European sustainable investment list, most of which are self-declared Article 8 funds, while giving ESG credit to 936 Article 6 funds with over $0.2tn in AUM.

Our view of a credible Article 8 fund: *A fund that promotes E&S considerations by incorporating ESG risks / opportunities into the investment process, with additional exclusions or engagement strategies adding further credibility. Exclusion-only funds may not meet the upcoming ESMA minimum standards for Article 8 and therefore may be difficult to market credibly to end-clients.*

Exhibit 10: We see a wide spectrum of approaches used to 'promote E&S characteristics' under Article 8

Article 8 classfication approaches taken by different asset managers

Article 8 Classification Approach		Example	Level of Sophistication Spectrum
Exclusion		**Exclusionary criteria** include: Controversies (products and conducts) and exposure to fossil fuel.	Less
ESG Scoring	Investment Universe Limitation	Set a **minimum threshold** (50% or 70%) to invest in **issuers rated by ESG rater**, or by proprietary rating in the absence of a third-party rating	
ESG Scoring	Scoring Enhancement	Achieve an **ESG score of its portfolio greater than that of the Benchmark**, and aims to invest in all or a certain level of ESG Rated securities (e.g. 90% in some funds checked)	
Exclusion + ESG Scoring		- **Exclude** issuers exposed to thermal coal and UN Global Compact violators - **Tilt towards issuers ranked higher on selected ESG criteria** and green bond issues - **Underweight**/exclude lower ranking issuers	
Exclusion + ESG Scoring + Engagement		- Apply norm-based and sectoral **exclusions** - Apply **proxy voting** in line with the firm's Stewardship policy - **Limit investments in companies with an elevated sustainability risk profile**	
Enhanced exclusion + ESG Scoring + Scenario-aligned Policy + Thematic Strategy + Active Ownership & Engagement		**All Art.8 funds meet the below four criteria...** - **Norms-based Screening & Exclusion**: involvement in coal mining, nuclear weapons, cluster munitions, anti-personnel mines, oil sand, violation of human rights, depleted uranium ammunition - **Principal Adverse Impact integration**: currently evaluates GHG emissions, Biodiversity, Water, Waste, Social and Employee matters and Human rights - **Paris Aligned Fossil Fuel Policy**: sets thresholds for companies' exposure to fossil fuel production, distribution and services; excludes those that exceed the thresholds if they do not have a documented transition strategy that aligns with the Paris agreement - **Enhanced exclusion filters** and other limits: assess a company's involvement in a specific activity measured by the revenue derived from this activity **...With some meeting one or more of below additional criteria** - **Active Ownership & Engagement** - **Proprietary ESG scoring**: select those scoring high on proprietary ESG scoring system, taking SDG alignment into consideration and analysing risks using SASB materiality map - **Thematic ESG strategies**	More

Source: Company data, Goldman Sachs Global Investment Research

Article 9 fund strategy overview - assessing existing approaches

Interpretation of what should be defined as Article 9 funds appears to have greater consensus, with most asset mangers tagging funds with **thematic / impact investment strategies**, **such as climate transition, SDG alignment, EU Taxonomy alignment**, and or products with **specific ESG fund targets** such as carbon footprint objectives, and greater ESG scores than the benchmark. We note that the level of sophistication of Article 9 funds still varies as asset managers leverage different tools to measure the ESG performance or contribution of a fund, with some adopting off-the-shelf solutions, while others utilize proprietary frameworks. The SDGs and EU Taxonomy serve as two of the clearest solutions for defining 'sustainable investments', but are not the only available methods.

Our view of a credible Article 9 fund: *A fund that can clearly articulate how a quantitative KPI or structured qualitative framework is used to qualify how a company meets an environmental objective (either Taxonomy-aligned, or self-defined) or social objective (self-defined), while ensuring companies do-no-significant-harm (either related to Taxonomy or self-defined DNSH criteria), while incorporating components of the PAIs, and shows a framework for defining good governance practices.*

Exhibit 11: Current Article 9 funds have more consensus around defining a 'sustainable investment'

Article 9 classfication approaches taken by a sample of asset managers

Article 9 Classification Approach		Example
Thematic		**Sustainable Themes** include: - Climate (solar energy, wind power, smart grids + infrastructure) - Sustainable cities (water, urban planning, accessibility) - Sustainable consumption (recycling & circular economy, sustainable products, eco-design) - Empowerment (access to digital services, health services and financial services)
Specific Targets	Best-in-class	**KPIs** include: - Carbon footprint (Scope 1 & 2 at start) Target: Fund footprint < 70% of the benchmark footprint - Environmental Performance Index Target: Fund > benchmark - ESG Score Target: Fund > benchmark - Controversy Score: Fund < benchmark
	Alignment to: SDGs Taxonomy Climate Agenda	**Contribution to SDGs**: - Invest mainly (i.e. >50% of the fund's net assets) in companies with >50% revenues contributing to selected SDGs **Alignment to EU Taxonomy**: - Invest predominantly (e.g. 70%) in companies that are substantially involved in economic activities that are considered environmentally sustainable according to the EU Taxonomy - For the four objectives of the EU Taxonomy where technical criteria do not currently exist, the fund uses the environmentally themed SDGs as a guideline **Climate Agenda:** - Invest in companies with products and services that are deemed to directly contribute positively to the fulfilment of one or several of the targets in Agenda 2030

Source: Company data, Goldman Sachs Global Investment Research

How GS SUSTAIN ESG data can help

We offer tools that can be helpful for investors to assess ESG risks or opportunities and good governance via our ESG framework and help define 'sustainable investments' through our SDG-alignment and EU Taxonomy-alignment datasets.

Please reach out to the GS SUSTAIN team or a GS sales rep for more detail or options to access our available ESG datasets.

Principal Adverse Impact (PAI) disclosure overview - assessing existing approaches

Entity-level disclosures on Principal Adverse Impacts (PAI) requiring asset managers, financial and insurance advisers, otherwise known as financial market participants (FMPs), to make entity-level disclosures on how the firm assesses principal adverse impacts (i.e. ESG risks) and establishes fund-level disclosures on a '**comply or explain**' basis.

At a product-level for Art. 8 & 9 funds, following the initial phase of SFDR, FMPs will then have to start following product-specific disclosures required under the SFDR RTS starting in 2023, **requiring mandatory reporting of PAI on the 14 ESG metrics** (+2 for Real Estate, +2 for sovereigns), **and choice of 2 from a list of 46 optional metrics** (see Appendix Exhibit 30 and Exhibit 31).

Exhibit 12: Disclosure requirements around Principal Adverse Impact consideration

Article 14a & Article 22

Identification of principal adverse impact consideration section for Article 8 and Article 9 funds

The section referred to in point (b) of Article 13(3) and point (b) of Article 20(3) shall:

(a) explain whether the financial product considers principal adverse impacts on sustainability factors;

(b) explain how such principal adverse impacts are considered; and

(c) include a statement that information on principal adverse impacts on sustainability factors is available in the information to be disclosed pursuant to Article 11(2) of Regulation (EU) 2019/2088.

Source: European Commission

Practices around PAI assessments vary across market. Many asset managers are not considering PAIs currently as the regulation is yet to be finalised, or because they state that they lack credible data to do so. Most asset managers that do monitor PAIs are either disclosing a subset of the 14 mandatory metrics, or are only assessing them qualitatively. At the other end of the spectrum, we see a few asset managers building multi-level assessment process for the PAI indicators, disclosing the rationale behind their methodology, and forming engagement strategies following the assessment.

Our view of PAIs: *PAI indicators serve as a sort of "nutrition label" for ESG funds, requiring disclosure of a standard list of 14 E&S KPIs. However, they do not require the meeting of any thresholds vs. peers, or the benchmark. In our view, end-investors should not shy away from certain ESG funds simply because of their initial PAI assessment. For example, climate transition funds may screen poorly on E-related KPIs, such as carbon emissions or exposure to fossil fuel activities, yet the strategy and engagement with companies can serve as suitable methods for promoting E&S considerations and defining sustainable investment objectives. However, difficulties may exist marketing funds to end-clients that do not appreciate the nuances of ESG strategies, and over-index on the PAIs as a signal for ESG strategy and performance.*

Exhibit 13: PAI assessment approaches taken by asset managers

PAI Assessment Approach		Example	Level of Sophistication Spectrum
Currently not in consideration		Currently not in a position to consider PAIs due to a lack of available and reliable data. *or* Currently does not consider PAIs as the regulatory rules have not yet been finalised.	**Less**
Partial monitoring	**Consideration only**	- Currently considering part of the 14 PAIs, and stating that **PAIs are reduced by excluding certain categories** of issuers.	
Partial monitoring	**Quantitative disclosure**	- **Currently disclosing part of the 14 PAIs** (those with better corporate disclosure or more reliable estimated data) - For the full range of principal adverse impact indicators, the asset manager has **set a specific deadline for reporting**	
Multi-level monitoring and engagement processes		**Step 1:** Each investee company is **assessed on the considered PAI indicators** **Step 2:** Each company is **ranked on their PAI indicator performance, both for individual indicators as well as across indicators** *- Steps 1 and 2 apply a combination of multiple datapoint values, scores and weights sourced from several data providers.* *- The indicator importance is prioritised according to parameters reviewed, including data quality, data freshness and history, data coverage, aspects of the methodology of the data providers, the materiality of the indicator's subject matter, and divergence of indicator values* **Step 3:** The output of steps 1-2 **results in a flag** indicating the performance of each investee company **Step 4:** Companies flagged for poor performance by the model, either overall or on individual indicators, are then **analysed by the asset manager's Responsible Investment team**. **Step 5:** If relevant, the cases will be **escalated to the Responsible Investment Committee**, who will decide on the appropriate action: Engagement, Exclusion or No Action.	**More**

Source: Company data, Goldman Sachs Global Investment Research

Do No Significant Harm (DNSH) - assessing existing approaches

All 'sustainable investments' within Article 8 and 9 funds must not significantly harm any environmental or social objectives, meaning that the DNSH assessment applies to effectively all Article 9 funds and Article 8 funds with an 'SI' (Article 8+). **There are two options for satisfying the DNSH criteria - 1)** where funds use the EU Taxonomy to define 'sustainable investments' they have to satisfy the specific DNSH principle set forth by the EU Taxonomy; while **2)** the portion of 'sustainable investments' not using the Taxonomy can follow the approach self-defined by the asset manager (with recommendations to reference the PAIs).

