Sustainable Finance in Luxembourg 2024

A maturing ecosystem

LSFI
Luxembourg
Sustainable Finance
Initiative

pwc

TABLE OF CONTENTS

FOREWORD

Since December 2023, the sustainable finance ecosystem has undergone significant changes, as have our society, planet, and economy.

We are at a tipping point in combatting increasing climate change, nature loss and social catastrophes. In 2022 alone, 32.6 million people were displaced by weather-related disasters, surpassing even those uprooted by conflict. These events not only have devastating human costs but also immense financial consequences. Extreme weather and climate-related events caused EUR 50bn in economic losses to EU Member States in 2022.

To address these challenges, continuous action is essential. Most importantly, we must redirect financial resources to initiatives and projects that foster and integrate a just and sustainable future. This is where sustainable finance comes in.

At the EU level, sustainable finance has been a cornerstone in the last few years, with the EU establishing itself as a global leader in the field. There have been notable strides and commitments, including pledging to mobilise at least EUR 1tn in sustainable investments over the next decade. Significant progress has been made in Luxembourg in the last years as well. For example, 73% of the country's overall UCITS fund assets under management (AuM) are considered ESG as per this study. This is enhanced by pioneering initiatives such as the Luxembourg Green Exchange, LuxFLAG, and the International Climate Finance Accelerator, just to mention a few.

Despite this progress, more remains to be done, both to overcome the current environmental and social challenges, but also to ensure the success of our financial sector and our economy, because sustainable finance is a crucial opportunity for the financial sector itself.

It is crucial for managing risks and mitigating costs. The risk of stranded assets and the financial risks linked to climate disasters are very real, with more frequent and severe events driving up insurance costs and disrupting global supply chains. Ignoring these risks could expose our financial sector to significant losses and instability. Yet sustainable finance also offers a crucial opportunity: it enables firms to seize investment opportunities, align with investor preferences, strengthen their reputations, and attract top talent. Embedding sustainable finance can help ensure that our sector remains robust, competitive, and resilient to future shocks.

As a key global financial centre, Luxembourg must continue being a leader in this journey.

This is exactly what this study aims to look at: examine the progress of sustainable finance in Luxembourg, while also identifying key trends and challenges. Gaining this understanding is essential for financial institutions to be able to fulfil their crucial role in driving the much-needed sustainable transition, but also to the Luxembourg Sustainable Finance Initiative, to be able to fulfil its mission in supporting the Luxembourg financial sector's transition.

As with previous editions, we have once again mapped new dimensions and indicators to track the progress of sustainable finance across various segments of the financial sector over time. The 2024 edition updates key figures from the 2022 and 2023 studies, while also exploring new areas such as private assets and stewardship, striving to provide the most comprehensive snapshot possible to date.

I would like to thank all the colleagues and partners who contributed to this study, with a special thank you to the study advisory committee and the LSFI Board members. We hope this study will help the Luxembourg financial centre guide its efforts toward building a sustainable and equitable future, and provide the insights needed to overcome existing challenges and seize the opportunities ahead.

Nicoletta Centofanti
CEO, Luxembourg Sustainable Finance Initiative

ACKNOWLEDGEMENTS

The LSFI and PwC wish to sincerely thank all the professionals who contributed to this study. Your guidance, constructive feedback, and expertise were crucial in its development. Special thanks are extended to members of the Study Advisory Committee, comprising:

- **Enrico Benetto,** Researcher and Head of Environmental Sustainability Assessment And Circularity Unit, Luxembourg Institute of Science and Technology (LIST)
- **Jane Wilkinson,** Independent Director, Ripple Effect
- **Laetitia Hamon,** Head of Sustainable Finance, Luxembourg Stock Exchange (LuxSE)
- **Michael Halling,** Chair and Coordinator of the research program in Sustainable Finance, University of Luxembourg

KEY FINDINGS

Building on the previous two editions published in 2022 and 2023, *Sustainable Finance in Luxembourg: A maturing ecosystem* seeks to provide an unbiased, data-driven analysis of the current status of the sustainable finance landscape in Luxembourg. Its ultimate goal is to provide a thorough guide to all relevant stakeholders within and outside Luxembourg to better understand this key facet of the Luxembourg financial centre and how it is evolving. The study is not promotional in nature and is intended to complement existing research endeavours.

As with the first two editions, this study looks at the key environmental, social and governance (ESG) strategies implemented by mutual funds domiciled in Luxembourg, highlighting how they are evolving – both when it comes to the number of funds and their assets under management (AuM). In addition, this study provides an update on the principal adverse impact (PAI) reporting, the adoption of the voluntary European ESG Template (EET) and other climate affiliations by Luxembourg players.

This edition of the study also includes three new sections. The first provides a quantitative analysis of ESG in private market funds domiciled in Luxembourg. The second shines the spotlight on three major actors in the Luxembourg sustainable finance landscape – namely, the Luxembourg Green Exchange (LGX), the Luxembourg Finance Labelling Agency (LuxFLAG) and the International Climate Finance Accelerator (ICFA). The third provides an overview of stewardship activities in Luxembourg. The study concludes with a few insights on the future of sustainable finance in the Grand Duchy.

The following bullet points indicate the study's major observations and findings:

Luxembourg's ESG UCITS landscape

- In H1 2024, the total AuM of ESG Undertakings for Collective Investment in Transferable Securities (UCITS) stood at EUR 3,247.7tn, up from EUR 3,020.7bn in H1 2023. The AuM of ESG UCITS made up 73.3% of the total UCITS AuM in Luxembourg (EUR 4,428.3tn) in H1 2024, a figure which has not shifted much since H1 2023.

- **ESG funds domiciled in Luxembourg experienced a rebound in AuM since the lows of H2 2022.** The figure jumped from EUR 2,893.1bn in H2 2022 to EUR 3,247.7bn by the end of June 2024 – an increase of 12.3%. However, the figure remains below the peak reached in H2 2021 (EUR 3,428.6bn).

- **When it comes to net flows, retail investors showed a strong interest in ESG funds, pouring in EUR 12.6bn in them in H1 2024.** Institutional investors, on the other hand, withdrew EUR 7.8bn. Among the ESG funds, the ones focused on bonds saw the highest inflows (EUR 50.8bn) while those focused on equities experienced the most outflows (EUR 46.3bn). **As a whole, ESG funds saw net inflows of EUR 4.8bn in H1 2024, while their non-ESG counterparts saw inflows of EUR 11.3bn.**

- **Asset managers from the US remain the largest when it comes to ESG AuM, with their 907 ESG funds collectively managing EUR 977.4bn.** This is followed by British (EUR 432.3bn) and French (EUR 431.0bn) managers. However, with regards to the number of ESG funds, French asset managers have the largest number (914 funds), followed by US and Swiss managers with 907 and 745 funds respectively.

- **Regardless of which ESG strategy is adopted (Screening, Exclusion, Involvement), the AuM trajectory of ESG funds domiciled in the Grand Duchy was favourable during the past 18 months.** However, the growth experienced by ESG Screening funds (15.6%) was slightly stronger than the one experienced by Exclusion and Involvement funds (12.4% both). Nonetheless, Exclusion funds represent the largest portion of the ESG fund landscape with 61.6% of total ESG UCITS AuM, followed by Involvement funds with 29.1% and Screening funds with 9.2%.

- **The majority (68%) of the AuM of Luxembourg-domiciled UCITS corresponds to funds disclosing as per Article 8 of the Sustainable Finance Disclosure Regulation (SFDR),** followed by 27% for Article 6 and 4% for Article 9. In terms of number of funds, nearly half (48%) of Luxembourg-domiciled UCITS disclose as per Article 8 of the SFDR. Together with Article 9 funds, **they account for 53% of all Luxembourg domiciled UCITS, while the remainder are disclosing as per Article 6 of the SFDR (44%) or funds with no SFDR disclosure (3%).**

Private markets and ESG in Luxembourg

- **Luxembourg continues to solidify its position as a leading hub for private markets.** From 2019 to 2023, private markets AuM grew from EUR 740.9bn to EUR 1,708.0bn, with the AuM of ESG private markets funds making up 36.5% (EUR 622.8bn) of the total private markets AuM in 2023.

- The growth experienced by ESG private market funds has been remarkable. Their AuM rose from EUR 42.9bn in 2019 to EUR 622.8bn in 2023 – growing at a compound annual growth rate (CAGR) of 95.2%.

- **Private equity (EUR 267.5bn) concentrates the largest share of AuM for private market ESG funds in 2023**, followed by infrastructure (EUR 188.9bn), real estate (EUR 107.7bn) and private debt (EUR 58.7bn).

- **ESG Integration stands out as the most popular strategy** across all types of ESG private market funds, among the five outlined ESG strategies (Impact, Thematic, Microfinance, Renewables/Energy Transition, and Integration). Out of 1,313 ESG private market funds in 2023, 766 followed the ESG Integration strategy, while the Renewables/Energy Transition strategy stood at a relatively distant second, with 114 of funds adopting it.

- **When it comes to AuM, similar to the ESG UCITS landscape, US asset managers have the largest amount of private markets AuM (EUR 148.5bn).** Swedish and British asset managers follow, with EUR 125.8bn and EUR 121.4bn of AuM respectively. However, British asset managers had the highest number of ESG private market funds (280), followed by US (255) and French (159).

Principal Adverse Impact (PAI) statements

- **Among the 440 Luxembourg-based AIFMs, banks, insurance companies, Super ManCos, and UCITS ManCos analysed, 106 have published a report on the PAIs of their investment decisions (of which 98 are at entity-level), while 195 have issued an explanation as to why they do not consider PAIs.** The most reported optional PAI by all financial market participants in 2024 was the investments in companies without carbon emission reduction initiatives, reported by 8 AIFMs, 29 Super ManCos, 7 UCITS ManCos, 8 banks and 5 insurance companies, totalling 57 financial market participants out of the 98 entities that have published a PAI report on entity level.

- **As a whole, a growing number of financial market participants in Luxembourg are actively engaging with the Sustainable Finance Disclosure Regulation (SFDR) framework, mainly by choosing to opt out or by reporting on their PAIs.** However, there are still numerous challenges encountered which hinder the effectiveness and progress-tracking potential of the PAIs disclosures. For one, explanations for non-disclosure continue to vary greatly in both detail and clarity, and certain financial market participants have maintained outdated documents related to their PAIs. Accessing PAI reports remains a challenge in some instances, with certain financial market participants failing to adopt the prescribed templates or formulas laid out in the SFDR Regulatory Technical Standards. In addition, the data reported can sometimes be limited or overly reliant on proxies, with some disclosures making scant reference to forward-looking strategies to address the PAIs.

European ESG Template (EET)

- Despite an increase in the number of Luxembourg-domiciled funds disclosing information in the relevant EET fields compared to 2023, the overall trend remains consistent with the results observed in September 2023.

- Across 2,750 funds disclosing as per Article 8 of the SFDR and publishing both the pre-contractual and reported data, only 71% of AuM were disclosed as aligned with environmental and social characteristics at the pre-contractual level (EET Field 63), while 90% were disclosed as aligned at the reported stage (EET Field 75). This indicates a more conservative disclosure approach early in the investment process.

- **When reporting on Fields 76 and 79 of the EET – which refer to sustainable environmental AuM and sustainable social AuM – there is a clear emphasis on environmental over social among funds disclosing as per Article 9 of the SFDR.** Indeed, these funds report on average that 62% and 54% of their AuM are environmentally sustainable and socially sustainable investments, respectively. In addition, these funds tend to adopt a more cautious approach during the pre-contractual stage. For instance, while 347 funds disclosed that an average of 93% of their AuM are classified as sustainable (Field 74), the same funds reported a lower figure of 82% at the pre-contractual stage (Field 65).

Climate affiliations of Luxembourg players

- **Among the 440 financial market participants analysed in Luxembourg, banks show the highest participation rate in the three major international climate initiatives analysed** – the Glasgow Financial Alliance for Net Zero (GFANZ), the Partnership for Carbon Accounting (PCAF) and the Science-Based Targets Initiative (SBTi) – with 30% of banks adhering to at least one of them.
- GFANZ recorded 105 Luxembourg affiliations – the highest number among the analysed climate initiatives – followed by SBTi and PCAF with 60 and 55 affiliations, respectively.

Stewardship activities in Luxembourg

- Given that stewardship is akin to a long-term dialogue with investee companies and is more qualitative in nature, measuring and quantifying it is inherently difficult.
- Nonetheless, the annual survey carried out by the Principles for Responsible Investment (PRI) – and the responses by the 114 Luxembourg-based signatories of the PRI – reveals key actions that Luxembourg financial institutions are taking to promote stewardship and sustainable finance. **When it comes to listed equities, among Luxembourg-based respondents, voting against the re-election of one or more board directors standards as the most popular (67% of respondents) escalation measure to enhance stewardship and engagement.** This is followed by voting against the chair of the board or joining an existing collaborative engagement/creating a new one (50% of respondents in both cases).

Future trends

- Given its status as a leading private markets hub, the Luxembourg financial centre is well-positioned to capitalise on the new European long-term investment fund (ELTIF 2.0) structure and the burgeoning trends of retailisation in private markets. Out of 132 ELTIFs as of September 2024, 84 are domiciled in Luxembourg, holding EUR 7.7bn in AuM (data on AuM as of end-2023).
- **The revamped ELTIF fund structure makes it easier for retail investors to participate in private markets, and it is set to unlock a new set of opportunities for sustainable and ESG-driven investments.**
- The European Supervisory Authorities recently issued a joint opinion suggesting that SFDR should transition towards a voluntary product classification regime with 'sustainable' and 'transition' categories. Such a recommendation, if implemented by European policymakers and legislators, could bring greater clarity to the sustainable finance landscape.

Moving forward, the Luxembourg financial centre appears well-positioned to continue being a leading international hub for sustainable finance, as players are expected to capitalise on the latest and upcoming policy and regulatory developments. However, continued efforts are required to bridge existing gaps, particularly when it comes to data quality and standardisation, as well as assessing the impact of sustainable finance investments.

1. INTRODUCTION

The summer of 2023 was the hottest on record.[1] That year, an area around twice the size of Luxembourg was burnt in the EU, amounting to more than half a million (504,002) ha.[2] Europe has been experiencing more frequent heatwaves, floods, droughts, and wildfires. As climate change intensifies, it is expected that these events will become more frequent and have even worse consequences.

Beyond the environmental and human toll these catastrophes take, climate change events also have significant impacts on infrastructure and resources, leading to considerable financial consequences. In Europe alone, extreme weather and climate-related events caused over EUR 50bn in economic losses to EU Member States in 2022.[3]

Concerted actions and innovative solutions from both the public and private sectors to mitigate and reverse climate change have never been more urgently needed, particularly as time is running out. According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) from March 2023, without "immediate and deep emissions reductions across all sectors, limiting global warming to 1.5°C is beyond reach" – a tipping point which, if crossed, would lead to countless destabilising shocks.[4]

Policymakers worldwide have begun implementing national policies and international agreements to initiate the necessary changes, such as the Paris Agreement and the Sustainable Development Goals (SDGs). However, to alter the current trajectory, capital is needed. Financial flows must be urgently redirected into activities that adhere to sustainable principles and foster sustainable activities. According to the UN's recent *Financing for Sustainable Development Report 2024*, the gaps to finance the SDGs range between USD 2.5tn and USD 4tn annually.[5]

In this context, sustainable finance – the process of considering environmental, social, and governance (ESG) factors when making investment or lending decisions – offers a key opportunity to address current environmental and social challenges, such as reducing socioeconomic inequalities and fostering inclusive growth. It also provides a way to mitigate the financial impacts of climate change and support the transition to a sustainable economy with a long-term focus.

In recent years, sustainable finance has gained increasing attention and relevance, particularly in the EU. A comprehensive regulatory framework has been developed to provide transparency and guidance for the sector. Methodologies, networks, and frameworks have been established, and new financial products are being launched. However, challenges remain, such as global setbacks in sustainable finance, data-related issues, and a lack of standardisation across jurisdictions.

If we are to move forward, achieve the SDGs, and bridge the funding gap, we must track progress over time, understand the current state of the financial sector, identify challenges, and design a clear path for the future - always aiming to achieve a positive impact on our society through investment decisions across sectors.

1. Copernicus Programme. Summer 2023: the hottest on record. September 5, 2023. https://climate.copernicus.eu/summer-2023-hottest-record
2. European Commission. Advance report on Forest Fires in Europe, Middle East and North Africa 2023. April 2024. https://publications.jrc.ec.europa.eu/repository/handle/JRC137375
3. European Environment Agency. Economic losses from weather- and climate-related extremes in Europe. October 6, 2023. https://www.eea.europa.eu/en/analysis/indicators/economic-losses-from-climate-related#:~:text=Economic%20losses%20from%20weather%2D%20and%20climate%2Drelated%20extremes%20in%20Europe,-Published%2006%20Oct&text=Between%201980%20and%202022%2C%20weather,EUR%2052.3%20billion%20in%202022
4. Intergovernmental Panel on Climate Change (IPCC), The evidence is clear: the time for action is now. We can halve emissions by 2030. April 2022. https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease/
5. UN. Financing for Sustainable Development Report 2024. April 2024. https://desapublications.un.org/publications/financing-sustainable-development-report-2024

1.1. SUSTAINABLE FINANCE IN EUROPE

As highlighted in the second edition of this study, the EU has taken a leading role in promoting sustainable finance. Since the original action plan on sustainable finance was announced in March 2018, a wide array of regulations has come to the fore which have drastically altered the European – and global – financial sectors. Given that readers would already be familiar with these regulations, the table below provides a simple overview of the key regulatory developments[6] since then:

Sustainable Finance Disclosure Regulation (SFDR)

The SFDR is a transparency instrument which seeks to provide ESG-oriented investors with clarity on financial products that purportedly incorporate ESG considerations (Article 8) or which follow a sustainable investment objective (Article 9). In-scope financial market participants are required to disclose the principal adverse impacts (PAIs) of their investment decisions on sustainability matters at both the entity (Article 4) and product level (Article 7).

Taxonomy

The EU Taxonomy establishes a classification system to define environmentally-sustainable economic activities. Taxonomy-aligned activities contribute to at least one of the following six goals: (1) climate change mitigation and (2) adaptation, (3) the sustainable use and protection of water and marine resources, (4) the transition to a circular economy, (5) pollution prevention and control, and (6) the protection and restoration of biodiversity and ecosystems. The activities must also abide by the 'do no significant harm' principle and comply with a set of defined minimum social safeguards.

Corporate Sustainability Reporting Directive (CSRD)

The CSRD significantly overhauls the existing Non-Financial Reporting Directive (NFRD) by requiring large European companies and non-EU companies with a significant presence on the continent to report on sustainability-related subjects which are deemed material to them, both from the impact perspective (i.e., how the firm's activities and its value chains impact the environment and society) and from the financial perspective (i.e. how sustainability factors can positively or negatively impact the firm's revenue flows). The CSRD is buttressed by the European Sustainability Reporting Standards (ESRS) which are a set of standards that define the subjects and metrics which in-scope firms must cover in their CSRD reporting.

Green Bond Standard

By establishing trust in a rapidly growing market, the EU Green Bond Standard (EU GBS) is a voluntary standard that strives to foster environmentally-sustainable investments while increasing investor protections. Green bond issuers adopting the EU GBS are required to prepare pre- and post-issuance reports which are to be reviewed by an external third-party, and can obtain an external review of their post-allocation impact reports.

Corporate Sustainability Due Diligence Directive (CSDDD)

The CSDDD creates a transparent framework which requires large companies in Europe to carry out a due diligence of their own activities and their value chains. This entails a duty to identify, prevent, mitigate, account for or end negative environmental and human rights impacts in the firm's own operations and across its value chains.

The CSDDD sets the framework that allows for due diligence-related information which in-scope firms will be required to publish.

6. For a more detailed overview of the EU's sustainable finance regulations, refer to: LSFI. *In depth: Deep dive into the key characteristics of the EU sustainable finance regulation.* https://lsfi.lu/regulations/taxonomy-regulation

1.2. CONTEXT AND OBJECTIVES OF THE STUDY

In 2022, the LSFI partnered with PwC to prepare Sustainable Finance in Luxembourg: A quantitative and qualitative overview, which analysed the status of the sustainable finance landscape in Luxembourg.[7] A year later, with Sustainable Finance in Luxembourg 2023: An expanded overview, we enlarged our remit and focused on novel facets of the European sustainable finance framework – such as the disclosures of principal adverse impacts (PAIs) as per the SFDR, the European ESG Template (EET), and the adherence to industry-led climate initiatives and tools.[8]

Similar to its two predecessors, the current edition of the study seeks to harness the latest available data to provide an unbiased, fact-based comprehensive overview of the sustainable finance landscape in Luxembourg that professionals in the financial sector and other key stakeholders in Luxembourg and beyond would benefit from. This includes an update of all previous dimensions of last year's study.

The current edition also examines PAIs disclosures at the entity level across different financial market participants (FMPs), comparing mandatory and voluntary metrics and suggesting best practices. Furthermore, it discusses additional voluntary sustainability practices, such as European ESG Template (EET) disclosures, and how these differ before and after investments for Article 8 and 9 funds. The adherence of Luxembourg FMPs to global climate initiatives and sustainability in the banking and insurance sectors is also covered.

However, the present edition is not a mere update. It also delves into the ESG dimensions of Luxembourg's private markets landscape and the stewardship mandates of Luxembourg players. It also provides an overview of the key sustainable finance players in Luxembourg and highlights the trends that are likely to shape the future of sustainable finance in the Grand Duchy.

Given that Luxembourg's fund industry is the largest in Europe and second only to the United States globally,[9] the data presented offers a robust picture of the overall state of sustainable finance in the country. This study seeks to complement other research efforts, such as the 'European Sustainable Investment Study 2022' commissioned by the Association of the Luxembourg Funds Industry (ALFI) and its subsequent edition 'European Sustainable Investment Funds Study 2024' that will become publicly available in Q1 2025; these studies focus on the whole European asset management industry.[10]

7. LSFI & PwC. *Sustainable Finance in Luxembourg: A quantitative and qualitative overview.* https://lsfi.lu/wp-content/uploads/2022/12/Sustainable-Finance-in-Luxembourg.pdf

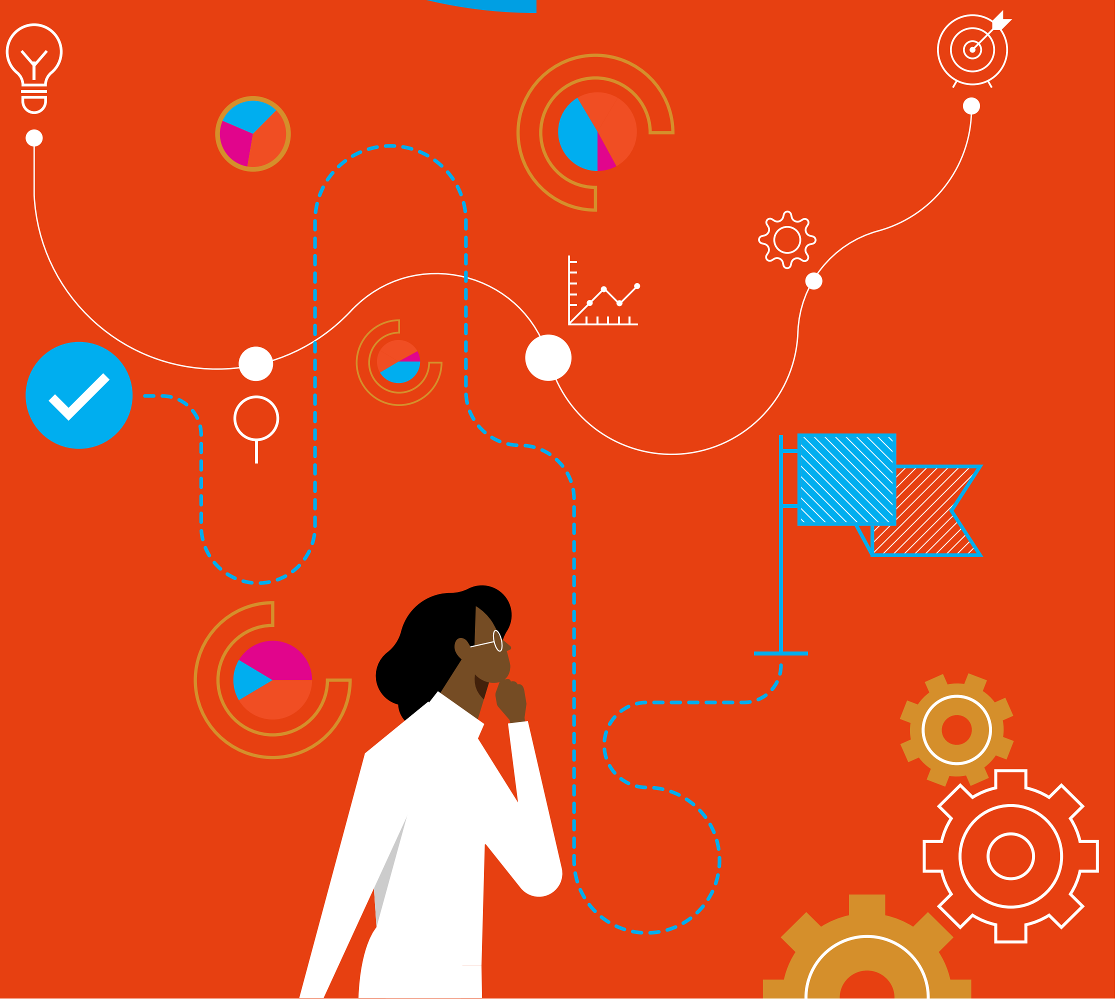
8. LSFI & PwC. Sustainable Finance in Luxembourg 2023: An expanded overview. https://lsfi.lu/wp-content/uploads/2023/12/Sustainable-Finance-in-Luxembourg-An-expanded-overview.pdf

9. ALFI. Luxembourg: The global fund centre. https://www.alfi.lu/getattachment/878cad68-7ae7-4ffd-a839-d465f624168b/app_data-import-alfi-luxembourg-the-global-fund-centre.pdf

10. zeb Consulting & Morningstar. *European Sustainable Investment Funds Study 2022.* https://zeb-consulting.com/en-DE/publications/european-sustainable-investment-funds-study-2022

2.

STRUCTURE AND SCOPE



As in 2022 and 2023, the LSFI selected PwC to consult and support with data research and analysis for this updated and expanded edition of the study. In addition, the LSFI has once again appointed the Advisory Committee that had provided guidance in the previous two editions. The Advisory Committee provided an additional layer of procedural rigour, reviewed the study's results, ensured oversight from experts across sectors and gave constructive feedback when necessary.

2.1. STRUCTURE OF THE STUDY

Sections 3 and 4 of the study are an update to the previous two editions.

In Section 3, the study provides an overview of the overall UCITS funds landscape in Luxembourg. Section 4 then narrows the focus to ESG funds, comparing them to their non-ESG counterparts and highlighting key developments over the past few years. This section is further divided into sub-sections, each examining a specific ESG fund strategy in detail.

As for Section 5, the study dives into private markets and its intersection with ESG in Luxembourg – the first time this subject is tackled in this study. Section 6 then highlights the PAI disclosures of management companies (ManCos), banks and insurance companies in Luxembourg, while Section 7 provides an overview of the usage of the EET by Article 8 and Article 9 funds in Luxembourg.

Section 8 analyses the affiliation of Luxembourg-based financial institutions to global climate initiatives and tools, including Glasgow Financial Alliance for Net Zero (GFANZ), Partnership for Carbon Accounting Financials (PCAF) and Science Based Targets initiative (SBTi), while Section 9 highlights the key sustainable finance players in Luxembourg, namely Luxembourg Green Exchange (LGX), Luxembourg Finance Labelling Agency (LuxFLAG) and International Climate Finance Accelerator (ICFA). As for Section 10, it examines stewardship in the Luxembourg funds industry, looking at Principle Responsible Investing (PRI) data sample which is also a new addition to the study compared with previous versions.

Lastly, Section 11 outlines the future trends and products that are likely to shape the sustainable finance landscape of Luxembourg in the coming years.

The appendices at the end of the document provide important insights into key areas of sustainable finance. Appendix A details the three main levels of SFDR disclosures for financial products: Article 6, Article 8, and Article 9. Appendix B offers an overview of the SFDR PAIs. Appendix C presents a comprehensive quantitative analysis of the six sub-strategies within ESG Involvement funds, complementing Section 4.4 of the study. These sub-strategies include Positive Tilt, Best-in-class, Thematic, SDG, Microfinance, and Sustainable Bonds funds, offering a detailed look into their performance, asset allocation, and market trends.

2.2. DATA SOURCES

For the analysis and the data included for Sections 3 and 4 as well as the appendix, data from LSEG Lipper (formerly Refinitiv Lipper) has been used as it is considered among the most trustworthy, comprehensive and widely accepted data providers in the asset management industry. All Lipper data was extracted in July 2024 and covers up to the first half of 2024 (i.e., 30 June 2024). The methodology applied in the definition of the UCITS ESG strategies is described in detail in Section 4.1.1.

Section 5, on the other hand, relies on data from Monterey Insight and Preqin, two of the most reliable sources of alternatives data. Monterey Insight also provides independent data on 100% of regulated funds and their service providers. The methodology applied in the definition of the ESG strategies for Private Assets is described in Section 5.2.

For Section 6, the PAI-related data was manually collected by the PwC Global AWM & ESG Research Centre between July and September 2024 from publicly-accessible sources (e.g., websites of different financial institutions). As for Section 7, data on EET adherence was retrieved from LSEG Lipper on July 25 and refers to the first half of 2024.

For Section 8, quantitative data of the analysed climate initiatives and tools was retrieved from their websites and were verified with additional publicly-accessible sources (e.g., websites of different financial institutions). As for Section 9, quantitative and qualitative data and activities' highlights were provided by each organisation, with quantitative data available as of the latest date in 2024. Likewise, Section 10 is based on data provided by PRI. Lastly, data on ELTIFs included in Section 11 was retrieved from ESMA, as well as from industry associations such as EFAMA.

2.3. A NOTE ON UPDATED FIGURES

In the 2023 edition of the study, we highlighted how LSEG Lipper continuously updates and reclassifies the funds in its database as information on ESG funds become available. This meant that the figures included in the inaugural 2022 edition were slightly revised and updated figures were included in the 2023 edition. Any data discrepancies between the first and the second edition of the study were due to the update and reclassification on Lipper's part.

The current edition is no exception, as the LSEG Lipper database has been updated once again, and this is reflected in the data presented herein. As such, the figures reported for 2022 and 2023 in this current study may differ from those shown in earlier versions of this study. This approach ensures the most complete overview of the sustainable finance landscape in Luxembourg is given at the time the study is issued. The current data and methodological classification are the most representative compared to previous editions. With databases becoming increasingly comprehensive , and with broader coverage, retroactive adjustments to the classification have allowed this year's edition to be the most accurate to date based on the available information.

2.4. LIMITATIONS OF THE ANALYSIS

As with the previous two editions of the study, constant changes in the ESG investment fund landscape – within and outside Luxembourg – mean that the present edition is as complete as it can be in terms of analysis. We acknowledge that other methodologies can be complementary to the one we adopted.

In Section 4, focusing on the investment strategies of Luxembourg ESG funds, no analysis of the underlying constituent companies in the funds has been performed, and no verification of the identified ESG strategies applied by each fund has been performed as this falls beyond the scope of this study.

With regards to Section 5, Private Markets and ESG in Luxembourg, no analysis of the underlying constituent companies in the funds has been performed, and no verification of the identified ESG strategies applied by each fund has been performed as this falls beyond the scope of this study. In addition, as many ESG private market funds pursue broad, flexible objectives rather than strictly defined strategies, some funds – despite reporting as per SFDR's Article 8 or 9 disclosure requirements – may not align neatly with the well-defined strategies such as energy transition, thematic or impact investments. As a result, several funds have been classified either as "ESG Integration" – when the supporting material indicates that the fund incorporates ESG factors in its investment process, but does not mention a specific theme – or as "Not Clarified" – when the ESG strategy of the fund is not clear. In addition, some funds implement some level of ESG integration in their strategies, but choose not to disclose as per Article 8 or 9 of the SFDR. Whilst the Section primarily focuses on open-ended and closed-ended funds, the analysis in Section 5.3. does not consider closed-ended funds currently raising capital or those in an interim close phase, which means that the figures may not fully capture the latest trends in ESG fundraising. For real estate funds, the analysis includes closed-ended structures as well as open-ended real estate funds that are not UCITS. For sake of clarity, only 20 open-ended real estate funds were included in Section 3, which provides an overview of Luxembourg's UCITS landscape.

For Section 6 on PAIs, a selection of mandatory indicators was chosen for their suitability for historical and interinstitutional comparisons, as well as their coverage of various ESG topics. Direct comparisons between last year's and this year's data are challenging and should be approached with caution as the sample size is smaller this year due to improvements in the entities' disclosure and the data collection process. Specifically, to make the sample more representative and accurate, we excluded branches of banks and insurance companies as these entities are not obliged to disclose on a stand-alone basis. This adjustment did not impact the depth of the analysis. In terms of coverage, we took into account the full sample for each type of entity (Super ManCos, UCITS ManCos, AIFMs, banks, insurance companies), while the analysis of the different PAIs (e.g., PAI 13 – median board gender diversity among investee companies) only considered explicit figures disclosed. Entities with inaccessible or disaggregated data were excluded from the PAIs analysis to ensure clarity and consistency.

For Section 7, Overview of the European ESG Template (EET), it is important to note that funds are not required to report via the EET template as participation is voluntary and therefore data availability is limited. Furthermore, only fields containing product-level asset allocation information, as mandated by SFDR Level II, were included, as these were most relevant to the analysis.

In Section 8 on climate initiatives and tools, the scope of this year's sample has been considerably broadened. It now encompasses all ManCos in Luxembourg registered with ESMA, all banks and insurance companies with a legal presence in Luxembourg, resulting in a total of 440 firms. In last year's study only the largest 50 banks and insurance companies were considered together with all ManCos. Because of this expanded sample size, the current data does not permit a direct year-on-year comparison with last year's edition.

As for Section 10, which deals with stewardship in Luxembourg, one initiative that provides valuable insights into the Luxembourg market is the PRI. Through the annual survey of its 114 Luxembourg-based signatories, the PRI collects data that sheds light on market trends and developments. A key limitation of this analysis is the small sample size, as only a limited number of the 114 signatories responded to the survey questions.

3.

OVERVIEW OF LUXEMBOURG'S UCITS LANDSCAPE

This section looks at the overall situation of Luxembourg-domiciled UCITS, highlighting their AuM, net flows, sectors in which investments are made, and the largest active asset managers. The term UCITS is used interchangeably with mutual funds.

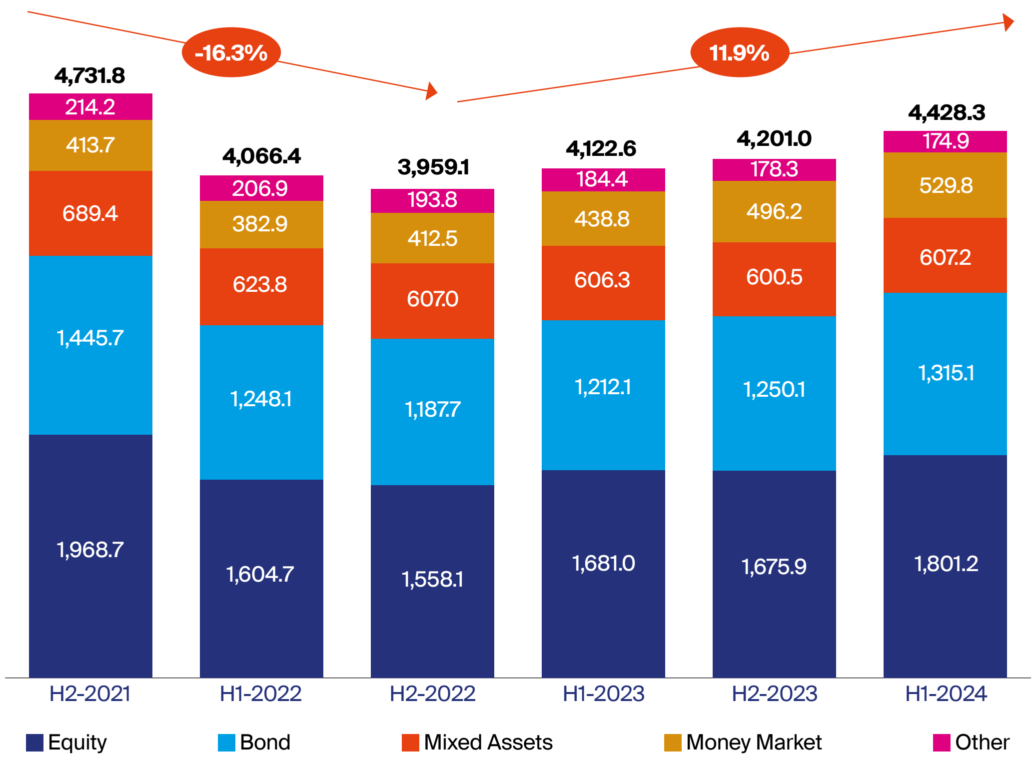
As with the rest of the global asset management industry, Luxembourg's fund industry experienced a downturn in 2022, as the global economy – still reeling from the COVID-19 pandemic – was affected by systemic shocks and the abrupt end of the prolonged era of low interest rates.

This section highlights that while the highs reached in 2021 still remain in the rearview mirror, the industry has managed to recover significantly.

3.1. ASSET CLASS BREAKDOWN

From a peak of EUR 4.7tn in H2 2021, the AuM of Luxembourg-domiciled UCITS dropped to EUR 3.9tn by the end of 2022, falling by 16.3%. However, a recovery has taken place since then. Between H2 2022 and H1 2024, the AuM grew by 11.9% to reach EUR 4.4tn, with equity and bond assets collectively making up a little over 70% of total assets (Exhibit 1).

Exhibit 1. AuM of Luxembourg-domiciled UCITS (by semester; EUR bn)



Note: Data Excludes Funds of Funds.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

In the first half of 2024, bond funds experienced the highest inflows, standing at EUR 53.1bn, followed by money market funds which saw inflows of EUR 19.5bn – a trend that has been ongoing since H2 2022. Equity funds and mixed funds, on the other hand, both saw net outflows of EUR 38bn and EUR 17.9bn in H1 2024, respectively (Exhibit 2).

Exhibit 2. Net flows of Luxembourg-domiciled UCITS (EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	-21.3	-38.4	-10.0	-50.7	-38.0
Bond	-66.2	-36.9	13.5	-7.7	53.1
Mixed	11.6	-10.3	-17.7	-25.9	-17.9
Money Market	-45.8	35.2	26.5	57.9	19.5
Other	5.2	-5.8	-9.3	-11.2	-0.6
Total	**-116.6**	**-56.3**	**3.0**	**-37.6**	**16.1**

Note: Data Excludes Funds of Funds.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

3.2. INSTITUTIONAL VS. RETAIL SPLIT

Institutional investors continue to hold the majority (60.4%) of AuM, a figure which has not moved much since H1 2022 (Exhibit 3.a). Investment flows from retail investors have significantly surpassed those from institutional investors in H1 2024. As a matter of fact, out of a total EUR 16.1bn in net flows, retail investors poured in EUR 35.4bn compared to institutional investors who pulled out EUR 19.2bn (Exhibit 3.b).

This is likely due to the fact that retail investors have been drawn to the market upticks in H1 2024, while their institutional counterparts may be redirecting some of their investment flows towards private markets, now that a degree of macroeconomic stability appears to have been established. Indeed, the 2023 edition of PwC's 'Asset and wealth management revolution' report had already forecast that alternatives AuM would grow in the coming years.[11]

Exhibit 3.a. AuM of Luxembourg-domiciled UCITS (retail vs. institutional investors; EUR tn)

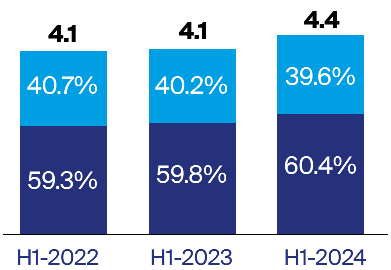


Exhibit 3.b. Net flows into Luxembourg-domiciled UCITS (retail vs. institutional investors; EUR tn)

	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Institutional	-98.7	-20.0	-11.1	-7.8	-19.2
Retail	-17.9	-36.3	14.1	-29.8	35.4
TOTAL	**-116.6**	**-56.3**	**3.0**	**-37.6**	**16.1**

Note: Data Excludes Funds of Funds.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

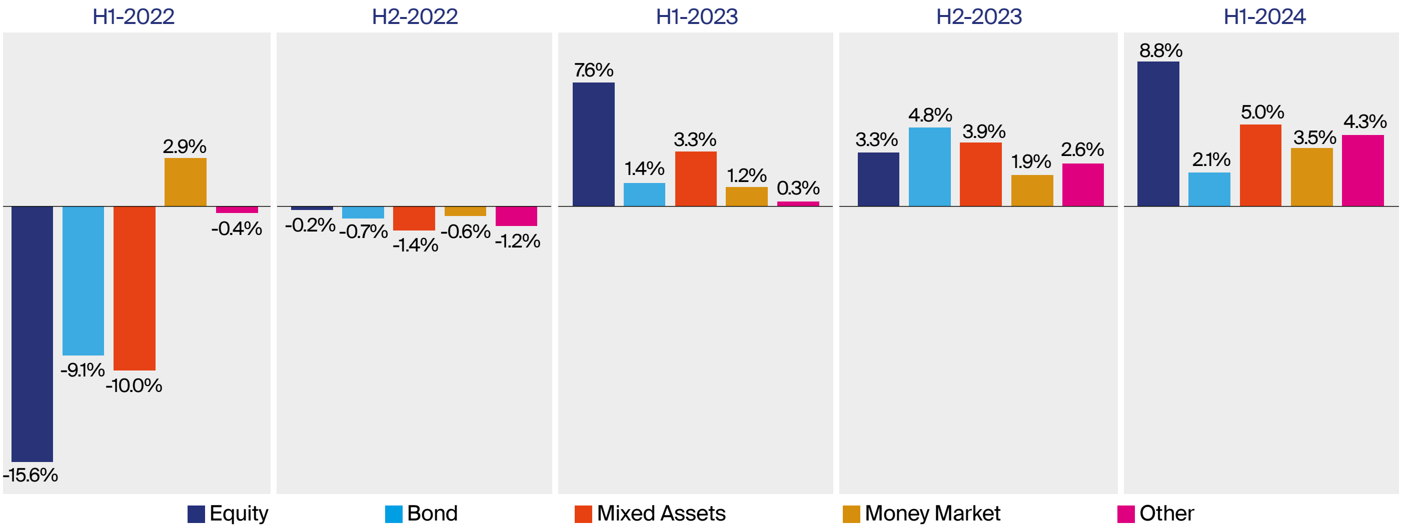
11. PwC. *Asset and wealth management 2023: The new context.* *https://www.pwc.com/gx/en/industries/financial-services/asset-management/publications/asset-and-wealth-management-revolution-2023.html?WT.mc_id=CT1-PL50-DM2-TR2-LS4-ND7-TTA9-CN_GX-FY23-XLOS-Transformation-Industryreinvention-AWMrevolution2023-all-posts-linkedin*

3.3. PERFORMANCE AND ASSET GROWTH BREAKDOWN

During the first half of 2024, positive returns were recorded across all asset classes. Equity funds delivered a strong performance, with returns of 8.8%, outpacing the 7.6% recorded in H1 2023. Funds focused on mixed assets and money markets also posted gains, with returns rising to 5% and 3.5%, respectively.