Template disclosure around DNSH for Article 8 & 9 funds

- *How do the sustainable investments that the financial product partially intends to make, not cause significant harm to any environmental or social sustainable investment objective? [include this question where the financial product includes sustainable investments]*
  - *How have the indicators for adverse impacts on sustainability factors been taken into account?*
  - *How are the sustainable investments aligned with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights?*

Among the prospectuses we have reviewed, disclosures around DNSH assessment lack details in the case of many asset managers. Most Article 8 funds do not make mention of DNSH, or do not elaborate on their processes to ensure DNSH. While all Article 9 funds are required to incorporate DNSH into their investment processes for defining 'sustainable investments', we have seen only a few starting to lay out the steps involved, including the limiting of the investable universe through sector exclusions and international standard breaches, and negative screening through controversy research.

Exhibit 14: DNSH assessment approaches taken by asset managers

DNSH Assessment Approach & Scope	Example	Level of Sophistication Spectrum
Statement with no detail (Article 8)	- The fund embraces the 'do no significant harm' in its investments	Less
Applicable to partial investments (Article 8)	- The DNSH principle **applies only to those investments with the fund that take into account the EU criteria for environmentally sustainable economic activities**. - The remaining portion of the fund do not take into account the EU criteria for environmentally sustainable economic activities.	
Applicable across all investments (Article 9)	**All investments are assessed** to establish any detrimental impacts and compliance with global standards on environmental protection, human rights, employment practices and anti-corruption measures.	
Assessed across all investments, with detailed disclosure (Article 9)	Exposure to those activities that are harmful or have a negative effect on sustainability matters are **significantly reduced as a part of the investment process**, from investable universe creation to portfolio construction. - The investible universe is screened against **adherence to the UNGC and OECD Guidelines using an external research provider**. If a company is found to be in breach with any of the principles: it will be excluded from the investible universe If a company is flagged for potential breaches: it is placed on a watch list and the asset manager will monitor and engage with the company, as appropriate. - For all investments, **security-level ESG analysis** would assesses corporate behaviour in light of global environmental and social standards and norms, **leveraging data from ESG controversy research**.	More

Source: Company data, Goldman Sachs Global Investment Research

Good Governance - assessing existing approaches

SFDR requires FMPs to describe their policies for assessing good governance practices, including assessing management structure, employee relations, remuneration of staff and tax compliance.

Template disclosure around Good Governance for Article 8 & 9 funds

- What is the policy to assess good governance practices of the investee companies?

As is the case with sustainable investments' primary objectives, the governance requirements are more process-focused than prescriptive in nature, leaving room for varied approaches and the level of sophistication to interpretation. Some asset managers analyze governance only qualitatively, while a few have designed comprehensive process to assess investee companies' governance practices, specifying proxy metrics identified, and remediation efforts if lacking sufficient data, and detailing actions towards companies that fail the assessment.

We also note that the European Securities and Markets Authority (ESMA) plans to contribute, as needed, to the legislative process on Sustainable Corporate Governance through 2022-2023.

Exhibit 15: Governance assessment approaches taken by asset managers

Governance Assessment Approach	Example	Level of Sophistication Spectrum
Qualitative assessment	**Qualitatively assess governance aspects of a target issuer** such as, as applicable, the ongoing production of financial statements, including information on sound management structure, remuneration, employee relations as well as legal and tax compliance issues.	Less
Quantitative assessment	**Governance is monitored and measured initially through the proprietary ESG dataset** and complemented by ad hoc analysis: - Specific governance indicators include Board independence, composition and skills, minority shareholder treatment and executive remuneration. - Corporate behaviour indicators cover accounting practices, tax issues and antibribery measures.	
Multi-step assessment and efforts	**Assessment Process:** Selected seven metrics for the Governance assessment, reflecting widely recognized industry-established norms: - Employee Relations (compliant with the 3rd principlal on labour relations on the UNGC and is not on the noncompliance list) - Management Structure: Bribery Corruption, and Business Ethics; Accurate Reporting to Markets and the broader Public; Board Oversight on Functioning of Management; Breaches of shareholder rights and Governance incidents - Tax compliance (no significant controversies on Taxation and Accounting) - Remuneration: Consistent Remuneration issues *For each metric above, data source and the required/allocated weight is specified **Remediation efforts for companies that lack sufficient data**: 1) data vendors are approached to increase data coverage where needed 2) data is collected from public company documentation, management engagement or other reliable sources *On an annual basis missing data is tested and reviewed **Actions towards companies that fail the Good Governance Test:** **1) Divestment:** The ineligible instruments should be divested within three months after the outcome of the Good Governance Test has been approved. **2) Engagement:** The portfolio manager can choose to submit a request for engagement within 30 days. Such request must be approved by the Controversial Behaviour Committee and supported by Active Ownership department, determining that a credible case can be made that engagement can lead to improved Governance practices and a positive assessment within one year.	More

Source: Company data, Goldman Sachs Global Investment Research

Benchmarking under SFDR - assessing existing approaches

SFDR recommends Article 8 & 9 follow a specified equivalent ESG benchmark, but does not require them except for Article 9 funds with a decarbonisation strategy (to specify a climate transition or Paris-aligned benchmark). ESMA asks for disclosure of process, including how the reference benchmark is aligned with promoted environmental or social characteristics, how alignment between the benchmark and the investment strategy is ensured, and how the benchmark differs from a relevant broad market index.

We note that broader/general indexes are still the dominant choice of benchmarks for Article 8 & 9 funds. Based on our analysis (Exhibit 7), 392 of the 3,576 Article 8 funds (~11%) have specified an ESG benchmark as of January 2022, while 16% of Article 9 funds have an ESG reference index.

Template disclosure around reference benchmarks for Article 8 & 9 funds

- **For Article 8:** Is a specific index designated as a reference benchmark to determine whether this financial product is aligned with the environmental and/or social characteristics that it promotes? *[include section where an index has been designated as a reference benchmark for the purpose of attaining the environmental or social characteristics promoted by the financial product and indicate where the methodology used for the calculation of the designated index can be found]*

- ***For Article 9:*** Is a specific index designated as a reference benchmark to meet the sustainable investment objective? *[indicate where the methodology used for the calculation of the designated index can be found]*
- **For Article 8 & 9 if a specific index has been referenced:**
  - How is the reference benchmark continuously aligned with each of the environmental or social characteristics promoted by the financial product?
  - How is the alignment of the investment strategy with the methodology of the index ensured on a continuous basis?
  - How does the designated index differ from a relevant broad market index?

Relevance of the EU Taxonomy to SFDR reporting

The EU Taxonomy is set to become the most influential ESG capital market regulation in Europe, driving increased international spillover and mounting pressure for non-EU companies to voluntarily disclose Taxonomy alignment, in our view. **EU Taxonomy reporting implications of SFDR classification are still underappreciated.** Starting January 1, 2023, Article 8 and 9 funds will need to report 'how and to what extent' underlying investments qualify as Taxonomy-eligible and aligned per Article 5 and 6 of the Taxonomy regulation. How to do this is detailed in the SFDR RTS Article 16a&b. *Please see the Appendix for disclosure requirements around Taxonomy for Article 8 & 9 funds set out by ESMA (Exhibit 32).*

While the majority of funds have yet to disclose Taxonomy alignment owing to, in their words, insufficient credible data, we have begun to see early examples of Taxonomy reporting leading up to the 2023 start for fund-level reporting.

Mounting pressure & incentives for ESG funds to align with the Taxonomy. We see the EU Taxonomy becoming hugely influential to ESG funds, and believe it is likely to become a 'label' that ESG funds compete around to credentialise themselves as green - leading to upward pressure on owning companies aligned to the Taxonomy. **We see three main areas of pressure that should lead to Taxonomy adoption and focus for ESG funds:**

1) Regulatory reporting requirements for Article 8 and 9 funds,

2) Market pressure to report Taxonomy details is coming from end-investors, fund distribution platforms, fund ecolabels, and MiFID II amendments, regardless of whether the EU Taxonomy is part of the investment strategy or not.

- EU Ecolabels and minimum ESG fund standards are likely to require a minimum threshold of Taxonomy-alignment to be attained. Any future labels or sustainability investment benchmarks or standards must incorporate the Taxonomy, such as the EU Ecolabel for retail ESG funds, which may require a threshold of Taxonomy alignment to attain the label.
- MiFID II sustainability suitability criteria explicitly mention Taxonomy-aligned

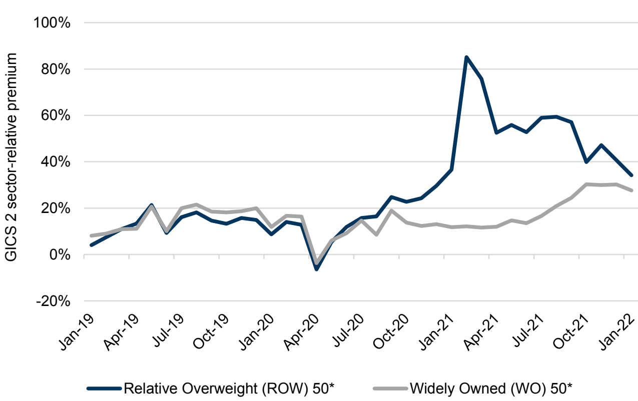
products as a potential option for meeting retail clients' sustainability preferences. This comes into effect in August 2022.

3) Direct financial incentives exist for a large group of ESG funds to achieve higher levels of Taxonomy alignment.