The performance of bond funds in H2 2023 (4.8%) was much better than in H1 2023 (1.4%), given decreasing inflation rates and the market's expectation of an end to the series of rate increases by central banks. But in H1 2024, their performance was well below that of other funds (Exhibit 4.a).

Exhibit 4.a. Luxembourg-domiciled UCITS – average fund performance by asset class

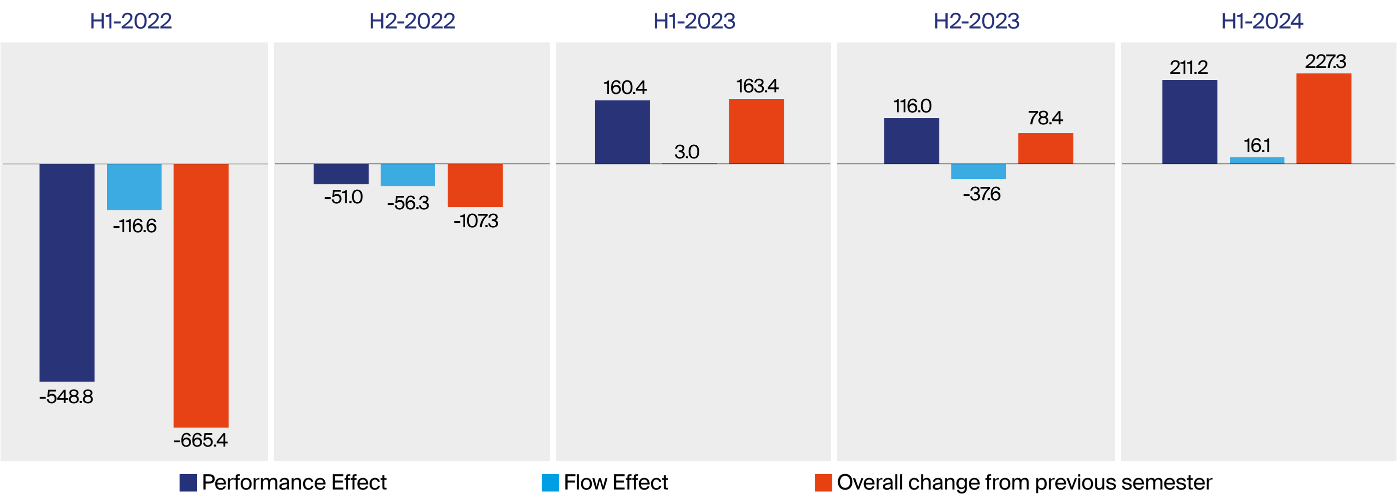


Note: Data Excludes Funds of Funds.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

By disentangling flows and performance, we can observe that performance has been the key driver of growth in assets among Luxembourg-domiciled UCITS during 2023 and H1 2024.

Indeed, out of EUR 227.3bn in increase AuM in the first half of 2024, EUR 211.2bn were due to the performance effect (Exhibit 4.b).

Exhibit 4.b. Luxembourg-domiciled UCITS – breakdown between performance and flow effect (EUR bn)



Note: Data Excludes Funds of Funds.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

3.4. SECTORAL ANALYSIS

When looking at the sectors in which Luxembourg-domiciled UCITS are allocating capital in the first half of 2024, Software & Services remains the most attractive sector, with 4.6% of AuM allocated, followed by a rising share for the Semiconductors sector, with 4% of AuM allocations. This might be due to the fact that both sectors are integral to the emergence of Artificial Intelligence (AI), which has prompted significant investment flows to the technology sector across the world over the last two years.

The Pharmaceuticals, Biotechnology & Life Sciences sector – which was the second most prominent sector in terms of capital allocations in H1 2024 – has been relegated to the fourth place, with 3.4% of AuM allocations (Exhibit 5).

Exhibit 5. Luxembourg-domiciled UCITS – indicative AuM* allocation to main sectors (in percentage; H1-2024)

Note: Data Excludes Funds of Funds, *The total AuM of funds for which sector data was available is EUR 1.86tn or 42% of the EUR 4.4tn displayed previously. The remaining sectors account for 11.7% of the allocation.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

3.5. THE LARGEST ASSET MANAGERS

Regarding the headquarters of the asset managers of Luxembourg-domiciled UCITS, US-based asset managers have the highest amount of AuM with EUR 1,253.8bn as of H1 2024, followed by French-based asset managers with EUR 607.8bn in AuM (Exhibit 6.a).

JPMorgan alone holds EUR 421.0bn in AuM allocated across 136 funds, while Amundi holds EUR 301.1bn in AuM spread across 546 funds – the largest number of funds managed by a single asset manager in Luxembourg (Exhibit 6.b).

However, when it comes to the number of funds domiciled in Luxembourg, Swiss-based asset managers have the largest number (1,422), followed by French (1,340), US (1,322) and German (1,171) asset managers (Exhibit 6.a).

Exhibit 6.a. HQ split of asset managers by AuM and number of funds (as of end-June 2024)

Variation 23-24 (AuM)		Manager HQ	AuM Q2 2024 (EUR bn)	# of funds	Variation 23-24 (# of funds)
=	1	USA	1,253.8	1,322	=
=	2	FR	607.8	1,340	=
▲	3	DE	570.4	1,171	=
▼	4	UK	559.1	899	=
=	5	CH	499.2	1,422	=
=	6	IT	228.8	663	=
=	7	BE	172.1	323	=
=	8	LU	111.7	941	=
=	9	NL	106.4	243	▲
		Other	318.9	1,273	
		TOTAL	**4,428.3**	**9,597**	

Note: Data Excludes Funds of Funds.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Exhibit 6.b. Ten largest asset managers by AuM and number of funds (as of end-June 2024)

	Manager HQ	Asset Manager Name	AuM Q2 2024 (EUR bn)	# of funds	Cluster Representation (%)
1		JPMorgan	**421.0**	136	9.5%
2		Amundi	301.1	546	6.8%
3		DWS	189.0	304	4.3%
4		BlackRock	167.6	147	3.8%
5		UBS	164.8	278	3.7%
6		Allianz Global Investors	156.2	210	3.5%
7		Morgan Stanley	148.4	95	3.4%
8		BNP Paribas	145.9	249	3.3%
9		Fidelity International	136.6	149	3.1%
10		Pictet	135.1	114	3.1%

Note: Data Excludes Funds of Funds.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.

ANALYSIS OF LUXEMBOURG ESG FUNDS' INVESTMENT STRATEGIES

Now that Luxembourg's overall UCITS landscape has been presented, this section dives into the current state of sustainable finance, examining how the sector has evolved since mid-2022.

In the first edition of this study (2022), we highlighted a relatively significant drop in ESG UCITS AuM between the end of 2021 and mid-2022. This drop was due to the numerous geopolitical and macroeconomic shocks to the global economy that had significantly impacted the global financial sector and dampened ESG ambitions among both investors and asset managers. The outflows which ESG funds experienced in 2022 were part of a broader market trend where most funds – ESG and non-ESG alike – experienced drawdowns.

However, as markets have stabilised and adapted to the end of the era of ultra-low interest rates, the picture that emerges is one of gradual recovery, and the figures presented below show that the sustainable finance sector appears to have weathered the storms.

Be it the large-scale industrial policies passed by governments to promote the energy transition and the decarbonisation of the global economy, continued interest among investors for ESG products, or the enforcement of sustainability-related regulations in the EU, sustainable finance will likely continue to experience a rebound from the depths experienced in 2022.

4.1. COMPARISON OF ESG AND NON-ESG FUNDS IN LUXEMBOURG

4.1.1. Description of ESG fund characteristics

The term 'ESG' is used to describe all the funds that include material Environmental and/or Social and/or Governance factors into their overall screening processes regardless of their underlying strategy or sub-strategy.

Similar to the previous two editions, the study clusters the categories provided by LSEG Lipper for its classification of ESG funds into three mutually exclusive groups that can be found in the table below.

ESG Screening	ESG Exclusion	ESG Involvement
This cluster contains ESG flagged funds which apply ESG factors into their overall screening process and cannot be explicitly included in either the Exclusion or Involvement categories.	This cluster includes ESG flagged funds that also apply one or more exclusion criteria. They generally exclude one or more controversial sectors from their investments (e.g., weapons, tobacco, adult entertainment, nuclear energy, alcohol or drugs, GMOs, fossil energy etc.).	This cluster includes ESG flagged funds that also apply one or more of the following sub-strategies: Best-in-class, Positive Tilt, Thematic, Microfinance, SDGs, and Sustainable Bonds funds. These funds may also apply exclusion criteria as well. Given that roughly 23.3% of the funds apply more than one sub-strategy, the data presented by sub-strategy double counts these funds and their respective AuM.

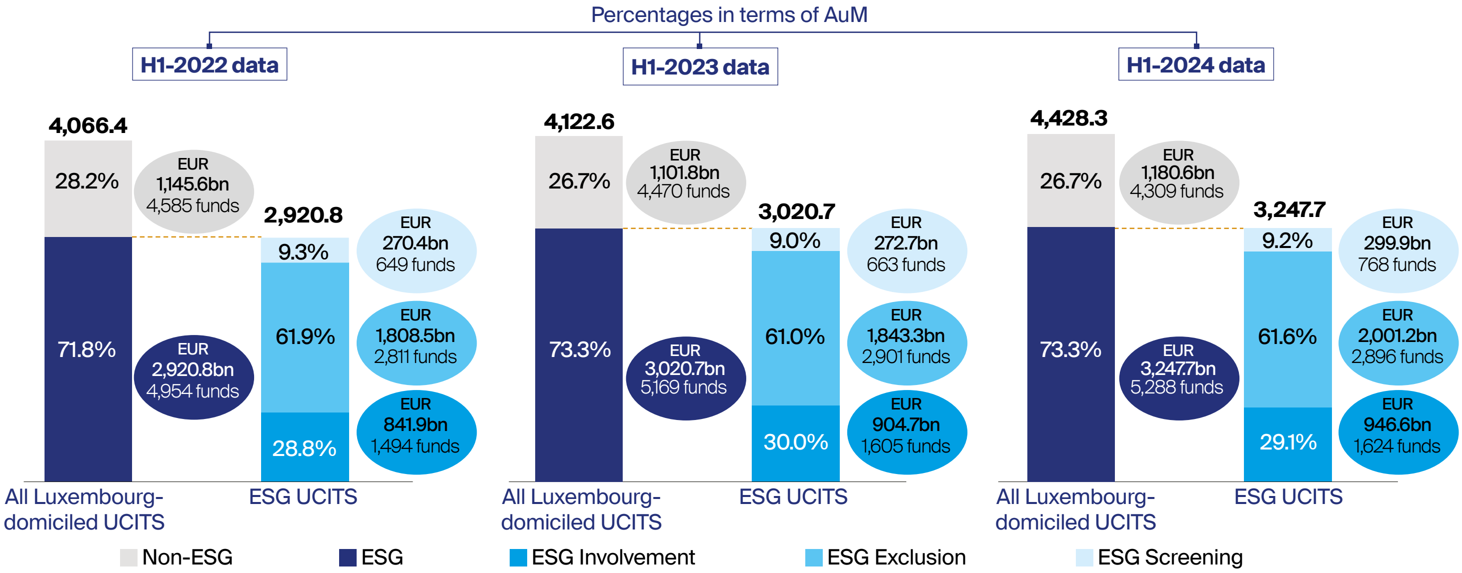
All the funds categorised under these three categories are tagged as ESG funds in the Lipper database, which means that ESG Exclusion and ESG Involvement funds apply ESG Screening to varying degrees.

ESG Involvement funds may also employ exclusion criteria, and all ESG funds employ the negative screening approach to exclude at least one controversial sector from their investment.

More information on the sub-categories used by ESG Involvement funds, alongside a quantitative analysis, can be found in Appendix C. In Luxembourg, the AuM of ESG funds makes up almost three-quarters (73.3%) of the total UCITS AuM – a figure which has not changed much since H1 2023 – and the dominant trend among them is to primarily employ purely exclusionary approaches (61.6% of total ESG AuM as of H1 2024) or embrace ESG involvement strategies (29.1% of total ESG AuM as of H1 2024).

However, a small segment of ESG funds (9.2% of AuM) lacks explicit ESG involvement or exclusion policies, but reportedly employs ESG screening methods in their investments (Exhibit 7).

Exhibit 7. Total AuM of ESG and non-ESG funds in Luxembourg (H1 2022 – H1 2024; percentages in terms of AuM)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.1.2. Performance and asset growth breakdown

After reaching a low of EUR 2,893.1bn in AuM in H2 2022, Luxembourg-domiciled ESG funds experienced a significant rebound, reaching EUR 3,247.7bn by the end of June 2024 – an increase of 12.3%. Equity and bond funds make up the bulk of Luxembourg's ESG funds, holding EUR 1,383.7bn and EUR 969.4bn in AuM respectively (Exhibit 8.a).

Non-ESG funds domiciled in Luxembourg have also experienced a rebound since H2 2022, going from a low of EUR 1,066.1bn to EUR 1,180.6bn in H1 2024. However, the growth rate (10.7%) was lower than the one experienced by ESG funds (Exhibit 8.b).

Exhibit 8.a. ESG UCITS AuM in Luxembourg
(by semester; EUR bn)

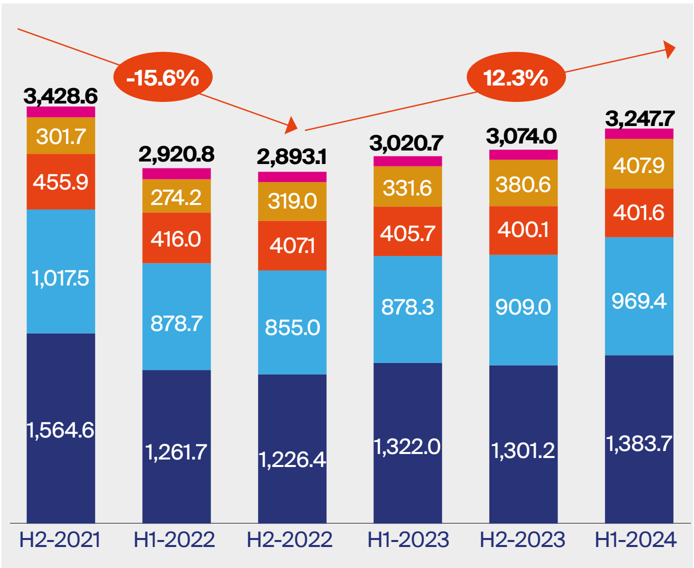
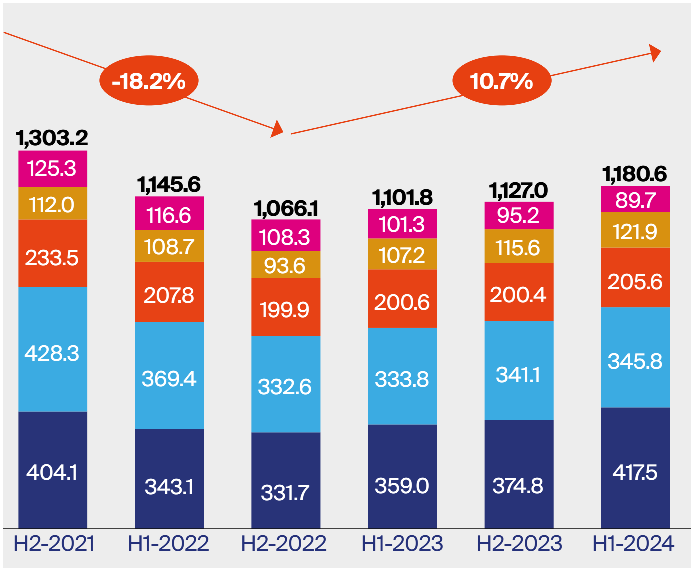


Exhibit 8.b. Non-ESG UCITS AuM in Luxembourg
(by semester; EUR bn)



Equity   Bond   Mixed Assets   Money Market   Other

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

In the first half of 2023, non-ESG Luxembourg-domiciled funds experienced total net inflows of EUR 13.4bn while their ESG counterparts saw net outflows of EUR 10.3bn. In the second half of that year, ESG funds continued to experience drawdowns, as EUR 32.5bn of net outflows were recorded (compared to outflows of EUR 5.2bn for non-ESG funds). These outflows were largely driven by the difficult global macroeconomic environment, while increased regulatory scrutiny over ESG funds in Europe may have also dampened ESG-related ambitions and expectations from asset managers and investors.

In the first half of 2024 both ESG and non-ESG funds saw net inflows, although the latter had stronger inflows (EUR 11.3bn) than the former (EUR 4.8bn). Among ESG funds, the ones focused on bonds saw a sizeable inflow of EUR 50.8bn, but this was partly offset by ESG equity funds which saw outflows of EUR 46.3bn (Exhibit 9.a).

Exhibit 9.a. Net flows of Luxembourg-domiciled ESG and non-ESG funds (by semester; EUR bn)

	Net flows (EUR bn)									
	H1-22		H2-22		H1-23		H2-23		H1-24	
Asset Class	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG
Equity	-19.6	-1.7	-28.3	-10.1	-13.1	3.1	-52.4	1.6	-46.3	8.4
Bond	-46.1	-20.1	-10.8	-26.1	8.8	4.7	-4.8	-3.0	50.8	2.3
Mixed	10.1	1.5	-7.6	-2.7	-14.6	-3.1	-20.9	-5.0	-16.8	-1.1
Money Market	-37.2	-8.6	47.7	-12.5	12.5	14.0	48.8	9.1	16.6	2.9
Other	3.6	1.5	-5.0	-0.9	-4.0	-5.3	-3.2	-8.0	0.5	-1.1
Total	**-89.2**	**-27.4**	**-4.0**	**-52.4**	**-10.3**	**13.4**	**-32.5**	**-5.2**	**4.8**	**11.3**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

When it comes to relative flows – which are obtained through a ratio between net flows and AuM – ESG bond funds had the highest figure (5.2%) among all asset classes in H1 2024, followed by ESG money market funds (4.1%). While these figures might appear to signal growing momentum for ESG funds in Luxembourg, it is worth noting that ESG funds focused on equities and mixed assets had negative relative flows, standing at -3.3% and -4.2% in the same period (Exhibit 9.b).

Exhibit 9.b. Relative flows of Luxembourg-domiciled ESG and non-ESG funds (by semester; EUR bn)

	Relative Flows									
	H1-22		H2-22		H1-23		H2-23		H1-24	
Asset Class	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG
Equity	-1.6%	-0.5%	-2.3%	-3.0%	-1.0%	0.9%	-4.0%	0.4%	-3.3%	2.0%
Bond	-5.2%	-5.4%	-1.3%	-7.9%	1.0%	1.4%	-0.5%	-0.9%	5.2%	0.7%
Mixed	2.4%	0.7%	-1.9%	-1.4%	-3.6%	-1.5%	-5.2%	-2.5%	-4.2%	-0.5%
Money Market	-13.6%	-7.9%	15.0%	-13.4%	3.8%	13.0%	12.8%	7.9%	4.1%	2.4%
Other	4.0%	1.3%	-5.8%	-0.8%	-4.8%	-5.2%	-3.8%	-8.4%	0.6%	-1.3%
Total	**-3.1%**	**-2.4%**	**-0.1%**	**-4.9%**	**-0.3%**	**1.2%**	**-1.1%**	**-0.5%**	**0.1%**	**1.0%**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As for the split between institutional and retail investors, interest among retail investors appears to be more focused towards non-ESG funds, as they poured in EUR 22.8bn in H1 2024, compared to EUR 12.6bn in ESG funds. As for institutional investors, they pulled out more capital from non-ESG funds (EUR 11.5bn) than ESG funds (EUR 7.8bn), which could indicate that they have longer exposure to the latter (Exhibit 9.c).

Exhibit 9.c. Net flows of Luxembourg-domiciled ESG and non-ESG funds (institutional vs. retail split; EUR bn)

	Net flows (EUR bn)									
	H1-2022		H2-2022		H1-2023		H2-2023		H1-2024	
	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG	ESG	Non-ESG
Institutional	-72.6	-26.2	5.6	-25.6	-15.2	4.1	-8.9	1.1	-7.8	-11.5
Retail	-16.7	-1.2	-9.5	-26.8	4.9	9.2	-23.6	-6.3	12.6	22.8
TOTAL	**-89.2**	**-27.4**	**-4.0**	**-52.4**	**-10.3**	**13.4**	**-32.5**	**-5.2**	**4.8**	**11.3**

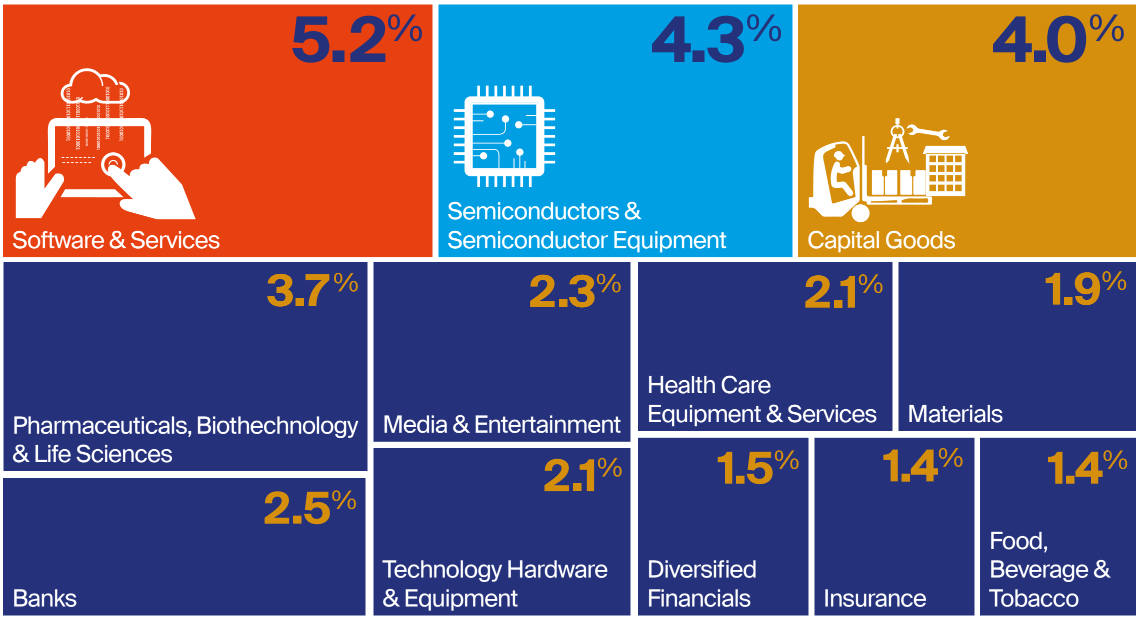
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.1.3. Sectoral analysis

The two leading sectors ESG funds invest in are Software & Services (5.2%) and Semiconductors & Semiconductor Equipment (4.3%) (Exhibit 10), which aligns with the wider UCITS landscape in Luxembourg as highlighted in Exhibit 5.

Exhibit 10. Luxembourg-domiciled ESG UCITS – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. *The total AuM of funds for which sector data was available is EUR 1.45tn or 44.5% of the EUR 3.2tn displayed previously. The remaining sectors account for 12.1% of the allocation.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.1.4. Asset managers' headquarter split

When it comes to the headquarters of the largest asset managers with ESG funds domiciled in Luxembourg, French managers have the highest number of ESG funds (914), closely followed by their American counterparts (907). Swiss asset managers come in third place, with 745 funds. However, when it comes to ESG AuM, American asset managers stand at the helm (EUR 977.4bn), followed by British (EUR 432.3bn) and French (EUR 431.0bn) asset managers (Exhibit 11.a).

Exhibit 11.a. HQ split of asset managers by AuM and number of ESG funds (as of end-June 2024)

Variation 23-24 (AuM)	Manager HQ		AuM Q2 2024 (EUR bn)	# of funds	Variation 23-24 (# of funds)
=	1	USA	977.4	907	▲
▲	2	UK	432.3	572	▼
▼	3	FR	431.0	914	=
=	4	CH	374.4	745	=
=	5	DE	294.6	535	=
=	6	IT	177.5	322	=
=	7	BE	161.1	205	▼
▲	8	NL	104.4	224	▲
▼	9	FI	78.5	105	=
		Other	216.5	759	
		TOTAL	3,247.7	5,288	

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Similar to the figures highlighted in Exhibit 6.b regarding the largest asset managers by AuM, JP Morgan and Amundi are the two largest when it comes to ESG AuM, with EUR 348.9bn and EUR 148.2bn in assets, respectively. Amundi is closely followed by BNP Paribas (EUR 139.1bn), Morgan Stanley (EUR 134.4bn) and Pictet (EUR 131.6bn) (Exhibit 11.b).

Exhibit 11.b. Ten largest asset managers by number of ESG funds and ESG AuM (as of end-June 2024)

	Manager HQ	Asset Manager Name	AuM Q2 2024 (EUR bn)	# of funds	Cluster Representation (%)
1		JPMorgan	**348.9**	117	10.7%
2		Amundi	148.2	300	4.6%
3		BNP Paribas	139.1	196	4.3%
4		Morgan Stanley	134.4	79	4.1%
5		Pictet	131.6	96	4.1%
6		Fidelity International	124.4	112	3.8%
7		UBS	96.3	135	3.0%
8		Eurizon Asset Management	94.1	127	2.9%
9		Goldman Sachs	92.8	132	2.9%
10		Schroders	89.8	119	2.8%

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

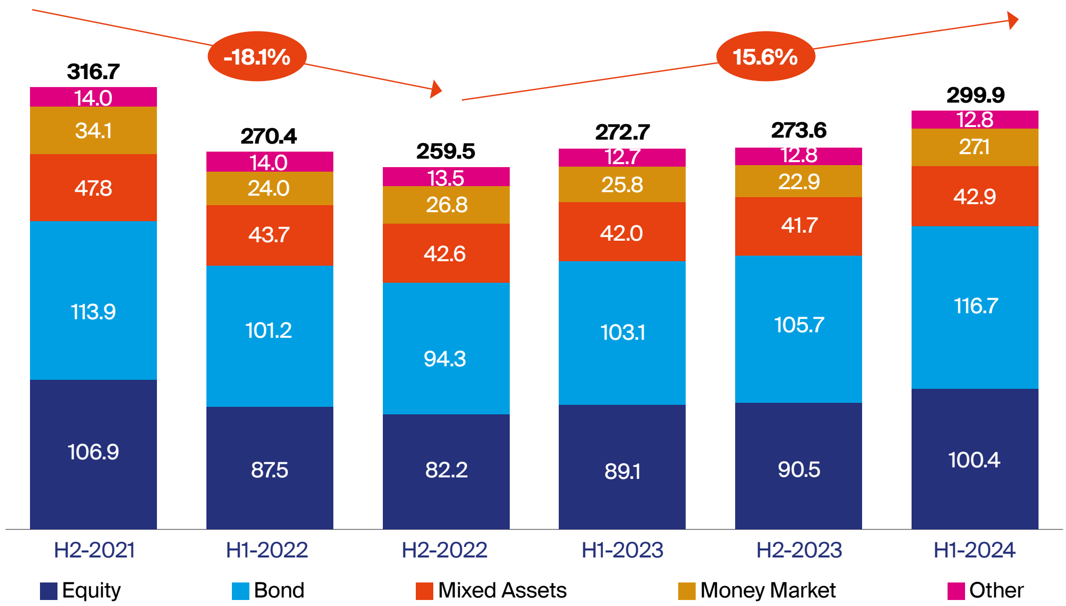
4.2. OVERVIEW OF ESG SCREENING FUNDS

The ESG Screening funds outlined in this sub-section apply an ESG strategy other than Exclusion or Involvement. As of H1 2024, they made up 9.2% of all ESG funds.

4.2.1. Asset class breakdown

In the first half of 2024, ESG Screening funds continued to see their AuM grow, recording a 15.6% increase since H2 2022 (Exhibit 12). However, they still have not reached the AuM levels recorded in H2 2021, and similar to the broader Luxembourg-domiciled fund market, this increase was driven by net inflows and by positive market performance, with the latter being the most influential factor (Exhibit 13).

Exhibit 12. AuM of ESG Screening funds domiciled in Luxembourg (by semester; EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Of the EUR 40.4bn increase in total AuM of ESG Screening funds since H2 2022, the largest change in percentage terms is in the bond funds, which saw an AuM increase of 24%. Equity assets gained approximately 22%.

When it comes to net flows, ESG Screening funds focused on bonds have attracted more inflows than their equities counterparts since H1 2023. Indeed, in the first half of 2024, bond funds saw EUR 10.8bn in net inflows, while equities funds saw inflows of EUR 0.3bn (Exhibit 13).

Exhibit 13. Net flows of Luxembourg-domiciled ESG screening funds (EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	-4.4	-3.4	0.7	-1.9	0.3
Bond	-0.9	-4.9	3.5	2.8	10.8
Mixed	2.5	0.0	-0.7	-1.9	-1.1
Money Market	-7.9	3.5	-1.5	-2.8	3.7
Other	0.2	-0.6	-1.0	-0.4	0.7
Total	**-10.6**	**-5.4**	**0.9**	**-4.1**	**14.4**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

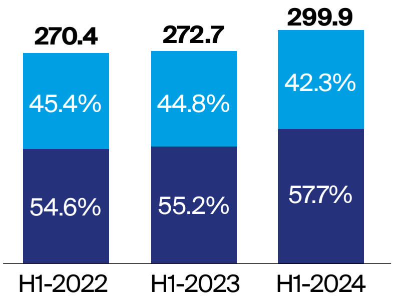
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.2.2. Institutional vs. retail split

Inflows towards ESG Screening funds in H1 2024 were driven by both institutional and retail investors, who poured in EUR 5.2bn and EUR 9.2bn respectively in these funds, bringing in a total of EUR 14.4bn. Retail investors continue to make up the majority (57.7%) of investors with allocations to ESG Screening funds (Exhibit 14).

Exhibit 14. AuM and net flows of Luxembourg-domiciled ESG screening funds (institutional vs. retail split; EUR bn)

AuM (EUR bn)



Net flows (EUR bn)

	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Institutional	-8.0	-5.2	-1.0	-3.8	5.2
Retail	-2.6	-0.2	1.9	-0.3	9.2
TOTAL	**-10.6**	**-5.4**	**0.9**	**-4.1**	**14.4**

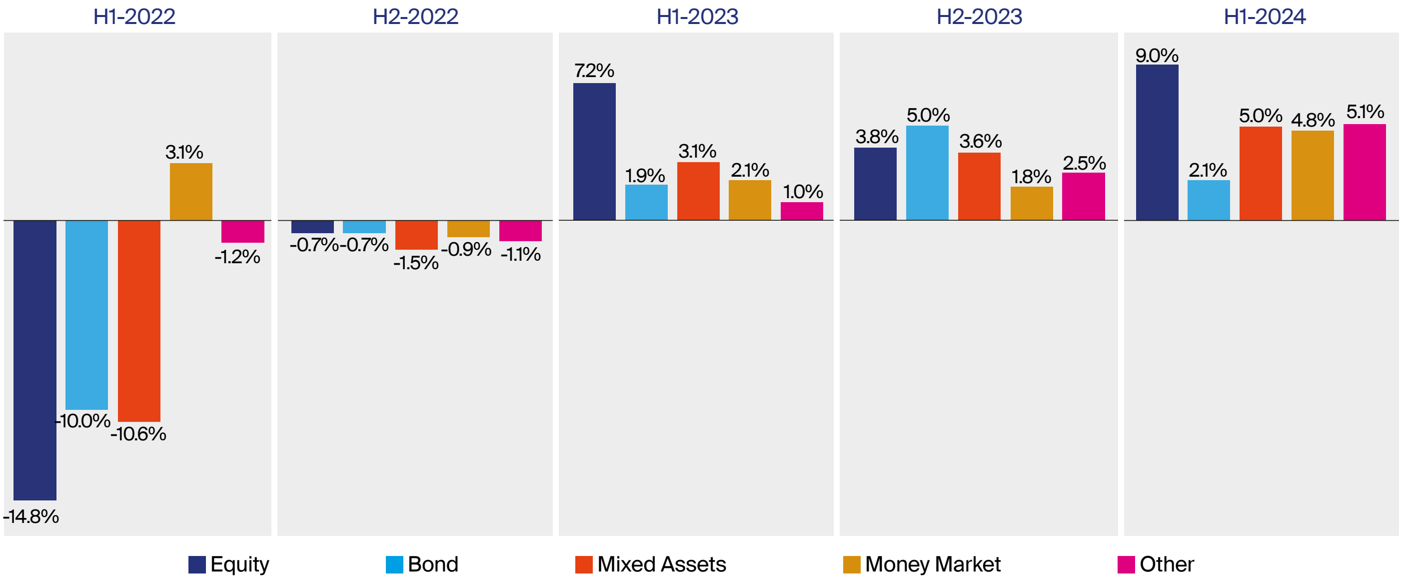
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.2.3. Performance by asset class

In H1 2024, ESG Screening funds focused on equities outperformed those focused on other assets. Indeed, the former recorded a positive performance of 9%, well higher than the performance recorded by those focused on mixed assets (5%), money markets (4.8%), and bonds (2.1%) (Exhibit 15.a).

Exhibit 15.a. Average performance of ESG Screening funds (by asset class)

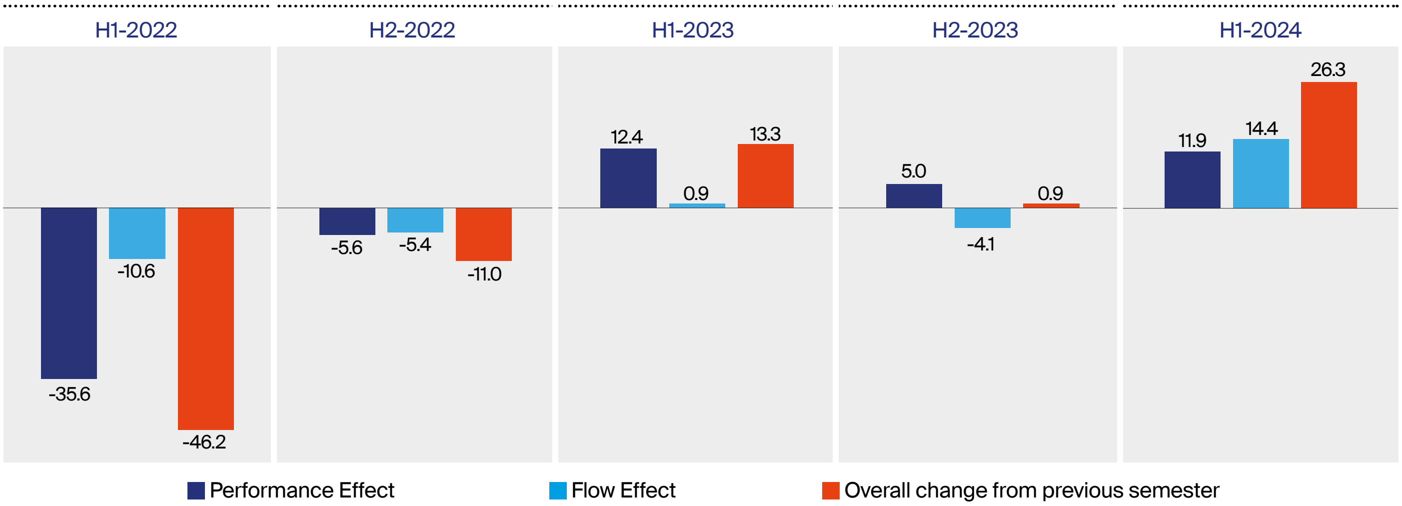


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

However, a large part of the growth witnessed by ESG Screening funds was due to stronger net flows (EUR 14.4bn) as opposed to improved performance (EUR 11.9bn). In fact, H1 2024 is the first half year since H1 2022 that sizable positive flows were recorded, which indicates that fresh capital is flowing into ESG Screening funds (Exhibit 15.b).

Exhibit 15.b. ESG Screening funds – Breakdown between performance and flow effect (EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.2.4. Managers' headquarter splits

When it comes to the asset managers' headquarters, French managers saw large drops in both AuM and number of ESG Screening funds, while such funds managed by British players gained the largest share of AuM. Nonetheless, French mangers have the largest number of funds, being the only one surpassing the one-hundred mark for this fund cluster (Exhibit 16.a).

Exhibit 16.a. HQ split of asset managers by AuM and number of ESG Screening funds (as of end-June 2024)

Variation 23-24 (AuM)		Manager HQ	AuM Q2 2024 (EUR bn)	# of funds	Variation 23-24 (# of funds)
▲	1	UK	70.9	99	▲
=	2	CH	48.8	96	▼
▲	3	DE	37.8	69	▼
▼	4	FR	28.7	122	=
▲	5	IT	28.3	76	▲
▼	6	USA	28.1	72	=
▼	7	BE	16.5	30	=
=	8	SG	9.2	38	▲
▲	9	LU	6.8	57	=
		Other	24.9	109	
		TOTAL	**299.9**	**768**	

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As for the largest managers by AuM when it comes to ESG Screening funds, abrdn has the highest amount of AuM with EUR 26.2bn, followed by UBS (EUR 25.8bn), Union Investment (EUR 20.1bn), Fideuram (EUR 19.4bn) and Janus Henderson (EUR 18.2bn) (Exhibit 16.b).

Exhibit 16.b. Ten largest asset managers by number of ESG Screening funds and AuM (as of end-June 2024)

	Manager HQ	Asset Manager Name	AuM Q2 2024 (EUR bn)	# of funds	Cluster Representation (%)
1	UK	abrdn	**26.2**	8	8.7%
2	Switzerland	UBS	25.8	30	8.6%
3	Germany	Union Investment	20.1	15	6.7%
4	Italy	Fideuram	19.4	**48**	6.5%
5	UK	Janus Henderson Investors	18.2	21	6.1%
6	Germany	DWS	13.8	28	4.6%
7	UK	M&G Investments	11.2	10	3.7%
8	USA	Goldman Sachs	10.6	13	3.5%
9	Belgium	Degroof Petercam	10.3	12	3.4%
10	Singapore	Eastspring Investments	8.4	31	2.8%

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

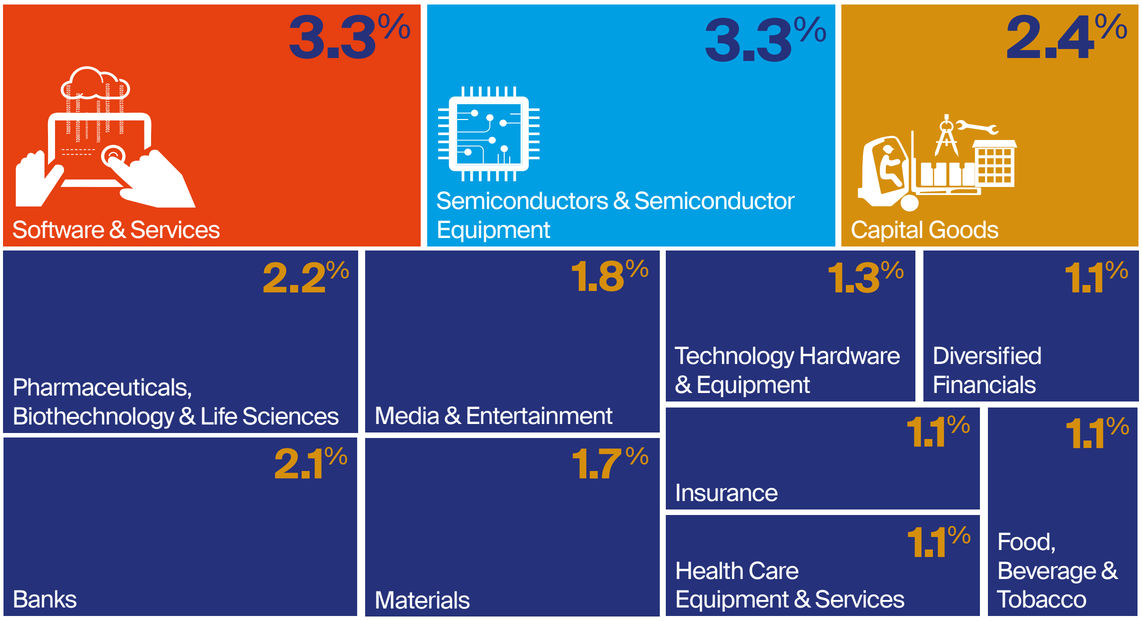
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.2.5. Sectoral analysis (ESG Screening funds)

ESG Screening funds have a relatively similar allocation of assets as the overall ESG funds market highlighted in Section 4.1.3. The main sectors are Software & Services, Semiconductors & Semiconductor Equipment, and Capital Goods, with a total of 9% of AuM allocated (Exhibit 17).

Given that ESG Screening funds do not follow a specific sustainable investment strategy and do not have an exclusion policy in place, they have more leeway in their investment decisions than other types of ESG funds. This allows them to be more aligned with global trends and market outcomes, which makes the choice of the main sectors for investments unsurprising.

Exhibit 17. Luxembourg-domiciled ESG Screening funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. *The total AuM of funds for which sector data was available is EUR 1.45tn or 44.5% of the EUR 3.2tn displayed previously. The remaining sectors account for 12.1% of the allocation.