- Luxembourg funds - UCITS and Part II UCIs pay subscription tax rate of 0.05% on their net assets, which may be reduced up to 0.01%, depending on the level of a fund's Taxonomy-alignment (%).
- According to our ESG fund holdings data, **Luxembourg accounts for 36% of all ESG AUM domiciled in Western Europe, and 28% of global ESG AUM, the single largest location of ESG funds by any country.**

Exhibit 16: The reward of higher equity multiples is clear for Taxonomy/ ESG alignment...

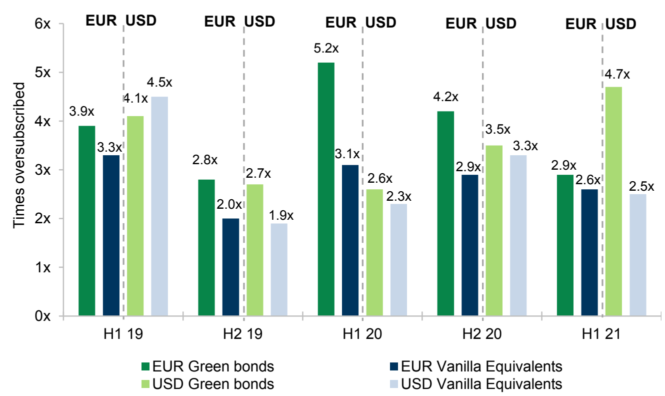
Trimmed mean 12m fwd consensus EV/EBITDA vs. ACWI GICS 2 peers



Source: Morningstar, Thomson Reuters, FactSet, Goldman Sachs Global Investment Research

Exhibit 17: ...along with greater demand for Green Bonds vs. vanilla equivalents

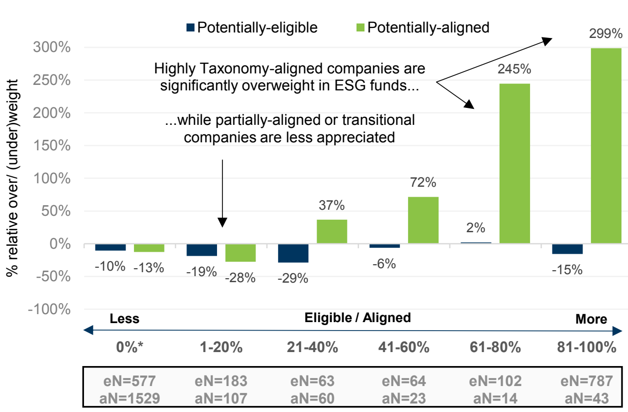
Average rate of oversubscription for Green vs. vanilla bonds for EUR and US, 2019 H1 - 2021 H1



Source: Climate Bonds Initiative, Goldman Sachs Global Investment Research

Exhibit 18: Clear Taxonomy-aligned companies correspond to greater weights in ESG funds...

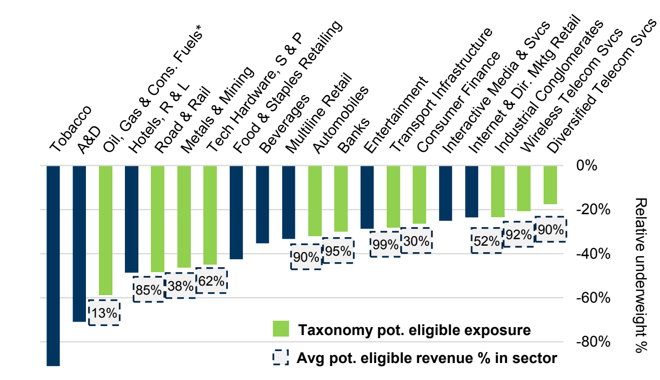
ESG funds' relative weight for eligible/aligned rev groupings, Oct 2021



Source: Morningstar, Goldman Sachs Global Investment Research

Exhibit 19: Many of the most underweight industries in ESG funds are Taxonomy-eligible, presenting potential upward opportunity

GICS 3 industries most relatively underweight in ESG funds, Oct 2021, with avg. eligible revenue % in exposed sectors



*The Oil & Gas industry has some exposure to low-carbon activities (chemicals, renewables, bio fuels, etc.) defined under the Taxonomy.

Source: Morningstar, Goldman Sachs Global Investment Research

Other Considerations - Use of derivatives and short-selling under SFDR and Taxonomy

Treatment of Derivatives. Derivatives can be used to attain the E or S characteristics promoted by Article 8 funds, or sustainable investment objectives for Article 9 funds. In these cases, asset managers are required to explain how they used derivatives to achieve such goals under Article 16 and 24. With regard to Taxonomy reporting, the regulation has specified that derivatives exposures should be excluded in the numerator when calculating Taxonomy alignment of investments currently. This will be reviewed in 2024. However, we note that entities could make additional Taxonomy disclosures on a voluntary basis taking derivatives into consideration, as long as their use and any estimates or proxies are clearly identified.

Short selling is permitted for EU Taxonomy reporting, but guidance is limited for treatment under SFDR. For Taxonomy reporting the alignment calculation should be netted, applying the methodology used to calculate net short positions laid down in Article 3, paragraphs 4 and 5 of Regulation (EU) No 236/2012 (EU Short Selling Regulation). Currently the treatment of short selling for SFDR requirements such as classifying E&S considerations or defining 'sustainable investments' or for PAI reporting is not currently covered. We would expect short-selling to be covered under SFDR treatment for these requirements given the lack of explicit mention and also allowance for EU Taxonomy reporting which tends to be much stricter.

The European ESG Template (EET) - An emerging template for SFDR fund-level reporting

From our industry conversations, we have heard that many funds managers are being required to fill in the EET before their funds can be listed on distribution platforms.

The European ESG Template aims to establish a common standard for fund-level ESG reporting, reflecting regulatory requirements from SFDR (Level 1 and RTS), MiFID II and Insurance Distribution Directive (IDD). The first draft version was published on 4 February 2022, and was open for consultation until 25 February 2022. The final version is expected to allow enough time for templates to be completed by 1 June 2022.

Within the voluntary EET, investment products classified under Articles 8 and 9, including funds, pensions and managed portfolios, will be required to make disclosures on PAIs and screening criteria if used in investment policies. In addition, the EET includes country-specific fields for France and Germany, and a section for ESG disclosure in the UK. The template will also ask financial advisors to disclose their strategy for integration of sustainability risks. The goal is to give distributors insight into the sustainability profile at the product-level, to assist their recommendations to clients.

This template can also be used to meet future requirements for prospectuses and annual reports. While it is expected to meet requirements for SFDR and the EU Taxonomy, it can also likely be used to meet other regulations, including MiFID requirements for ESG preferences in suitability considerations.

EET cannot be fully implemented until the SFDR RTS have been adopted by the European Commission, so the SFDR RTS delay from July 2022 to January 2023 will likely push back the go-live date for EET. Once live, the European ESG Template is expected to become industry standard in order to standardize fund reporting under SFDR and ease usability and implementation across the investment value chain.

Holdings analysis of Art. 8 & 9 equity funds

Holdings Implications for Investors and Companies:

Our analysis of Articles 6, 8 and 9 funds shows that **there are significant differences in company / sector exposures across each type of fund, which will likely have a meaningful influence on capital flows and company valuations as the penetration and growth of ESG AUM continues.** Some sectors widely regarded as not ESG-friendly, including Tobacco and Aerospace & Defense (albeit debated now), are consistently relatively underweight among ESG and non-ESG funds. Others, including Oil, Gas and Consumable Fuels, Airlines, and Metals & Mining are significantly more relatively underweight in Art. 8 & 9 funds compared to Article 6. As a result, the acceleration of flows and transition into Art. 8 & 9 funds will likely lead to strong flows away from these emissions-intensive sectors, towards Water Utilities, Independent Power and Renewable Electricity Producers and Electrical Equipment.

Our ESG fund holdings data is backward looking and may not be reflective of the growing debate around ownership of Oil & Gas companies or Defense companies in ESG funds going forward.

Fund Holdings Insights:

We dig into Article 8 and 9 funds to identify sectors that appear to be most-preferred among ESG investors, based on the constituents of 3,500+ Article 8 funds and 600+ Article 9 equity funds. Diversified Consumer Services (includes Educational Services) are most relatively overweight vs. the benchmark, versus other GICS 3 sectors for **both Article 8 and Article 9 funds,** at 1,150% and 2,224% relatively overweight respectively. **Other common overweights amongst Article 8 & 9 funds** include Water Utilities (+146% Art. 8, +1,550% Art. 9), Paper & Forest Products (+233% Art. 8, +493% Art. 9) and Building Products (+173% Art. 8, +489% Art. 9) (Exhibit 20). **Sectors that are consistently most underweight amongst both Article 8 & 9 funds** include **Tobacco** (-93% Art. 8, -100% Art.9), **Aerospace & Defense** (-79% Art. 8, -91% Art. 9), **Oil, Gas & Consumable Fuels** (-70% Art. 8, -84% Art. 9) and **Tech Hardware, Storage & Peripherals** (-62% Art. 8, -71% Art. 9) (Exhibit 21).

Article 8 sectors most overweight include Diversified Consumer Services (+1,150%), Paper & Forest Products (+233%), Health Care Technology (+202%), Auto Components (+188%), Construction & Engineering (+178%), and Building Products (+173%).

Article 8 sectors most underweight include Tobacco (-93%), Aerospace & Defense (-79%), Oil, Gas & Consumable Fuels (-70%), Tech Hardware, Storage & Peripherals (-62%), Metals & Mining (-51%), Automobiles (-50%) and Road and Rail (-44%).

Article 9 sectors most overweight include Diversified Consumer Services (+2,224%), Water Utilities (+1,550%), Independent Power & Renewable Electricity Producers (+831%) and Electrical Equipment (+546%), with 11 total sectors being over 200% overweight in these funds, as shown below.