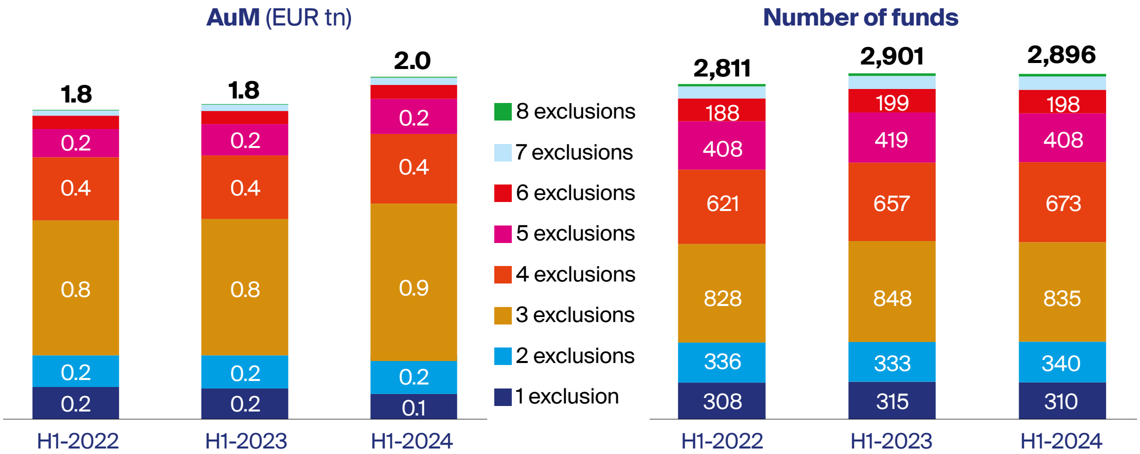
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.3. OVERVIEW OF ESG EXCLUSION FUNDS

Funds analysed in this sub-section do not invest in companies operating in one or more non-sustainable or controversial sectors. These sectors include, but are not limited to, fossil fuels, weapons, alcohol or drugs, tobacco, and nuclear energy. As of H1 2024, ESG Exclusion funds represent 61.6% of ESG AuM in Luxembourg, a minor increase since H1 2023.

The number of ESG Exclusion funds has decreased very minimally between H1 2023 and H1 2024, while their AuM has grown significantly, jumping from EUR 1.8tn to EUR 2.0tn. A little over half (52%) of these funds apply three or four exclusions (Exhibit 18).

Exhibit 18. AuM and number of ESG Exclusion funds (EUR tn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Looking at the sectors excluded, the most common ones are the weapons sector (96% of funds), followed by the tobacco (74%) and the fossil energy sector (60%) (Exhibit 19). These exclusions broadly align with the exclusions mandated by European regulations with regards to the EU Climate Transition Benchmarks and the EU Paris-Aligned Benchmarks.[12]

In the first half of 2023, the number of funds applying these exclusions saw a significant increase, while those focused on fossil energy exclusion saw an uptick in number in the first half of 2024. However, it is worth keeping in mind that the exclusions carried out by funds are not necessarily mutually exclusive – therefore a fund which excludes the weapons sector from its investment policy can also exclude the tobacco and fossil energy sectors as well.

Exhibit 19. Sector exclusions by ESG Exclusion funds (AuM* and number of funds)

	AuM (EUR tn)			**Number of funds**		
	H1-2024	H1-2023	H1-2022	H1-2022	H1-2023	H1-2024
Weapons	1,957.0	1,795.6	1,758.3	2,690	+90	-2
Tobacco	1,536.4	1,388.1	1,345.3	2,087	+75	-9
Fossil Energy	981.8	916.2	890.3	1,639	+68	+20
Adult Entertainment	299.8	274.9	264.8	763	+25	-12
Alcohol or Drugs	216.2	201.9	193.3	420	+18	-12
Nuclear	284.3	249.9	220.0	496	+7	-2
GMO	39.5	32.4	27.0	104	+10	+4
Other	1,417.5	1,281.2	1,253.5	1,791	+90	0

H1-2022 H1-2023 H1-2024

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *Funds in this cluster can apply more than one exclusion, which is why the AuM shown sums up to more than the total for this fund cluster.

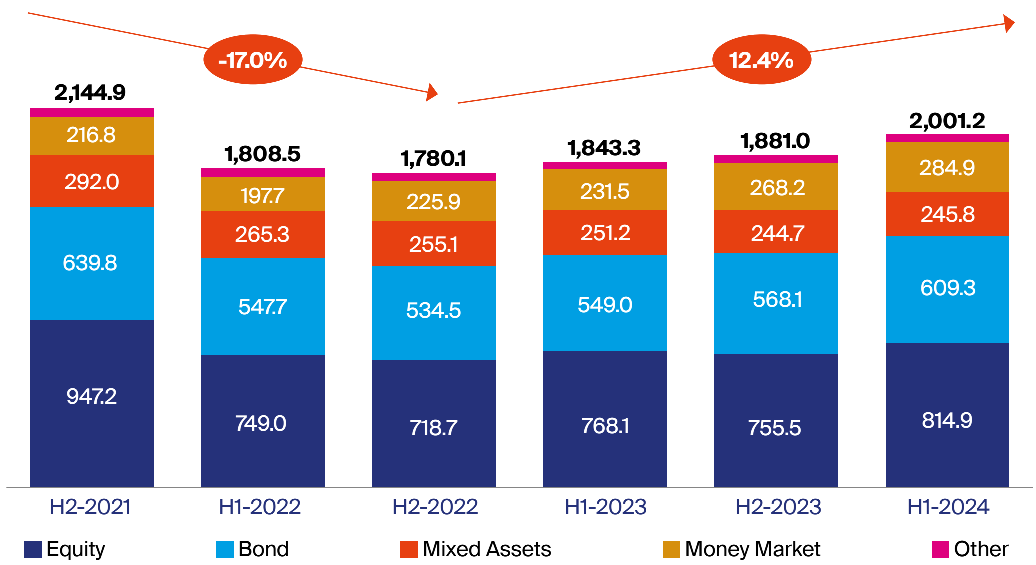
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

12. Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks. https://eur-lex.europa.eu/eli/reg_del/2020/1818/oj

4.3.1. Asset class breakdown

ESG Exclusion funds focused on equities and bonds make up the majority of AuM, holding EUR 814.9bn and EUR 609.3bn in assets. Money market funds and mixed asset funds come in a relatively distant third and fourth places, with EUR 284.9bn and EUR 245.8bn in assets, respectively (Exhibit 20).

Exhibit 20. AuM of Luxembourg-domiciled ESG Exclusion funds (by semester, EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

However, when looking at the net flows, a different picture emerges. ESG Exclusion funds focused on equities have experienced continuous outflows every semester since H1 2022. As for the ones focused on bonds, H1 2024 saw strong inflows of EUR 33.2bn. ESG Exclusion funds focused on money markets – despite having a much lower AuM than their equities and bonds counterparts – have seen continuous net inflows each semester since H2 2022 (Exhibit 21).

Exhibit 21. Net flows of Luxembourg-domiciled ESG Exclusion funds (EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	-22.5	-23.2	-13.5	-36.2	-23.3
Bond	-35.4	-5.3	7.1	-4.0	33.2
Mixed	3.9	-6.0	-10.9	-14.0	-10.8
Money Market	-29.3	29.6	6.3	36.5	9.0
Other	1.4	-3.3	-3.2	-1.1	0.4
Total	**-81.9**	**-8.2**	**-14.2**	**-18.9**	**8.6**

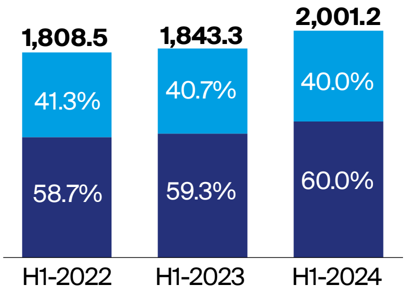
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.3.2. Institutional vs. retail split

After continuous outflows every semester between H1 2022 and H2 2023, retail investors poured in EUR 17.8bn into ESG Exclusion funds in the first half of 2024. However, these inflows were partly offset by outflows from institutional investors who withdrew EUR 9.2bn, bringing the total inflows to these funds at EUR 8.6bn (Exhibit 22).

Exhibit 22. ESG Exclusion funds in Luxembourg; institutional vs. retail split
(AuM and net flows; EUR bn)

AuM (EUR bn)



Net flows (EUR bn)

	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Institutional	-63.2	1.7	-19.8	-7.9	-9.2
Retail	-18.7	-10.0	5.7	-11.0	17.8
TOTAL	**-81.9**	**-8.2**	**-14.2**	**-18.9**	**8.6**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

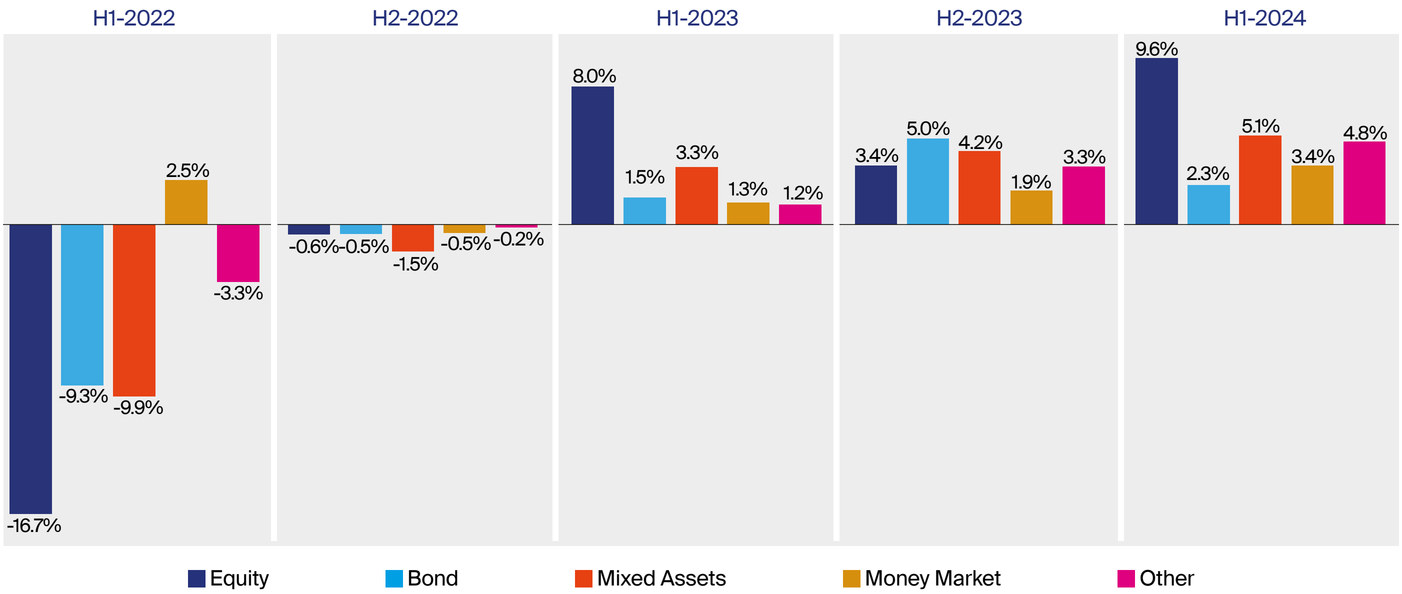
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.3.3. Performance by asset class

As with UCITS funds in general, ESG Exclusion funds were not spared from the global downturn in 2022. Indeed, in both H1 and H2 2022, these funds saw negative performances – with the exception of funds focused on money markets which had a modest 2.5% positive performance in H1 2022.

Nonetheless, and in tandem with other funds following other ESG strategies, ESG Exclusion funds began to experience a recovery in H1 2023, experiencing positive performance across all asset classes. In H1 2024, ESG Exclusion funds focused on equities had a positive performance of 9.6% – well above the performance recorded by those focused on mixed assets (5.1%), money markets (3.4%) and bonds (2.3%) (Exhibit 23.a).

Exhibit 23.a. Average performance of ESG Exclusion funds (by asset class)

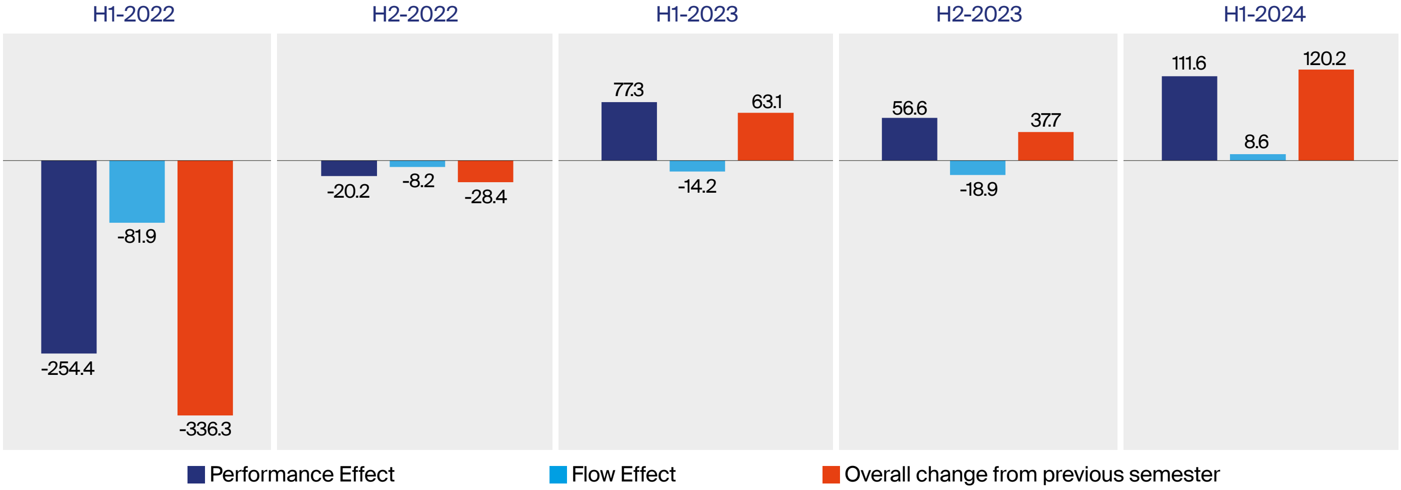


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As Exhibit 23.b shows, out of EUR 120.2bn of increase in AuM witnessed in H1 2024, EUR 111.6bn was due to the funds' performance effect (Exhibit 23.b).

Exhibit 23.b. ESG Exclusion funds – breakdown between performance and flow effect (EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.3.4. Managers' headquarter split

US asset managers continue to have a clear lead in terms of AuM of ESG Exclusion funds domiciled in Luxembourg, managing a combined total of EUR 732.2bn, or nearly 37% of AuM in this fund cluster, across 606 funds. British asset managers come in second place when it comes to AuM, with EUR 318.3bn, followed by French asset managers with EUR 281.6bn (Exhibit 24.a).

Exhibit 24.a. HQ split of asset managers by AuM and number of ESG Exclusion funds (as of end-June 2024)

Variation 23-24 (AuM)		Manager HQ	AuM Q2 2024 (EUR bn)	# of funds	Variation 23-24 (# of funds)
=	1	USA	732.2	606	=
=	2	UK	318.3	351	=
=	3	FR	281.6	540	=
=	4	DE	161.6	253	=
▲	5	CH	148.1	406	=
▼	6	IT	110.2	169	=
=	7	BE	107.5	121	=
▲	8	LU	29.8	158	=
▲	9	NL	28.7	89	▲
		Other	83.2	203	
		TOTAL	**2,001.2**	**2,896**	

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

The largest asset manager in terms of AuM of ESG Exclusion funds is JPMorgan, managing EUR 339.8bn in assets or 17% of the total AuM of this cluster of ESG funds. Fidelity International comes in second place, with EUR 121.0bn in AuM, followed by Amundi with EUR 105.3bn – the latter being the asset manager with the largest number of ESG Exclusion funds domiciled in Luxembourg (Exhibit 24.b).

Exhibit 24.b. Ten largest asset managers by number of ESG Exclusion funds and AuM (as of end-June 2024)

	Manager HQ	Asset Manager Name	AuM Q2 2024 (EUR bn)	# of funds	Cluster Representation (%)
1		JPMorgan	**339.8**	97	17.0%
2		Fidelity International	121.0	100	6.0%
3		Amundi	105.3	**213**	5.3%
4		BNP Paribas	93.7	114	4.7%
5		Schroders	83.0	90	4.1%
6		BlackRock	72.2	58	3.6%
7		AllianceBernstein	71.3	52	3.6%
8		Allianz Global Investors	67.3	81	3.4%
9		Eurizon Asset Management	60.8	79	3.0%
10		Goldman Sachs	58.7	93	2.9%

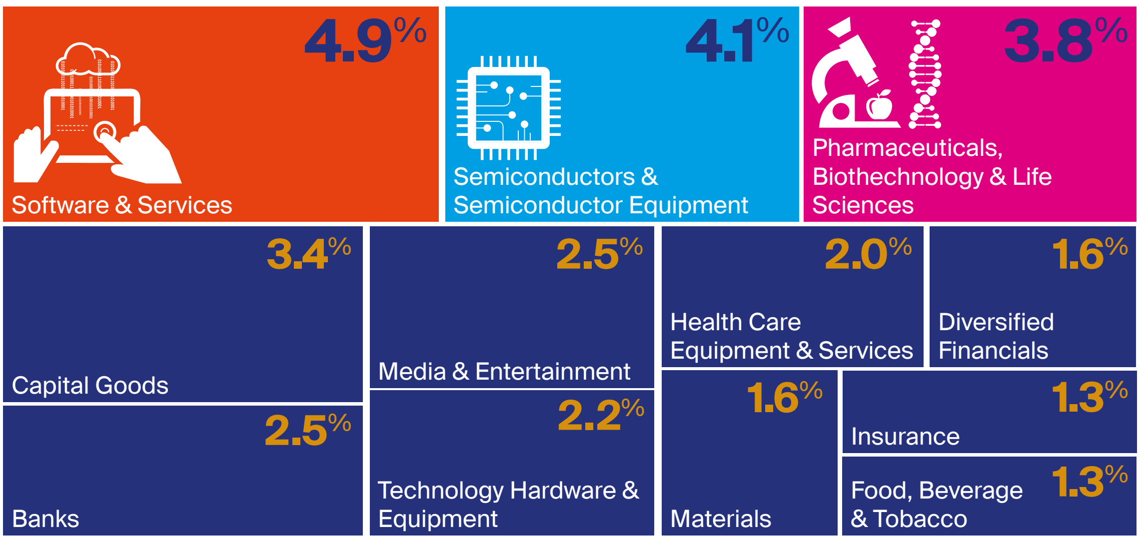
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.3.5. Sectoral analysis (ESG Exclusion funds)

When it comes to the sectors in which investments are allocated, ESG Exclusion funds generally align with other clusters of ESG funds, as Software & Services (4.9%) and Semiconductor & Semiconductor Equipment (4.1%) are the two sectors that receive the largest share of investments. However, ESG Exclusion funds have more exposure to the Pharmaceuticals, Biotechnology & Life Sciences (3.8%) sector than their ESG Screening counterparts (Exhibit 25).

Exhibit 25. Luxembourg-domiciled ESG Exclusion funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. *The total AuM of funds for which sector data was available is EUR 859.0bn or 42.9% of the EUR 2,001.2bn displayed previously. The remaining sectors account for 11.6% of the allocation.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.4. OVERVIEW OF ESG INVOLVEMENT FUNDS

This sub-section zooms in on ESG Involvement funds and the six sub-strategies which they adopt, namely Best-in-class, Positive Tilt, Thematic, Microfinance, SDGs, and Sustainable Bonds. The table below presents an explanation of each sub-strategy, as per LSEG Lipper:

Positive Tilt	Best-in-Class	Thematic
The fund leans towards companies that lead in terms of certain ESG criteria. Positive Tilt funds use an investment strategy called "tilting" to insulate portfolios from risk through the pursuit of a specific investment strategy or goal.	The fund selects the best companies by ESG criteria within each sector of the fund's investment universe (e.g., the least polluting oil company).	The fund focuses on sustainable themes such as clean water, climate change mitigation, sustainable development, circular economy etc.
Sustainable Development Goals (SDGs)	**Microfinance**	**Sustainable Bond funds**
The fund invests in companies that demonstrate progress towards the achievement of the United Nations' Sustainable Development Goals.	The fund invests in Microfinance projects. Microfinance is the provision of financial services to low-income individuals and households that are not otherwise served by the global financial system.	Funds in this sub-category invest in green bonds, social bonds, sustainable bonds or sustainability-linked bonds (SLBs). Unlike use-of-proceeds bonds such as green bonds, the proceeds of SLBs are not earmarked for specific projects. Instead, the issuer commits to meeting sustainability targets, and the financial and/or structural characteristics of the bond can vary depending on whether the issuer achieves those targets.

ESG Involvement funds can apply more than one sustainable investment sub-strategy. As such, when summing both the AuM and number of funds of the different sub-strategies, the total figures presented in this sub-section exceed the total for the overall ESG Involvement funds universe.

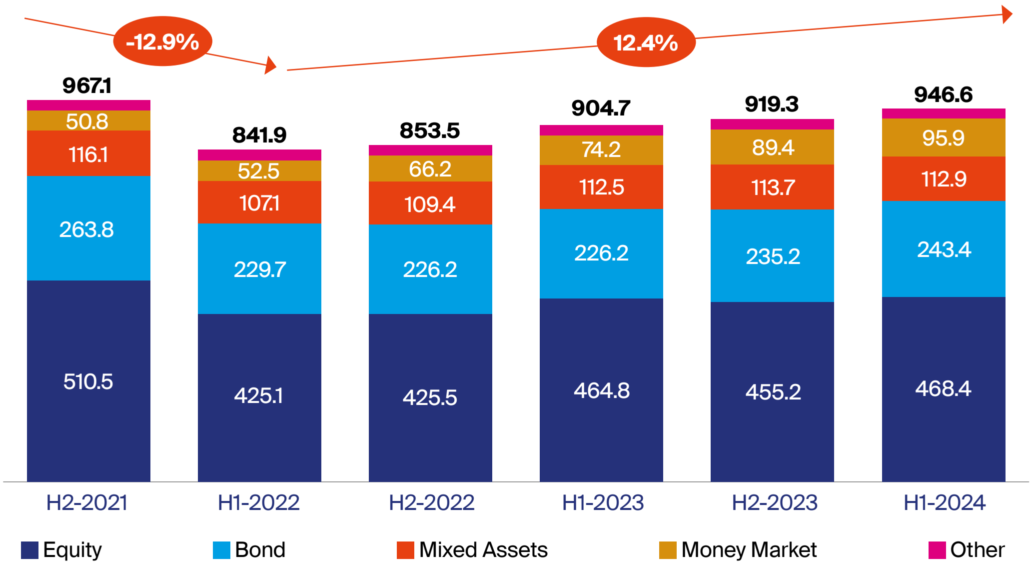
This sub-section provides a general overview of all ESG Involvement funds, but a more detailed for analysis can be found in the Appendix C.

4.4.1. Breakdown of asset classes, exclusions, and involvement strategies

From H2 2021 to H1 2022, ESG Involvement funds experienced a significant drop in AuM. Indeed, from a high of EUR 967.1bn, AuM dropped by 12.9% to reach EUR 841.9bn. This drop was aligned with broader drawdowns across Luxembourg's fund industry, as both ESG and non-ESG funds struggled due to the macroeconomic and geopolitical convulsions that gripped the global economy at the time.

Nonetheless, since H1 2023, ESG Involvement funds experienced a rebound from the lows reached in 2022, with AuM jumping from EUR 904.7bn in H1 2023 to EUR 946.6bn in H1 2024. Funds focused on equities make up almost half (49.4%) of the AuM of ESG Involvement funds (Exhibit 26).

Exhibit 26. AuM of Luxembourg-domiciled ESG Involvement funds (by semester; EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

ESG Involvement funds experienced EUR 18.1bn in outflows in H1 2024, primarily driven by funds focused on equities which collectively saw outflows of EUR 23.3bn. Their counterparts focused on bonds and money markets managed to record positive flows of EUR 6.8bn and EUR 3.9bn, but these were not enough to offset the overall outflows (Exhibit 27).

Exhibit 27. ESG Involvement funds – net flows (EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	7.3	-1.7	-0.3	-14.3	-23.3
Bond	-9.7	-0.6	-1.8	-3.6	6.8
Mixed	3.7	-1.6	-3.0	-5.0	-4.9
Money Market	0.0	14.6	7.7	15.1	3.9
Other	2.1	-1.1	0.3	-1.7	-0.6
Total	**3.3**	**9.7**	**2.9**	**-9.5**	**-18.1**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As ESG Involvement funds often combine their strategy with several exclusions, 90% of them applied at least one exclusion at the end of June 2024 (Exhibit 28).

As for the number of involvement strategies adopted, the majority of ESG Involvement funds (1,246 out of 1,624) adopt only one strategy, while 308 and 55 adopt two and three strategies, respectively. Only a small number of ESG Involvement funds adopt more than three involvement strategies (Exhibit 29).

Exhibit 28. Number of exclusions applied by ESG Involvement funds (number of funds)

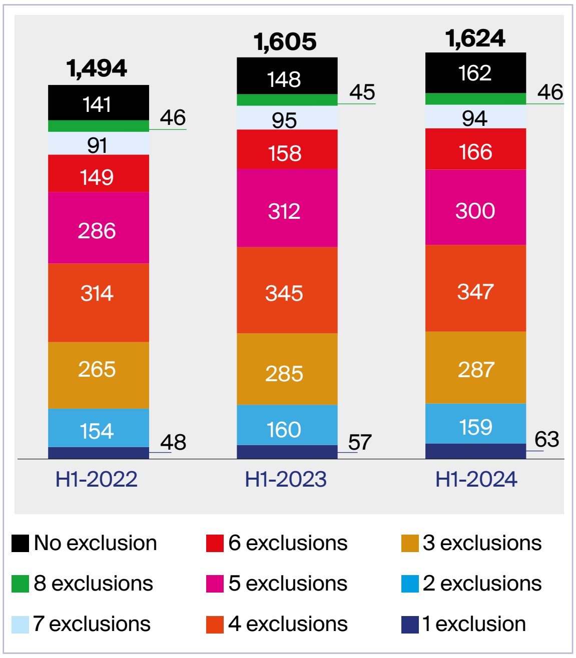
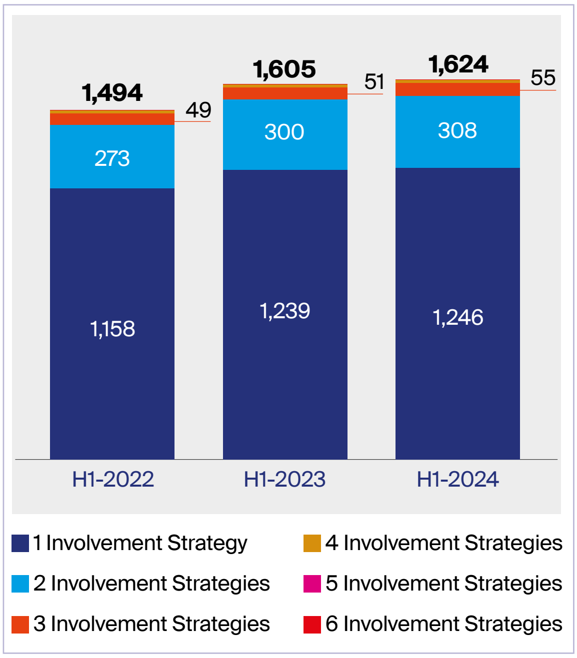


Exhibit 29. Number of involvement strategies used by ESG Involvement funds (number of funds)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Zooming in on the sub-strategies, EUR 518.9bn of the collective AuM of ESG Involvement funds are attributed to funds following the SDGs sub-strategy, while EUR 291.6bn are attributed to those following the Best-in-class sub-strategy. Microfinance, with just EUR 16.1bn, is the least popular sub-strategy. In H1 2023 and H1 2024, the number of ESG Involvement funds adopting the SDGs sub-strategy grew by 64 and 40, respectively – more than any other type of ESG Involvement fund. These were followed by Best-in-class funds which saw 32 new ones in H1 2023 (Exhibit 30).

Exhibit 30. AuM and number of ESG Involvement funds applying each involvement sub-strategy

	AuM (EUR tn) H1-2022	**AuM** (EUR tn) H1-2023	**AuM** (EUR tn) H1-2024	**Number of funds** H1-2022	**Number of funds** H1-2023	**Number of funds** H1-2024
Positive Tilt	96.0	100.5	108.2	106	+6	+6
Best in Class	255.2	286.2	291.6	552	+32	+1
Thematic	132.9	142.1	132.8	725	+19	-15
Sustainable Development Goals (SDGs)	442.4	476.9	518.8	763	+64	+40
Microfinance	14.2	14.4	16.1	20	0	+1
Sustainable Bond Funds	112.1	116.1	125.1	253	+24	+2

H1-2022 H1-2023 H1-2024

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. Funds within this cluster can apply more than one involvement strategy. As a result, the AuM shown sum up to more than the total for this fund cluster.

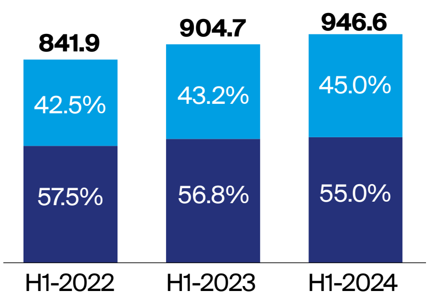
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.4.2. Institutional vs. retail split

Institutional investors were responsible for positive inflows from H2 2022 to H2 2023 and had even managed to offset retail investors' negative outflows in H1 2023. However, the situation changed in H1 2024, and the aforementioned net outflows were driven by both retail and institutional investors – the latter withdrawing EUR 3.8bn from ESG Involvement funds (Exhibit 31).

Exhibit 31. ESG Involvement funds in Luxembourg; institutional vs. retail split (AuM and net flows; EUR bn)

AuM (EUR bn)



Net flows (EUR bn)

	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Institutional	-1.4	9.1	5.6	2.8	-3.8
Retail	4.6	0.6	-2.7	-12.3	-14.4
TOTAL	**3.3**	**9.7**	**2.9**	**-9.5**	**-18.1**

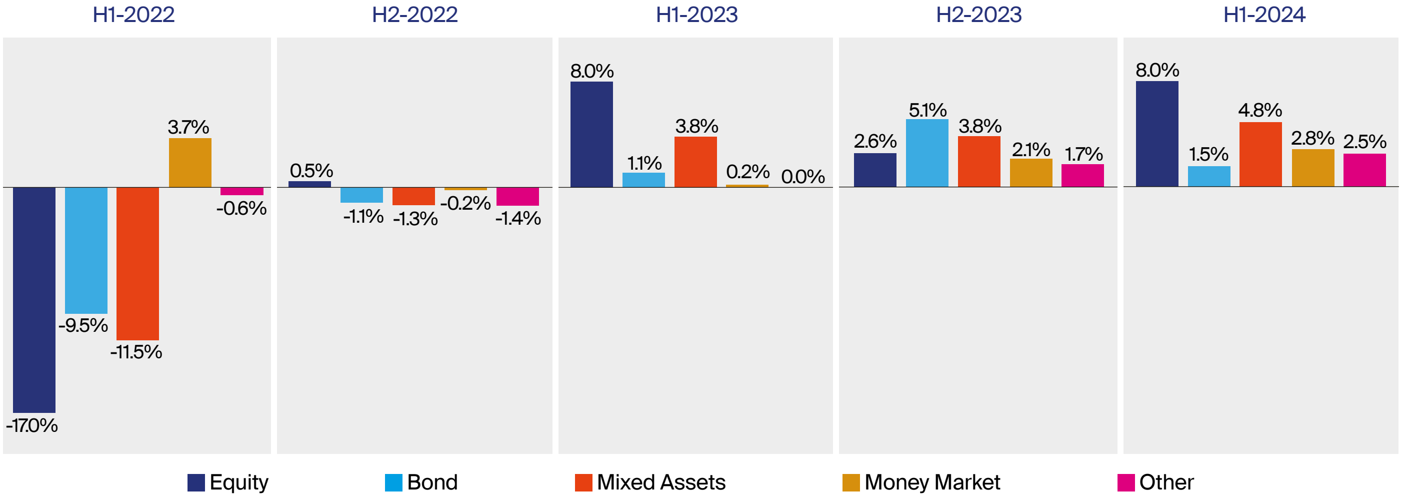
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.4.3. Performance by asset class

ESG Involvement funds focused on different asset classes had varying performances. While those focused on equities had an average performance of 8% in H1 2024, the average performance of their peers focused on bonds stood at just 1.5%. This was a significant fall from the 5.1% average performance recorded by ESG Involvement funds focused on bonds in H2 2023 (Exhibit 32.a.).

Exhibit 32.a. Average ESG Involvement fund performance by asset class

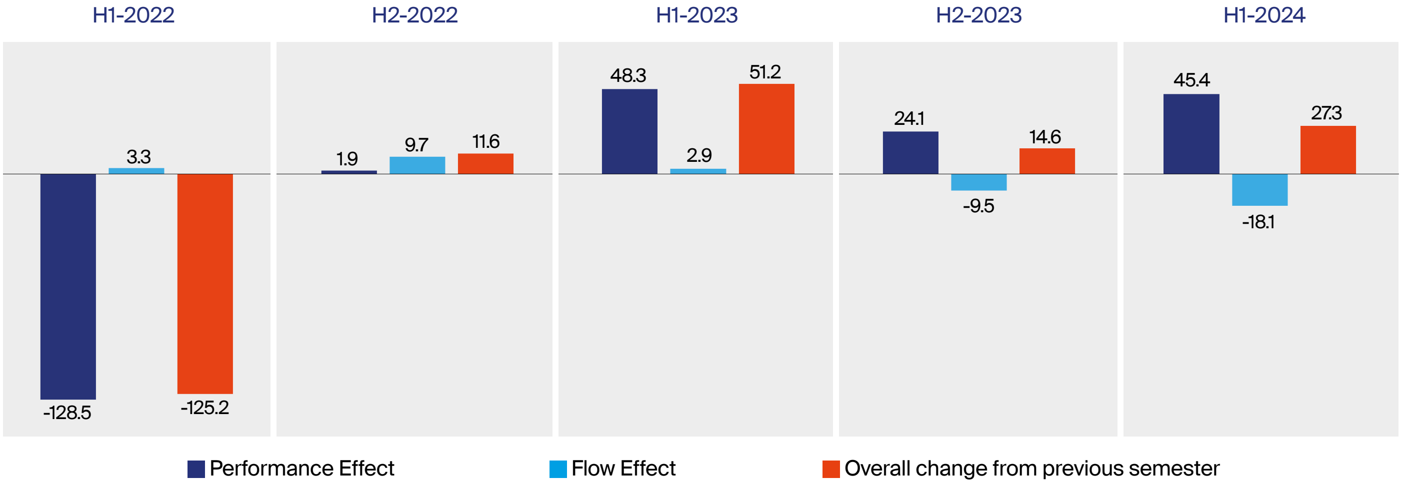


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As Exhibit 32.b below highlights, the performance effect once again comes into play, as EUR 45.4bn came from the positive performance of ESG Involvement funds. However, this positive performance is contrasted with negative net flows in H2 2023 and H1 2024, and weak inflows of just EUR 2.9bn in H1 2023.

Exhibit 32.b. ESG Involvement funds – Breakdown between performance and flow effect (EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.4.4. Managers' headquarter split

As with ESG Exclusion funds, American asset managers hold the highest amount of assets in ESG Involvement funds (EUR 217.0bn). They are followed by Swiss and French asset managers who oversee EUR 177.5bn and EUR 120.7bn in AuM respectively in their ESG involvement funds (Exhibit 33.a).

Exhibit 33.a. HQ split of asset managers by AuM and number of ESG Involvement funds (as of end-June 2024)

Variation 23-24 (AuM)		Manager HQ	AuM Q2 2024 (EUR bn)	# of funds	Variation 23-24 (# of funds)
▲	1	USA	217.0	229	=
▼	2	CH	177.5	243	=
▼	3	FR	120.7	**252**	=
▲	4	DE	95.2	213	=
▼	5	NL	75.0	123	▲
▲	6	FI	70.0	83	▲
▼	7	UK	43.1	122	▼
▲	8	IT	39.0	77	▲
=	9	BE	37.1	54	▼
		Other	71.9	228	
		TOTAL	**946.6**	**1,624**	

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Pictet and Morgan Stanley are the two largest asset managers by AuM in the ESG Involvement funds cluster, overseeing EUR 110.7bn and EUR 106.0bn in AuM respectively, with both collectively representing over one-fifth of the total AuM in this cluster. Finland's Nordea comes in a relatively distant third place, with EUR 69.7bn in AuM (Exhibit 33.b).

Exhibit 33.b. Ten largest asset managers by number of ESG Involvement funds and AuM (as of end-June 2024)

	Manager HQ	Asset Manager Name	AuM Q2 2024 (EUR bn)	# of funds	Cluster Representation (%)
1	CH	Pictet	**110.7**	52	11.7%
2	USA	Morgan Stanley	106.0	40	11.2%
3	FI	Nordea	69.7	**81**	7.4%
4	NL	Robeco	52.9	77	5.6%
5	DE	DWS	44.4	**81**	4.7%
6	FR	BNP Paribas	38.7	69	4.1%
7	FR	Amundi	36.9	62	3.9%
8	IT	Eurizon Asset Management	30.8	40	3.3%
9	USA	Goldman Sachs	23.5	26	2.5%
10	USA	Franklin Templeton	21.5	16	2.3%

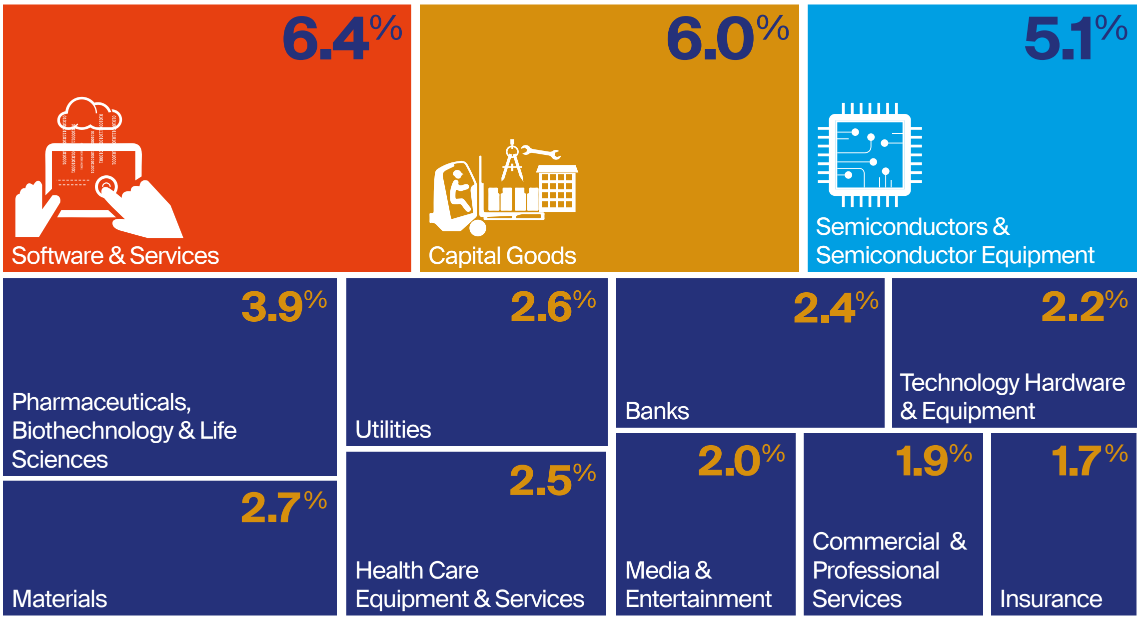
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

4.4.5. Sectoral analysis (ESG Involvement funds)

While the leading sectors in AuM allocation for ESG Involvement funds again reflect the wider ESG market, capital allocations seem to be more concentrated. Roughly 17% of AuM is allocated to the Software & Services, Capital Goods, and Semiconductors & Semiconductor Equipment sectors (Exhibit 34).

Exhibit 34. Luxembourg-domiciled ESG Involvement funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)

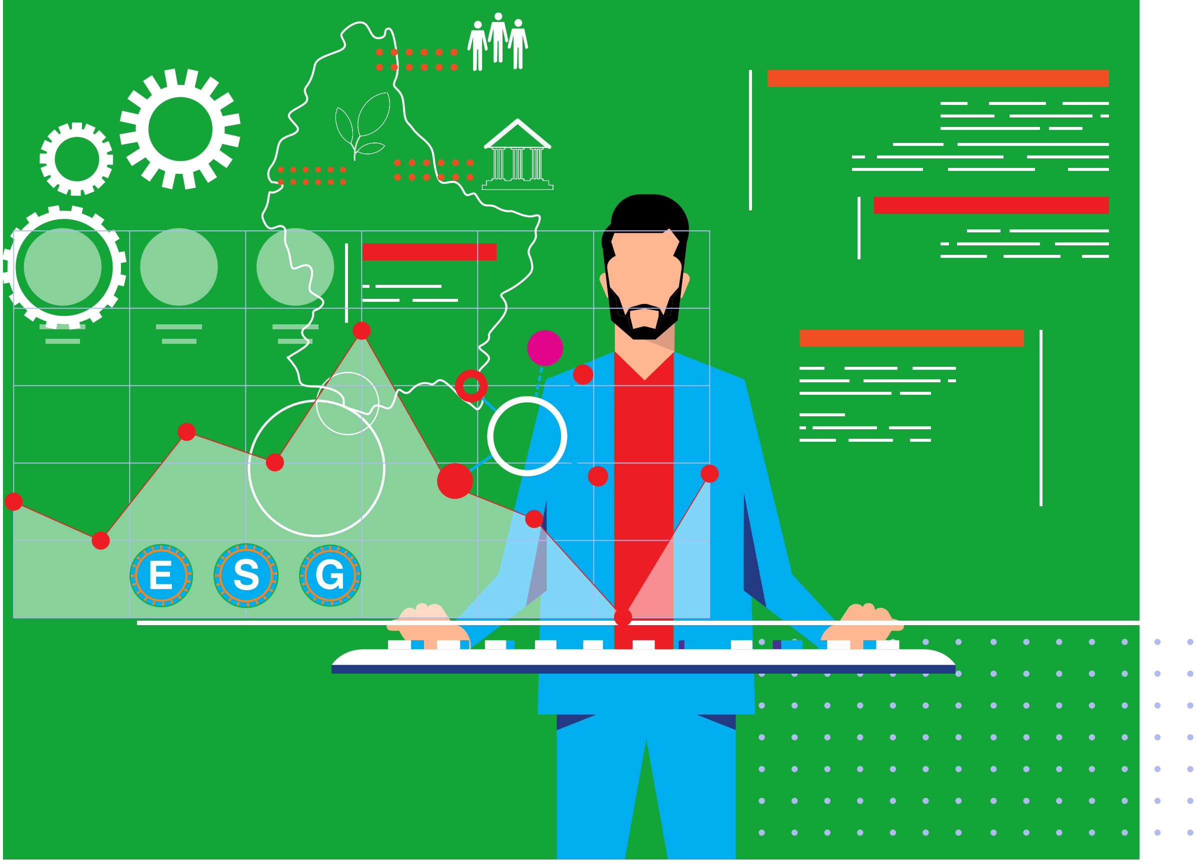


Note: Data excludes Funds of Funds. *The total AuM of funds for which sector data was available is EUR 493.1bn or 52.1% of the EUR 946.6bn displayed previously. The remaining sectors account for 12.6% of the allocation.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

5.