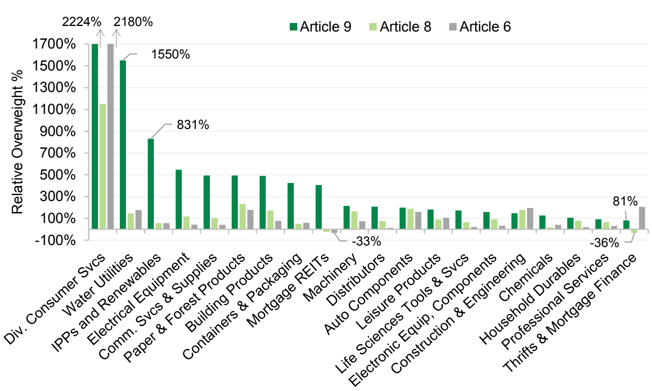
Article 9 sectors most underweight include Tobacco (-100%), Aerospace & Defense

(-91%), Oil, Gas & Consumable Fuels (-84%), Diversified Financial Services (-71%), Tech Hardware, Storage & Peripherals (-71%), Energy Equipment & Services (-68%) and Beverages (-67%).

Article 6 (non-ESG) sectors most overweight include Diversified Consumer Services (+2,180%), Thrifts & Mortgage Finance (+205%), Construction & Engineering (+196%) and Paper & Forest Products (+178%), while being most relatively underweight Industrial Conglomerates (-57%), Tech Hardware (-52%), Diversified Financial Services (-48%), Tobacco (-42%) and Household Products (-42%).

Exhibit 20: Article 9 funds are significantly overweight Diversified Consumer Services, Water Utilities and Independent Power & Renewable Electricity Producers

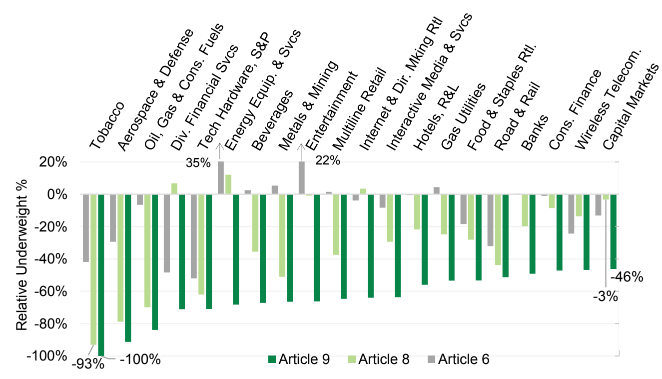
GICS 3 sub-industry overweights and underweights, percentage points relative to MSCI ACWI



Source: Bloomberg, Morningstar, Goldman Sachs Global Investment Research

Exhibit 21: Article 8 & 9 funds are significantly underweight Tobacco, Aerospace & Defense, and Oil, Gas & Consumable Fuels

GICS 3 sub-industry overweights and underweights, percentage points relative to MSCI ACWI



Source: Bloomberg, Morningstar, Goldman Sachs Global Investment Research

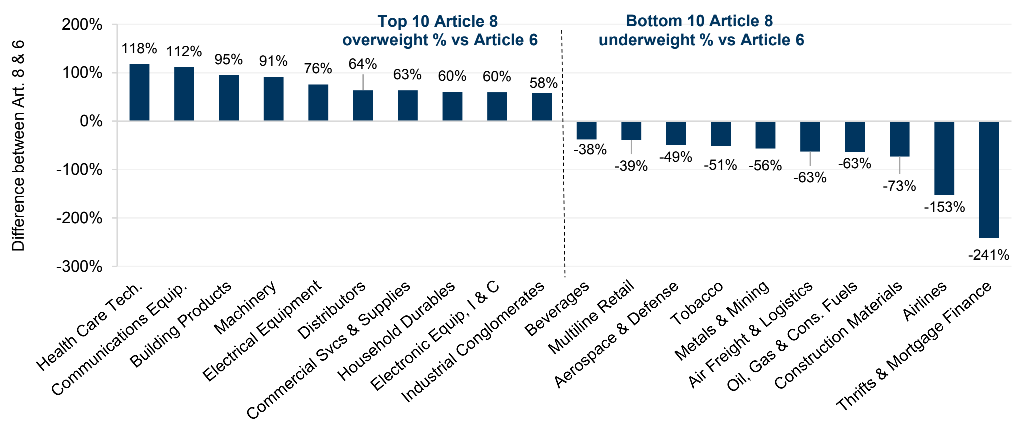
We also consider how Article 8 and Article 9 holdings differ from our global universe of ESG funds. Article 9 funds are much more overweight Electrical Equipment, Commercial Services & Supplies and Mortgage REITs than global ESG funds. While global ESG funds are similarly most overweight Diversified Consumer Services, Water Utilities and IPPs and Renewables, the trend is much more pronounced amongst Article 9 funds. Article 8 funds favor Auto Components, Chemicals, and Health Care Technology compared to global ESG funds. On the opposite side, Article 9 funds are more underweight Diversified Financial Services, Energy Equipment & Services, Internet & Direct Marketing Retail and Gas Utilities compared to global ESG funds, while Article 8 funds are more underweight Automobiles and Tech Hardware.

What does the movement from Article 6 to Article 8/9 funds mean for companies? Non-ESG friendly sectors, including Tobacco and Aerospace & Defense, are consistently relatively underweight among ESG and non-ESG funds, though much more underweight in ESG funds. Movement from Article 6 to Article 8 therefore will have less drastic holdings consequences for those sectors, we believe. Others, like Thrifts & Mortgage Finance, Airlines, Construction Materials, and Oil, Gas & Consumable Fuels, see ownership drop off drastically between Article 6 and Article 8 funds (Exhibit 22). The differences between Article 6 and Article 9 funds show even stronger movement away from emissions intensive sectors including Airlines, Construction Materials and Energy Equipment & Services (Exhibit 23). We thus expect **flows towards ESG to lead to flows out of these non-ESG friendly sectors towards more ESG friendly sectors including Health Care Technology, Communications Equipment and Building Products for Article 8, and ESG-friendly sectors including Water Utilities, Renewables and Electrical Equipment for Article 9.**

We note that this is not representative of the entire pool of AUM available to invest in these sectors, as our analysis focuses on European ESG and non-ESG funds only. That said, **as European funds transition away from Article 6 towards Article 8 and 9, a trend that appears poised only to get stronger over the next few years, there should be widespread implications for flows of capital towards specific companies and sectors.**

Exhibit 22: Article 8 funds, in general, are significantly underweight some sectors vs. Article 6, where the sectors are in large viewed negatively from an ESG perspective

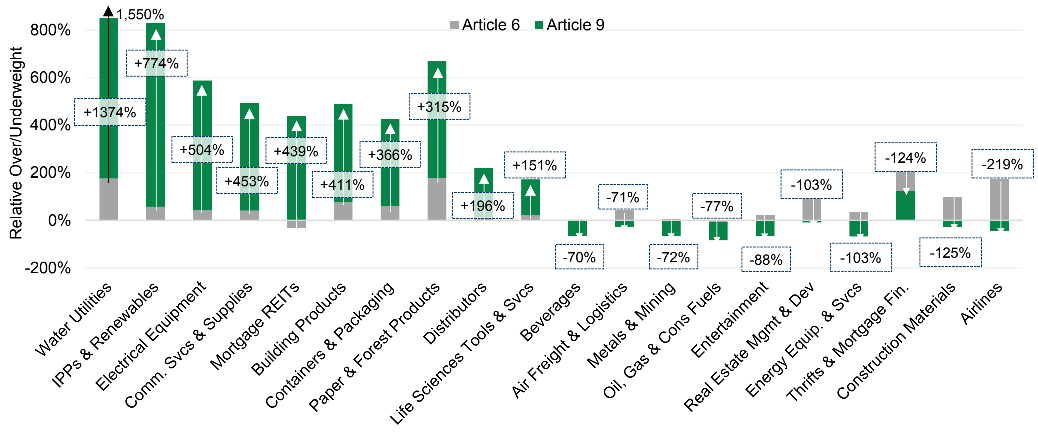
Difference between Article 8 and 6 funds, in percentage points, where highest values represent sectors where Article 8 funds are more relatively overweight than Article 6



Source: Bloomberg, Morningstar, Goldman Sachs Global Investment Research

Exhibit 23: Traditionally ESG-friendly sectors like Water, Renewables and Electrical Equipment are significantly overweight in Art. 9 funds vs. Art. 6, while sectors like Airlines, Construction Materials, and Energy Equipment are more underweight in Art. 9

Difference between Article 9 and 6 fund relative weights, in percentage points, where boxes show the p.p. difference between Article 9 and 6 weights



Source: Bloomberg, Morningstar, Goldman Sachs Global Investment Research

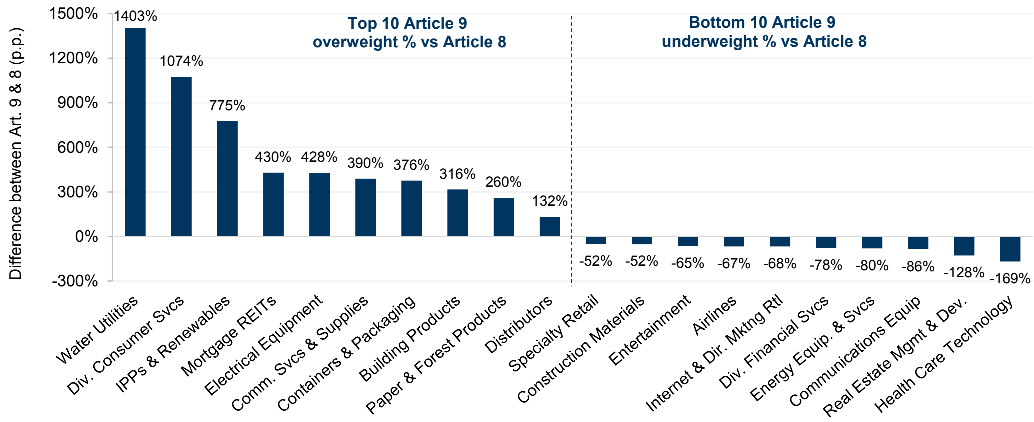
What does the movement from Article 8 to Article 9 funds mean for companies?

While most sectors see similar patterns of relative over/underweight, a few sectors have **notable differences between Article 8 and Article 9**. For example, Energy Equipment and Services, Airlines, Construction Materials, Transportation Infrastructure and Real Estate Management & Development are underweight in Article 9 funds (-68, -45%, -27%, -22% and -9% respectively) while being overweight in Article 8 funds (+12%, +22%, +25%, +11%, and +119% respectively). Mortgage REITs, Thrifts & Mortgage Finance, Multi-Utilities, and Electric Utilities are underweight in Article 8 funds (-24%, -36%, -26% and -44% respectively) while being overweight in Article 9 funds (+406%, +81%, +60% and +58% respectively).

Our deep dive into the differences between Article 9 and 8 funds considers which sectors are most favored by sophisticated sustainable investment funds, and provides more nuance than the above ESG (Article 8/9) vs. non-ESG (Article 6) comparison. We find that **Article 9 funds are more overweight Water Utilities, Diversified Consumer Services, Independent Power & Renewable Electricity Producers, Mortgage REITs and Electrical Equipment than Article 8** to the most extreme degree (Exhibit 24). At the other end of the spectrum, **Article 9 funds are more underweight Health Care Technology, Real Estate Management & Development, Communications Equipment, and Energy Equipment & Services compared to Article 8 funds**. This may be an indicator that there is less consensus around these sectors in terms of sustainable investments.

Exhibit 24: While most Article 8 and 9 funds follow similar patterns of sector weightings, some Article 9 funds are significantly over- or underweight some sectors vs. Article 8

Difference between Article 9 and 8 funds, in percentage points, where highest values represent sectors where Article 9 funds are more relatively overweight than Article 8



Source: Bloomberg, Morningstar, Goldman Sachs Global Investment Research

A growing puzzle: SDR in UK and ESG fund requirements in France and Germany

Sustainability labels have surged over the last decade, including public labels from France's SRI and Greenfin labels and AMF Doctrine, Austria's Umweltzeichen (Ecolabel), the Scandanavian Nordic Swan Ecolabel, and the EU's Paris Aligned Benchmark and Climate Transition Benchmark, and private sector labels in Germany (FNG label and BaFin proposals), Belgium (Towards Sustainability label), and Luxembourg (LuxFLAG ESG, Environment and Climate Finance labels). Others are considering new actions, including the Central Bank of Ireland, which sent financial services CEOs a letter outlining the CBI's approach to EU ESG regulation compliance and supervisory expectations. **ESMA plans to enact a full review of the EU and national ecolabels landscape through 2022-2024, and contribute to the European Commission's effort to develop EU-wide labels (i.e. EU Ecolabel and EU Green Bond Standard) and investment products over the same timeline.**

SFDR, by design, does not restrict the investable universe of ESG funds; however, upcoming minimum guidelines for Article 8 funds, and country-specific guidance and additional ESG fund minimum standards, if imposed, could threaten ESG fund innovation and limit the investable universe for ESG funds, in our view. The UK released a discussion paper on Sustainability Disclosure Requirements and investment labels that mirrors the EU's objectives to create a product labeling system. **France's AMF already requires ESG funds to exclude 20% of the investable universe on the basis of ESG factors,** in addition to reporting and complying with SFDR. **German regulator BaFin has proposed minimum guidelines for a fund to be considered sustainable if at least 75% of its assets are invested sustainably,** companies have less than 10% revenue exposure to fossil fuels and other exclusions, and if the assets have made a 'substantial contribution' to environmental and social objectives.

UK - Proposed ESG funds standards under SDR

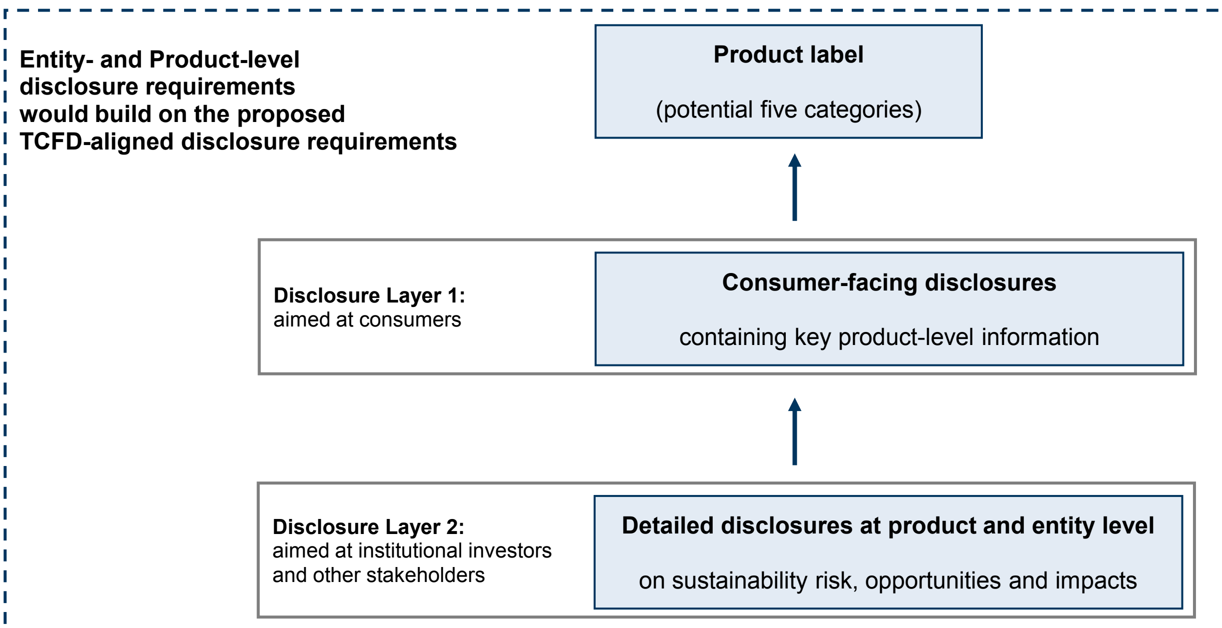
The UK Government published its Roadmap for Sustainability Disclosure Requirements (SDR) in November, 2021, with a goal for the financial system of achieving net zero and protecting the natural environment. The Discussion Paper has three key elements, outlining a product labeling system, product-level information and disclosures, and entity-level disclosures on sustainability risks, opportunities, and impacts. It seeks to build on the FCA's TCFD (Task Force on Climate-Related Financial Disclosures) and thus differs from the EU SFDR and Green Taxonomy rules. **It is expected that the FCA will publish a consultation paper in Q2 of this year, with more details for further discussion and consultation.**

As outlined in the Roadmap, the proposed classification and labeling system will separate products into five categories: (1) Impact, which has an objective to deliver positive environmental or social impact; (2) Aligned, which features sustainable characteristics, themes or objectives, with high allocation to Taxonomy-aligned sustainable activities; (3) Transitioning, involving sustainable characteristics, themes or objectives, but with low allocation to Taxonomy-aligned sustainable activities; (4) Responsible, which may have some sustainable investments but is not considered sustainable under SDR; and (5) Not promoted as sustainable.

A few key notes:

- All listed issuers, asset managers and asset owners will be required to report on their sustainability risks, opportunities and impacts, regardless of whether they incorporate ESG factors or not.
- The regime will build on recommendations of the TCFD, expanding the scope eventually to cover wider sustainability topics beyond climate change.
- SDR will include disclosure requirements relating to the forthcoming UK Green Taxonomy
- The International Financial Reporting Standards (IFRS) Foundation's International Sustainability Standards Board (ISSB) will form a core component of the SDR framework.

Exhibit 25: Potential product labelling and disclosure system



Source: FCA, Goldman Sachs Global Investment Research

Exhibit 26: Potential approach to a sustainable product classification and labelling system

Minimum 'entry-level' criteria at the relevant entity level

In order to use a **'Sustainable'** or **'Responsible'** product label, the entity responsible for managing investments must demonstrate key attributes such as:

- meet existing governance, systems and controls requirements
- identify how ESG considerations are integrated into investment processes to minimise risks and take advantage of opportunities
- stewardship and using ownership rights (eg, voting and engagement)

Product-level Classification

	Potential SDR Categories	Product-level classification definitions	Minimum criteria	FCA's mapping to SFDR
	Not promoted as sustainable	Certain investment products do not take sustainability considerations into account, even as a form of risk management. Sustainability considerations may, for example, be deprioritised for certain investment strategies.		Article 6
	Responsible	Responsible products could be characterised by the integration of ESG factors and stewardship, directed towards the delivery of long-term sustainable investment decisions and returns. Responsible products may have high, low or no allocation to sustainable investments.	The criteria applied would not impose any restriction on the investible universe of such funds; exclusions, tilting or allocation thresholds would therefore not be an expectation. However, the criteria could include demonstrable evidence of ESG analytical capabilities and effective stewardship at entity level, applied in the management of the product.	Article 8
Sustainable	Transitioning	Products with sustainability characteristics, themes or objectives that **do not yet have a high proportion of underlying assets meeting the sustainability criteria set out in the UK Taxonomy** (or can otherwise be verifiably established to be sustainable, where a taxonomy is not yet available). These products pursue strategies that aim to influence underlying assets towards meeting sustainability criteria over time, for instance through active and targeted investor stewardship. The expectation, therefore, is that **this proportion will rise over time.**	Evidence of sustainability characteristics, themes or objectives that are reflected fairly and consistently in the investment policy or strategy and may include some combination of: ● restrictions to the investible universe, including investment limits and thresholds ● screening criteria (positive or negative) ● the application of benchmarks or indices and expected or typical tracking error relative to the benchmark ● the entity's stewardship approach as applied to the product	Article 8
Sustainable	Aligned	Products with sustainability characteristics, themes or objectives and a **high proportion of underlying assets (measured according to a minimum threshold) that meet the sustainability criteria set out in the UK Taxonomy** (or could otherwise be verifiably established to be sustainable, where a taxonomy is not yet available).	See Transitioning criteria above, with the addition of minimum thresholds for asset allocation.	Article 9
Sustainable	Impact	Products with the objective of delivering net positive social and/or environmental impact alongside a financial return.	Intentionality, theoretical ability to deliver and measure additionality through investment decision-making and investor stewardship, impact measurement and verification.	Article 9

Source: FCA, Goldman Sachs Global Investment Research

France - Existing ESG fund labels and new AMF requirements

The French government's SRI and Greenfin labels have been around since 2015 and 2016, with the goal of increasing the flow of capital towards financing the energy transition and sustainable development. The SRI label requires measurable ESG integration into investment decisions, with requirements set by the government. It is awarded only after an application process against the label's specifications, conducted by an independent body. A fund that achieves the SRI label must define their objectives, establish their analysis methodology, describe how the fund manages assets, engages stakeholders and promotes ESG, be transparent with investors, and evaluate and communicate measurable impact.