PRIVATE MARKETS AND ESG IN LUXEMBOURG



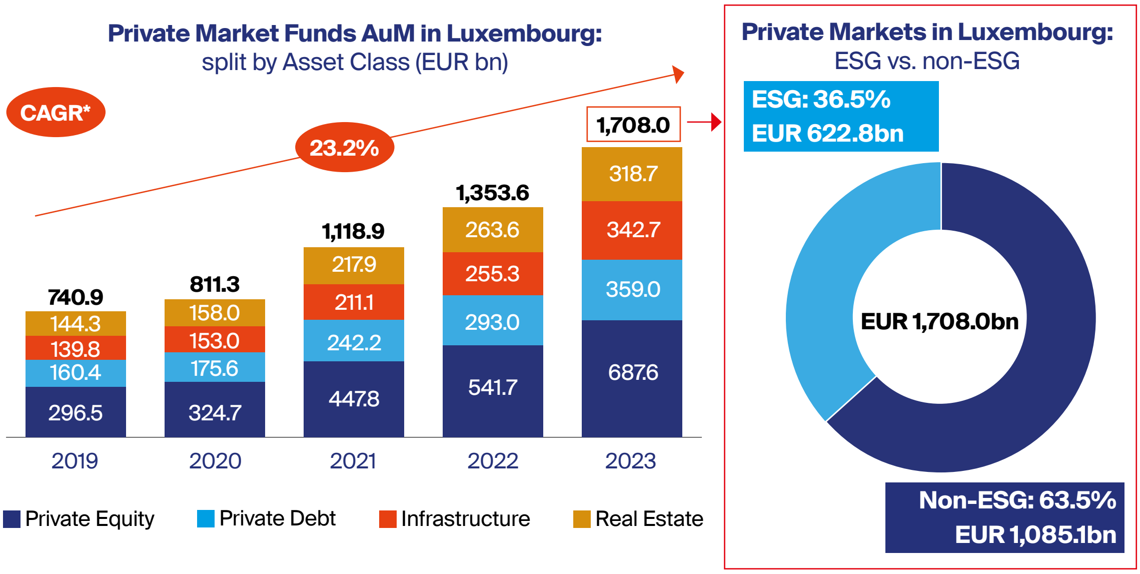
5.1. OVERVIEW OF LUXEMBOURG'S PRIVATE MARKETS LANDSCAPE

Over the last several years, the private markets segment of the asset management industry in Luxembourg has witnessed significant growth in the number of funds and AuM. From political stability and a skilled workforce with experience in all matters related to alternative funds, to a supportive regulatory environment exemplified by the 'Luxembourg Alternative Investment Toolbox,'[13] Luxembourg is undoubtedly an appealing destination for asset managers active in private markets.

This appeal is reflected in the significant growth in AuM which private market funds have experienced since 2019. From EUR 740.9bn in 2019, their AuM more than doubled to reach EUR 1.7tn in 2023, growing at a CAGR of 23.2%. Out of the AuM figure for 2023, 36.5% (EUR 622.8bn) correspond to ESG private market funds (Exhibit 35).

In general, private market funds are closed-end funds with long-term commitments, and hence are not exposed to outflows.

Exhibit 35. Private Market Funds AuM in Luxembourg (EUR bn)



Note: Data excludes Funds of Funds and funds that are in the fundraising process, and includes secondaries.[14] Due to their predominantly closed-end nature, the AuM of private market funds is less subject to valuation effects than UCITS, and once their target size is reached, their NAV often remains more-or-less constant until the fund is liquidated. *Compound Annual Growth Rate for the period 2019-2023.

Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

13. PwC Luxembourg. *Luxembourg Alternative Investment Toolbox.* https://www.pwc.lu/en/alternative-investments/docs/luxembourg-alternative-investment-toolbox.pdf

14. As of end-2023, there were 110 secondaries overall, 9 of which were ESG funds with an AuM of EUR 1.7bn. The secondaries are identified as such based on the name of the fund.

5.2. ESG IN PRIVATE MARKETS: METHODOLOGY

As the data sources for UCITS and private market funds differ, a new methodology had to be developed in order to analyse the ESG characteristics of the latter domiciled in Luxembourg. The analysis utilised data sourced from Monterey Insight, a widely recognised provider of fund information in Luxembourg. Monterey Insight's data is frequently employed by numerous industry participants due to its reputation for reliability and coverage.

In order to determine the ESG universe within private market funds, our starting point was to isolate the private market funds reporting as per Articles 8 or 9 of the SFDR. Beyond this point, however, this specific database does not provide any further classifications for ESG funds regarding their sustainable investment focus. As a result, our approach was to manually screen all the Article 8 and 9 private market funds (1,605 entries) and determine the ESG strategy of each one of them. Our process involved the following steps:

1. Checking if the name of the fund includes any specific keyword (e.g., “impact,” “energy transition,” “microfinance” etc.),
2. Cross-checking this information with the Preqin database which provides complementary information on private market funds such as: asset class, deals, fund status, fund vintage, investment objectives and ESG strategy or “ESG fund label”,
3. Checking the prospectus of the fund (if any) and either confirm the ESG strategy or classify it as “not clarified” if no strategy clearly emerged.

In other words, this approach replicates what several data providers implement when it comes to ESG fund identification and categorisation, although at a smaller scale. We identified the following clusters within which the aforementioned funds were categorised:

Impact	Thematic	Microfinance
Funds in this category are focused on making beneficial social returns, apart from financial gains.	Funds in this category focus on sustainable themes such as clean water, climate change etc.	Funds in this category invest in microfinance projects.
Renewables/Energy Transition[15]	**ESG Integration**	**Not Clarified**
Funds in this category invest in clean energy projects or projects related to the energy transition. Although infrastructure funds were the most likely to fall under this cluster, some private equity funds also fit, particularly those that invest in pioneering clean energy companies or startups.	Funds in this category do not have a clear ESG strategy that could fall in the clusters above, but they still mention that they integrate ESG factors in their investment process. For instance, some funds present ESG commitments included in their documents and/or have a policy specifying how ESG factors are used before investing in portfolio companies/assets and/or have a list of exclusionary screening factors.	Funds in this category disclose as per Articles 8 or 9 of the SFDR but their ESG strategy is not clearly defined. In most cases, the fund name does not indicate any strategy and the fund cannot be found in the Preqin database or any other available source.

15. Energy Transition funds might include funds investing in nuclear energy.

When analysing ESG private market funds, it is important to understand the nuances and limitations in the categorisation of their investment strategies. One key factor is that many ESG funds pursue broad, flexible investment objectives rather than adhering to a specific, narrowly defined ESG strategy. Consequently, as mentioned in the 'Not Clarified' category above, several funds may not align neatly with the strategies defined despite the fact that they report as per the disclosure requirements of Article 8 or 9 of the SFDR.

Moreover, we came across some[16] funds which are implementing some level of ESG integration in their strategies but choose not to disclose as per Article 8 or 9 of the SFDR. There are many reasons as to why this might be the case. For instance, certain asset managers are awaiting further clarity and guidance from regulatory authorities on the SFDR, as they would strive to ensure that they are not inadvertently practicing what might be interpreted as greenwashing. In addition, certain asset managers might see the regulatory complexity of the SFDR as a hindrance to their activities and hence prefer to eschew it, even if they their investment strategies do take into account ESG factors. As a result, these funds were excluded from the list of ESG funds.

Lastly, 1,603 sub-funds – funds within an umbrella fund, each distinct from one another – have not disclosed their SFDR article status according to Monterey Insight, which means that they were considered among the 'non-ESG' private market funds. Meanwhile, 3,929 private market funds are disclosing as per Article 6 of the SFDR – which means that they were also included among non-ESG private market funds – while 1,605 private market funds are disclosing as per Article 8 or 9, which makes them ESG funds.

Finally, the data does not account for funds currently in the process of raising capital or those that are in an interim close phase, a temporary stage before a fund reaches its final close. As a result, the figures presented in Section 5.3 do not fully reflect the most recent trends in ESG fundraising, particularly since many funds that are actively fundraising could see a significant increase in their total AuM once their fundraising efforts are completed. According to Preqin data, which covers approximately 47% of the ESG funds AuM in Monterey Insight, there are 155 funds currently at the fundraising stage, with a cumulative target size in the amount of EUR 115.9bn.

However, the size of closed-end funds that are still in the fundraising process (i.e., funds that have not reached their target size and have not closed yet) is traditionally not included in the AuM in private markets.

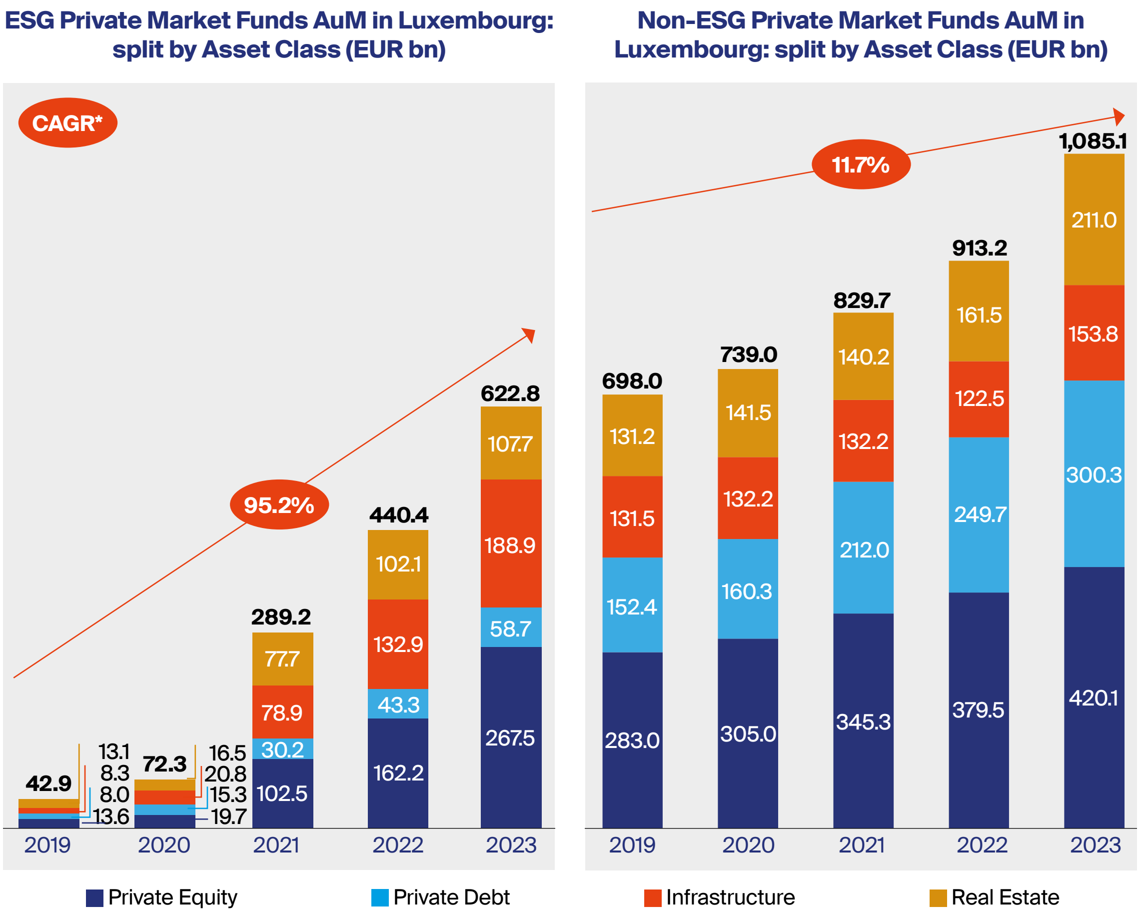
16. For 59 funds in the Monterey Insight database that disclose as per Article 6 of the SFDR and for 10 more that do not disclose at all as per the SFDR, their name indicates a clear sustainability focus: ESG, SDG, Sustainability, Energy Transition/Renewables or Impact.

5.3. COMPARISON OF ESG AND NON-ESG PRIVATE MARKET FUNDS IN LUXEMBOURG

Among non-ESG private market funds domiciled in Luxembourg, the ones focused on private equity (PE) had the highest AuM in 2023, standing at EUR 420.1bn, followed by those focused on private debt, with EUR 300.3bn in AuM. As a whole, non-ESG private market funds saw their AuM grow from EUR 698.0bn in 2019 to EUR 1,085.1bn in 2023, at a CAGR of 11.7%.

However, ESG private market funds witnessed considerably more significant growth since 2019, particularly between 2020 and 2021. From EUR 72.3bn in AuM in 2020, the figure rose to EUR 289.2bn the next year, before reaching EUR 622.8bn in 2023. As a whole, ESG private market funds experienced a CAGR of 95.2% between 2019 and 2023 (Exhibit 36).

Exhibit 36. ESG and Non-ESG Private Market Funds AuM in Luxembourg – Asset Class Split (EUR bn)



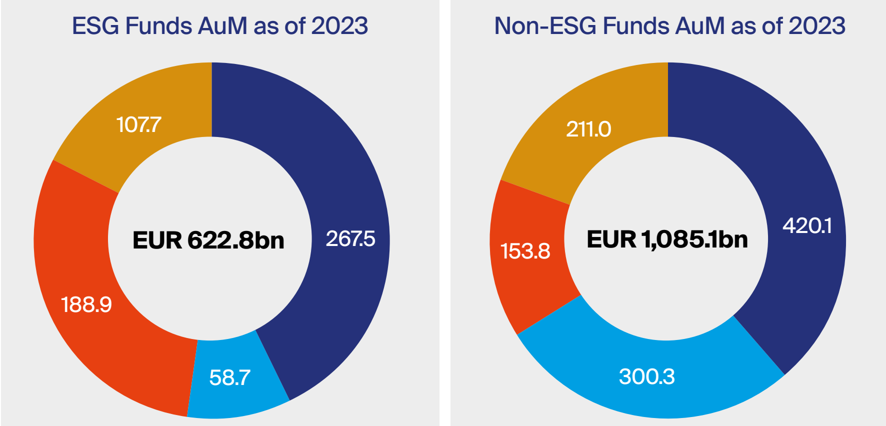
Note: Data excludes Funds of Funds and funds that are in the fundraising process, and includes secondaries. Historical data on ESG funds is based on both the SFDR disclosure and the analysis of the ESG strategy of the fund. *Compound Annual Growth Rate for the period 2019-2023.

Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

Similar to their non-ESG peers, the largest share of AuM for private market ESG funds domiciled in Luxembourg is concentrated in PE (EUR 267.5bn). However, ESG infrastructure private market funds had a higher AuM (EUR 188.9bn) than their non-ESG peers (EUR 153.8bn).

As a whole, out of a total of 1,313 private market ESG funds as of end-2023, there were 633 PE funds, 246 infrastructure funds, 205 real estate funds, and 229 private debt funds – compared to 5,824 non-ESG funds spread out across 2,630 PE funds, 1,384 private debt funds, 1,156 real estate funds, and 654 infrastructure funds (Exhibit 37). Despite being far fewer in number, ESG-focused infrastructure funds had a higher AuM (EUR 188.9bn) than their non-ESG counterparts (EUR 153.8bn).

Exhibit 37. AuM and Number of ESG and non-ESG private funds as of 2023



	Number of ESG Funds AuM as of 2023	Number of Non-ESG Funds AuM as of 2023
Private Equity	633	2,630
Private Debt	229	1,384
Infrastructure	246	654
Real Estate	205	1,156
TOTAL	**1,313**	**5,824**

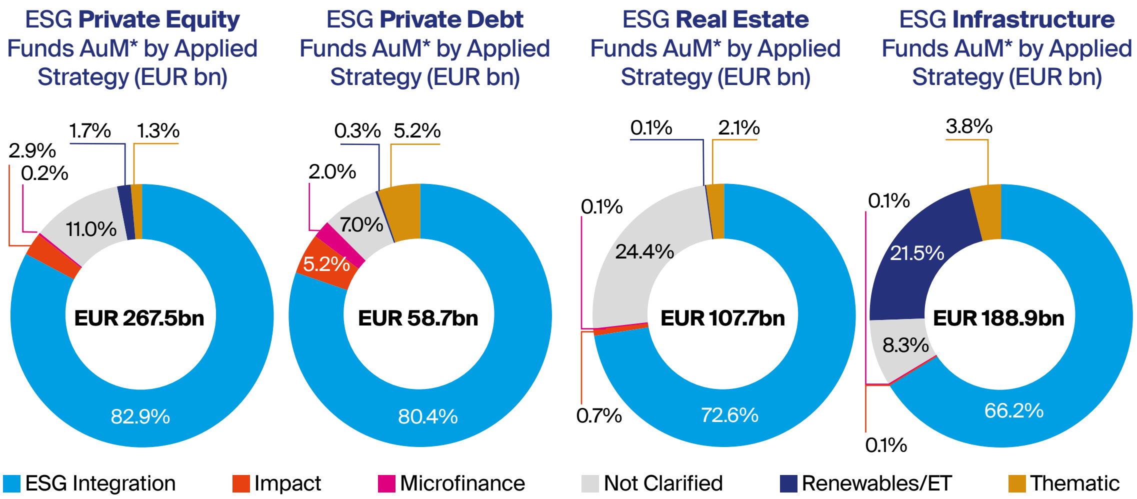
Note: Data excludes Funds of Funds and funds that are in the fundraising process, and includes secondaries.

Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

5.4. DEEP DIVE INTO ESG PRIVATE MARKET FUNDS

In terms of specific strategies applied, for all asset classes, the majority of funds fall into the "ESG Integration" category, meaning that they integrate ESG factors in their investment process without providing many additional details that would map the fund in a different ESG strategy (Exhibits 38.a and 38.b).

Exhibit 38.a. ESG Private market funds in Luxembourg by asset class and strategy (EUR bn)



Note: Data Excludes Funds of Funds and funds that are in the fundraising process, and includes secondaries. *Data as of end-2023.
Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

Exhibit 38.b. Number of ESG private market funds in Luxembourg (split by asset class and ESG strategy)

Number of ESG Private Market Funds in Luxembourg: split by Asset Class and ESG Strategy*

	Private Equity	Private Debt	Real Estate	Infrastructure	Total
ESG Integration	363	152	142	109	**766**
Impact	63	21	8	1	**93**
Microfinance	4	11	0	1	**16**
Not Clarified	149	29	42	39	**259**
Renewables/Energy Transition	20	3	2	89	**114**
Thematic	34	13	11	7	**65**

Note: Data Excludes Funds of Funds and funds that are in the fundraising process. *Data as of end 2023.
Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

Within PE, the ESG Integration strategy is predominant, accounting for 82.9% of the ESG PE AuM in Luxembourg and corresponding to 363 funds, followed by the Impact strategy (2.9% of AuM corresponding to 63 funds). The ESG strategy is not clarified for 11.0% of the ESG PE AuM, or 149 funds.

Similar to PE, ESG Integration emerges as the most common strategy for private debt funds, accounting for 80.4% of the ESG private debt AuM (152 funds), followed by Impact (5.2%) and Thematic (5.2%), which correspond to 21 and 13 funds, respectively. Private debt funds without a clarified strategy accounted for 7.0% of the AuM, distributed among 29 funds.

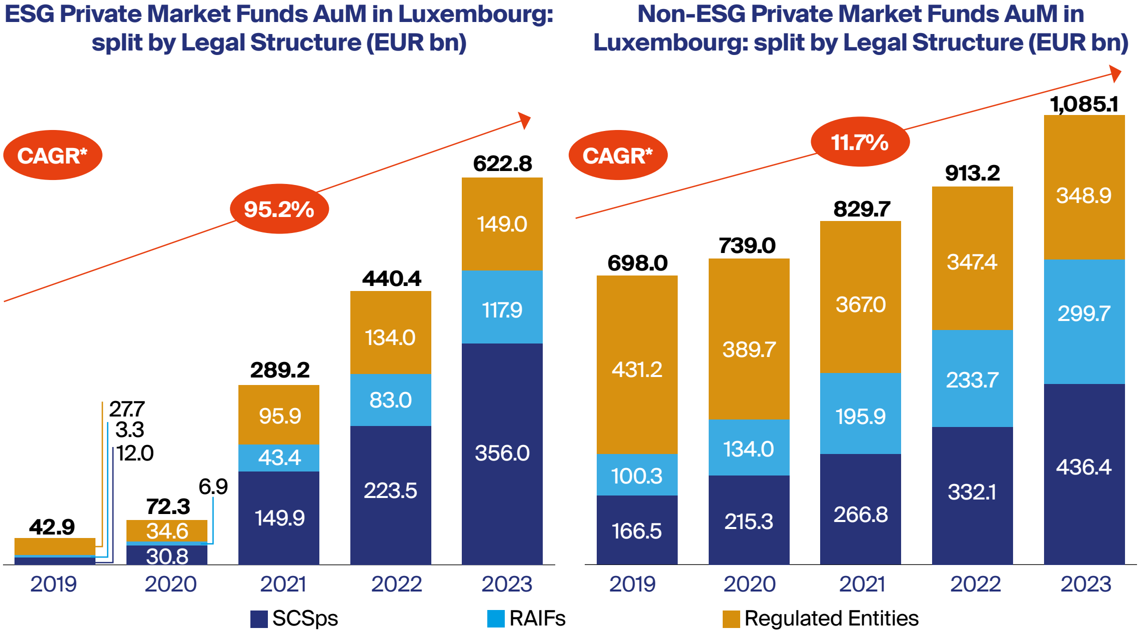
Among real estate funds, ESG Integration is once again the leading strategy, although on a smaller scale, with 72.6% of AuM and 142 funds. As for Infrastructure funds, apart from the 66.2% applying the more general ESG Integration strategy (corresponding to 109 funds), a significant portion of their AuM (21.5%) is on the Renewables/Energy Transition strategy, applied by 89 funds. This should come as no surprise, given that a large number of new infrastructure funds is dedicated to this theme.[17]

5.5. LEGAL STRUCTURE SPLIT

One of the reasons Luxembourg is an attractive domicile for private market funds is its regulatory environment and the flexibility of the legal structures available in the country, coupled with the country's long-standing political and macroeconomic stability and its financial sector workforce skilled in all matters related to alternatives. Some asset managers setting up a fund in the Grand Duchy opt for more flexible structures which are better catered to the needs of their clients, and which allow for a quicker time to market.

There are two main legal structures that are favoured by asset managers in private markets: *the Société en commandite spéciale* (SCSp) and the Reserved Alternative Investment Fund (RAIF). Both these structures tick the boxes mentioned above, offering ease and speed of setup and flexibility to asset managers selecting them.

Exhibit 39. ESG and Non-ESG private market funds in Luxembourg, split by legal structure (EUR bn)



Notes: Data Excludes Funds of Funds and funds that are in the fundraising process. Historical data on ESG funds is based on both the SFDR disclosure and the analysis of the ESG strategy of the fund. *Compound Annual Growth Rate for the period 2019-2023.

Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

17. An infrastructure-focused database (IJ Investor) suggests that around 84.5% of infra funds domiciled in Luxembourg are at least exposed to "Renewables" and, further, 27% are primarily focused on Renewables, which suggests that the undisclosed funds should primarily fall in the "Energy Transition" category.

When it comes to ESG private market funds, both SCSps and RAIFs are the preferred legal form for asset managers. As Exhibit 39 indicates, SCSps accounted for more than EUR 356.0bn (or 57.2%) of private market ESG AuM in Luxembourg, while EUR 117.9bn (or 18.9% of private markets ESG AuM) are held in RAIFs. Combined, these two legal forms account for EUR 473.9bn (or 76.1%) of the ESG AuM in Luxembourg-domiciled private market funds, cementing the reputation of these structures among asset managers. Regulated structures account for the remaining 23.9% of private markets ESG AuM.

A similar picture emerges among private market non-ESG funds, where SCSps held EUR 436.4bn in AuM as of 2023, accounting for 40.2% of total non-ESG private market AuM. As for RAIFs, they held EUR 299.7bn in AuM, representing a little over a quarter (27.6%) of non-ESG private market AuM. These two legal structures together hold EUR 736.1bn, or 67.8%, of the total non-ESG private market AuM (Exhibit 39).

5.6. MANAGERS' HEADQUARTER SPLIT

The positioning of Luxembourg makes it a significant and international hub for private market investments, and players from across the globe are drawn into the Grand Duchy for their private market operations.

This international profile is further validated when we look at the country of origin of private market asset managers in Luxembourg. In terms of ESG private markets AuM, US managers have the largest amount of AuM, with nearly EUR 150bn across 255 ESG private market funds. Swedish and UK managers follow suit, with EUR 125.8bn and EUR 121.4bn in AuM respectively, with UK managers also having the largest number of ESG private market funds domiciled in the country (280) (Exhibit 40.a).

Exhibit 40.a. ESG private market funds in Luxembourg – Manager HQ split (as of end-2023)

	Manager HQ	AuM Q2 2024 (EUR bn)	# of funds
1	US	148.5	255
2	SE	125.8	94
3	UK	121.4	**280**
4	FR	76.0	159
5	DE	42.5	143
6	CH	41.3	166
7	AU	29.4	23
8	LU	8.2	33
9	FI	4.4	15
	Other	25.3	123
	TOTAL	**622.8**	**1,313**

Note: Data excludes Funds of Funds and funds that are in the fundraising process.
Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

Among the ESG private market funds domiciled in the Grand Duchy, Sweden's EQT has the highest amount of ESG private markets AuM in the country, accounting for more than EUR 100bn, or 16.3% of the total ESG private markets AuM. EQT is followed by Blackstone (EUR 28.3bn) and the UK-based Permira (EUR 27.0bn) with regards to ESG private markets AuM.

Exhibit 40.b. ESG private market funds in Luxembourg – Ten largest asset managers by number of ESG funds and AuM (as of end-June 2024)

	Manager HQ	Asset Manager Name	AuM 2023 (EUR bn)	# of funds	Cluster Representation (%)
1		EQT	101.8	31	16.3%
2		Blackstone	28.3	12	4.5%
3		Permira	27.0	8	4.3%
4		Intermediate Capital Group	23.6	43	3.8%
5		Partners Group	22.7	52	3.6%
6		Nordic Capital	20.9	29	3.4%
7		Advent International Capital	19.2	73	3.1%
8		Macquarie	16.1	7	2.6%
9		Carlyle Group	15.8	5	2.5%
10		BlackRock	14.5	12	2.3%

Note: Data excludes Funds of Funds and funds that are in the fundraising process.
Sources: PwC Global AWM & ESG Research Centre, Monterey Insight

6.

PRINCIPAL ADVERSE IMPACT (PAI) STATEMENTS

6.1. OVERVIEW OF REPORTING CLASSIFICATION BY TYPE OF FMP

This section covers the disclosure of the Principal Adverse Impacts (PAIs) of investment decisions taken by financial market participants (FMPs) in Luxembourg on sustainability factors, as outlined in the SFDR, more specifically Article 4 (disclosures at entity level) and Article 7 (disclosures at product level).

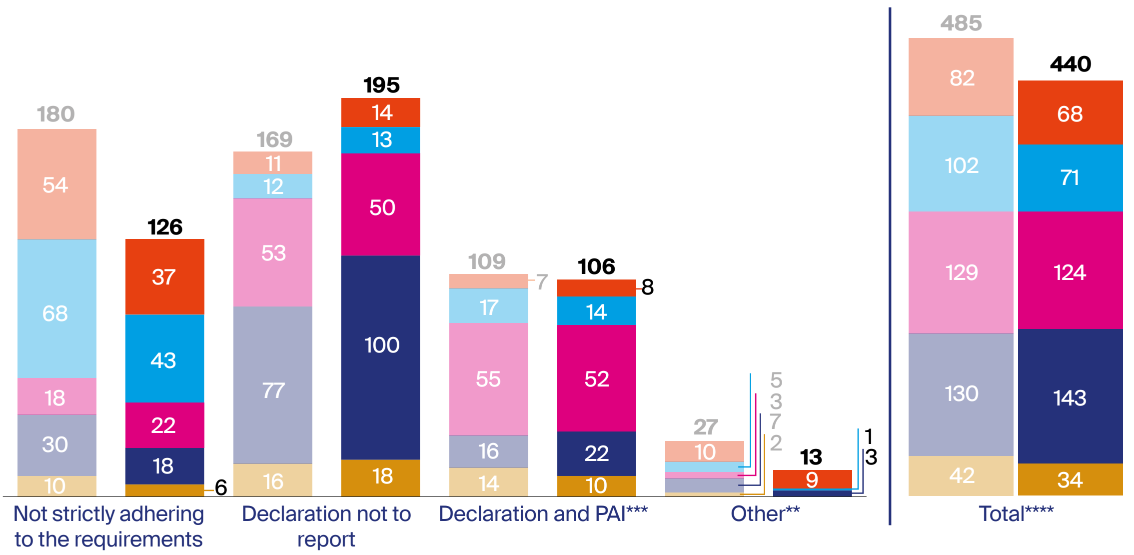
This section focuses on Article 4. Under this article, in-scope FMPs must either (1) publish a PAI statement explaining whether they account for PAIs in their investment processes or (2) provide a report that identifies the PAIs linked to their investment activities on sustainability factors. Alternatively, if they do not consider PAIs, they must provide clear reasons for this decision.

Our analysis examines 440 FMPs operating in Luxembourg. This includes Super ManCos,[18] Alternative Investment Fund Managers (AIFMs), UCITS ManCos, banks and insurance companies. This assessment included all PAI statements submitted by mid-September, despite the official deadline being 30 June, to accommodate delays in submissions.

6.2. PAI ANALYSIS FINDINGS

More than two-thirds (68%) of the FMPs included in our analysis have responded to the SFDR by either publishing a report or fulfilling the explain element of the requirement. This marks an 11% improvement over the previous year when only 57% considered the regulation. Among these, nearly a quarter (24%) have opted to publish a report, either on a group or entity level. However, a growing number of FMPs, particularly AIFMs, have responded to the regulation by opting not to report (Exhibit 41).

Exhibit 41. Breakdown by licences on Reporting Classification 2023 vs. 2024*

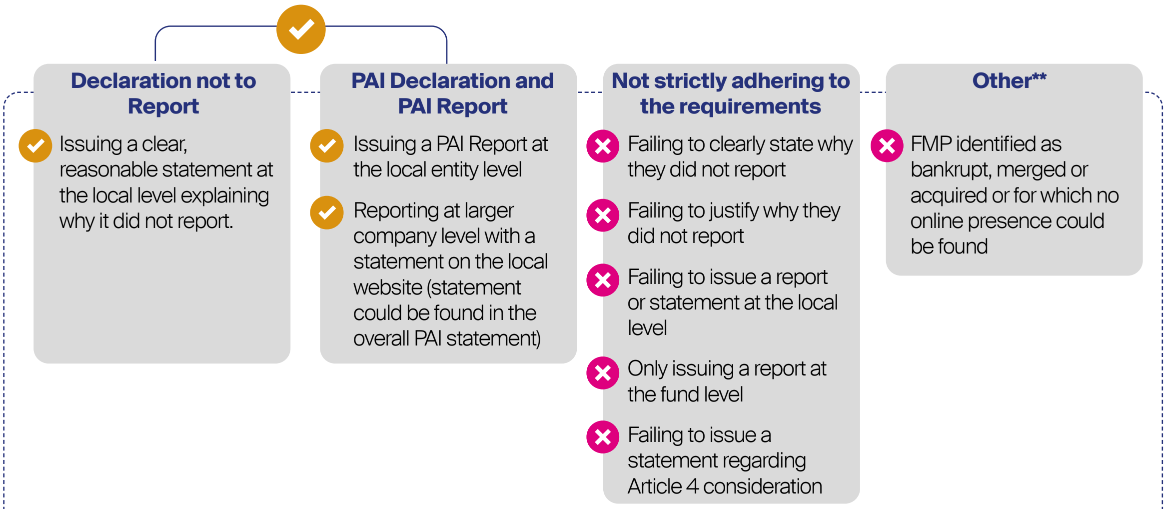


*Data excludes Re-Insurance companies;
**Other include entities which are still part of the ESMA register that were identified as bankrupt, merged or acquired;
***Some statements are password protected and not accessible;
****The base population of enterprises covered in Luxembourg has slightly decreased due to more accurate data capture.

Source: PwC Global AWM & ESG Research Centre

18. While not a legally-defined term, 'Super ManCos' generally refer to management companies that are simultaneously UCITS ManCos and AIFMs.

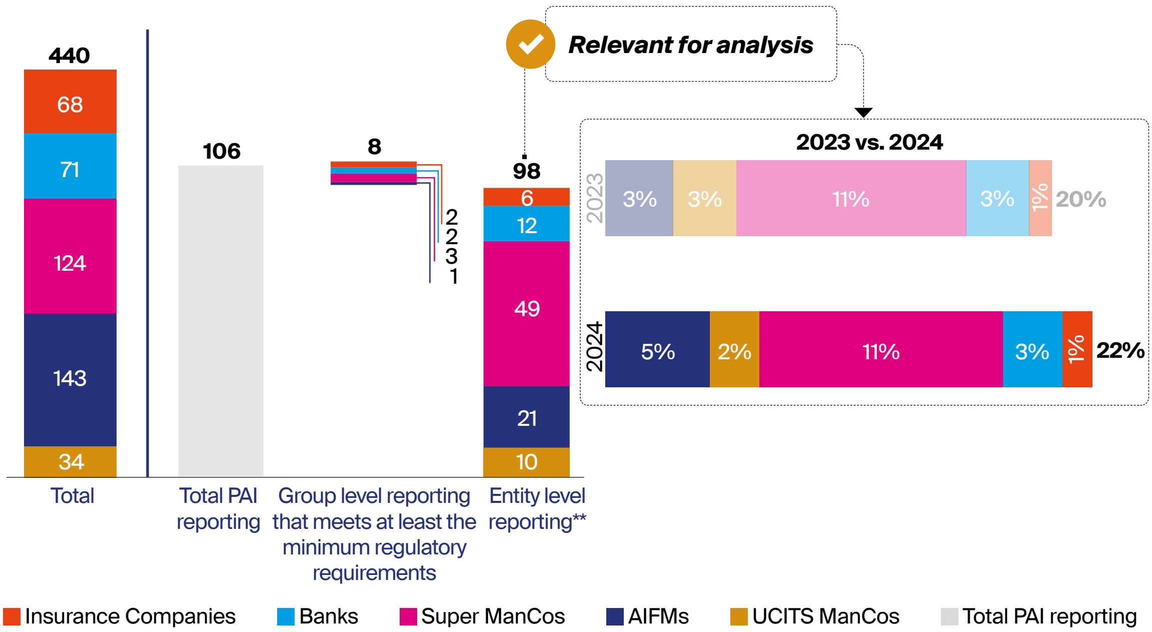
Exhibit 42. Classification criteria



Note: **Other include entities which are still part of the ESMA register that were identified as bankrupt, merged or acquired.
Source: PwC Global AWM & ESG Research Centre

Of the total number of FMPs in our review, 106 PAI reports were submitted in 2024, representing 24% of the total ManCos, banks, and insurance companies legally present in Luxembourg. More than one in five respondents (22%) published a PAI statement at the entity level, a slight increase from last year's 20% (Exhibit 43).

Exhibit 43. Breakdown on PAI reporting levels, by licences*



Note: *Data excludes Re-Insurance companies;
**Some statements are password protected and not accessible.
Source: PwC Global AWM & ESG Research Centre

Although there have been no significant changes in the composition of reporting licenses, Super ManCos remain leaders in overall PAI reporting. However, the relative number of AIFMs submitting reports has seen a slight increase (Exhibit 41). Notably, there was a strong continuity between companies that reported both in 2023 and 2024, with 90 entities, or 85% of reporting companies in 2024, also having submitted a report in the previous year. The discrepancies between years were due to various reasons, including companies being inactive this year, choosing to start reporting after opting out last year, or having password-protected reports. Some companies also retained last year's PAI statements online without issuing a new one for 2024, or, in one case, discovered that they were not in scope and decided to stop publishing a PAI report.

More companies are actively engaging with the SFDR framework, whether by reporting or choosing to opt out. This reflects greater awareness and consideration of SFDR requirements. Furthermore, some clear regulatory guidance has emerged, such as the 2023 European Supervisory Authorities (ESA) report on Regulatory Technical Standards (RTS).[19] The reporting patterns are varied, with the highest proportion of FMPs having chosen to opt out of publishing a report.

6.3. MANDATORY PAI COVERAGE

This section evaluates the current reporting coverage by assessing the percentage of entities that have reported a numerical value for each mandatory PAI indicator (Exhibit 44.a). It is important to note that the assessment does not account for the accuracy or correctness of the reported data, focusing solely on whether a numerical value was provided.

From the analysis of firm-level reports, coverage has largely remained stable or shown improvement compared to 2023. However, six indicators have exhibited a decline in reported figures. Coverage remains consistently high for PAI indicators 1 to 14, which are applicable to FMPs with investments in companies. In contrast, missing data is more prevalent for PAIs related to investments in sovereigns or real estate assets (PAIs 15, 16, 17 and 18) (Exhibit 44.b).

Exhibit 44.a. List of mandatory PAIs

PAI 1.1: GHG Scope 1

PAI 1.2: GHG Scope 2

PAI 1.3: GHG Scope 3

PAI 1.4: Total GHG emissions

PAI 2: Carbon Footprint

PAI 3: GHG intensity of investee undertaking

PAI 4: Exposure to companies active in the fossil fuel sector

PAI 5: Share of non-renewable energyconsumption and production

PAI 6: Energy consumption intensity per high-impact climate sector

PAI 7: Activities that negatively affect biodiversity-sensitive areas

PAI 8: Emissions in water

PAI 9: Hazardous waste and radioactive waste ratio

PAI 10: Violations of UN Global Compact principles and OECD Guidelines for Multinational Enterprises

PAI 11: Lack of processes and compliance mechanisms to monitor compliance with UN Global Compact principles and OECD Guidelines for Multinational Enterprises

PAI 12: Unadjusted gender pay gap

PAI 13: Board gender diversity

PAI 14: Exposure to controversial weapons (antipersonnel mines, cluster munitions, chemical weapons and biological weapons)

PAI 15: GHG intensity of investee countries

PAI 16: Investee countries subject to social violations

PAI 17: Exposure to fossil fuels through real estate assets

PAI 18: Exposure to energy-inefficient real estate assets

Sources: PwC Global AWM & ESG Research Centre, European Commission

19. Joint Committee of the European Supervisory Authorities. *Final Report on draft Regulatory Technical Standards*. December 4, 2023. *https://www.esma.europa.eu/sites/default/files/2023-12/JC_2023_55_-_Final_Report_SFDR_Delegated_Regulation_amending_RTS.pdf*

Exhibit 44.b. Mandatory PAI coverage[1] (in percentage; by licence)

	AIFMs	'23	UCITS ManCos	'23	SuperManCos	'23	Banks	'23	Insurance Companies	'23
PAI 1.1[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 1.2[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 1.3[2]	100%	▲	100%	▲	98%	=	92%	▼	100%	=
PAI 1.4[2]	100%	=	100%	▲	100%	▲	100%	▲	67%	▼
PAI 2[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 3[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 4[2]	100%	=	100%	▲	100%	▲	100%	=	100%	=
PAI 5[2]	100%	=	100%	▲	98%	▼	100%	▲	100%	=
PAI 6[2]	91%	▲	100%	▲	100%	▲	100%	=	100%	=
PAI 7[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 8[2]	91%	▲	100%	▲	96%	▼	100%	=	100%	=
PAI 9[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 10[2]	100%	▲	100%	▲	100%	=	100%	=	100%	=
PAI 11[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 12[2]	91%	▼	100%	▲	100%	=	100%	=	100%	▲
PAI 13[2]	100%	=	100%	▲	100%	=	100%	=	100%	=
PAI 14[2]	100%	▲	100%	▲	100%	=	100%	=	100%	=
PAI 15[3]			89%	▲	98%	▲	100%	▲	100%	=
PAI 16[3]			89%	▲	94%	▼	83%	▲	100%	▲
PAI 17[4]	90%	▲			83%	▲	40%	▲		
PAI 18[4]	80%	▲			83%	▲	60%	▲		

Note: (1) PAI 1 to 14 are applicable to FMPs with investments in companies. PAI 15 and 16 are only mandatory for FMPs with investments in sovereigns and supranationals, PAI 17 and 18 for FMPs with investments in real estate assets. The coverage was calculated with respect to the investment universe of each company. (2) Only AIFMs that do not exclusively invest in real estate were included in the analysis for the coverage. Two AIFMs were excluded due to the PAI statement not being publicly available. (3) Coverage is only calculated for the entities that declared having investments in sovereigns. (4) Coverage is only calculated for the entities that declared having investments in real estate.

Source: PwC Global AWM & ESG Research Centre

6.4. MANDATORY PAI INDICATORS BY TYPE OF FINANCIAL ACTOR

The following sub-section offers a deeper analysis of a selected set of mandatory indicators disclosed by various types of FMPs, aiming to provide a descriptive overview of the data reported in 2024, rather than attempting to draw conclusions about progress or improvement. For this analysis, seven PAI indicators were considered: three environmental indicators (PAI 3, PAI 4, and PAI 7), three social indicators (PAI 10, PAI 12, and PAI 13), and one governance indicator (PAI 11).