The Greenfin label, previously known as the Transition énergétique et écologique pour le climat, dictates that 75% of a fun must be allocated to green activities defined in a taxonomy or green bonds. It was the first public label for private investments into sustainability, and represents funds that actively participate in financing the green economy. The Greenfin label also excludes nuclear energy and fossil fuels, which have been identified as controversial or incompatible with the energy transition.

France's AMF expands on these existing regulations to add further granularity to allow for intermediate categories of ESG fund labeling, but also establishes minimum standards for financial products that consider ESG factors including requirements to exclude 20% of the investable universe based on ESG factors (that can be self defined).

Germany - Looming ESG fund requirements to set minimum standards & exclusions

The Forum Nachhaltige Geldanlagen's sustainability quality label seeks to promote sustainable investment throughout Germany, Austria, Liechtenstein and Switzerland. The label's methodology borrows from Eurosif's Transparency Code and FNG's Sustainability Profiles, with an award procedure carried out annually and communicated officially in the fourth quarter of the year. The label is valid for one year after obtaining and is available in four grades: 0 through 3 stars.

Also out of Germany, in August 2021, the German Federal Financial Supervisory Authority (BaFin) published a **draft guideline to set out how German investment funds can qualify as sustainable and be marketed as such in Germany.** The guideline takes the efforts of the EU Taxonomy and SFDR and introduces further requirements for quantitative and qualitative standards for domestic public investment funds.

The thresholds proposed push further than SFDR, requiring a minimum sustainable investment quota of 75% (previously 90%). The fund must also significantly contribute to environmental or social objectives, meet Do No Significant Harm criteria for other environmental and social objectives, and take good governance aspects into account. **Other specifications include that portfolio companies may not generate more than 10% of revenue from fossil fuel (excluding gas) or nuclear power; more than 5% of revenue from extraction of oil or coal; any revenue from the extraction of and services for oil sands and oil shale.**

The consultation process for BaFin's initial proposal closed in September 2021. We expect BaFin to provide more detail and clarity on the timeline for their proposed regulation this year.

SFDR - Next Steps and Timelines

The European Securities and Markets Authority (ESMA) has established a list of its three top priorities for its Sustainable Finance Roadmap 2022-2024, which covers:

1) **tackling greenwashing and promoting transparency** by establishing guidance on key concepts, providing guidance to regulators on applying the rules, and assessing market disclosure on ESG products.

2) **Building National Competent Authorities (NCA) and ESMA capacities** by establishing training at both national and European levels and sharing supervisory experiences among NCAs.

3) **Monitoring, assessing and analysing ESG markets and risks**, particularly for developments in the EU carbon markets, by engaging in climate scenario analysis and stress testing, as well as establishing common methodologies for such analyses with other EU institutions.

Exhibit 27: Overview of key SFDR-related actions

	Actions	Indicative timeline	Priority
Horizontal	Assess / contribute to consistency of Sustainable Finance legislation across sectors (CSRD, Benchmarks Regulation, SFDR, Taxonomy, etc.) and convergence in their application / supervision	2022-23	○ Greenwashing ○ Monitoring ESG markets
Single Rulebook	Contribute to EC's planned work on minimum sustainability criteria, or a combination of criteria for financial products that disclose under Article 8 of the SFDR	2022	○ Greenwashing
	Review the regulatory technical standards under SFDR to clarify: ○ Indicators for climate- and environment- related PAI ○ PAI on social and employee matters, respect for human rights, anti-corruption and anti-bribery matters	2022	○ Greenwashing
	Contribute as needed to the legislative process on Sustainable Corporate Governance	2022-23	-
	Flag to the EC any need to amend / clarify / interpret Level 1 and Level 2 such as for SFDR, Taxonomy, UCITS Directive or AIFMD	2022-24	-
Supervisory Convergence	Map NCAs' supervisory role, notably on greenwashing, taking into account sustainable finance requirements applicable to asset managers (SFDR, Taxonomy, AIFMD, UCITS Directive)	2022-23	○ Greenwashing ○ Building capacities
	Deliver training on SFDR (Articles 3, 5, 6 and 8- 11), Taxonomy (Articles 5-6 and 8)	2022-24	○ Building capacities
	Contribute to consistent implementation of new requirements applicable to asset managers (mainly SFDR and related provisions from Taxonomy, but also AIFMD and UCITS Directive)	2022-24	○ Greenwashing ○ Building capacities
Risk Assessment	Analyse disclosures under SFDR Article 8 and 9 in the investment management sector to support supervisory convergence efforts and the identification of greenwashing cases	2022-24	○ Greenwashing ○ Monitoring ESG markets

Source: ESMA, Goldman Sachs Global Investment Research

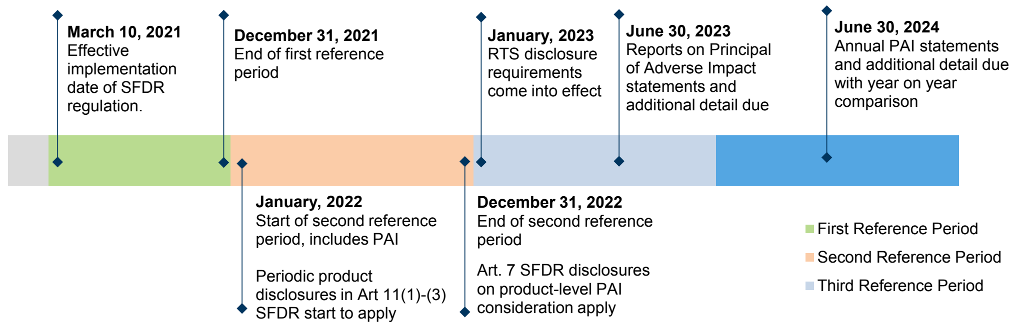
Timeline and Requirements

While March 10, 2021 is the effective date on which 'Level 1' of the regulation went into effect, large financial market participants (firms above 500 employees) will have until June 30, 2023, to disclose their Principal Adverse Impact (PAI) statement, based on the first reference period (January 1, 2022 to December 31, 2022). The Regulatory Technical Standards (RTS) now come into effect January 1, 2023, after another round of delays from the European Commission (previously delayed from January 1, 2022 to July 1, 2022). The RTS disclosure requirements include sustainability indicators, pre-contractual information required under Articles 8 and 9, disclosures under Article 10 and periodic reports under Article 11, along with information on DNSH (Do No Significant Harm). By June 30, 2024, firms will also have to start reporting their historical year-on-year comparison of the PAI data with their second FMP PAI statement. The Commission is set to issue an evaluation of SFDR on December 30, 2022.

Financial firms (including financial advisors), market participants that manufacture and/or sell financial products, and FMPs that offer portfolio management services, fall within the scope of the SFDR, including mutual funds, ETFs and derivatives. FMP entity-level SFDR disclosure requirements on PAI apply to companies with at least 500 employees during a financial year, or if they consider PAI in sustainability factors.

Exhibit 28: March 10, 2021 saw the beginning of the implementation of SFDR, while large FMPs have until June 30, 2023 to disclose PAI statements

Timeline of SFDR reporting requirements and assessment reference periods



Source: ESA

Appendix

Exhibit 29: Mandatory PAI indicators

Mandatory Principal Adverse Impact Metrics			
Applicable to investments in…	**Adverse sustainability indicators**		**Metric**
Investee companies	**GHG emissions**	1. GHG emissions	Scope 1 GHG emissions
			Scope 2 GHG emissions
			Scope 3 GHG emissions (From 1 January 2023)
			Total GHG emissions
		2. Carbon footprint	Carbon footprint
		3. GHG intensity	GHG intensity of investee companies
		4. Fossil fuel exposure	Share of investments in companies active in the fossil fuel sector
		5. Share of non-renewable energy consumption and production	Share of non-renewable energy consumption and non-renewable energy production of investee companies from non-renewable energy sources compared to renewable energy sources, expressed as a percentage
		6. Energy consumption intensity per high impact climate sector	Energy consumption in GWh per million EUR of revenue of investee companies, per high impact climate sector
	Biodiversity	7. Activities negatively affecting biodiversitysensitive areas	Share of investments in investee companies with sites/operations located in or near to biodiversity sensitive areas where activities of those investee companies negatively affect those areas
	Water	8. Emissions to water	Tonnes of emissions to water generated by investee companies per million EUR invested, expressed as a weighted average
	Waste	9. Hazardous waste ratio	Tonnes of hazardous waste generated by investee companies per million EUR invested, expressed as a weighted average
	Social and employee matters	10. Violations of UNGC principles and OECD Guidelines	Share of investments in investee companies that have been involved in violations of the UNGC principles or OECD Guidelines for Multinational Enterprises
		11. Lack of processes to monitor UNGC and OECD compliance	Share of investments in investee companies without policies to monitor compliance with the UNGC principles or OECD Guidelines for Multinational Enterprises or grievance /complaints handling mechanisms to address violations of the UNGC principles or OECD Guidelines for Multinational Enterprises
		12. Unadjusted gender pay gap	Average unadjusted gender pay gap of investee companies
		13. Board gender diversity	Average ratio of female to male board members in investee companies
		14. Exposure to controversial weapons	Share of investments in investee companies involved in the manufacture or selling of controversial weapons (antipersonnel mines, cluster munitions, chemical weapons and biological weapons)
Sovereigns and supranationals	**Environmental**	15. GHG intensity	GHG intensity of investee countries
	Social	16. Investee countries subject to social violations	Number of investee countries subject to social violations (absolute number and relative number divided by all investee countries), as referred to in international treaties and conventions, United Nations principles and, where applicable, national law
Real estate assets	**Fossil fuels**	17. Fossil fuel exposure	Share of investments in real estate assets involved in the extraction, storage, transport or manufacture of fossil fuels
	Energy efficiency	18. Energy-inefficiency exposure	Share of investments in energy inefficient real estate assets