These indicators were selected because they allow for cross-institutional comparisons and provide a broad representation of different aspects of ESG. Any additional data or complex breakdowns were excluded, as they were not easily comparable and, therefore, not suitable for the calculations. As a result, the coverage in these examples may differ from that in the previous sub-section.

For PAI 3 (GHG intensity of investee companies), all zero values were excluded from the analysis to prevent data distortion. This decision was based on the unlikelihood of a company having genuinely zero emissions, suggesting that zero values represent either missing or inconsistent data. However, for all other indicators, all reported values were considered.

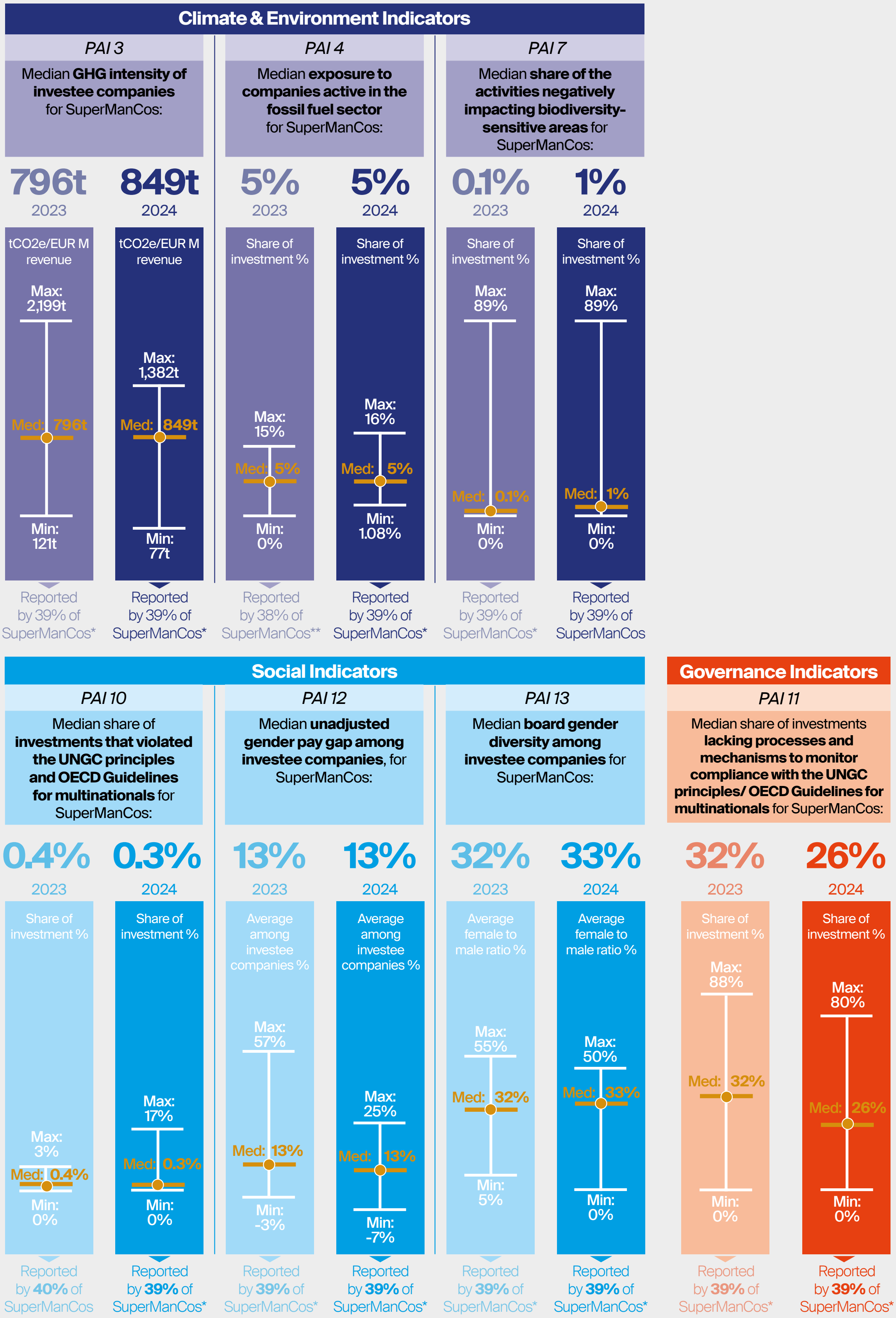
6.4.1. Super ManCos

Direct comparisons between last year's and this year's data are challenging and should be approached with caution due to several factors, such as potential changes in calculation methodologies, variations in the scope of data collection, and changes in data providers. These inconsistencies mean that a straightforward year-on-year analysis might not yield meaningful insights. As a result, this analysis is more descriptive in nature.

One notable trend in this year's data is the decrease in variation for several key performance indicators. The most prominent decrease occurred for PAI 12, where the maximum value of the reported unadjusted gender pay gap among portfolio companies fell from 57% to 25%. Additionally, the maximum value of the reported GHG intensity of portfolio companies (PAI 3) saw a considerable decline of 37%. While these values shifted significantly, the median values across most indicators remained relatively stable.

The exception to this general trend is PAI 11, which tracks the proportion of investments in companies lacking processes to monitor compliance with the UN Global Compact Principles and OECD Guidelines for Multinational Enterprises. The median for this indicator showed a modest decrease of 6 percentage points. However, this decrease should be interpreted cautiously, as it may not necessarily reflect an overall improvement in compliance mechanisms, but rather a shift in reporting or data collection practices.

Exhibit 45. PAI statement indicators – Super ManCos



*Excluding PAI statements with breakdown figures;
**Excluding entities that did not report on that PAI.

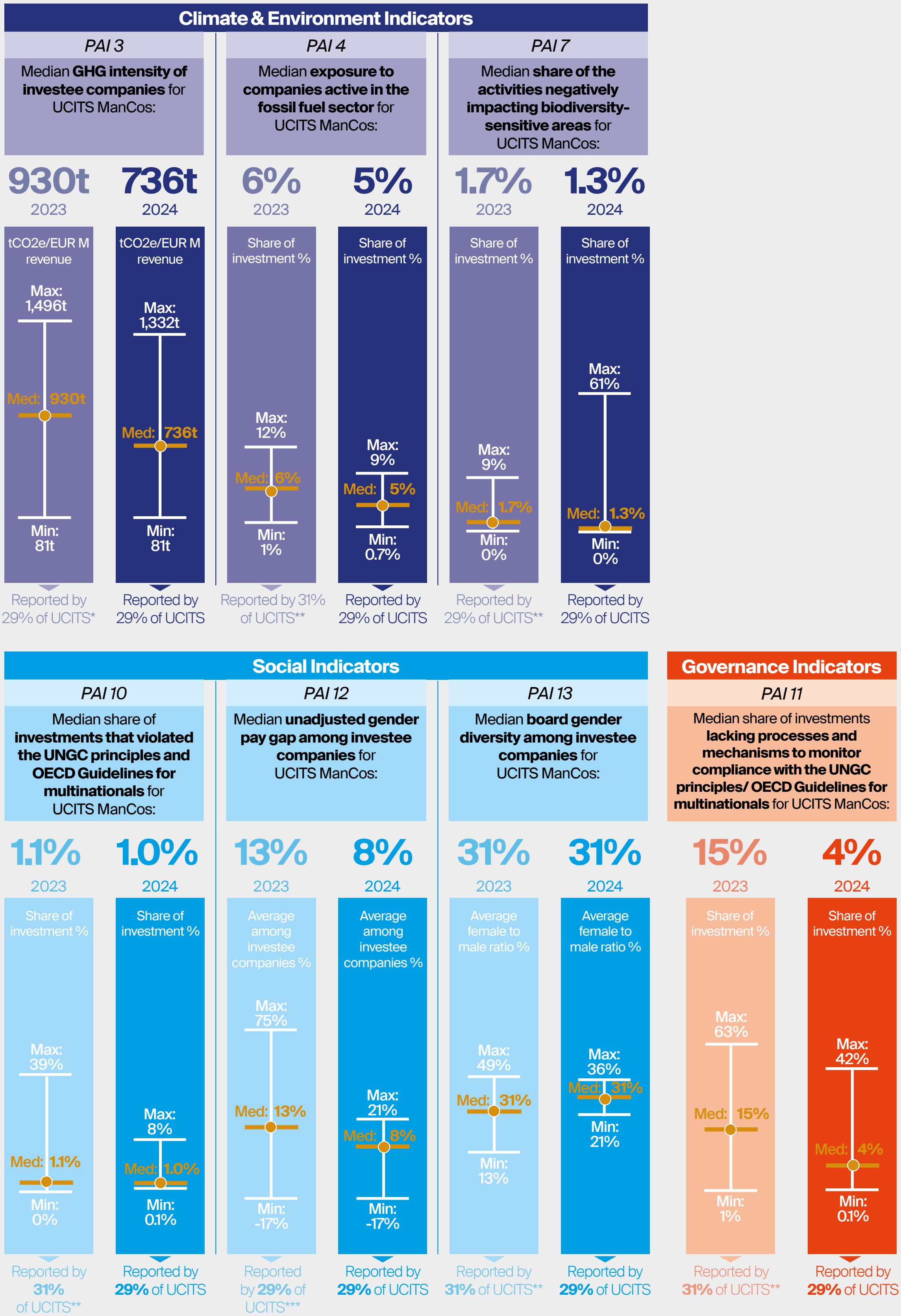
Source: PwC Global AWM & ESG Research Centre

6.4.2. UCITS ManCos

In 2023, UCITS ManCos reported the widest range and highest shares among all FMPs for two indicators: the unadjusted gender pay gap among investee companies (PAI 12) and the share of investments violating the UN Global Compact principles and OECD Guidelines for Multinational Enterprises (PAI 10). However, in 2024, the median share of investments in violation of PAI 10 decreased to 1%, while the median unadjusted gender pay gap (PAI 12) fell to 8%.

A similar trend was observed for PAI 11, which tracks investments lacking processes and mechanisms to monitor compliance with UNGC principles and OECD Guidelines. The median value for PAI 11 dropped by more than half, reaching the lowest reported levels among all FMPs in 2024, both in terms of median and maximum values.

Exhibit 46. PAI statement indicators – UCITS ManCos



*Excluding zeroes and one outlier that reported a value above 100Mt;
**Excluding entities that did not report on that PAI;
***Excluding one outlier that reported a value above 1000%.

Source: PwC Global AWM & ESG Research Centre

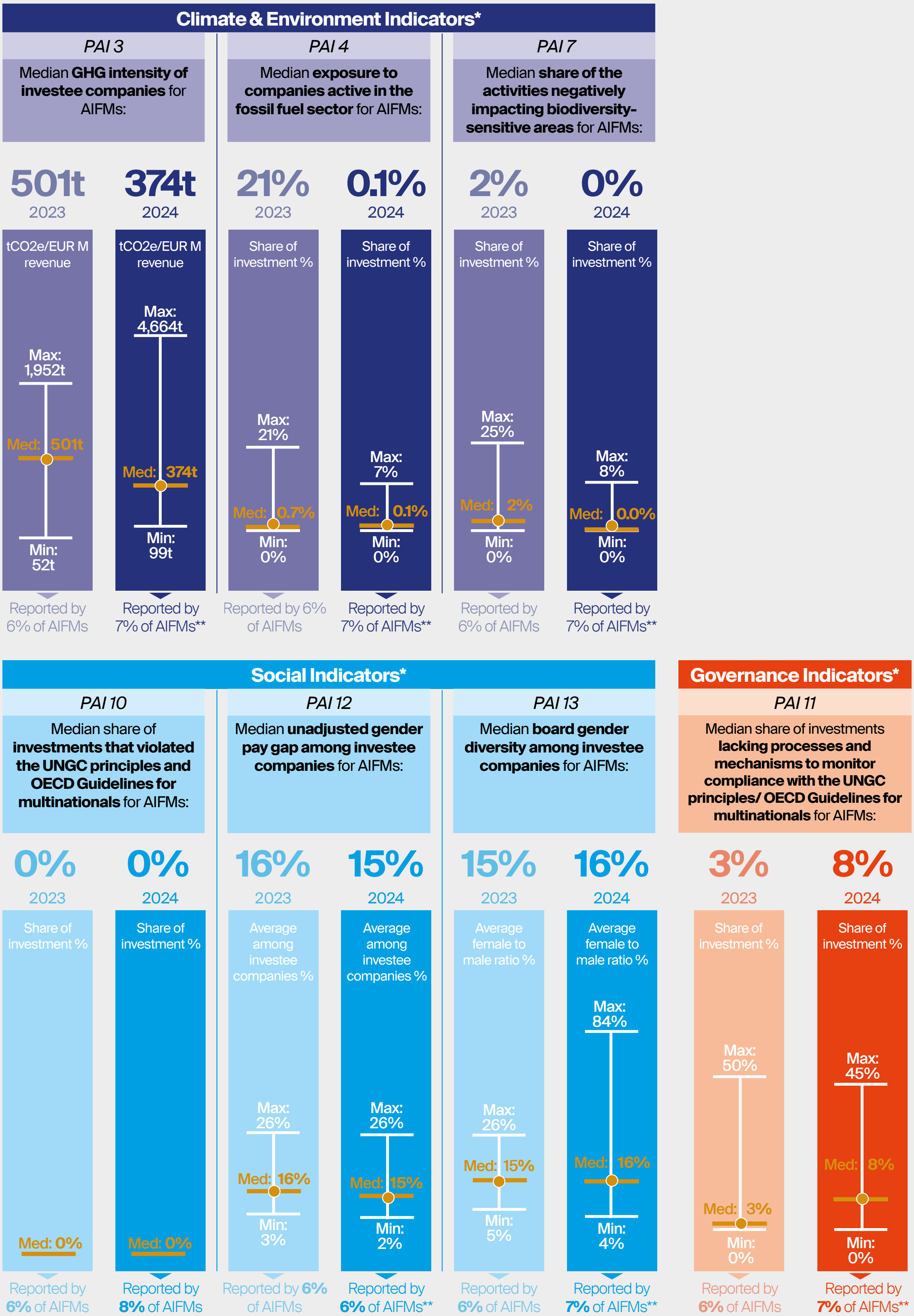
6.4.3. AIFMs

The reported figures for the maximum GHG intensity of AIFMs' investee companies have more than doubled, while the median value has decreased by 25%. This trend is similar across the two other climate and environmental indicators, where the median values have dropped to nearly 0%.

In terms of gender diversity, there has been a notable increase in the maximum reported figures for gender diversity on the boards of investee companies, which now represents the highest value across all licensed entities. Despite this, the median value for gender diversity has remained relatively stable compared to last year.

Additionally, the minimum share of investments by AIFMs that lack the processes and mechanisms to monitor the UN Global Compact principles and OECD Guidelines remains consistently at zero for all reporting entities.

Exhibit 47. PAI statement indicators – AIFMs



*Excluding AIFMs that only manage real estate assets;
**Excluding PAI statements with breakdown figures or that did not report on that PAI.

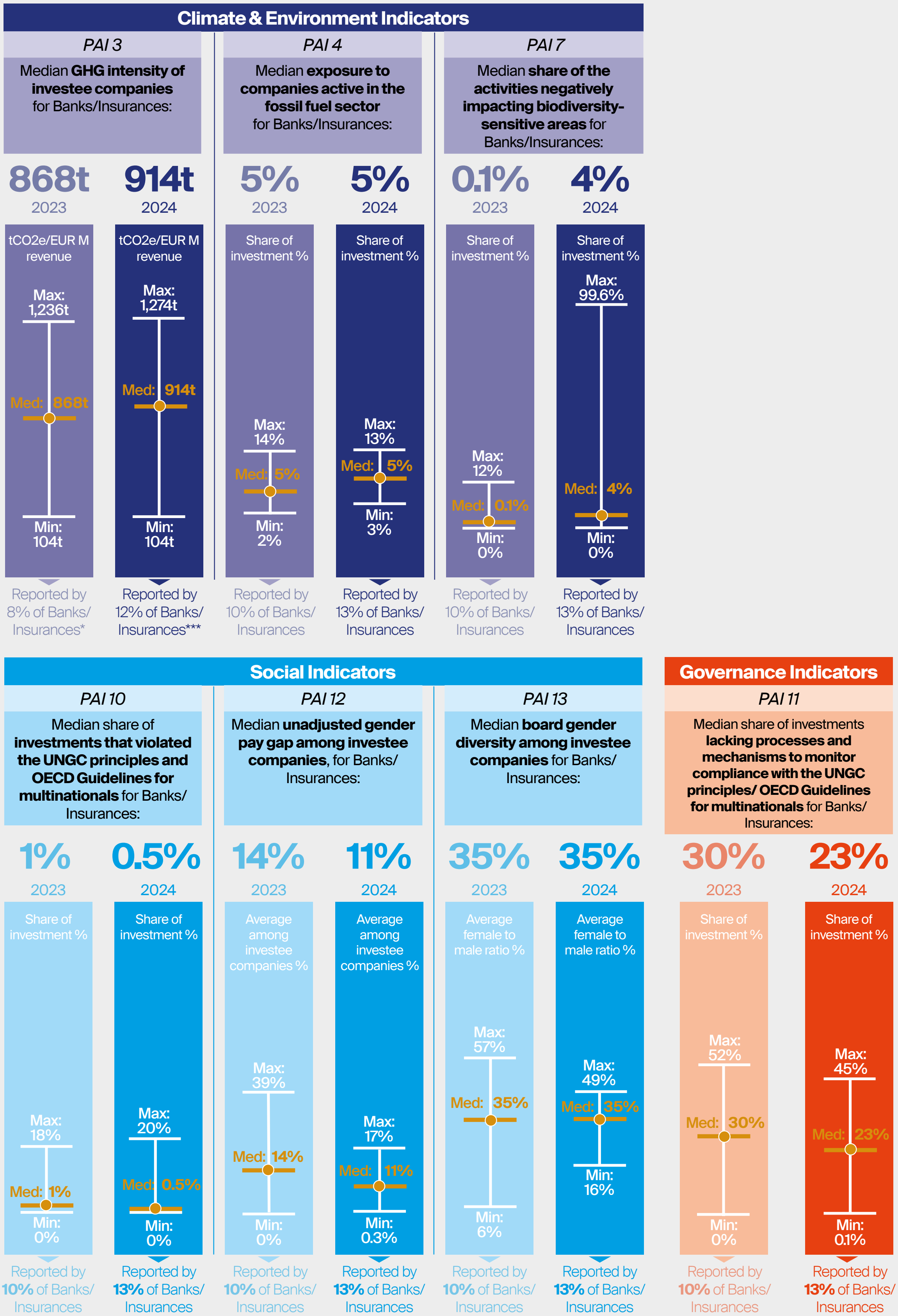
Source: PwC Global AWM & ESG Research Centre

6.4.4. Banks and insurance companies

Banks and insurance companies continue to report higher exposure to fossil fuel investments compared to other FMPs. In 2024, there was an increase in the number of banks and insurance companies reporting on PAIs compared to the previous year. Despite showing the lowest median value for activities affecting biodiversity-sensitive areas, this statistic saw the largest year-over-year increase. In 2024, the median of such negative impacts rose to 4%, the highest across all FMPs.

Conversely, banks and insurance companies continue to report a higher proportion of women on the boards of their investee companies relative to ManCos. Furthermore, the gender pay gap among their investee companies has decreased, with reductions observed both in median and maximum values.

Exhibit 48. PAI statement indicators – Banks and insurance companies



*Excluding outliers that reported values above 400Mt and below 2t or break down figures;
**Excluding entities that did not report on this PAI.

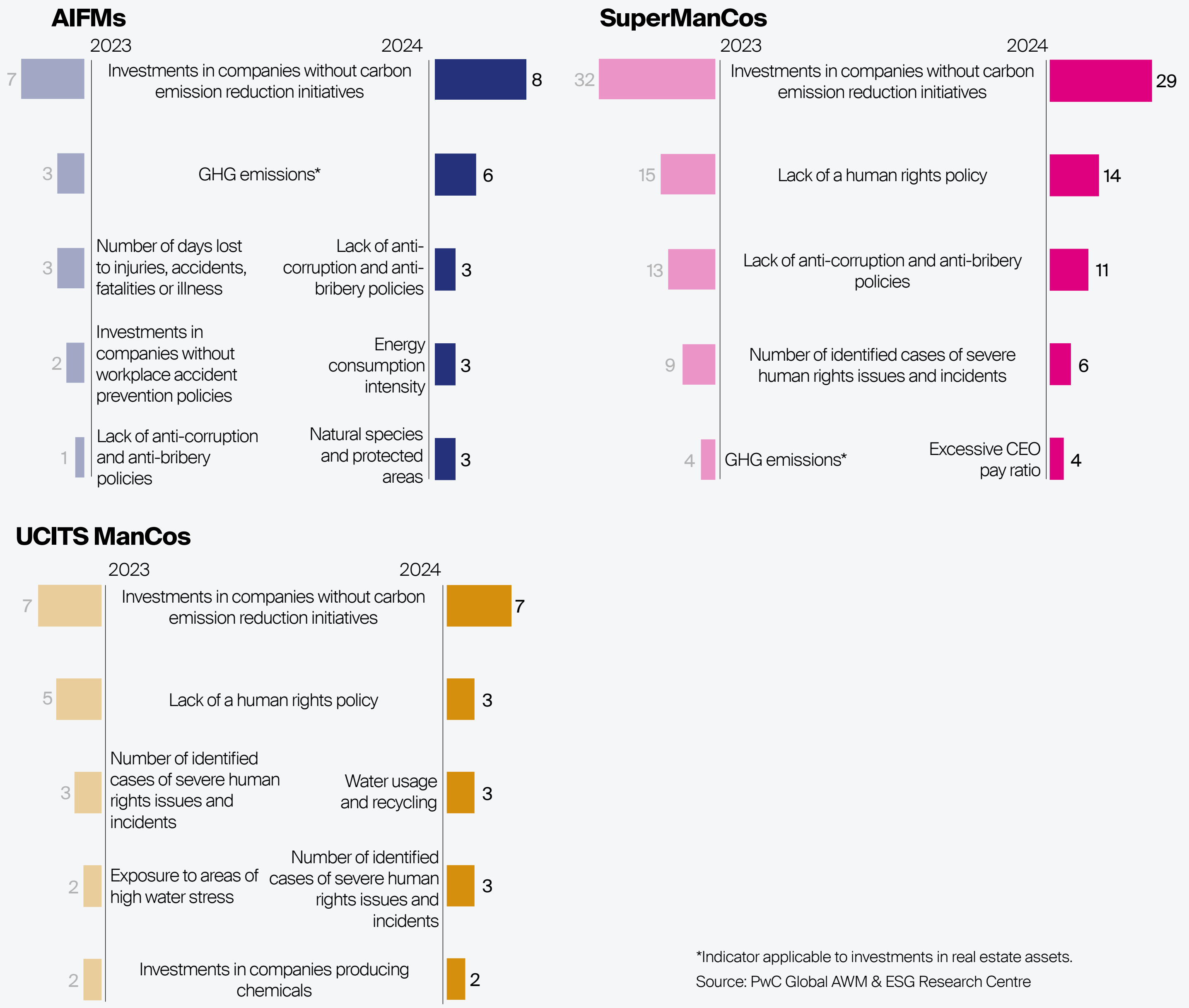
Source: PwC Global AWM & ESG Research Centre

6.5. REPORTING PATTERNS FOR OPTIONAL PAIS

FMPs must disclose at least two optional PAIs chosen from a selection of 46 environmental, social, and governance indicators, depending on the relevance to their specific investment activities – although some exceptions do apply, such as in the case of real estate. This sub-section offers insight into the most commonly reported optional PAIs (see Appendix B for the full list of optional PAIs).

Analysis of disclosures from all ManCos reveals that the most frequently reported indicator in both 2023 and 2024 was the proportion of investments in investee companies lacking initiatives to align carbon emissions reductions with the Paris Agreement (PAI 4 of Climate and other environment-related indicators). The absence of human rights policies (PAI 9 of Indicators for social and employee, respect for human rights, anti-corruption and anti-bribery matters) ranked second among disclosures made by Super ManCos and UCITS ManCos. In contrast, AIFMs have more commonly reported greenhouse gas (GHG) emissions associated with real estate assets, which may be attributed to the nature of investments managed.

Exhibit 49.a. ManCos – most reported optional PAI (number of institutions) 2023 vs. 2024

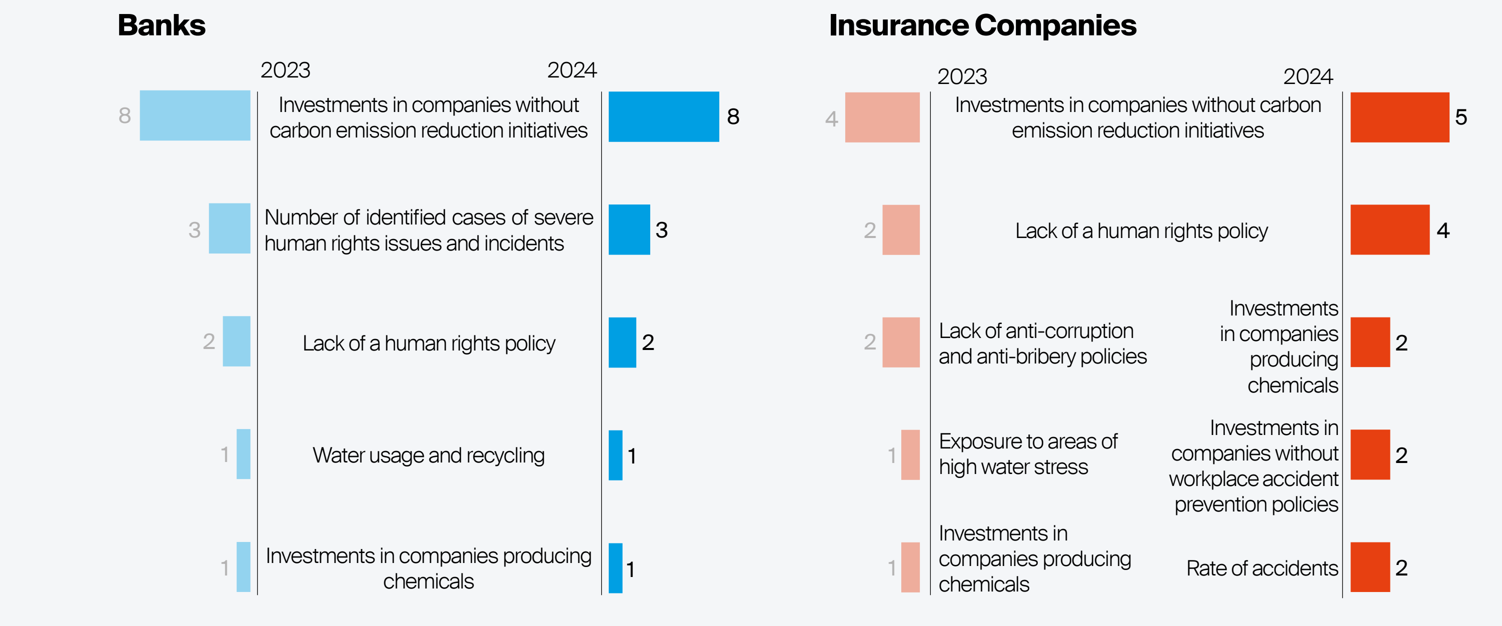


*Indicator applicable to investments in real estate assets.
Source: PwC Global AWM & ESG Research Centre

Investments in companies without initiatives to reduce carbon emissions and the lack of a human rights policy also rank highly for banks and insurance companies. Insurance companies have exhibited minimal variation in their reporting frameworks when juxtaposed with the previous year. In contrast, banks have retained the same set of optional indicators, demonstrating a consistent approach to their reporting practices.

The number of institutions disclosing PAIs isn't particularly important in the context of Exhibits 49.a. and 49.b. Instead, the focus should be on the relative prominence of the top five PAIs being reported, out of more than 40 possible indicators. The exact number of institutions reporting these top indicators is less relevant than their ranking and frequency among disclosures.

Exhibit 49.b. Banks and insurance companies – most reported optional PAI (number of institutions) 2023 vs. 2024



Source: PwC Global AWM & ESG Research Centre

6.6. OBSERVED PAI STATEMENT PRACTICES

The introduction of PAI reporting marks a positive step for sustainable finance and signals growing understanding and maturity of FMPs in Luxembourg and across Europe. While data coverage has improved, particularly in complex areas such as Scope 3 emissions, the reporting of PAI statements remains low, and many FMPs rely on estimates due to challenges in obtaining reliable data. On 25 July, ESMA published a new consolidated version of the Q&A on SFDR, which includes several new questions and answers, providing further guidance on how to account for various PAI Indicators.[20] Despite this, many FMPs opt out of disclosing the PAIs of their investment decisions on sustainability factors, while others fail to update reports annually or struggle with the accessibility and format of their reports.

Coupled with the lack of clear targets or future plans present in existing PAI disclosures – such as specific emission reduction goals by a set year – these issues affect accuracy and comparability. While further regulatory clarity on how to calculate the values could support FMPs in their PAI disclosures, new ESG regulations coming into force in the EU, such as the CSRD, will likely help make reporting on PAIs in the financial sector more standardised, comparable, and accessible in the coming years as companies in-scope of the CSRD begin publishing a wide array of ESG data.

The table below presents major observations of the analysis of PAIs disclosures in Luxembourg:

Slow progress in 2024

A significant number of FMPs are still choosing to opt out of PAI disclosures, and the explanations for non-disclosure continue to vary greatly in both detail and clarity. This ongoing low engagement with PAI reporting continues to hinder the financial industry's ability to present a comprehensive view of its commitment to sustainability.

Lapses in updating annual reports

Some FMPs maintained outdated documents instead of uploading updated reports. These firms may have either delayed their reporting, opted out without officially declaring, or may be unaware that annual updates are mandatory.

Discrepancies in report availability and accessibility

Accessibility to reports remains inconsistent. Some reports are easy to locate on company homepages, while others are buried within submenus, grouped with unrelated documents, posted on parent company websites, or even restricted behind password protection.

Inconsistent adherence to standard templated and formats

Several FMPs are still not following the prescribed templates or referencing the formulas laid out in the SFDR Regulatory Technical Standards (RTS). While some firms ensure their reports are well-structured, searchable, and user-friendly as per regulatory guidelines, others continue to use customised formats or methodologies, diverging from the RTS.

Challenges with data quality

Despite improvements in areas like Scope 3 emissions and complex metrics, many FMPs still face difficulties in gathering and presenting complete and reliable data. This often leads to limitations or non-disclosure, with many firms relying on estimates or proxies instead of actual data, impacting the accuracy, consistency, and comparability of reports. The gradual rollout of the CSRD could help address some of these issues.

20. Consolidated questions and answers (Q&A) on the SFDR (Regulation (EU) 2019/2088) and the SFDR Delegated Regulation (Commission Delegated Regulation (EU) 2022/1288. *https://www.eiopa.europa.eu/document/download/de2ef448-5638-4b07-b493-259e109e35c2_en?filename=JC-2023-18-Consolidated-JC-SFDR-QAs.pdf*

Shortcomings in the quality of information and target setting

FMPs often struggle to provide clear and accountable details in their PAI statements. While some offer in-depth explanations of their engagement, due diligence, policies, and future plans, including specific numerical targets, others respond with vague statements and minimal forward-looking strategies to address adverse impacts.

Reporting patterns affecting data comparability

As reporting scope expands, many firms cite this as a reason for inability to compare current data with previous years. Other factors affecting comparability include changes in portfolio companies' turnover, or adjustments in their methodologies and data collection processes, often due to updated internal systems or third-party data providers using differing approaches.

7.

OVERVIEW OF THE EUROPEAN ESG TEMPLATE (EET)

In early 2022, the FinDatEx (Financial Data Exchange) working group developed the European ESG Template (EET) to help FMPs address challenges related to sustainability reporting.

Unlike mandatory ESG regulations, the EET is a voluntary tool designed to facilitate regulatory compliance and data sharing. It offers guidance on how to report in line with existing EU sustainability disclosure regulations (such as SFDR, Taxonomy, IDD, and MiFID) and provides templates for various disclosure requirements. Its main goal is to streamline sustainability reporting, enhance comparability of EU entities' reports, and promote transparency within the European sustainable finance sector.

Since it was launched, the EET has had a mixed response from industry players. On one hand, the standardisation of ESG reporting which the EET brings is making it easier for FMPs to comply with the SFDR and other sustainable finance regulations. In addition, the uniform template paves the way for better communication between asset managers and their clients, and hence allows better integration of ESG criteria into financial products – which can often be one of the demands made by investors.

However, the EET has not been without its fair share of challenges. Smaller FMPs with limited resources may struggle to manage all the detailed requirements as the EET requires very specific information that is not always easy to obtain.

Nonetheless, the EET is still relatively novel, and it is too early to determine whether it has been a successful template. Similar to PAIs, the roll-out of the CSRD in the coming years and the availability of high-quality ESG data on a much wider scale will make it easier for FMPs to make use of the EET.

Our analysis covers 9,597 mutual funds, with over half of them disclosing as per Article 8 or Article 9 of the SFDR, compared to 9,708 funds in the 2023 edition of the study (Exhibit 51). However, our analysis is confined to funds which have published both the pre-contractual and the reported data.

For instance, when analysing funds reporting as per Article 8 of the SFDR, for Field 63 and Field 75 (which represent the percentage of the fund's AuM which is aligned with E and/or S characteristics at the pre-contractual and reporting levels, respectively), this year's edition of the study found 2,750 funds on both fields, which represents an increase of 31.1% compared to 2,097 in the previous edition of this study.

Exhibit 50. EET Overview

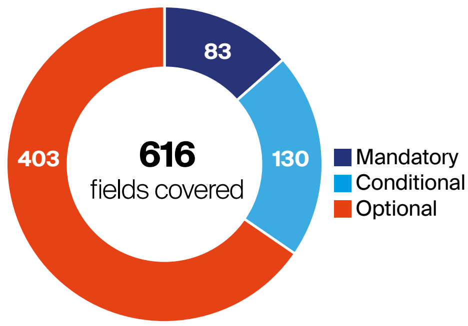
EET overview

1 Template	• In March 2022, the FinDatEx (Financial Data Exchange) working group published the EET as a standardized and machine-readable template covering financial products' key ESG characteristics. • The EET should be filled out for funds and structured financial products, on a share class level. • The EET is intended for a wide range of FMPs, notably insurers, distributors, and funds of funds.
600+ Fields	• There are more than 600 fillable fields in the template. • The fields cover information required for other reporting templates, so no new measures are necessary. • The fields mostly take pre-defined values (e.g., only "Yes" or "No").
3 Field Statuses	• Fields can be either mandatory (for Article 8 and 9 funds), conditional, or optional. • A field's status may change over time. • For example, in January the SFDR-related fields changed from optional to conditional.
9,597 Funds	• The dataset used in this analysis covers 9,597 mutual funds in Luxembourg active as of the end of June 2024 (compared to 9,708 funds in the 2023 edition of the study). • Just under half of the funds in the extract are SFDR funds, the vast majority of which are Article 8.

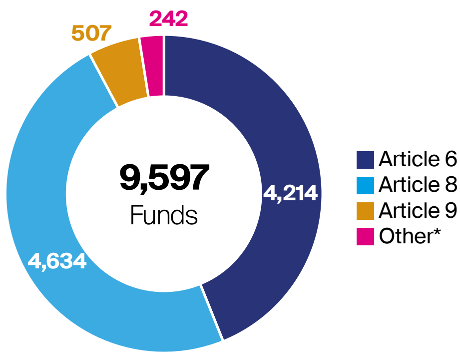
Sources: PwC Global AWM & ESG Research Centre analysis, LSEG Lipper

Exhibit 51. EET fields statuses

EET fields statuses



SFDR split



*'Other' includes funds that have not reported their SFDR status to LSEG Lipper and funds for which no data is available.

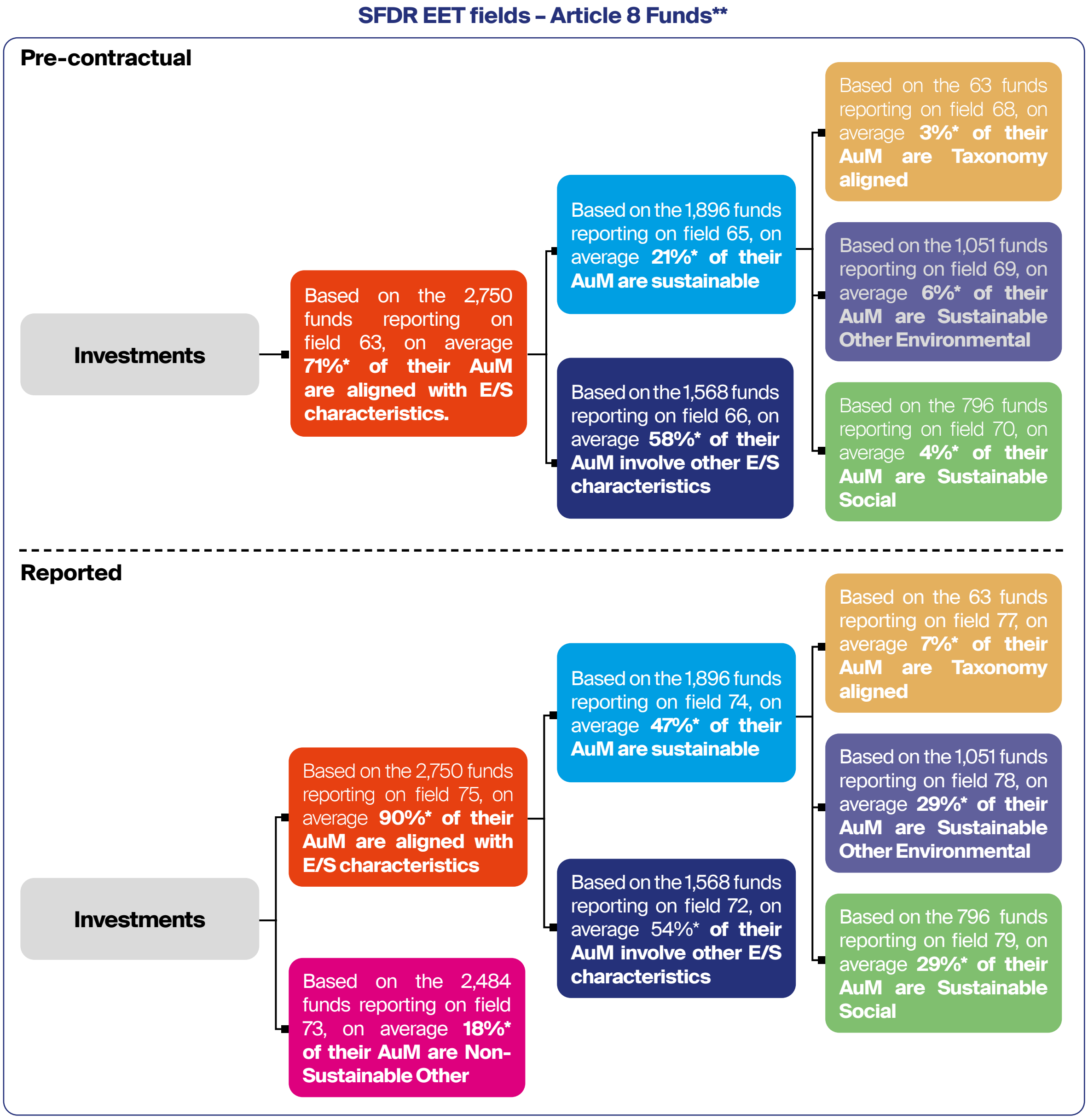
Sources: PwC Global AWM & ESG Research Centre analysis, LSEG Lipper

7.1. SFDR EET FIELDS: PRODUCT-LEVEL DISCLOSURES UNDER ARTICLE 8

The data presented suggests a cautious approach by asset managers during the pre-contractual stage, as observed in funds reporting under Article 8 of the SFDR. The analysis, based on mean values across ESG fields, reveals that funds tend to disclose more conservative figures at this stage compared to reported values.

Despite an increase in the number of funds disclosing information in the relevant fields compared to the previous year, the overall trend remains consistent with the results observed in September 2023. Specifically, asset managers report lower alignment percentages for certain ESG characteristics during the pre-contractual phase. For instance, across 2,750 funds, only 71% of AuM were disclosed as aligned with Environmental and Social characteristics at the pre-contractual level (Field 63). However, this figure rises significantly to 90% at the reported stage (Field 75), signalling a more conservative disclosure approach early in the investment process.

Exhibit 52. SFDR EET fields – Article 8 Funds



Note: *Percentage of values that are non-blank and strictly positive, among Article 8 primary funds and excluding funds of funds;
**For the sake of consistency, this study analyses data at fund level (rather than share class level).

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

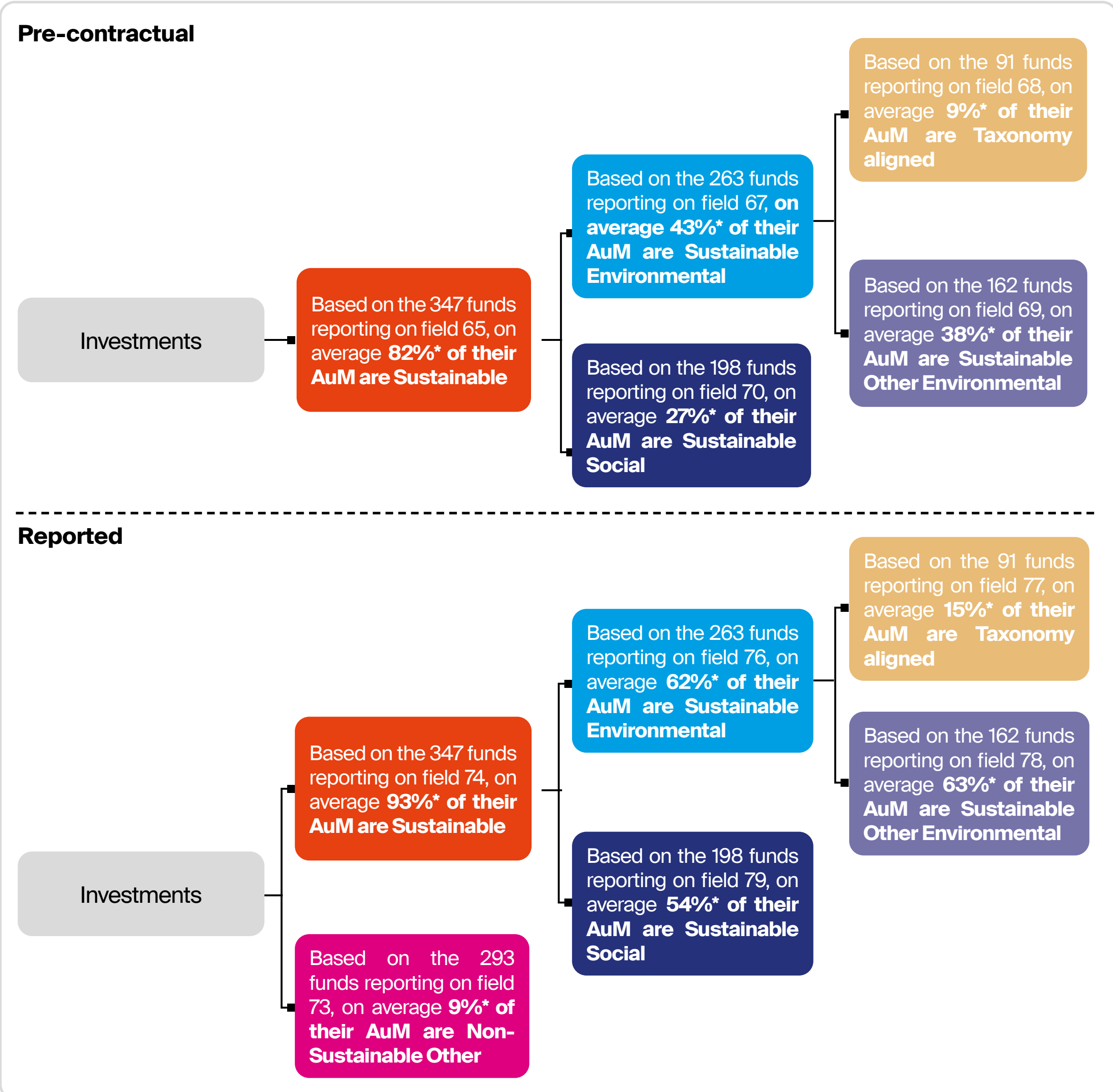
7.2. SFDR EET FIELDS: PRODUCT-LEVEL DISCLOSURES UNDER ARTICLE 9

The analysis of funds reporting under Article 9 of the SFDR reveals a clear emphasis on environmental sustainability over social sustainability. This trend has been particularly noticeable since June 2023, with an increasing number of funds opting to disclose information related to sustainability through the EET fields.

The data further indicates that funds tend to adopt a more cautious approach during the pre-contractual stage. For instance, while 347 funds have disclosed that an average of 93% of their AuM are classified as sustainable (EET field 74), the same funds reported a lower figure (82%) at the pre-contractual stage (EET field 65). This disparity highlights the evolving nature of sustainability disclosures as funds move through different reporting stages.

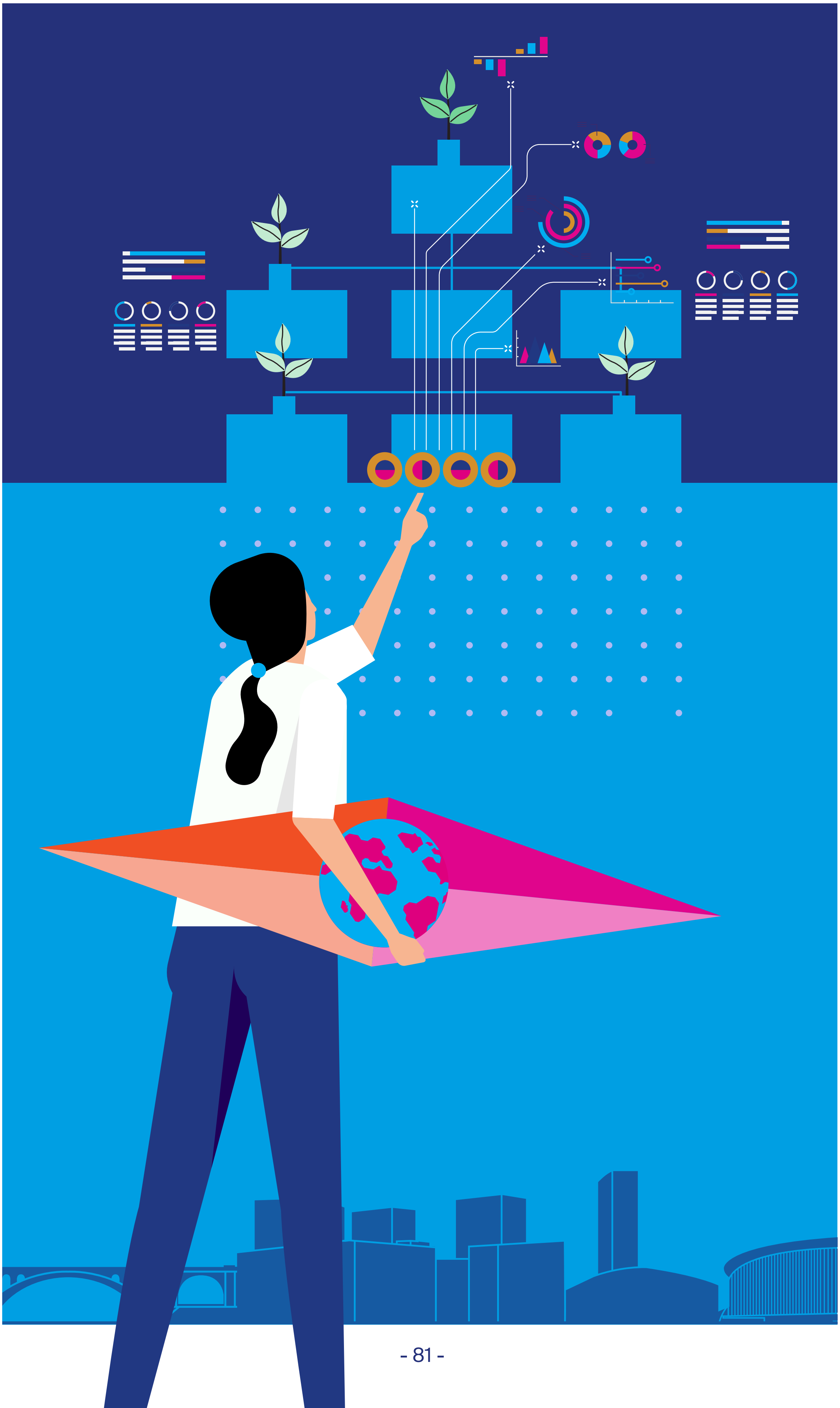
In a similar trend, 263 funds reported that, on average, 62% of their AuM are environmentally sustainable (EET field 76), which marks a significant increase of nearly 20% compared to the 43% disclosed at the pre-contractual stage. This pattern further underscores the stronger focus on environmental factors in sustainable investment strategies, particularly as funds progress through regulatory and reporting obligations.

Exhibit 53. SFDR EET Fields: Article 9 Funds



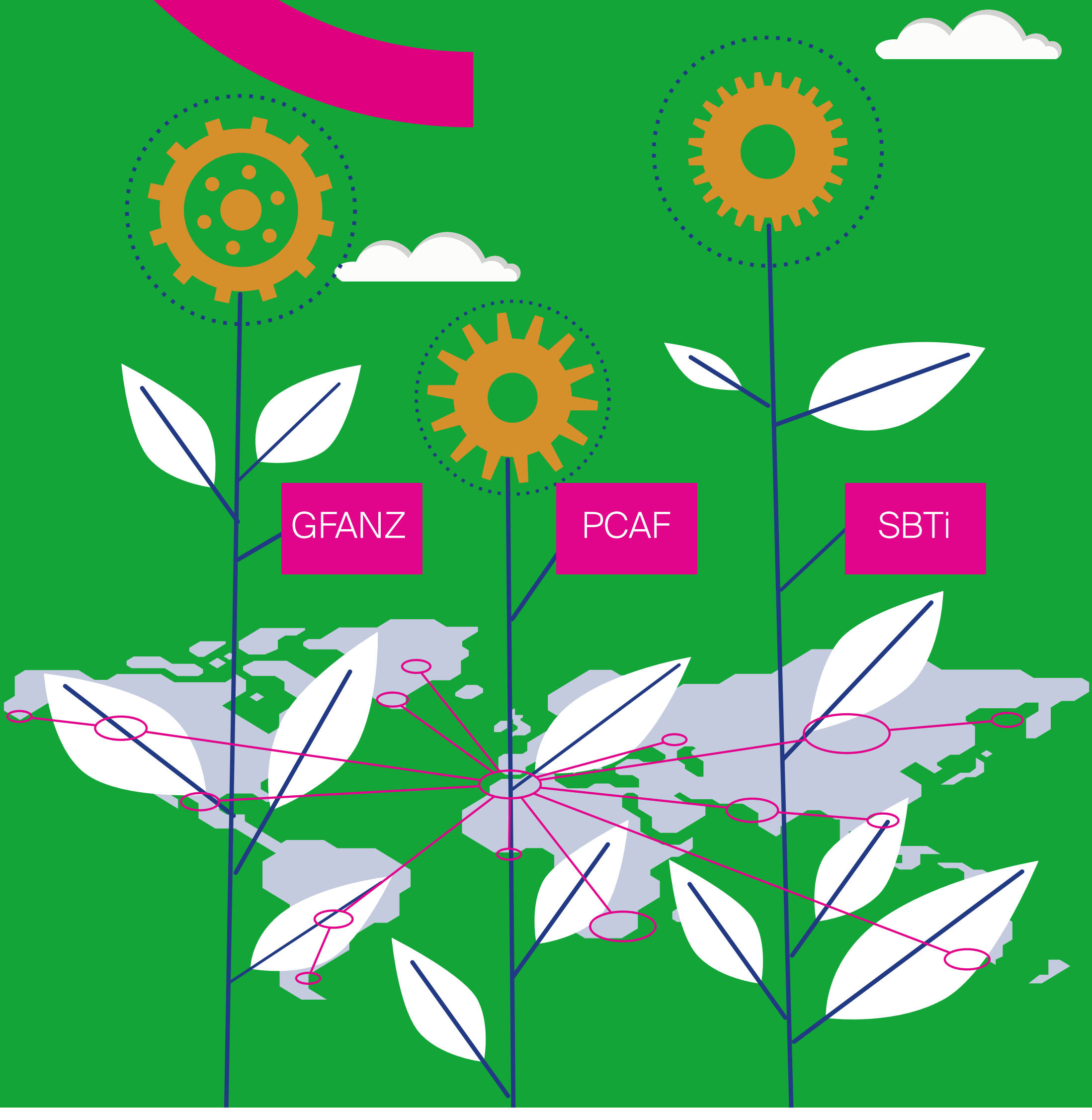
*Percentage of values that are non-blank and strictly positive, among Article 9 primary funds and excluding funds of funds;
**For the sake of consistency, this study analyses data at fund level (rather than share class level).

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper



8.

CLIMATE AFFILIATIONS



The LSFI, by virtue of its mandate, plays a crucial role in promoting collaboration across the Grand Duchy's financial centre' organisations and beyond to accelerate the transition to a sustainable economy. It complements the efforts of several key institutions and international initiatives by coordinating the advancement towards SDGs and Paris agreement goals and scaling up sustainable finance.

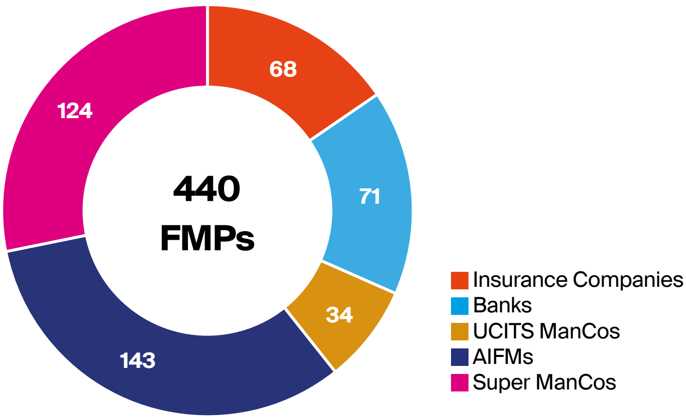
In line with the previous edition of this report, this study examines three international initiatives and tools that financial institutions can adhere to: Glasgow Financial Alliance for Net Zero (GFANZ), the Partnership for Carbon Accounting Financials (PCAF), and the Science-Based Targets Initiative (SBTi). This section of the study assesses how FMPs in Luxembourg are positioned in relation to the adoption of these key climate-related initiatives and tools. The objective is not to assess whether these firms are fully implementing all the requirements of a particular initiative or tool, nor to evaluate the potential impact that full compliance with these requirements might have on climate change.

8.1. CLIMATE AFFILIATIONS STUDY METHODOLOGY

This year's study follows the same assumption as the previous edition – if a financial institution adheres to a climate initiative or tool at the group level, we assume its Luxembourg subsidiary does the same, provided there is a statement confirming full alignment with the parent company.

The scope of this year's sample has been significantly refined and now includes the same total sample as used in the PAI section. However, comparing this year's sample with that of the previous edition would not be meaningful. In the former, all management companies with a presence in Luxembourg were included alongside the 50 banks with the biggest assets and the 50 insurance companies with the highest total premiums. This year's sample encompasses all FMPs and should be considered a true baseline, providing a clearer status quo for future editions (Exhibit 54).

Exhibit 54. Sample of financial institutions



Source: PwC Global AWM & ESG Research Centre

8.2. OVERVIEW OF CLIMATE INITIATIVES AND TOOLS

GFANZ is a global coalition of financial institutions committed to supporting the transition to net-zero by 2050. It was founded in April 2021 at the COP26 summit in partnership with the United Nations Framework Convention on Climate Change (UNFCCC) Race to Zero campaign. As per GFANZ's 2023 progress report, the coalition brings together over 675 firms from more than 50 countries as at COP28,[21] and comprises eight sector-specific alliances: **the Net-Zero Asset Owner Alliance (NZAOA), Net-Zero Asset Managers initiative (NZAMI), Paris Aligned Asset Owners (PAAO), Net-Zero Banking Alliance (NZBA), Net Zero Financial Service Providers Alliance (NZFSPA), Net Zero Investment Consultants Initiative (NZICI), The Venture Climate Alliance (VCA), and the Net-Zero Export Credit Agencies Alliance (NZECA).**[22] The Net Zero Insurance Alliance (NZIA), formerly part of the coalition, was disbanded in April 2024[23] and is expected to be replaced by the Forum for Insurance Transition to Net-Zero (FIT).[24] As a result, it was excluded from our analysis. Collectively, the remaining alliances promote collaborative action and work towards achieving the objectives of the Paris Agreement.

PCAF is a global partnership of financial institutions that have developed a standardised approach for GHG emissions calculations allowing financial institutions to quantify and disclose GHG emissions associated with loans and investments. This transparency supports the alignment of portfolios with climate goals and helps institutions make informed decisions in their transition to a low-carbon economy. As of September 2024, PCAF has 530 institutions with combined assets of over USD 90tn.[25]

SBTi is a climate action organisation providing companies and financial institutions with a clearly defined pathway to set science-based targets and commit to reducing emissions at a rate that aligns with the goal of limiting global warming to 1.5°C. It was formed as a collaboration between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). At the end of 2023, the number of firms with science-based targets validated by SBTi stood at 4,205 with 86 of them being financial institutions.[26]

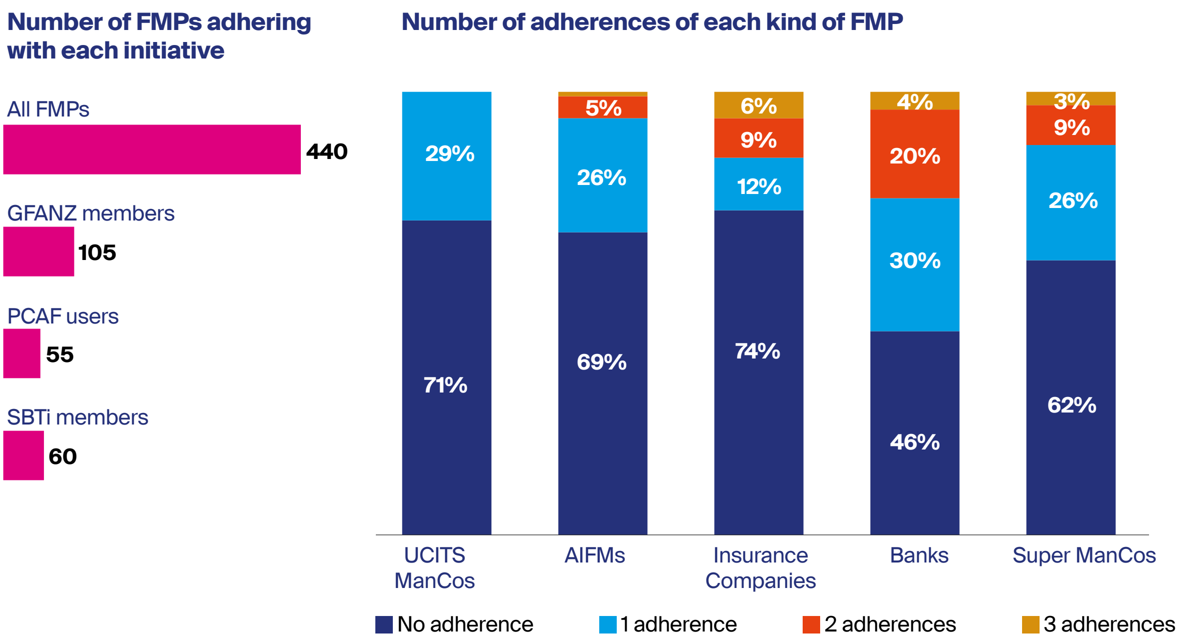
8.3. OVERVIEW OF LUXEMBOURG ENTITIES' ADHERENCE TO MAJOR CLIMATE TOOLS AND INITIATIVES

Among banks, 30% adhere to one climate initiative or tool. Insurance companies, on the other hand, have the lowest overall participation, with 74% of entities not adhering to any initiative. UCITS ManCos closely followed, with 71% of entities having no adherence.

GFANZ recorded the highest number of members (105), representing nearly 24% of all companies in the sample, followed by SBTi with a membership of 60 and PCAF with 55 users. Overall, companies in Luxembourg with visible commitment to any of the three analysed initiatives or tools—whether through their PAI statements, press releases, website updates, or ESG and sustainability reports—represent a minority (Exhibit 55).

21. GFANZ. 2023 Progress Report. December 2023. https://assets.bbhub.io/company/sites/63/2023/11/GFANZ-2023-Progress-Report.pdf
22. GFANZ, About Section. https://www.gfanzero.com/about/
23. Jessop, S. Insurers' climate alliance relaunches after member exodus. Reuters April 2024. https://www.reuters.com/sustainability/climate-energy/insurers-climate-alliance-relaunches-after-member-exodus-2024-04-25/
24. UNEP. Net Zero Insurance. https://www.unepfi.org/insurance/insurance/projects/net-zero-insurance-alliance/
25. PCAF. Financial institutions taking action. Retrieved September 26 from. https://carbonaccountingfinancials.com/financial-institutions-taking-action#overview-of-financial-institutions
26. SBTi. SBTi monitoring report 2023. https://sciencebasedtargets.org/reports/sbti-monitoring-report-2023

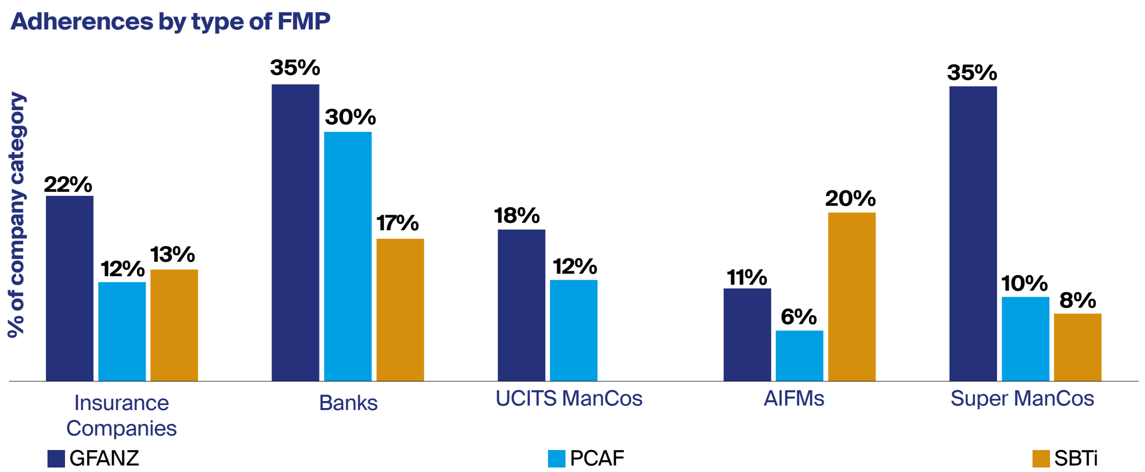
Exhibit 55. Number of adherences



Source: PwC Global AWM & ESG Research Centre

When analysing the specific initiatives adopted by the 440 FMPs, Super ManCos and Banks took the lead in GFANZ adherence, with 35% of entities in each category aligning with the initiative. In contrast, AIFMs demonstrated the lowest adherence to GFANZ, with only 11% of them adhering. Despite overall lower adoption of the PCAF framework, banks significantly outperformed other sectors, with 30% of banking entities adhering to it (Exhibit 56).

Exhibit 56. Adherences by type of financial services industry



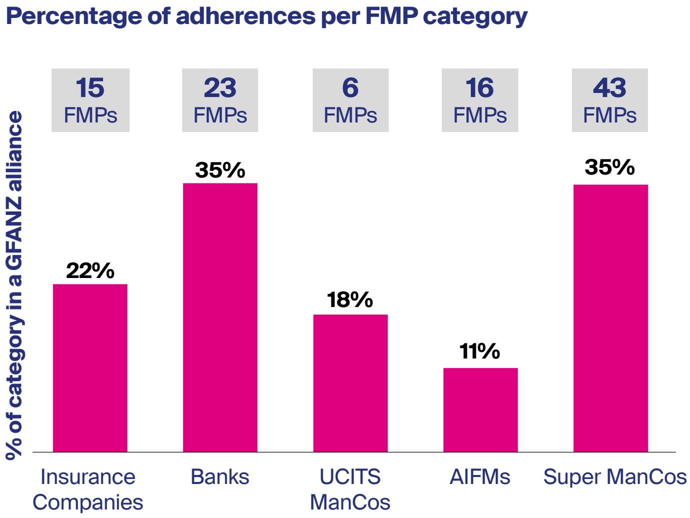
Source: PwC Global AWM & ESG Research Centre

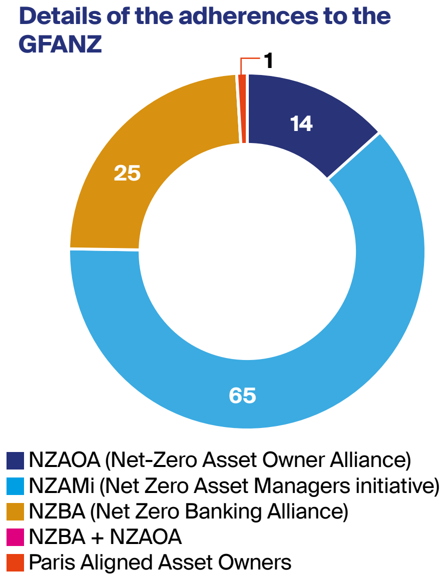
8.3.1. GFANZ

For this study, companies adhering to GFANZ were selected based on their membership in five key sector-specific alliances: NZAOA, NZAMI, NZBA, PAAO, and NZIA/FIT, as these were most relevant to our analysis.

In total, 105 FMPs adhere to GFANZ, with Super ManCos representing nearly half of these (43 entities). AIFMs, on the other hand, account for the fewest members, with only 11% of FMPs adhering to GFANZ (Exhibit 57).

Exhibit 57. Adherence to GFANZ



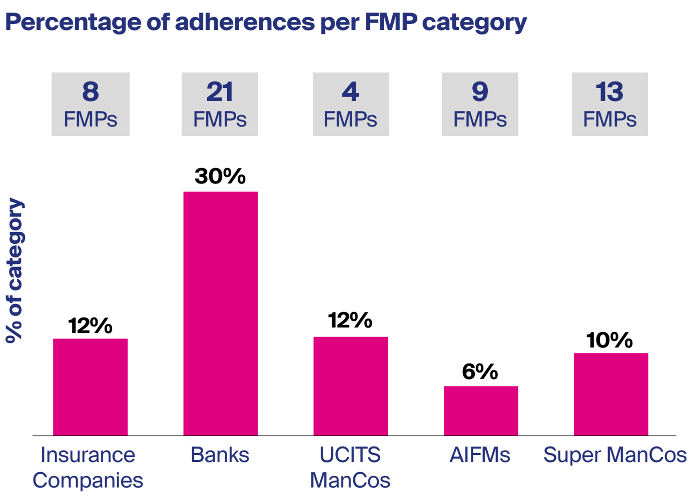


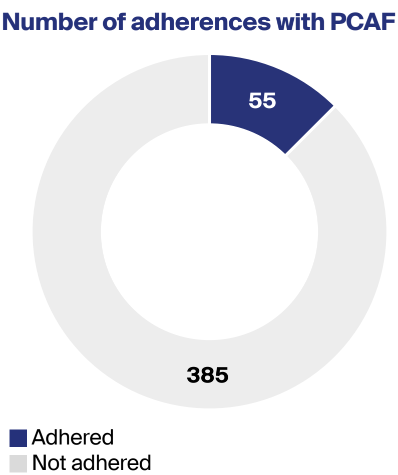
Source: PwC Global AWM & ESG Research Centre

8.3.2. PCAF

Similarly, financial institutions are considered adherent to PCAF when they actively use it or commit to its future use. PCAF saw the lowest adoption rate among the initiatives, with only 55 entities adhering, representing approximately 13% of the companies analysed. Banks emerged the highest, with a 30% adherence rate, likely driven by PCAF's methodology for quantifying and disclosing GHG emissions tied to loans and investments.[27] Insurance companies and UCITS ManCos followed, each at 12%, while AIFMs showed the lowest participation, with just 6% adherence (Exhibit 58).

Exhibit 58. Adherence to PCAF





Source: PwC Global AWM & ESG Research Centre

27. PCAF. PCAF Global GHG Standard. https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf

8.3.3. SBTi

To be considered adherent to SBTi, companies must either set science-based targets or make a commitment to do so. SBTi recognises three key target categories: near-term targets (within 5–10 years), long-term targets (more than 10 years), and net-zero targets (full decarbonisation with a clear plan to reach net-zero).

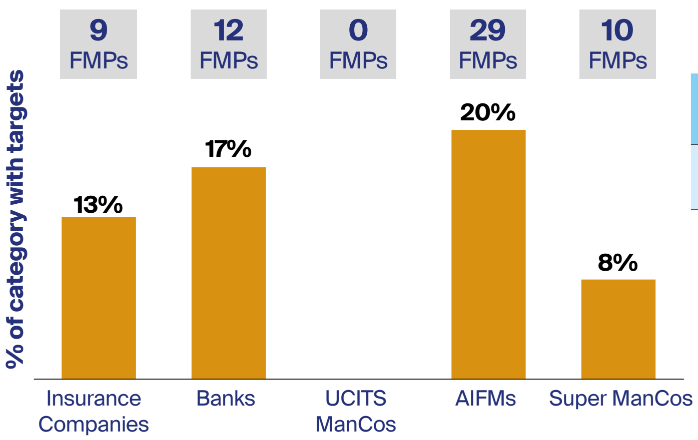
In our analysis, companies adhering to SBTi either commit to near-term or have set a net-zero commitment. These categories ensure companies align their operations with global climate goals, with specific reduction timelines.

Of the companies reviewed, 60 (representing about 14% of the total sample) adhere to SBTi, with varying levels of commitment. AIFMs had the highest number of entities adhering to SBTi (20%), whereas no UCITS ManCo currently adheres to it.

When it comes to the details of this adherence, 21 companies in our sample have already set near-term targets but these are not towards net-zero commitment. However, of the 16 companies that have near-term commitments, 6 have set targets (Exhibit 59).

Exhibit 59. Adherence to SBTi

Percentage of adherences per FMP category

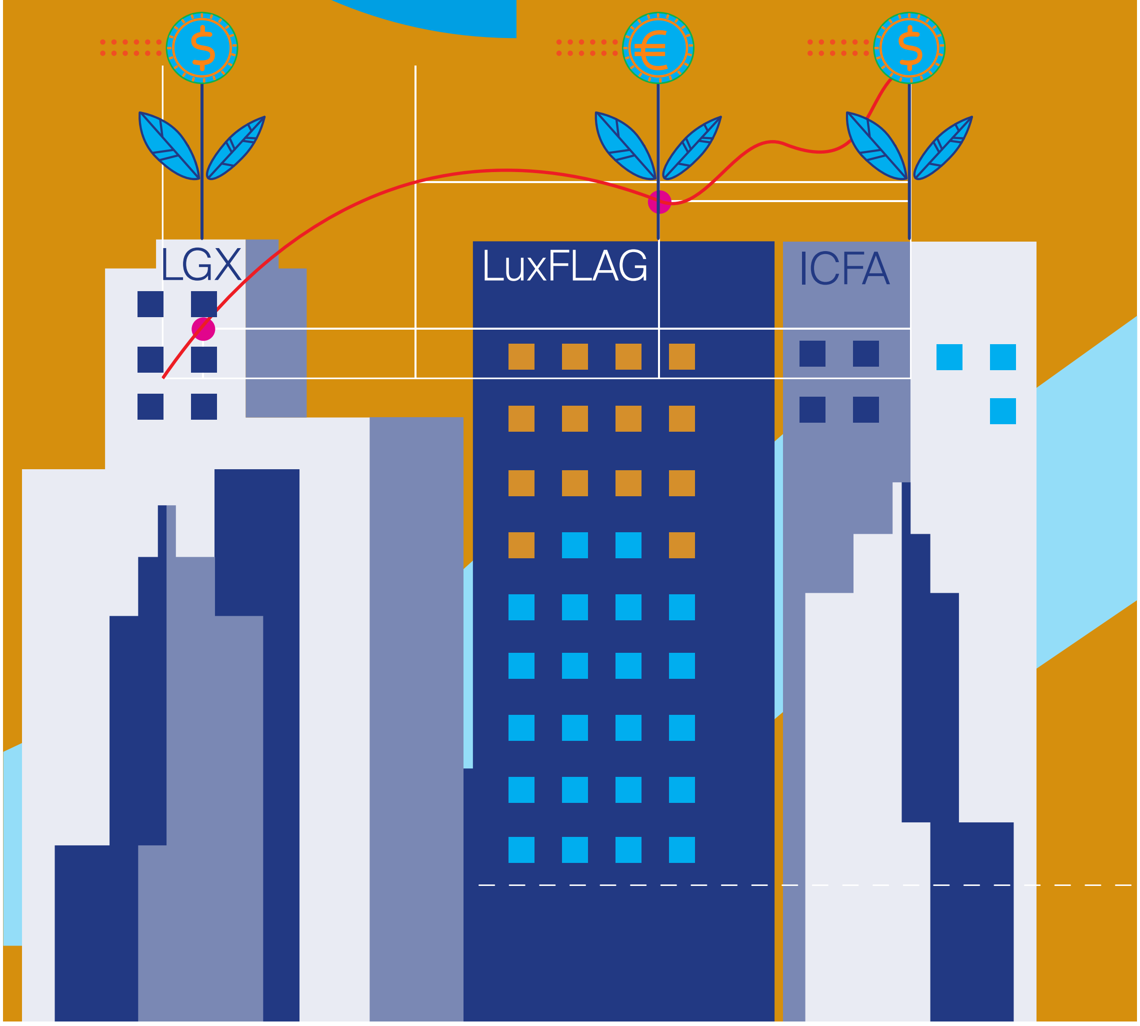


Detail of the adherences to the SBTi

	Near-term commitment	Near-term targets set
No net-zero commitment	17	21
Net-zero commitment	16	6

Source: PwC Global AWM & ESG Research Centre

9. LUXEMBOURG PLAYERS' POSITION



This section discusses the contributions of three key Luxembourg-based organisations – the Luxemborug Green Exchange (LGX), the labelling agency LuxFLAG and the International Climate Finance Accellerator (ICFA) – in pushing the international sustainable finance agenda forward, examining how they are actively shaping the future of sustainable finance in Luxembourg and beyond.

9.1. LUXEMBOURG GREEN EXCHANGE (LGX)

9.1.1. About LGX

LGX was launched by the Luxembourg Stock Exchange (LuxSE) in 2016 and is the world's first and leading platform dedicated exclusively to sustainable securities. Its primary objective is to directly contribute to the United Nations SDGs and the Paris Agreement by redirecting capital flows towards sustainable investment projects. In its pursuit to promote the sustainable finance agenda, LGX now encompasses a full spectrum of sustainability-related products and services, including the LGX Platform, LGX Academy, LGX DataHub and LGX Assistance Services. Issuers seeking market visibility by showcasing their financial securities on LGX must first meet the platform's strict eligibility requirements and commit to continuous reporting on their investments.

This rigorous approach not only ensures that listed securities meet strict sustainability criteria but also encourages issuers to lead by example, promoting greater trust and credibility in the sustainable finance market. By fostering transparency, LGX helps bridge the gap between investors seeking sustainable opportunities and issuers committed to making a positive environmental and social impact.

9.1.2. Why is Luxembourg the preferred destination for bond issuance?

Over the last 60 years, LuxSE has actively contributed to the development of international capital markets. This is in part attributable to its strong culture of servicing international clients and addressing their unique needs and its stringent yet business-friendly admission process which provides high transparency to investors.

By providing increased visibility to issuers, LuxSE has positioned itself as the gateway to access international investors. Issuers on LuxSE benefit from the country's vibrant and integrated financial ecosystem and proximity to a powerful network of international experts such as the country's numerous law firms, banks and consulting firms, among others.

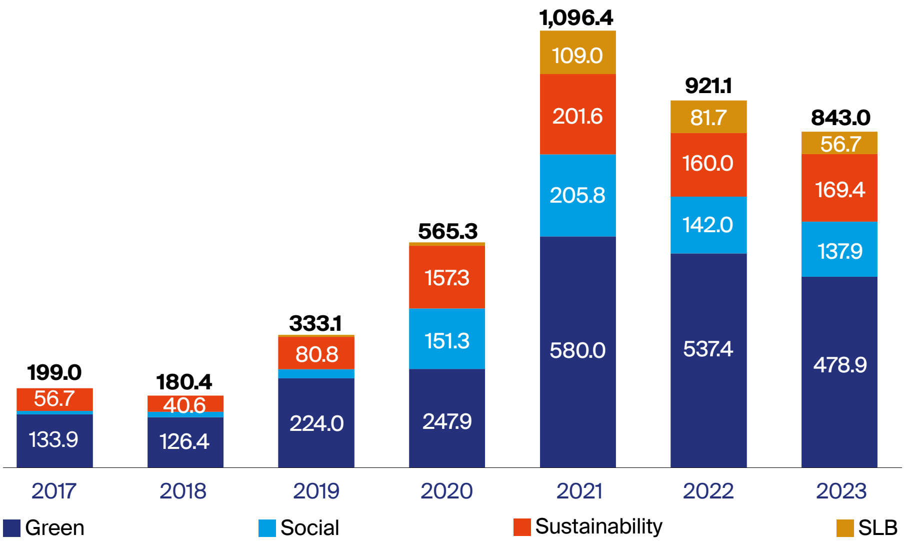
9.1.3. Pillars of LGX

To address some of the most pressing needs of the sustainable finance industry, LGX operates around four core pillars: **reorientating capital flows** by providing a platform that connects impact-driven investors with issuers of sustainable debt securities; **building sustainable finance knowledge capacity** via the LGX Academy, which offers training on the path to becoming a certified ESG professional as well as capacity building missions abroad; **addressing data gaps** by offering comprehensive sustainability-related data across nearly the entire sustainable bond universe via the LGX DataHub; and **assisting the sustainable issuance journey** by providing expert guidance from pre- to post-issuance, including peer comparisons, reviewing sustainability frameworks, and assisting with post-issuance reporting.

9.1.4. GSSS bonds

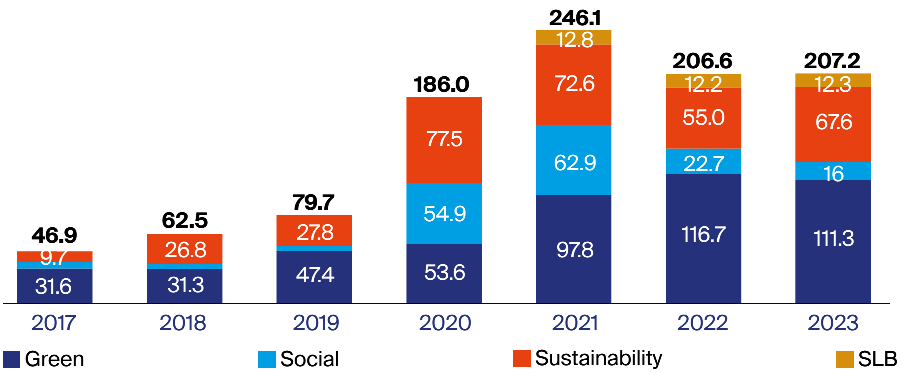
LGX is an important catalyst to the growth of the Green, Social, Sustainability and Sustainability-linked (GSSS) bond market. At the end of 2023, the platform had raised over EUR 207bn worth of GSSS bonds, second only to the highest-ranking year of 2021 (Exhibit 61). Earlier this year, the total value of listed GSSS bonds reached a significant milestone, hitting the EUR 1tn mark.[28] As of September 2024, LGX featured over 2,000 GSSS bonds from more than 300 issuers, across 41 currencies, underscoring its vital role in driving sustainable finance.

Exhibit 60. The amount of GSSS bonds issued globally (EUR bn)



Sources: LuxSE, LGX

Exhibit 61. The amount of GSSS bonds listed on LuxSE and displayed on LGX (EUR bn)



Sources: LuxSE, LGX

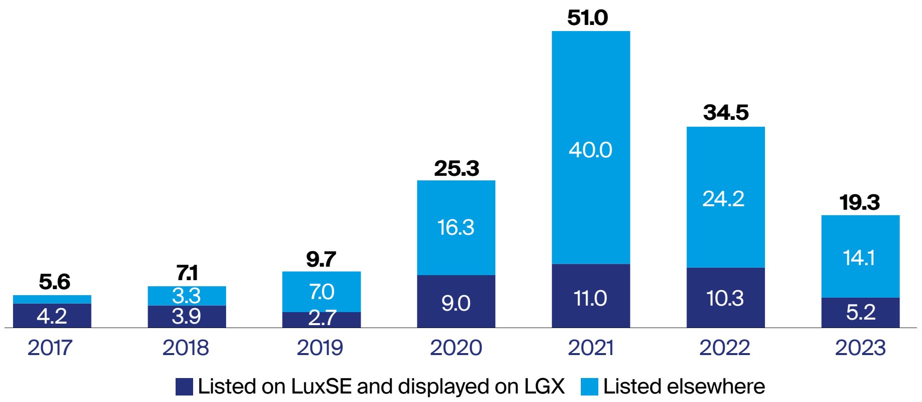
28. Hamon, L. *LGX hits EUR 1 trillion mark*. LuxSE. February 2024. https://www.luxse.com/blog/Sustainable-Finance/LGX-hits-EUR-1-trillion-mark

9.1.5. Gender-focused bonds

Gender finance, which is particularly linked to UN SDG5, calling for gender equality and the empowerment of all women and girls, is expanding. These bonds are structured to direct capital towards projects that support women's empowerment, close gender gaps, and enhance female participation in various sectors. LuxSE has taken significant steps to advance gender finance by flagging gender-focused bonds on its platform since May 2022 (Exhibit 62).[29]

Beyond this, the exchange has in May 2023 released a comprehensive market study, *Linking gender and finance: An overview of the gender-focused bond market*, which analysed 169 listed GSSS bonds from the LGX DataHub. These bonds allocate all or part of their proceeds to projects that promote gender equality and women's empowerment. LuxSE also collaborated with UN Women on a series of case studies showcasing innovative financing instruments aimed at reducing the gender gap. Additionally, the LGX Academy introduced a dedicated module on gender finance, educating participants on how capital markets can drive gender equality through strategic financial decisions and investments.[30]

Exhibit 62. Amount of gender-focused bonds issued per year globally (EUR bn)



Note: A large portion of gender-focused bonds are identified post-issuance, after issuers report having effectively allocated a portion of their bonds' proceeds to gender-related projects. Post-issuance reports are generally published one to two years after the issuance of the bonds, which explains why the years 2022 and 2023 show relatively low figures in the graph above. The figures for these years are expected to rise moving forward.

Sources: LuxSE, LGX

29. LuxSE. Gender-focused bonds on LGX. https://www.luxse.com/en/discover-lgx/sustainable-securities-on-lgx/gender-focused-bonds

30. LuxSE. Linking gender and finance: An overview of the gender-focused bond market. https://www.luxse.com/discover-lgx/sustainable-securities-on-lgx/gender-focused-bonds/gender-finance-study

9.2. LUXFLAG

9.2.1. About LuxFLAG

LuxFLAG is an independent and international non-profit association established in July 2006 by seven public and private partners: ABBL (Luxembourg Bankers' Association), ADA (*Appui au Developpement Autonome*), ALFI (Association of the Luxembourg Fund Industry), European Investment Bank, LuxSE, Luxembourg for Finance, and the Government of the Grand Duchy of Luxembourg. In 2023, ACA (Luxembourg Insurance and Reinsurance Association) joined as the eighth charter member of LuxFLAG.

9.2.2. Why labels play a key role

Since 2006, LuxFLAG has played a crucial role in promoting sustainable finance through the labelling of financial products that demonstrably meet sustainable criteria. LuxFLAG's mission is to enhance the visibility and credibility of sustainable financial products, thereby boosting investor confidence, enable informed decision-making, and to facilitate the identification of sustainable investment opportunities quickly and with confidence. By providing clear and transparent information about the sustainability of financial products, LuxFLAG makes a valuable contribution to creating a trustworthy and integral sustainable financial market. Certification by LuxFLAG ensures that financial products meet stringent sustainability criteria and thus make a genuine contribution to sustainable development.