Source: European Commission

Exhibit 30: Additional environment-related PAI indicators (optional)

Additional climate and other environment-related indicators			
Applicable to investments in…	**Adverse sustainability indicators**		**Metric**
Investee companies	**Emissions**	1. Emissions of inorganic pollutants	Tonnes of inorganic pollutants equivalent per million EUR invested, expressed as a weighted average
		2. Emissions of air pollutants	Tonnes of air pollutants equivalent per million EUR invested, expressed as a weighted average
		3. Emissions of ozone depletion substances	Tonnes of ozone depletion substances equivalent per million EUR invested, expressed as a weighted average
		4. Investments in companies without carbon emission reduction initiatives	Share of investments in investee companies without carbon emission reduction initiatives aimed at aligning with the Paris Agreement
	Energy	5. Breakdown of energy consumption by type of non-renewable sources of energy	Share of energy from nonrenewable sources used by investee companies broken down by each nonrenewable energy source
	Water, waste and material emissions	6. Water usage and recycling	1. Average amount of water consumed and reclaimed by the investee companies (in cubic meters) per million EUR of revenue of investee companies 2. Weighted average percentage of water recycled and reused by investee companies
		7. Investments in companies without water management policies	Share of investments in investee companies without water management policies
		8. Exposure to areas of high water stress	Share of investments in investee companies with sites located in areas of high water stress without a water management policy
		9. Investments in companies producing chemicals	Share of investments in investee companies the activities of which fall under Division 20.2 of Annex I to Regulation (EC) No 1893/2006
		10. Land degradation, desertification, soil sealing	Share of investments in investee companies the activities of which cause land degradation, desertification or soil sealing
		11. Investments in companies without sustainable land/agriculture practices	Share of investments in investee companies without sustainable land/agriculture practices or policies
		12. Investments in companies without sustainable oceans/seas practices	Share of investments in investee companies without sustainable oceans/seas practices or policies
		13. Non-recycled waste ratio	Tonnes of non-recycled waste generated by investee companies per million EUR invested, expressed as a weighted average
		14. Natural species and protected areas	1.Share of investments in investee companies whose operations affect threatened species 2.Share of investments in investee companies without a biodiversity protection policy covering operational sites owned, leased, managed in, or adjacent to, a protected area or an area of high biodiversity value outside protected areas
		15. Deforestation	Share of investments in companies without a policy to address deforestation
	Green securities	16. Share of securities not certified as green under a future EU legal act setting up an EU Green Bond Standard	Share of securities in investments not certified as green
Sovereigns and supranationals	**Green securities**	17. Share of bonds not certified as green under a future EU act setting up an EU Green Bond Standard	Share of bonds not certified as green
Real estate assets	**Emissions**	18. GHG emissions	Scope 1 GHG emissions generated by real estate assets
			Scope 2 GHG emissions generated by real estate assets
			From 1 January 2023, Scope 3 GHG emissions generated by real estate assets
			Total GHG emissions generated by real estate assets
	Energy	19. Energy consumption intensity	Energy consumption in GWh of owned real estate assets per square meter
	Waste	20. Waste production in operations	Share of real estate assets not equipped with facilities for waste sorting and not covered by a waste recovery or recycling contract
	Resource consumption	21. Raw materials consumption for new construction and major renovations	Share of raw building materials (excluding recovered, recycled and biosourced) compared to the total weight of building materials used in new construction and major renovations
	Biodiversity	22. Land artificialisation	Share of non-vegetated surface area (surfaces that have not been vegetated in ground, as well as on roofs, terraces and walls) compared to the total surface area of the plots of all assets

Source: European Commission

Exhibit 31: Additional social-related PAI indicators (optional)

Additional indicators for social and employee, respect for human rights, anti-corruption and anti-bribery matters			
Applicable to investments in...		**Adverse sustainability indicator**	**Metric**
Investee companies	Social and employee matters	1. Lack of accident prevention policies	Share of investments in investee companies without a workplace accident prevention policy
		2. Rate of accidents	Rate of accidents in investee companies expressed as a weighted average
		3. Lost time injury	Number of workdays lost to injuries, accidents, fatalities or illness of investee companies expressed as a weighted average
		4. Lack of supplier code of conduct	Share of investments in investee companies without any supplier code of conduct (against unsafe working conditions, precarious work, child labour and forced labour)
		5. Lack complaints handling mechanism	Share of investments in investee companies without any grievance/complaints handling mechanism related to employee matters
		6. Insufficient whistleblower protection	Share of investments in entities without policies on the protection of whistleblowers
		7. Incidents of discrimination	Number of incidents of discrimination reported in investee companies expressed as a weighted average
			Number of incidents of discrimination leading to sanctions in investee companies expressed as a weighted average
		8. Excessive CEO pay ratio	Average ratio within investee companies of the annual total compensation for the highest compensated individual to the median annual total compensation for all employees (excluding the highest -compensated individual)
	Human Rights	9. Lack of a human rights policy	Share of investments in entities without a human rights policy
		10. Lack of due diligence	Share of investments in entities without a due diligence process to identify, prevent, mitigate and address adverse human rights impacts
		11. Lack of processes for human traffic prevention	Share of investments in investee companies without policies against trafficking in human beings
		12. Operations and suppliers at significant risk of incidents of child labour	Share of investments in investee companies exposed to operations and suppliers at significant risk of incidents of child labour exposed to hazardous work in terms of geographic areas or type of operation
		13. Operations and suppliers at significant risk of incidents of forced or compulsory labour	Share of the investments in investee companies exposed to operations and suppliers at significant risk of incidents of forced or compulsory labour in terms in terms of geographic areas and/or the type of operation
		14. Severe human rights issues	Number of cases of severe human rights issues and incidents connected to investee companies on a weighted average basis
	Anti-corruption and anti-bribery	15. Lack of anti-corruption and anti-bribery policies	Share of investments in entities without policies on anti-corruption and antibribery consistent with the United Nations Convention against Corruption
		16. Cases of insufficient action taken to address breaches of standards of anti-corruption and antibribery	Share of investments in investee companies with identified insufficiencies in actions taken to address breaches in procedures and standards of anticorruption and anti-bribery
		17. Violation of anti-corruption and anti-bribery laws	Numbers of convictions and amount of fines for violations of anticorruption and anti-bribery laws by investee companies
Sovereigns and supranationals	Social	18. Average income inequality score	The distribution of income and economic inequality among the participants in a particular economy including a quantitative indicator explained in the explanation column
		19. Average freedom of expression score	Measuring the extent to which political and civil society organisations can operate freely including a quantitative indicator explained in the explanation column
	Human rights	20. Average human rights performance	Measure of the average human right performance of investee countries using a quantitative indicator explained in the explanation column
	Governance	21. Average corruption score	Measure of the perceived level of public sector corruption using a quantitative indicator explained in the explanation column
		22. Non-cooperative tax jurisdictions	Investments in jurisdictions on the EU list of non - cooperative jurisdictions for tax purposes
		23. Average political stability score	Measure of the likelihood that the current regime will be overthrown by the use of force using a quantitative indicator explained in the explanation column
		24. Average rule of law score	Measure of the level of corruption, lack of fundamental rights, and the deficiencies in civil and criminal justice using a quantitative indicator explained in the explanation column

Source: European Commission

Exhibit 32: Disclosure of Sustainable investment information and Calculation of Taxonomy alignment of investments for Article 8 funds

Article 16a

Sustainable investment information in the asset allocation section for financial products that promote environmental or social characteristics

1. For financial products referred to in Article 6 of Regulation (EU) 2020/852, the section referred to in point (d) of Article 13(3) shall also contain the following information:

a) a graphical representation in the form of a pie chart of:
   i. the minimum taxonomy alignment of aggregated investments calculated in accordance with paragraphs 1 to 4 of Article 16b
   ii. the minimum taxonomy alignment of aggregated investments excluding sovereign exposures, calculated in accordance with paragraph 5 of Article 16b

   When aggregating the taxonomy alignment of the investments in non-financial undertakings, the same key performance indicator shall be used. When aggregating the taxonomy alignment of the investments in financial undertakings, the same key performance indicator shall be used for the same type of financial undertaking. For insurance and reinsurance undertakings that carry out non-life underwriting activities, the key performance indicator may combine the investment and the underwriting key performance indicators in accordance with Article 8 of Regulation (EU) 2020/852

b) a description of the investments underlying the financial product that are in Taxonomy-aligned economic activities, including whether the compliance of those investments with the requirements laid down in Article 3 of Regulation (EU) 2020/852 will be subject to an assurance provided by one or more auditors or a review by one or more third parties and, if so, the name or the names of the auditor or third party;

c) where the financial product invests in sustainable investments with an environmental objective which invests in economic activities that are not Taxonomy-aligned economic activities, clear explanation of the reasons for doing so; and

d) for financial products referred to in Article 6 of Regulation (EU) 2020/852 that have sovereign exposures and where the financial market participant cannot assess the extent to which those exposures contribute to Taxonomy-aligned economic activities, a narrative explanation of the proportion in total investments of investments that consist of those exposures.

2. For financial products including sustainable investments with a social objective, the section referred to in point (d) of Article 13(3) shall also contain the minimum share of those sustainable investments.