LuxFLAG Labels are designed for global use on eligible financial and insurance products. This diverse portfolio of labels can be classified into:

- **Impact Labels:** Microfinance, Environment, Climate Finance, Green Bonds
- **Sustainability Transition Labels:** ESG, ESG Insurance Product, ESG Discretionary Mandate

Impact Labels are for mission driven products with positive social or environmental impact.

All LuxFLAG Labels have specific eligibility criteria and/or exclusions, as well as alignment with EU Regulations and equivalent frameworks. Labels are currently valid for a period of 1 year and labelled entities must undergo a renewal on a yearly basis. However, LuxFLAG will extend the validity period of the labels from 1 to 3 years. The applicants will be subject to an initial review followed by yearly intermediary reviews, consisting of investment policy review and portfolio review and sampling.

Products at pre-launch phase may be eligible to the AFS (Applicant Fund Status) Label. This label has a transitory status and is available to early-stage products in their pre-investment phase to highlight its Sustainability/ESG/Impact credentials. It is granted on the basis of the investment policies and procedures, which must be in line with the label criteria.

The main benefits of the Labels are to:

- Enhance credibility and trustworthiness to the financial products;
- Provide transparency and disclosure;
- Mitigate risks associated with environmental and social factors; and
- To differentiate the labelled products from competitors, helping to distinguish them in a crowded market to attract investors looking for sustainable options.

9.2.3. Pillars of LuxFLAG

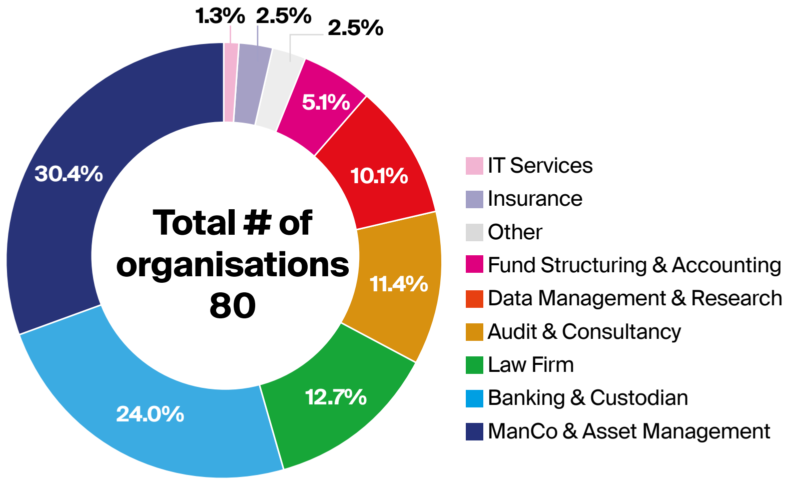
LuxFLAG's core pillars are its labelling activities, the Associate Membership program and its Knowledge sharing:

1. Associate Membership Program

The primary objective of the program is to provide a platform for member organisations to network among themselves and to share expertise and best practices about responsible investing.

As at Q3 2024, 80 organisations representing multiple segments of the financial sector such as Banks, Audit Firms, Law firms, Management Companies, Asset Managers, actively took part in LuxFLAG's Associate Membership program, which are represented as follows:

Exhibit 63. Organisations taking part in the Associate Membership Program (as at Q3 2024)



Source: LuxFLAG

LuxFLAG offers access to events, engages in event collaborations, organises working groups, shares references in response to requests, while providing visibility through its website publications.

2. Knowledge sharing

LuxFLAG proposes to its members to participate in conferences, seminars, quarterly breakfast events, quarterly webinars on selected sustainable finance topics. Participants nurture their knowledge foundation by leveraging LuxFLAG's extensive expertise in ESG, impact investing, regulatory matters, and practice on sustainable investing products. Furthermore, LuxFLAG aims to introduce a comprehensive training catalogue designed to offer tailor-made courses for its members. These courses focus on enhancing practical knowledge on impact and sustainable finance, its risks, opportunities, and benefits.

Focus on LuxFLAG's labelling activity

LuxFLAG-labelled products are currently domiciled across six jurisdictions, with Luxembourg recording the highest number of labelled products (163), followed by France with 63 and Ireland with 11. As an international labelling agency, LuxFLAG extends its reach to both EU and non-EU jurisdictions.[31]

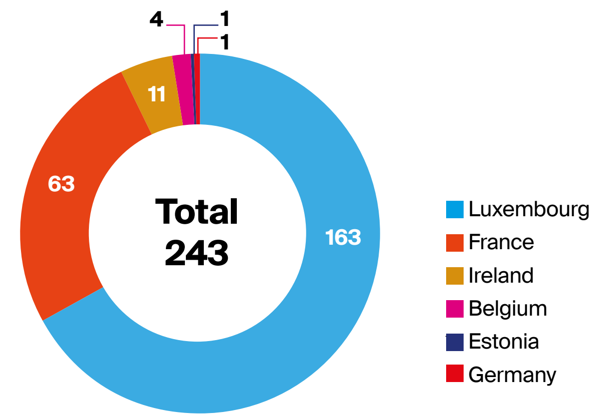
Moreover, ESG-labelled products dominate the allocation with a total of 169[32] (including 20 AFS). The Microfinance Label ranks second with 30 labelled products at the end of Q3 2024. The ESG Insurance product recorded the least number (7) of labelled products at the end of the reference period.

31. The equivalence of regulatory and/or supervisory frameworks of non-EU countries with the EU framework will be assessed premised on the equivalence decisions of the European Commission and the Luxembourg national supervisory authority.

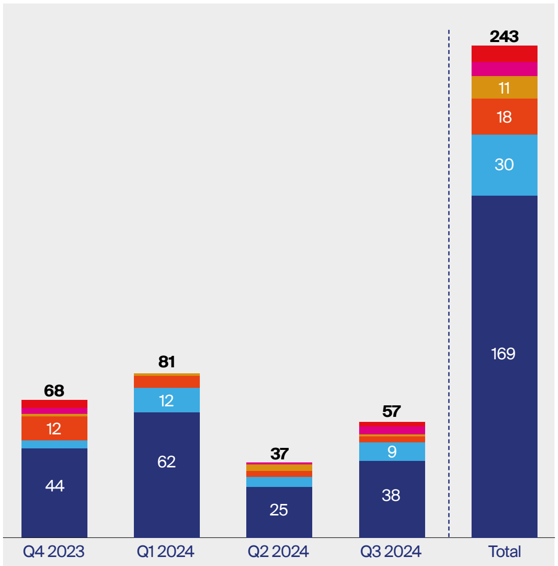
32. The numbers for ESG, Environment, and Climate Finance labelled funds include the funds with AFS status (ESG - 20, Environment - 2, Climate Finance - 2). LuxFLAG Applicant Fund Status is a unique tool at the disposal of Asset Managers, which they can use to highlight the Sustainability/ESG/Impact credentials of their newly launched investment products.

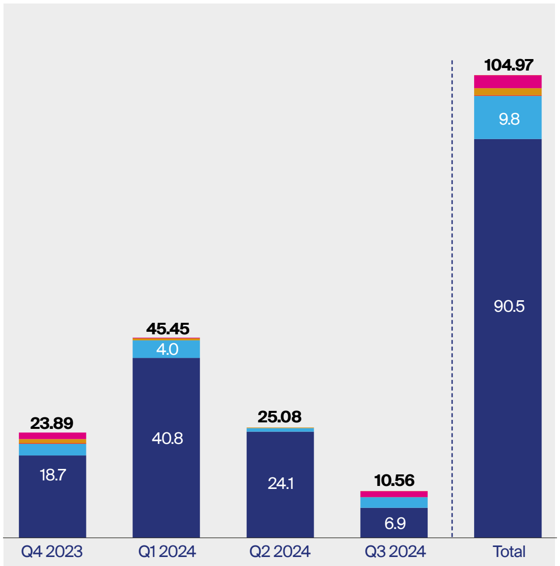
When it comes to distribution of LuxFLAG-labelled products in AuM across various label types and quarters, ESG-labelled products lead with a total of EUR 90,522mn in AuM. Microfinance-labelled products come in second with AuM of EUR 9,770mn. ESG Discretionary Mandates recorded the least amount of AuM at EUR 222mn. The highest quarterly allocation occurs in Q1 2024, with EUR 45.451mn.

Exhibit 64. Overall activities



Note: *21 Green Bonds are excluded from the number of labelled products by domicile.





ESG | Microfinance | ESG Discretionary Mandate | Climate Finance | Environment | ESG Insurance Product

Source: LuxFLAG

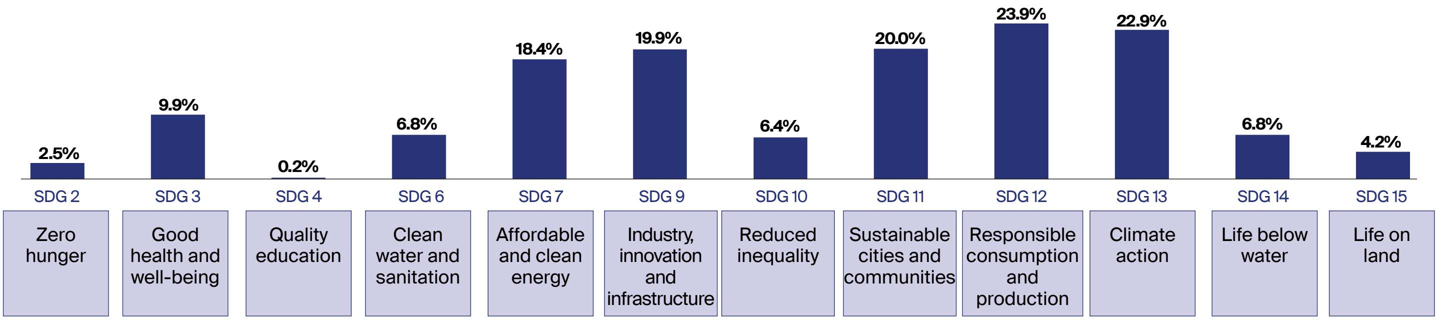
Labelled products footprint: SDG Involvement and geographies

a. ESG-labelled products

As LuxFLAG reviews the footprint of its labelled products, the labelling agency examines various quantitative indicators. LuxFLAG analysed the involvement of the products awarded the LuxFLAG ESG Label in Sustainable Development Goals (SDGs) related activities, as measured by their respective portfolio allocation to companies with a positive SDG score on one or multiple SDGs.

The analysis LuxFLAG conducted indicates that the highest involvement of the products awarded the LuxFLAG ESG Label is in SDG 12 (Responsible Consumption and Production) with 23.9% of AuM, or EUR 161.4m, followed by SDG 13 (Climate Action), SDG 11 (Sustainable Cities and Communities), and SDG 9 (Industry, Innovation and Infrastructure).

Exhibit 65. Involvement into SDGs: ESG labelled products (average involvement in %)



Note: For listed companies, data is not available for SDGs 1, 5, 8, 16 and 17.

Sources: Robeco[33] SDG Scores, data adapted and processed for research purpose by LuxFLAG

b. Impact labelled products: Environment, Climate Finance, and Microfinance Labels

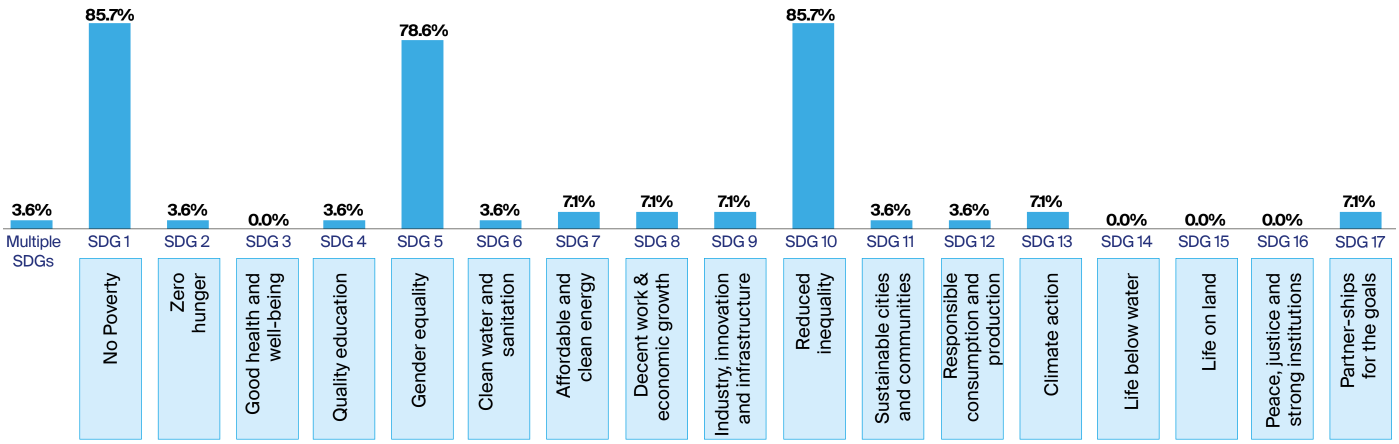
Additionally, LuxFLAG conducts in-depth analysis on products holding a label from the LuxFLAG's Impact family, including the Environment, Climate Finance, or Microfinance Labels. However, Green Bonds, which are specifically designated as such, are excluded from this analysis.

This analysis shows the involvement of the products awarded the LuxFLAG Environment, Climate Finance, and Microfinance Labels[34] in Sustainable Development Goals (SDGs) related activities, as measured by their respective portfolio allocation to companies with a positive SDG score on one or multiple SDGs. It indicates that the highest proportion of the products awarded the LuxFLAG Environment, Climate Finance, and Microfinance Labels is registered in SDG 10 (Reduced Inequalities), with 85.7% of the products, as well as in SDG 1 (No Poverty) with the same proportion of the products. This is followed by SDG 5 (Gender Equality), with 78.6% of the products. At the same time, the data shows no involvement in SDG 3 (Good Health and Well-being), SDG 14 (Life Below Water), SDG 15 (Life on Land), and SDG 16 (Peace, Justice and Strong Institutions).

33. Please refer to https://www.robeco.com/en-int/sustainable-investing/sdg-framework

34. Please refer to https://www.robeco.com/en-int/sustainable-investing/sdg-framework

Exhibit 66. Involvement into SDGs: Impact labelled products (average involvement in %)



Sources: Robeco[35] SDG Scores, data adapted and processed for research purpose by LuxFLAG

As LuxFLAG reviews the regional exposure of products awarded the LuxFLAG Environment, Climate Finance, and Microfinance Labels, the data reflects the presence of investments across various regions, regardless of portfolio weighting (Exhibit 67).

The analysis indicates that the majority of the products (61%) are investing in Southeastern Asia, closely followed by Central Asia, Eastern Asia, and Western Europe. At the same time, the least exposure is seen in North America (22%) and Northern Europe (8%).

Exhibit 67. Geographical focus: Impact labelled products (regional exposures, in %)

South-eastern Asia	Central Asia	Eastern Asia	Western Europe	Southern Asia	Eastern Europe	Western Asia	Southern Europe	Northern Africa	Northern America	Northern Europe
61%	59%	55%	55%	49%	47%	45%	43%	27%	22%	8%

Sources: Robeco[36] SDG Scores, data adapted and processed for research purpose by LuxFLAG

Impact Investing – LuxFLAG's roots in Microfinance

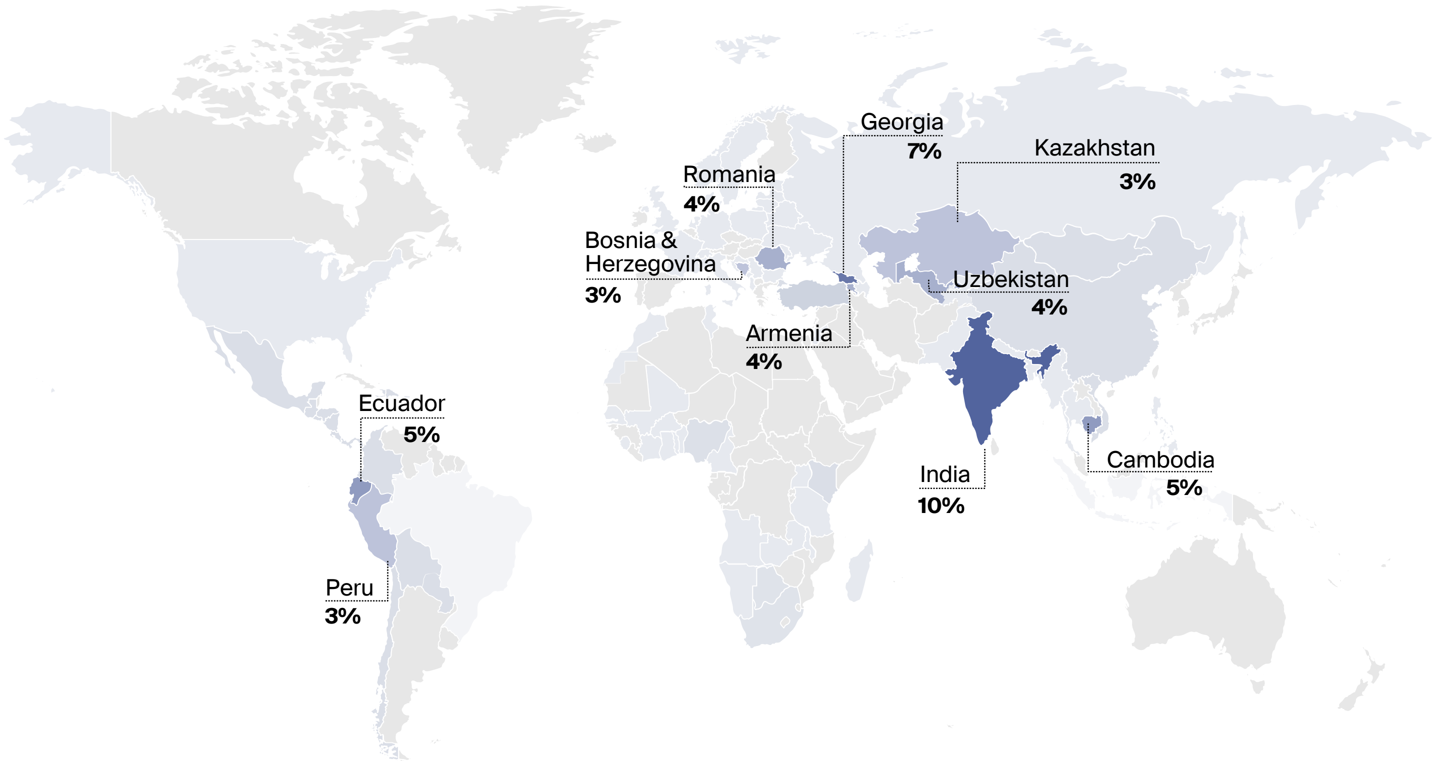
Since 2006 and the creation of its Microfinance Label, LuxFLAG reviews products that have a Microfinance strategy. These specialised investment products focus on providing capital to microfinance institutions (MFIs) or Microfinance Service Providers (MSPs), which in turn lend to underserved populations, particularly in developing countries. These products aim to address financial inclusion by offering financial services to individuals and small businesses that lack access to traditional banking.

The investments target high-impact sectors, including agriculture, education, healthcare, and micro-enterprise development. Geographically, these products have a global footprint, with 50% of the capital deployed concentrated in 10 countries. According to their average country allocation, these countries are: India (10%), Georgia (7%), Ecuador (5%), Cambodia (5%), Uzbekistan (4%), Romania (4%), Armenia (4%), Peru (3%), Bosnia and Herzegovina (3%), and Kazakhstan (3%).

35. Please refer to https://www.robeco.com/en-int/sustainable-investing/sdg-framework

36. Please refer to https://www.robeco.com/en-int/sustainable-investing/sdg-framework

Exhibit 68. Countries with the largest allocation of microfinance-labelled products (average country allocation in %)



Source: LuxFLAG

9.3. INTERNATIONAL CLIMATE FINANCE ACCELERATOR (ICFA)

9.3.1. About ICFA

In 2018, amidst growing efforts to combat climate change, highlighted by the Paris Agreement, Luxembourg positioned itself as a proactive leader in mobilising public and private capital to advance climate finance and promote impact investments. In this framework, ICFA was signed into action with the support of the Luxembourg State in June 2017 and was founded in 2018.

The ICFA is a unique support programme for investment managers, set up as a Public-Private Partnership by the Luxembourg State and a dozen private sector partners with deep experience in impact finance. Specifically, the ICFA programme offers an innovative, multi-year programme that accelerates and supports impact investment managers to launch their first or second fund focused on climate action or social progress. These managers are selected using a highly competitive process and once selected, they receive access to technical and financial support.

9.3.2. Why is accelerating impact fund managers essential?

This initiative aims to address an existing market need confronting investment managers of small-scale, innovative investment funds seeking to make a positive contribution to support climate action and social progress. Emerging fund manager face large financial and administrative hurdles to launch their financial instruments. For this reason, a true partnership between public and private entities, all contributing to the design, set-up, and operation of a support programme, was considered the optimal solution to meet this need.

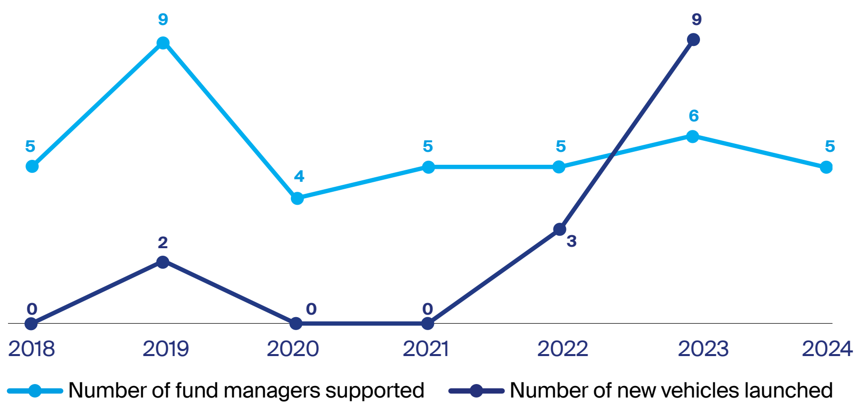
9.3.3. ICFA pillars of support

Each supported manager receives access to financial support in the form of a support services envelope of EUR 80,000 and a working capital loan of EUR 200,000, and technical support in the form of trainings on a wide range of topics, an experienced coach and other benefits. These benefits also encompass opportunities to attend significant events for increased visibility, access to a knowledge hub, and membership in a supportive community.

Cohorts of supported investment managers

Since 2018, the ICFA has onboarded 39 investment managers across 8 cohorts – of which 5 new investment managers were welcomed in July 2024 – and assisted in launching 14 investment vehicles raising more than USD 450mn in AuM.

Exhibit 69. Investment managers supported and vehicles launched from 2018 to 2024*



Note: *Data reflects 39 supported fund managers as of July 2024, since inception in 2018. In 2019, the ICFA accelerated two cohorts in the same year, resulting in higher numbers.

Source: ICFA

The five new managers selected in June 2024 as part of the 2024 Cohort include:

Agri Frontier

A boutique advisory firm supporting the growth of agricultural SMEs in East and West Africa by providing investment and capacity building support through its Agri Growth Hub accelerator.

Big Valley

A pioneering investment advisory firm, backing solutions to accelerate the transition, predominantly in circular business models and carbon removal technologies and practices that not only tackle climate change mitigation, but also support climate resilience for smallholder farmers in developing countries.

Miarakap

A Madagascar-based impact investment firm that uses innovative financial mechanisms to reduce pressure on biodiversity and foster climate resilience in Madagascar and the least developed countries of the southwest Indian Ocean by supporting the next generation of entrepreneurs committed to sustainable resource management, innovative climate solutions and community development.

Outrigger Impact

An innovative blue economy impact solution that provides capital and capacity to projects in Small Island Developing States (SIDS).

Outrigger's blended finance solution addresses the unique climate, environmental, social and economic challenges facing SIDS by identifying successful business models, transferring expertise and aggregating projects to scale and attract additional private capital.

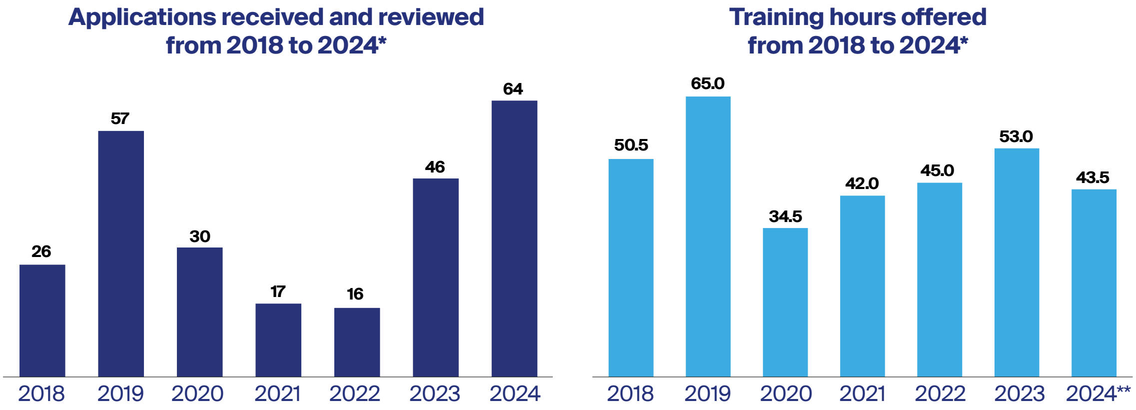
Scalar International

Asset manager and advisory firm dedicated to unlocking institutional capital to support the emergence of first-tier, Indigenous and women-owned businesses that contribute to a sustainable and inclusive future through clean energy and digital technologies.

Technical support

The ICFA has received 256 applications to date, providing feedback for each one, and organized 58 training days, including ongoing sessions in 2024, amounting to a total of 333.5 training hours (Exhibit 70).

Exhibit 70. Total applications received and total training hours from 2018 to 2024



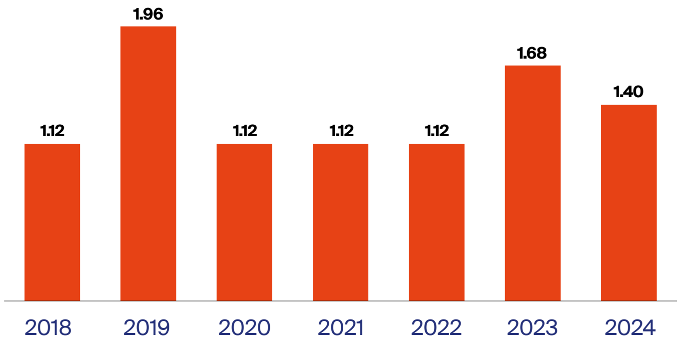
Note: *Data reflects 39 supported fund managers as of July 2024, since inception in 2018. In 2019, the ICFA accelerated two cohorts in the same year, resulting in higher numbers. **As the 2024 training sessions are still in progress, the number indicated in 2024 is indicative.

Source: ICFA

Financial support

From 2018 to 2024, the ICFA has offered a total of EUR 9.5mn in financial support for investment managers (Exhibit 71).

Exhibit 71. Financial support offered from 2018 to 2024 (EUR mn)*



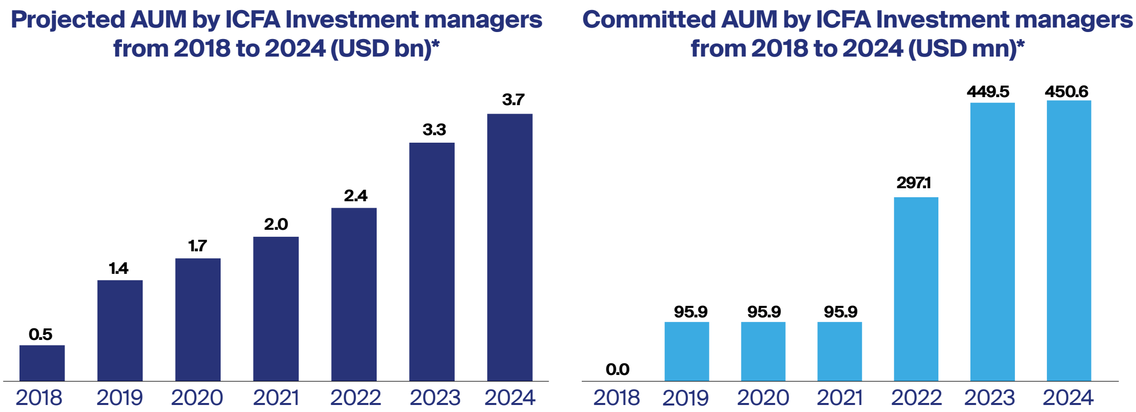
Note: *Data reflects 39 supported fund managers as of July 2024, since inception in 2018. Financial support is offered to 34 fund managers in the form of support service envelope of EUR 80,000 and working capital loan of EUR 200,000. In 2019, the ICFA accelerated two cohorts in the same year, resulting in higher numbers.

Source: ICFA

9.3.4. ICFA's impact

As of July 2024, the supported investment managers are targeting to raise a projected AuM of USD 3.7bn and, so far, 13 investment managers have launched 14 investment vehicles with a combined AUM of USD 450.6mn (Exhibit 72).

Exhibit 72. Projected and committed AuM by ICFA investment managers from 2018 to 2024



Note: *Data reflects 39 supported fund managers as of July 2024, since inception in 2018. Targeted AUM represents 31 active fund managers only. Committed AUM includes publicly announced fund closes as well as undisclosed capital raised and might be subject to undisclosed commitment conditions. Financial support is offered to 34 fund managers in the form of support service envelope of EUR 80,000 and working capital loan of EUR 200,000.

Source: ICFA

9.3.5. Continued need for acceleration support

The demand for the initiative's support continues to grow, becoming increasingly prevalent across diverse themes, including climate change adaptation solutions, biodiversity conservation, renewable energy projects, circular economy in food systems, blue technology, and others.

As part of ongoing efforts to drive and channel sustainable investments through innovative financing mechanisms, the Luxembourg Ministry of Finance and Ministry of Foreign and European Affairs have joined forces with the initiative to set up an International Social Finance Accelerator programme ("ISFA") as part of their strategy to promote inclusive and sustainable investments.

This new programme would follow the model set by the ICFA programme by supporting emerging impact investment managers in launching innovative, social impact funds by bridging the technical and financial barriers that can block the path for innovative social finance strategies.

10.

STEWARDSHIP ACTIVITIES IN LUXEMBOURG

This chapter focuses on investee stewardship, concentrating on the pivotal role that asset owners and asset managers play in overseeing their investee companies. It aims to highlight a key strategy for driving the economic transition, a goal that currently faces significant challenges due to the lack of harmonised, publicly available data and key performance indicators (KPIs). The chapter provides an overview of current practices and the obstacles encountered in this area.

10.1. UNDERSTANDING THE HIDDEN ADDED-VALUE STRATEGY OF STEWARDSHIP

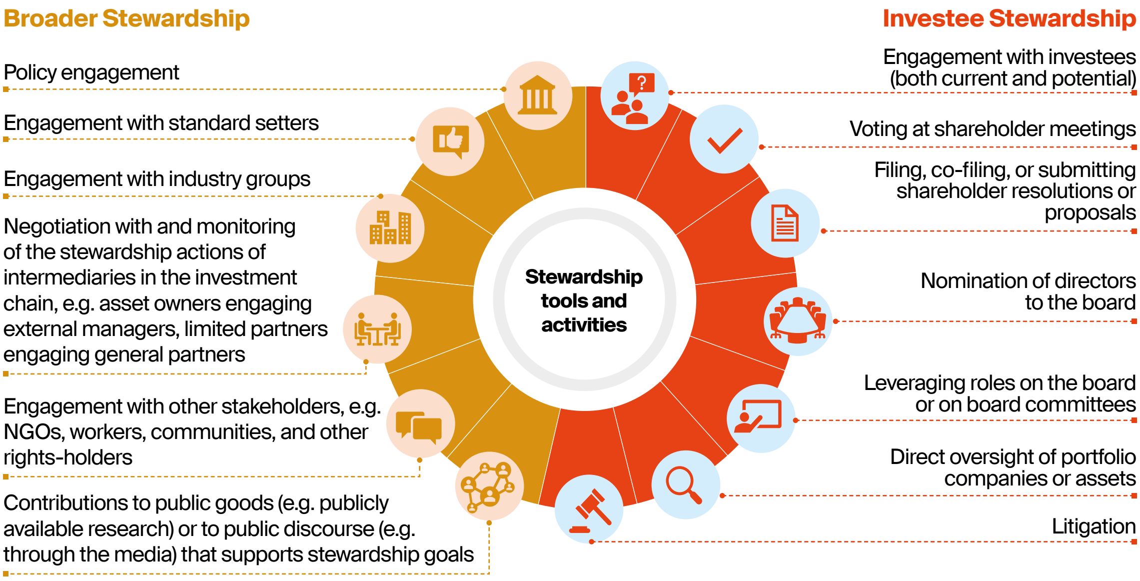
Stewardship is crucial for sustainable finance, highlighting the fiduciary duty of asset owners and managers in prioritising the long-term interests of their beneficiaries. This responsibility encompasses not just financial returns but also the effective use of influence to maximise overall long-term value, including the value of shared economic, social, and environmental assets that underpin returns and the interests of clients and beneficiaries.[37]

Practically, FMPs can fulfil their stewardship responsibilities through various means and activities such as investee stewardship or broader stewardship. Investee stewardship distinguishes itself from broader stewardship through direct engagement with companies or assets, including voting at shareholder meetings, submitting shareholder resolutions, and appointing directors to the board. These measures enable investors to shape corporate conduct and promote the adoption of sustainable practices.

Broader stewardship on the other hand involves engagement with policymakers, standard setters, industry associations, and other stakeholders to influence the regulatory and normative environment in which companies operate. This encompasses advocating for more stringent ESG disclosure requirements, supporting the development of sustainable finance frameworks, and participating in public discourse on the role of finance in tackling global challenges.[38]

This chapter focuses on investee stewardship, hence the critical role played by asset owners and managers through actions such as exercising their voting rights, participating in dialogues, and advocating for transparency to drive positive change within organisations. This proactive stance ensures that companies align their strategies with broader societal goals, such as addressing climate change and enhancing social equity.

Exhibit 73. Broader stewardship vs Investee stewardship



Source: PRI

37. Definition by PRI: https://www.unpri.org/stewardship/about-stewardship/6268.article#:~:text=The%20PRI%20defines%20stewardship%20as,on%20which%20their%20interests%20depend

38. PRI. About stewardship. https://www.unpri.org/stewardship/about-stewardship/6268.article#:~:text=The%20PRI%20defines%20stewardship%20as,on%20which%20their%20interests%20depend.

10.2. THE ROLE OF THE FINANCIAL SECTOR

Effective stewardship within the financial sector requires a substantial investment of time, resources, and comprehensive data, alongside the necessary insights to drive meaningful outcomes. Over the years, stewardship has gained increasing attention, particularly from regulators who have supported it through legislations such as the EU Directive 2017/828 on shareholder rights.[39] This directive provides guidelines to better evaluate stewardship efforts; however, quantifying these efforts beyond voting or public resolutions remains a challenge.

Beyond regulatory frameworks, the financial sector is further guided by global stewardship codes such as the ICGN Stewardship Principles,[40] the OECD's Responsible Business Conduct for Institutional Investors,[41] the EFAMA Stewardship Code in Europe,[42] the UK Stewardship Code,[43] the recent Swiss Stewardship Code[44] and the Principles for Responsible Investment (PRI) work on Stewardship.[45] As of March 2023, more than 5,300 institutions had signed the PRI, pledging to integrate ESG considerations into their ownership practices and policies.[46] These initiatives offer guidelines to improve stewardship practices, promoting transparency, accountability, and responsible investment.

Institutional investors and asset managers implement stewardship principles through various types of engagement:

1. **Proactive engagement** involves actively addressing material ESG risks by influencing the practices of companies within investment portfolios, with a focus on pre-identified priorities.
2. **Reactive engagement** tackles emerging controversies, where analysts lead efforts to manage issues and develop remediation plans.
3. **Collaborative engagement** enables participation in industry-wide initiatives, amplifying impact as minority investors. The key areas of focus for collaborative engagement include corporate governance, climate change, biodiversity, human rights, diversity, and responsible technology. These engagements are designed to deliver long-term value to clients and the issuers that asset managers invest in.

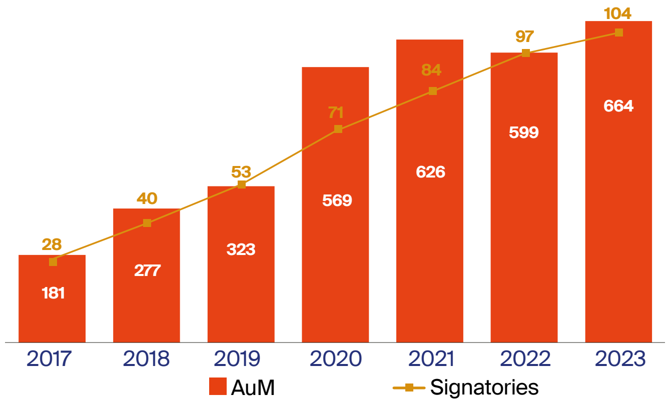
Furthermore, ESMA suggests that the Commission consider establishing an EU-level stewardship code for asset managers, institutional investors, and other market actors. This voluntary code would leverage existing codes in other jurisdictions, align with the EU Framework, and support implementation across Member States, including smaller market actors.[47]

39. This directive empowers investors to actively engage with companies and hold them accountable for their ESG performance. This directive encourages long-term shareholder engagement to ensure that decisions are made with the long-term stability/viability of a company in mind, while also considering environmental and social issues. Directive EU 2017/828. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32017L0828.
40. ICGN. ICGN Global Stewardship Principles. 2020. https://www.icgn.org/sites/default/files/2021-06/ICGN%20Global%20Stewardship%20Principles%202020_1.pdf
41. OECD. Responsible business conduct for institutional investors: Key considerations for due diligence under the OECD Guidelines for Multinational Enterprises. 2017. https://mneguidelines.oecd.org/RBC-for-Institutional-Investors.pdf
42. EFAMA. EFAMA Stewardship Code: Principles for asset manager's monitoring of, voting in, engagement with investee companies. April 06, 2011. Revised in 2017-2018. https://www.efama.org/sites/default/files/files/EFAMA%20Stewardship%20Code_FINAL.pdf
43. Financial Reporting Council. The UK Stewardship Code 2020. 2019. https://media.frc.org.uk/documents/The_UK_Stewardship_Code_2020.pdf
44. Asset Management Association Switzerland. Swiss Stewardship Code. 2023. https://www.am-switzerland.ch/assets/content/files/2023_10_04_Swiss-Stewardship_Code_final_2023-10-04-064306_gazd.pdf
45. PRI. About stewardship. https://www.unpri.org/stewardship/about-stewardship/6268.article#:~:text=The%20PRI%20defines%20stewardship%20as,on%20which%20their%20interests%20depend.
46. CFA Institute. How Investors Achieve Impact Through Stewardship. https://www.cfainstitute.org/en/professional-insights-stories/how-investors-achieve-impact-through-stewardship
47. ESMA. *ESMA Opinion: Sustainable investments: Facilitating the investor journey – a holistic vision for the long term.* July 24, 2024. https://www.esma.europa.eu/sites/default/files/2024-07/ESMA36-1079078717-2587_Opinion_on_the_functioning_of_the_Sustainable_Finance_Framework.pdf

10.3. STEWARDSHIP IN LUXEMBOURG

Stewardship is inherently challenging to measure and quantify. One initiative that offers valuable insights into the Luxembourg market is PRI. Through annual surveys of their 114 Luxembourg-based signatories, PRI gathers information that highlights market trends and developments. While it doesn't provide a complete overview, it reveals key actions that these financial market participants are taking to promote stewardship and sustainable finance. This approach offers detailed insights, particularly regarding their investee stewardship (Exhibit 74).

Exhibit 74. PRI Signatories & AuM in Luxembourg



Note: 2022 was a non-reporting year. Hence, the AUM figures for 2022 are based on invoicing AuM.
Source: PRI

Over the years the PRI has seen a growth of signatories across the globe. This has also reflected in a growing number of Luxembourg-based investors and service providers to commit to the principles. The principles remain the largest voluntary commitment on responsible investment across the globe, and the total signatory base represents about 150trn USD of assets under management. The First Luxembourg signatory joined from the start of the PRI in 2006.