Article 16b

Calculation of the taxonomy alignment of investments

1. The taxonomy alignment of investments shall be calculated in accordance with the following formula:

$$\frac{\textit{market value of all taxonomy-aligned investments of the financial product}}{\textit{market value of all investments of the financial product}}$$

where 'taxonomy-aligned investments of the financial product' shall be the sum of the market values of the following investments of the financial product:

a) for debt securities and equities of investee companies, where a proportion of activities of those investee companies is associated with Taxonomy-aligned economic activities, the market value of that proportion of those debt securities or equities;

b) for debt securities other than those referred to in point (c) where a proportion of the proceeds are required by their terms to be used exclusively on Taxonomy-aligned economic activities, the market value of the proportion of those proceeds;

c) for green bonds issued under Union legislation on environmentally sustainable bonds, the market value of those green bonds;

d) for investments in real estate assets which qualify as Taxonomy-aligned economic activities, the market value of those investments;

e) for investments in infrastructure assets which qualify as Taxonomy-aligned economic activities, the market value of those investments;

f) for investments in securitisation positions with underlying exposures in Taxonomyaligned economic activities, the market value of the proportion of those exposures; and

g) for investments in financial products referred to in Article 5 and Article 6 of Regulation (EU) 2020/852, the market value of the proportion of those financial products representing the taxonomy alignment of investments calculated in accordance with this Article.

h) The calculation shall be performed by applying the methodology used to calculate net short positions laid down in Article 3, paragraphs 4 and 5 of Regulation (EU) No 236/2012 of the European Parliament and of the Council

2. See right box

3. For disclosures referred to in Articles 16a(1)(a) and 25(1)(a), in the case of investee companies that are non-financial undertakings referred to in Article 8(2) of Regulation (EU) 2020/852 and other non-financial undertakings, the calculation referred to in paragraph 2 shall use the same type of key performance indicator for all non-financial undertakings, which shall be turnover. By way of derogation from the first subparagraph, where a more representative calculation of the taxonomy alignment is given by capital expenditure or operating expenditure due to the features of the financial product, the calculation may use the most appropriate of those two indicators.

4. In the case of investee companies that are financial undertakings subject to Article 8(1) of Regulation (EU) 2020/852 and for other financial undertakings, the calculation referred to in paragraph 2 shall use key performance indicators referred to in points (b) to (e) of Section 1.1 of Annex III of Commission Delegated Regulation (EU) 2021/XXX [insert reference to Article 8 Taxonomy Regulation Delegated Act].

5. For disclosures referred to in point (ii) of Article 16a(1)(a), point (ii) of Article 25(1)(a), point (iii) of Article 61a(b) and point (iii) of Article 67a(b), paragraphs 1 to 4 shall apply except that the sovereign exposures shall be excluded from the calculation of the numerator and of the denominator of the formula contained in paragraph 1.

2. For the purposes of point (a) of paragraph 1, the proportion of activities of investee companies associated with Taxonomy-aligned economic activities shall be calculated on the basis of the most appropriate key performance indicators for the investments of the financial product using the following information:

a) for investee companies referred to in Article 8(1) and (2) of Regulation (EU) 2020/852, on the basis of the disclosures made by those investee companies in accordance with that Article; and

b) for other investee companies, on the basis of equivalent information.

The description shall include:

a) in respect of investee companies that are non-financial undertakings, whether the taxonomy alignment of investments is measured by turnover, or whether a more representative calculation of the taxonomy alignment is given when measured by capital expenditure or operating expenditure due to the features of the financial product, the reason for that decision, including how it is appropriate for investors in the financial product;

b) where information relating to the taxonomy alignment of investments is not readily available from public disclosures by investee companies, details of how equivalent information was obtained directly from investee companies or from third party providers; and

c) a breakdown of the minimum proportions of investments in the enabling activities referred to in Article 16 of Regulation (EU) 2020/852 and transitional activities referred to in Article 10(2) of that Regulation, in each case expressed as a percentage of all investments of the financial product.

Source: ESMA, EBA, Goldman Sachs Global Investment Research

Exhibit 33: Disclosure of Sustainable investment information and Calculation of Taxonomy alignment of investments for Article 9 funds

Article 25
Sustainable investment information in the asset allocation section for financial products with the objective of sustainable investment

1. For financial products referred to in Article 5 of Regulation (EU) 2020/852, the section referred to in point (d) of Article 20(3) shall also contain the following information:

a) a graphical representation in the form of a pie chart of:
   i. the minimum taxonomy alignment of aggregated investments calculated in accordance with paragraphs 1 to 4 of Article 16b
   ii. the minimum taxonomy alignment of aggregated investments excluding sovereign exposures, calculated in accordance with paragraph 5 of Article 16b.

   When aggregating the taxonomy alignment of the investments in non-financial undertakings, the same key performance indicator shall be used. When aggregating the taxonomy alignment of the investments in financial undertakings, the same key performance indicator shall be used for the same type of financial undertakings. For insurance and reinsurance undertakings that carry out non-life underwriting activities, the key performance indicator may combine the investment and the underwriting key performance indicators in accordance with Article 8 of Regulation (EU) 2020/852

b) where the financial product invests in sustainable investments with an environmental objective which invests in economic activities that are not Taxonomy-aligned economic activities, a clear explanation of the reasons for doing so;

c) a description of the investments underlying the financial product that are in Taxonomyaligned economic activities, including whether the compliance of those investments with the requirements laid down in Article 3 of Regulation (EU) 2020/852 will be subject to an assurance provided by one or more auditors or a review by one or more third parties and, if so, the name or the names of the auditor or third party; and

d) for financial products referred to in Article 5 of Regulation (EU) 2020/852 that have sovereign exposures and where the financial market participant cannot assess the extent to which those exposures contribute to Taxonomy-aligned economic activities, a narrative explanation of the proportion in total investments of investments that consist of those exposures.

2. For financial products including sustainable investments with a social objective, the section referred to in point (d) of Article 20(3) shall also contain the minimum share of those sustainable investments.

Article 16b
Calculation of the taxonomy alignment of investments

1. The taxonomy alignment of investments shall be calculated in accordance with the following formula:

$$\frac{\textit{market value of all taxonomy} - \textit{aligned investments of the financial product}}{\textit{market value of all investments of the financial product}}$$

where 'taxonomy-aligned investments of the financial product' shall be the sum of the market values of the following investments of the financial product:

a) for debt securities and equities of investee companies, where a proportion of activities of those investee companies is associated with Taxonomy-aligned economic activities, the market value of that proportion of those debt securities or equities;

b) for debt securities other than those referred to in point (c) where a proportion of the proceeds are required by their terms to be used exclusively on Taxonomy-aligned economic activities, the market value of the proportion of those proceeds;

c) for green bonds issued under Union legislation on environmentally sustainable bonds, the market value of those green bonds;

d) for investments in real estate assets which qualify as Taxonomy-aligned economic activities, the market value of those investments;

e) for investments in infrastructure assets which qualify as Taxonomy-aligned economic activities, the market value of those investments;

f) for investments in securitisation positions with underlying exposures in Taxonomyaligned economic activities, the market value of the proportion of those exposures; and

g) for investments in financial products referred to in Article 5 and Article 6 of Regulation (EU) 2020/852, the market value of the proportion of those financial products representing the taxonomy alignment of investments calculated in accordance with this Article.

h) The calculation shall be performed by applying the methodology used to calculate net short positions laid down in Article 3, paragraphs 4 and 5 of Regulation (EU) No 236/2012 of the European Parliament and of the Council

2. See right box

3. For disclosures referred to in Articles 16a(1)(a) and 25(1)(a), in the case of investee companies that are non-financial undertakings referred to in Article 8(2) of Regulation (EU) 2020/852 and other non-financial undertakings, the calculation referred to in paragraph 2 shall use the same type of key performance indicator for all non-financial undertakings, which shall be turnover. By way of derogation from the first subparagraph, where a more representative calculation of the taxonomy alignment is given by capital expenditure or operating expenditure due to the features of the financial product, the calculation may use the most appropriate of those two indicators.

4. In the case of investee companies that are financial undertakings subject to Article 8(1) of Regulation (EU) 2020/852 and for other financial undertakings, the calculation referred to in paragraph 2 shall use key performance indicators referred to in points (b) to (e) of Section 1.1 of Annex III of Commission Delegated Regulation (EU) 2021/XXX [insert reference to Article 8 Taxonomy Regulation Delegated Act].

5. For disclosures referred to in point (ii) of Article 16a(1)(a), point (ii) of Article 25(1)(a), point (iii) of Article 61a(b) and point (iii) of Article 67a(b), paragraphs 1 to 4 shall apply except that the sovereign exposures shall be excluded from the calculation of the numerator and of the denominator of the formula contained in paragraph 1.

2. For the purposes of point (a) of paragraph 1, the proportion of activities of investee companies associated with Taxonomy-aligned economic activities shall be calculated on the basis of the most appropriate key performance indicators for the investments of the financial product using the following information:

a) for investee companies referred to in Article 8(1) and (2) of Regulation (EU) 2020/852, on the basis of the disclosures made by those investee companies in accordance with that Article; and

b) for other investee companies, on the basis of equivalent information.

For the purposes of point (c) of paragraph 1, the description shall include:

a) in respect of investee companies that are non-financial undertakings, whether the taxonomy alignment of investments is measured by turnover, or whether a more representative calculation of the taxonomy alignment is given when measured by capital expenditure or operating expenditure due to the features of the financial product, the reason for that decision, including how it is appropriate for investors in the financial product;

b) where information relating to the taxonomy alignment of investments is not readily available from public disclosures by investee companies, details of how equivalent information was obtained directly from investee companies or from third party providers; and

c) a breakdown of the minimum proportions of investments in the enabling activities referred to in Article 16 of Regulation (EU) 2020/852 and transitional activities referred to in Article 10(2) of that Regulation, in each case expressed as a percentage of all investments of the financial product.

Source: ESMA, EBA, Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Evan Tylenda, CFA, Grace Chen, Madeline Meyer, Rachit Aggarwal, Brendan Corbett, Brian Singer, CFA, Derek R. Bingham, Sharmini Chetwode, Ph.D. and Emma Jones, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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