10.4. FROM COLLABORATION TO ESCALATION

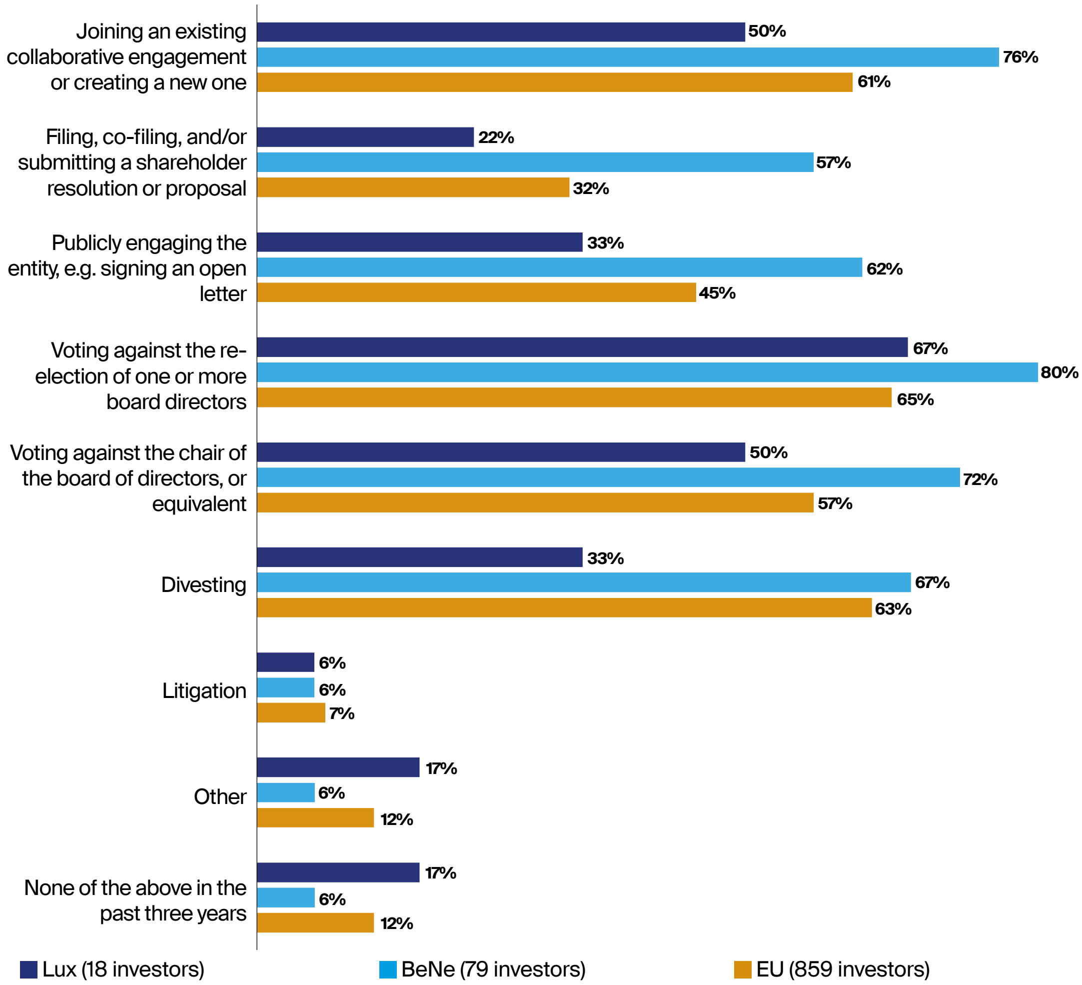
Principle 5 of the PRI, along with various voluntary codes and guidelines, encourages investors to collaborate with peers. This collaboration is essential for engaging with investees and other stakeholders on shared issues of collective interest. By working together, PRI signatories can pool their knowledge, time, and resources, thereby enhancing their influence over investees and stakeholders in areas that matter to them all.

When initial stewardship efforts do not yield the desired results within a specified timeframe, investors may resort to escalation. This approach varies by asset class and investor type but generally involves employing increasing stewardship tools and activities. Escalation is a critical component of effective stewardship, ensuring that investors remain proactive in their engagement efforts and committed to achieving their objectives.

As illustrated in Exhibit 75, we discuss various escalation measures available to investors in the context of listed equity, highlighting the spectrum of activities or tools that can be employed to enhance stewardship and engagement efforts. Among these measures, divesting stands out as a particularly drastic action. While it can serve as a powerful statement of disapproval regarding an investee's practices or policies, divestment should be considered as a last resort after other engagement efforts have proven unsuccessful. This underscores the importance of a thoughtful and strategic approach to stewardship, where divestment is not taken lightly, but is seen as a necessary step when all other avenues have been exhausted.

Collaboration therefore stands as a more popular and effective strategy within the escalation framework. By partnering with other investors, stakeholders, or organisations, investors can amplify their influence and drive meaningful change without the significant resource demands associated with individual actions.

Exhibit 75. Escalation measures in listed equity



Source: PRI

10.5. STEWARDSHIP AND SUSTAINABLE FINANCE

Stewardship involves going beyond merely maximising the risk-return profile of individual investments. It emphasises actions that enhance the overall value of a portfolio by addressing systemic sustainability issues, which can pose risks even to well-diversified portfolios. In this way, stewardship is intrinsically linked to sustainable finance, as both focus on long-term value creation and risk management through responsible practices.

Stewardship has a key role in the management of ESG risks as well as in guiding the investee companies' sustainability journey and is thus a key driver for long term value creation. For example, insights gained from engaging with investee companies can enhance investment decision-making processes. Investors have various tools to influence and drive this positive change. By employing these strategies, they can effectively align their financial objectives with broader sustainability goals, reinforcing the link between stewardship and sustainable finance.

11.

THE FUTURE OF SUSTAINABLE FINANCE

In this final chapter, we explore the future of the sustainable finance landscape through the lens of the updated European Long-Term Investment Fund (ELTIF 2.0) regulation and the potential amendments to the SFDR. These initiatives will be vital in reshaping how capital is allocated, emphasising the importance of transparency and impact. They will further drive sustainable financial practices that align with global climate and social objectives.

11.1. ELTIF 2.0

ELTIF was introduced in 2015 as a framework to facilitate long-term investments in the European 'real' economy by retail investors. It aimed to achieve this by making it easier to channel capital into long-term projects that contribute to economic growth, such as infrastructure development, real estate, and other sustainable initiatives within the EU, while offering investors opportunities for stable, long-term returns.

Despite initial traction, the original ELTIF regulation did not take off as expected. To address these shortcomings, Regulation (EU) 2023/606 (the "ELTIF 2.0 Regulation") amending Regulation (EU) 2015/760 of 29 April 2015 on ELTIFs was introduced on 15 March 2023 to improve the original framework and provide greater access to long-term investments for private market investors, while maintaining a focus on sustainability principles. It entered into force on 10 January 2024 and introduces several key changes:

- It broadens the range of eligible assets, now including EU AIFs managed by EU AIFMs, provided they are invested in ELTIF-eligible assets.
- Greater flexibility in asset allocation is achieved by lowering the mandatory investment threshold in eligible assets from 70% to 55%. This enables ELTIF managers to better manage the liquidity of ELTIFs.
- ELTIF 2.0 enhances the growing retailisation trend within private markets segment of the fund industry, by removing the 10% cap on financial instruments portfolios not exceeding EUR 500,000 for retail investors.
- ELTIFs can now be structured as "de facto" open-ended funds, with the mandatory lock-up period during the ramp-up phase removed, and the lock-up period potentially shortened.
- ELTIF 2.0 removes the possibility of investors requesting the winding down of an ELTIF if their redemption requests have not been satisfied within one year.[48,49]

By making it easier for retail investors to participate, the revised framework is set to unlock a new wave of sustainable and ESG-driven investments. This shift will provide investors with more opportunities to make an impact with their money, aligning their portfolios with sustainable initiatives that require long-term capital and support for meaningful environmental and social change. ELTIF 2.0 is poised to play an important role in driving the capital needed for Europe's transition to a more sustainable future.

48. Share redemption can also be facilitated by the new regime in the case of an open-ended ELTIF, but the fund manager will have to comply with some liquidity requirements set out in the ELTIF 2.0 RTS, depending on the redemption frequency that will be chosen by the fund manager. In addition, an envisioned mechanism is the creation of a secondary market for ELTIF shares, where investors or other asset managers (such as secondaries funds) could step in and create liquidity for this market.

49. Regulation (EU) 2023/606 of the European parliament and of the council of 15 March 2023. *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0606*

Luxembourg has emerged as the leading domicile for ELTIFs, hosting 60 funds with a total AuM of EUR 7.7bn by the end of 2023, representing over 56% of ELTIF AuM. Of the 60 funds, 73.3% are non-ESG ELTIFs while 26.6% are ESG ELTIFs disclosing under SFDR. By addressing the limitations of the 2015 framework, ELTIF 2.0 is expected to drive substantial growth in the market, with the Alternative Investment Management Association (AIMA) forecasting an additional EUR 100bn in alternative asset funding over the next five years.[50]

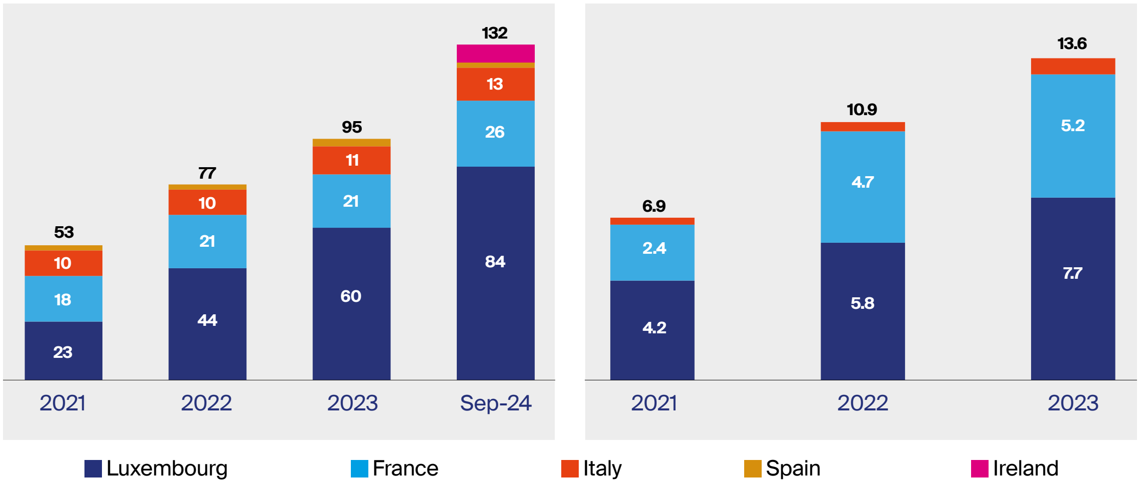
As of the latest data from the ESMA,[51] there are now 132 ELTIFs across the EU, a significant increase compared to the 95 ELTIFs in existence at the end of 2023. This evolution of ELTIFs reflects the increasing appeal of private markets, with the retailisation of these markets making them more accessible to a broader range of investors across the EU.

Luxembourg remains an attractive hub for launching ELTIFs due to its extensive cross-border distribution network and robust fund management infrastructure. However, further growth is necessary to fully harness the potential of ELTIFs in driving long-term investments across Europe. With their capacity to support sustainable finance initiatives, ELTIFs are positioned to play a crucial role in shaping the future of the sector, but their full impact has yet to be realised.

Exhibit 76. ELTIF domiciliation by country

Number of ELTIFs by country of domiciliation

AuM of ELTIFs by country of domiciliation (EUR bn)*



Note: Figures based on funds actively marketed at the end of each year. *Latest available data.
Sources: PwC Global AWM & ESG Research Centre, ESMA, EFAMA, Scope, AIMA

50. AIMA. *ELTIF 2.0: Reforms set to drive significant growth in European private markets.* June 2023. https://www.aima.org/article/elftif-2-0-reforms-set-to-drive-significant-growth-in-european-private-markets.html

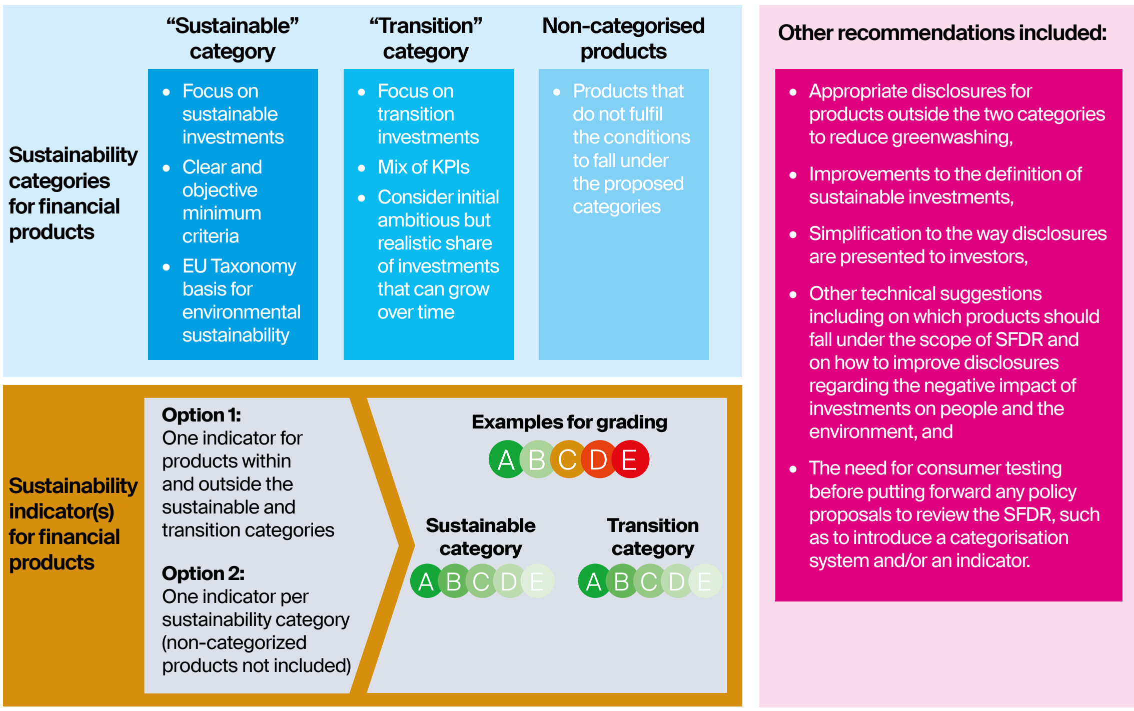
51. ESMA. Register of authorised European long-term investment funds (ELTIFs). https://www.esma.europa.eu/document/register-authorised-european-long-term-investment-funds-eltifs

11.2. THE FUTURE OF SFDR

In parallel, the SFDR continues to push financial institutions towards greater transparency on how sustainability risks are integrated into their decision-making processes. On 18 June 2024, the three European Supervisory Authorities (ESAs) – ESMA, the EBA and EIOPA – published a joint opinion, 'On the assessment of the Sustainable Finance Disclosure Regulation (SFDR).[52] The primary focus of the opinion suggests transitioning to a voluntary product classification regime with two categories – 'sustainable' and 'transition' – to help consumers better understand financial products and reduce the risks of greenwashing.

Additionally, it proposes the introduction of a sustainability indicator to rate investment products such as funds, life insurance, and pensions. Although these recommendations provide a clear direction for the future of SFDR, they are not yet legally binding, and it remains uncertain if or when the European Commission will adopt them. However, if implemented, this shift could bring greater clarity to the sustainable finance landscape, but for now, the framework continues to evolve without definitive legislative changes.

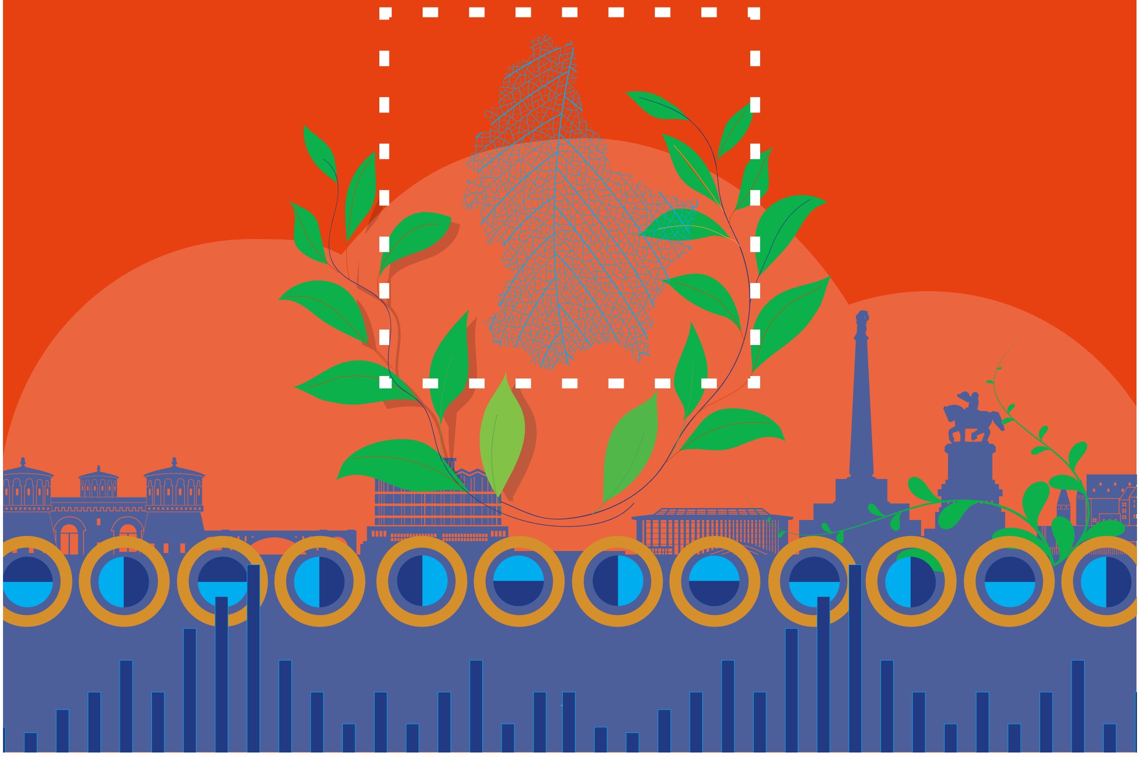
Exhibit 77. ESAs Opinion on SFDR



Sources: PwC Global AWM & ESG Research Centre, ESMA, ESAs

52. ESA. Joint ESAs Opinion "*On the assessment of the Sustainable Finance Disclosure Regulation (SFDR).*" *https://www.esma.europa.eu/sites/default/files/2024-06/JC_2024_06_Joint_ESAs_Opinion_on_SFDR.pdf*

CONCLUSION



CONCLUSION

The third edition of our ***Sustainable Finance in Luxembourg 2024: A maturing ecosystem*** study takes a step forward from the previous two editions, providing a picture of the evolving landscape of sustainable finance in Luxembourg. It captures the progress achieved, sheds light on the challenges still to overcome, and inspires a forward-looking vision of the opportunities and milestones on the horizon.

Among others, the updated overview of Luxembourg's ESG and non-ESG UCITS landscape highlights how ESG funds continue to recover from the challenges of 2022 when it comes to AuM and the strong interest of retail investors in ESG funds.

Similarly, for the first time, the study delves into the adoption of ESG strategies within Luxembourg's private markets, revealing remarkable growth in private market funds in this space, with private equity emerging as the dominant segment, capturing the largest share of AuM.

Looking ahead, Luxembourg's position as a leading private markets hub offers significant opportunities to capitalise on the new ELTIF 2.0 framework. The forthcoming SFDR update is expected to bring greater clarity to the sustainable finance landscape, while an increasing emphasis and implementation of stewardship practices and alignment with international climate initiatives could further accellerate the sustainable finance transition.

Beyond the observed trends, to advance further, sustained efforts will be required to address persistent challenges, particularly around data quality, standardisation, and the effective measurement of the impact of sustainable finance. Policymakers and financial institutions must also collaborate to ensure financial flows are directed toward activities that support not only environmental goals but also just, inclusive and equitable growth. Sharing best practices, enhancing coordination, and fostering the development of relevant skills should also be key priorities. Innovation and leveraging science will be fundamental pillars for effectively and timely addressing the sector's challenges.

Sustainable finance will, and must, continue to play a critical role in addressing the global social and environmental challenges. As a leading hub for sustainable finance, home of pioneering unique sustainable finance initiatives, Luxembourg is very well positioned to demonstrate that sustainable finance can be a driver for positive change, helping channel capital flows towards sustainable investments, as well as providing financial opportunities, ensuring we remain resilient and competitive.

As sustainable finance evolves, the financial sector's ability to confront future risks, while capitalising on the opportunities of a sustainable economy, will determine its success.

APPENDIX A – SFDR in Luxembourg's funds industry

Under the SFDR,[53] financial market participants (FMPs) can follow three different levels of sustainability disclosures for their financial products:

ARTICLE 6

All FMPs must include a pre-contractual disclosure in their financial products explaining how sustainability risks are integrated in the product's investments and how they may impact returns. The pre-contractual disclosure is required even if sustainability risks are not deemed material.

ARTICLE 8

Financial products that promote "among other characteristics, environmental or social characteristics, or a combination of those characteristics" have to disclose information on how these characteristics are met.

ARTICLE 9

Whenever "sustainable investment" (as defined by Article 2, paragraph 17 of the SFDR) is one of the objectives of the financial product, FMPs must publicly disclose how the objective will be achieved.

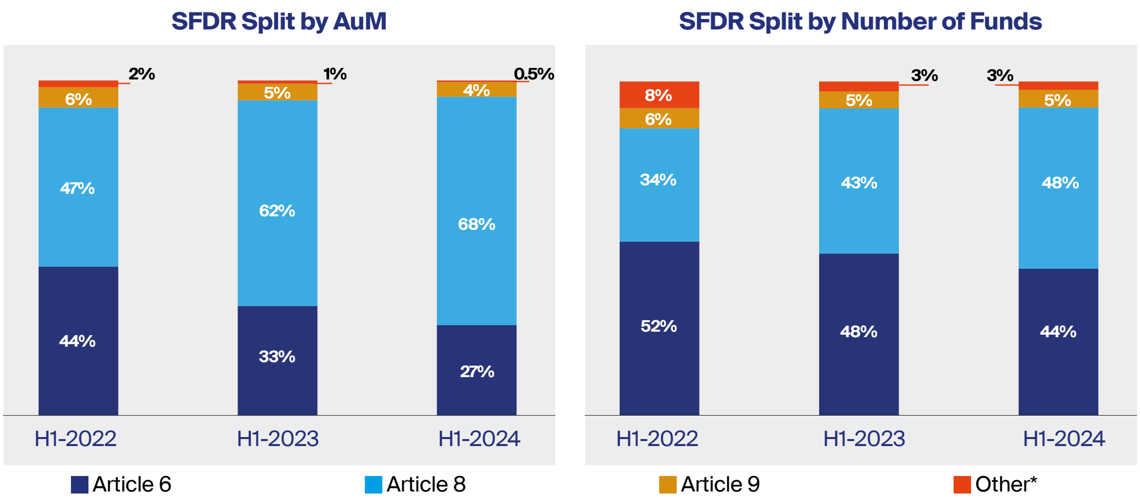
Although a transparency regime in essence, these three articles have become de facto labels, with funds not following any sustainability objective reporting as 'Article 6' funds while funds that report under Article 8 and 9 signal to investors that the product is pursuing ESG objectives, with the two types of funds sometimes colloquially called 'light green' and 'dark green' funds.

This appendix presents quantitative data on the SFDR in Luxembourg.

A.1. SFDR AND UCITS FUNDS

As of the end of June 2024, Article 8 and 9 funds account for almost three-quarters (72%) of Luxembourg-domiciled funds' AuM – up from 53% in H1 2022. In addition, when it comes to the number of funds, the share of Article 8 and 9 funds also increased, going from 48% in H1 2023 to 53% in H1 2024. These two positive trends are driven by the increased regulatory clarity and constantly growing investor interest in sustainable finance products.

Exhibit 78. UCITS in Luxembourg: SFDR split by AuM and number of funds (in H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *'Other' includes funds that have not reported their SFDR status to LSEG Lipper and funds for which no data is available.

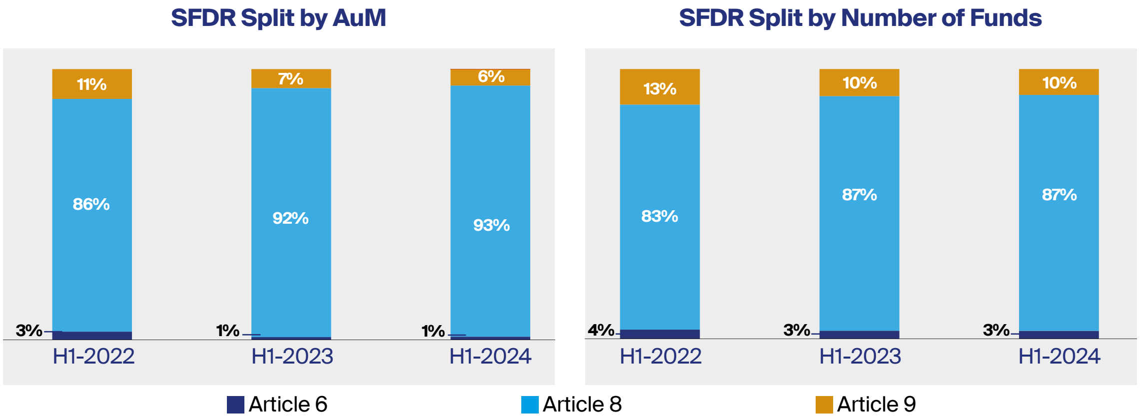
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

53. EU Regulation 2019/2088 on sustainability-related disclosures in the financial services sector. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R2088

A.2. SFDR AND ESG FUNDS

Among ESG funds, SFDR Article 8 is by far the most represented, both in terms of AuM (93% in H1 2024) and fund count (87% in H1 2024). The proportion of Article 9 funds' AuM to the total AuM of ESG funds slightly decreased from 2023 to 2024. This may be due to several factors, such as the performance of these funds, their inflows and outflows, as well as the ambiguity and pending classifications surrounding which funds can be categorised as following a sustainable investment objective as per Article 9.

Exhibit 79. ESG funds in Luxembourg: SFDR split by AuM and number of funds (in H1-2024)



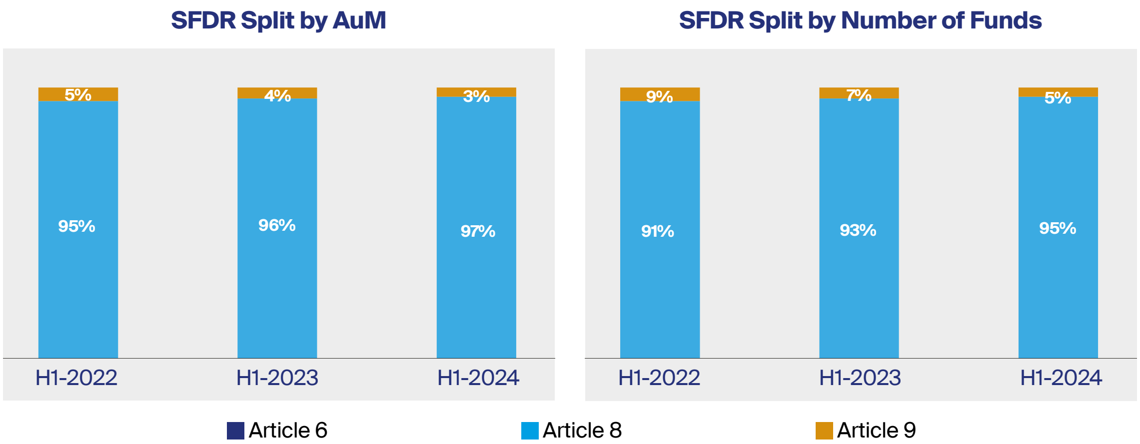
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

A.2.1. SFDR and ESG Screening funds

Almost all AuM (97%) under ESG Screening funds are allocated to funds that disclose as per Article 8 of the SFDR. The AuM of ESG Screening funds following Article 9 is relatively marginal and has been decreasing since H1 2022. The same observation can be made for the number of funds, as those following Article 8 have increased since H1 2022 while those following Article 9 have decreased.

Exhibit 80. ESG Screening funds in Luxembourg: SFDR split by AuM and number of funds (in H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

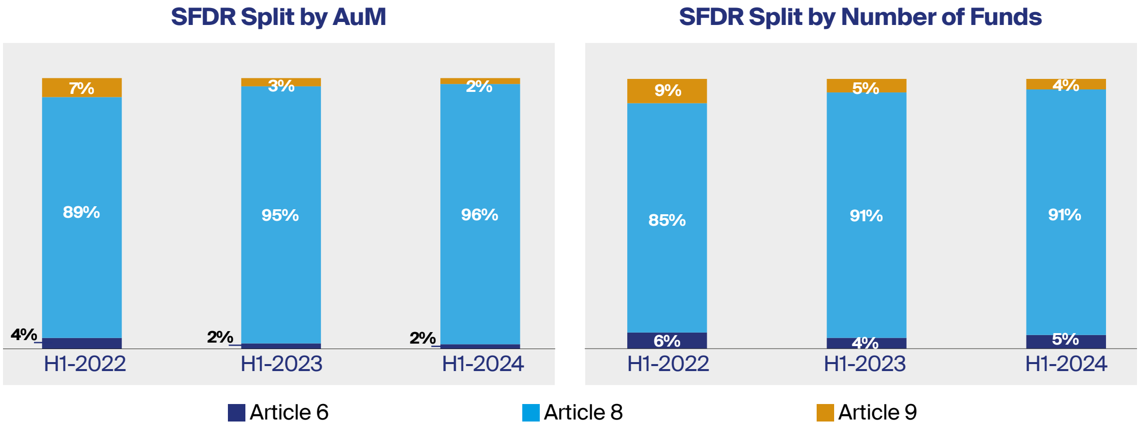
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

A.2.2. SFDR and ESG Exclusion funds

When it comes to both AuM and number of funds, ESG Exclusion funds follow a similar pattern to ESG Screening funds. The share of AuM allocated to funds following Article 8 has grown from 89% in H1 2022 to 96% in H1 2024, while the share of Article 8 funds Exclusion funds increased from 85% to 91%. Meanwhile, the AuM and fund count share figures for ESG Exclusion funds declined to 2% and 4% respectively in H1 2024.

However, a small portion of ESG Exclusion funds limit themselves to being Article 6. While the number of these funds has slightly increased since H1 2023, their AuM figures remained constant.

Exhibit 81. ESG Exclusion funds in Luxembourg: SFDR split by AuM and number of funds (in H1-2024)



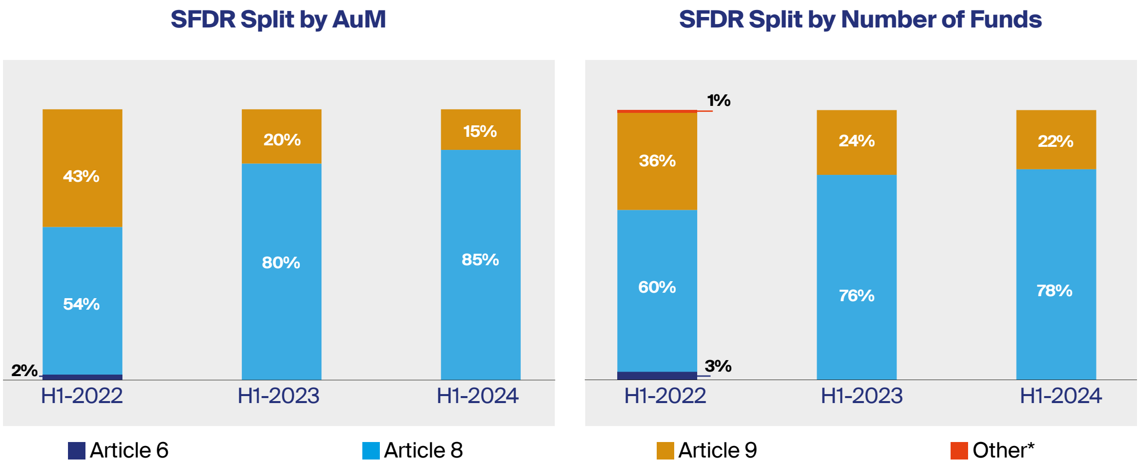
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

A.2.3. SFDR and ESG Involvement funds

In H1 2022, close to half (43%) of the AuM of ESG Involvement funds was in Article 9 funds, while 36% of these funds were Article 9. In H1 2024, the picture has changed significantly. Only one in five (22%) ESG Involvement funds are now considered Article 9 funds, while just 15% of their AuM is placed in Article 9 funds.

Exhibit 82. ESG Involvement funds in Luxembourg: SFDR split by AuM and number of funds (in H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *'Other' includes funds that have not reported their SFDR status to LSEG Lipper and funds for which no data is available.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

APPENDIX B – Overview of the SFDR Principal Adverse Impact Indicators

Exhibit 83. Overview of the SFDR Principal Adverse Impact Indicators according to Commission Delegated Regulation (EU) 2022/1288 of 06 April 2022; Annex 1[54]

Mandatory indicators

Undertakings

1. Greenhouse Gas Emissions (scope 1, 2, 3, total)
2. Carbon Footprint
3. GHG intensity of investee companies
4. Exposure to companies active in the fossil fuel sector
5. Share of non-renewable energy consumption and production
6. Energy consumption intensity per high impact climate sector
7. Activities negatively affecting biodiversity-sensitive areas
8. Emissions to water
9. Hazardous and radioactive waste ratio
10. Violations of UN Global Compact principles and OECD Guidelines for Multinational Enterprises
11. Lack of processes and compliance mechanisms to monitor compliance with UN Global Compact principles and OECD* Guidelines for Multinational Enterprises
12. Unadjusted gender pay gap
13. Board gender diversity
14. Exposure to controversial weapons (antipersonnel mines, cluster munitions, chemical weapons and biological weapons)

Sovereigns / Supranationals

15. GHG intensity
16. Investee countries subject to social violations

Real Estate Assets

17. Exposure to fossil fuels through real estate assets
18. Exposure to energy-inefficient real estate assets

*https://mneguidelines.oecd.org/mneguidelines/

54. Commission Delegated Regulation (EU) 2022/1288 of 06 April 2022; Annex 1, supplementing Regulation (EU) 2019/2088 on sustainability-related disclosures in the financial services sector. https://eur-lex.europa.eu/eli/reg_del/2022/1288/oj

Additional opt-in indicators: Climate and other environment

Undertakings

1. Emissions of inorganic pollutants
2. Emissions of air pollutants
3. Emissions of ozone-depleting substances
4. Investments in companies without carbon emission reduction initiatives
5. Breakdown of energy consumption by type of non-renewable sources of energy
6. Water usage and recycling
7. Investments in companies without water management policies
8. Exposure to areas of high water stress
9. Investments in companies producing chemicals
10. Land degradation, desertification, soil sealing
11. Investments in companies without sustainable land/agriculture practices
12. Investments in companies without sustainable oceans/seas practices
13. Non-recycled waste ratio
14. Natural species and protected areas
15. Deforestation
16. Share of securities not issued under Union legislation on environmentally sustainable bonds

Sovereigns / Supranationals

17. Share of bonds not issued under Union legislation on environmentally sustainable bonds

Real Estate Assets

18. GHG emissions (scope 1, 2, 3, total)
19. Energy consumption intensity
20. Waste production in operations
21. Raw materials consumption for new construction and major renovations
22. Land artificialisation

Additional opt-in indicators: Social and employee, respect for human rights & governance

Undertakings

1. Investments in companies without workplace accident prevention policies
2. Rate of accidents
3. Number of days lost to injuries, accidents, fatalities or illness
4. Lack of a supplier code of conduct
5. Lack of grievance/complaints handling mechanism related to employee matters
6. Insufficient whistleblower protection
7. Incidents of discrimination
8. Excessive CEO pay ratio
9. Lack of a human rights policy
10. Lack of due diligence
11. Lack of processes and measures for preventing trafficking in human beings
12. Operations and suppliers at significant risk of incidents of child labour
13. Operations and suppliers at significant risk of incidents of forced or compulsory labour
14. Number of identified cases of severe human rights issues and incidents
15. Lack of anti-corruption and anti-bribery policies
16. Cases of insufficient action taken to address breaches of standards of anti-corruption and anti-bribery
17. Number of convictions and amount of fines for violation of anti-corruption and anti-bribery laws

Sovereigns / Supranationals

18. Average income inequality score
19. Average freedom of expression score
20. Average human rights performance
21. Average corruption score
22. Non-cooperative tax jurisdictions
23. Average political stability score
24. Average rule of law score

Sources: PwC Global AWM & ESG Research Centre, European Commission

APPENDIX C – Quantitative analysis of ESG Involvement funds' sub-strategies

The LSEG Lipper classification of ESG funds is based on official documents (e.g., fund prospectuses, Key Investor Information Documents, published ESG strategies etc.). The table below highlights the main sub-strategies used by ESG Involvement funds:

Positive Tilt	Best-in-Class	Thematic
Funds in this subcategory lean towards companies that lead in terms of certain ESG criteria. Positive Tilt funds use a known investment strategy, called "tilting," to insulate portfolios from risk through the pursuit of a specific investment strategy or goal – in this case, by weighting their portfolios towards ESG companies and financial instruments.	Funds in this subcategory select the best companies by ESG criteria within each sector of the fund's investment universe (e.g., the least polluting oil company).	Funds in this sub-category focus on sustainable themes such as clean water, climate change etc.
Microfinance	**Sustainable Development Goals (SDGs)**	**Sustainable Bond funds**
Funds in this sub-category invest in microfinance projects.	Funds in this sub-category invest in companies that demonstrate progress towards the achievement of the UN SDGs.	Funds in this sub-category invest in green bonds, social bonds, sustainable bonds or bond that have sustainability-linked targets such as SLBs. Unlike use-of-proceeds bonds such as green bonds, the proceeds of SLBs are not earmarked for specific projects. Instead, the issuer commits to meeting sustainability targets, and the financial and/or structural characteristics of the bond can vary depending on whether the issuer achieves those targets.

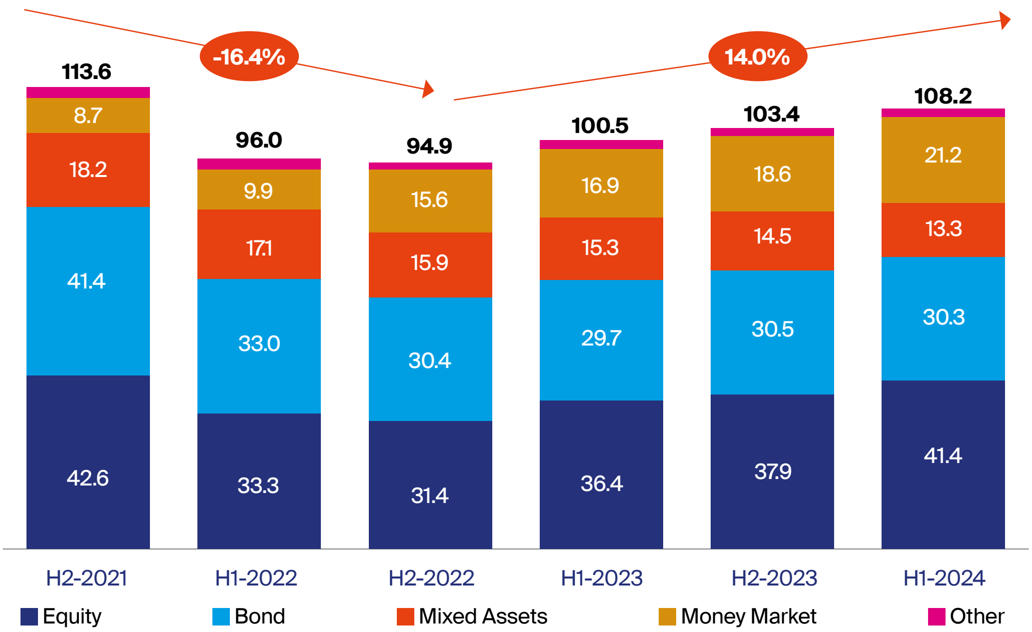
This analysis complements Section 4.4 "Overview of ESG Involvement funds" by providing greater detail on the six investment sub-strategies.

C.1. POSITIVE TILT FUNDS

C.1.1. AuM and net flows

While the AuM of Positive Tilt funds has not yet recovered to the heights reached in H2 2021 (EUR 113.6bn), the funds have experienced a rebound since the end of 2022, going up from EUR 94.9bn to EUR 108.2bn in H1 2024.

Exhibit 84. AuM of Positive Tilt funds (by semester, EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Almost every asset class of Positive Tilt funds experienced outflows in H1 2024, aside from the funds focused on money markets, bringing the total net outflows to EUR 1.1bn. The fact that AuM still increased despite these outflows indicates good market performance.

Exhibit 85. Net flows of Positive Tilt funds (by semester, EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	-0.4	-1.0	0.9	-0.9	-1.0
Bond	-4.9	-2.4	-1.1	-1.0	-0.1
Mixed	0.7	-0.8	-1.0	-1.3	-1.7
Money Market	0.7	5.8	1.3	1.4	1.9
Other	-0.1	-0.9	0.5	-0.3	-0.2
Total	**-3.9**	**0.7**	**0.5**	**-2.0**	**-1.1**

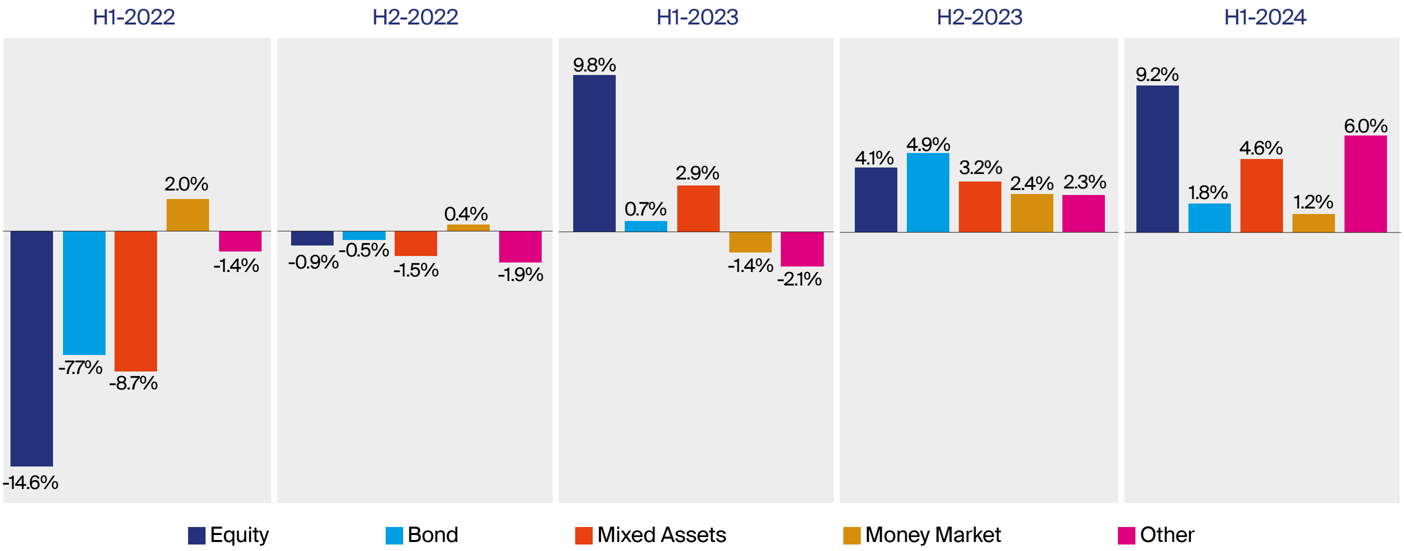
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.1.2. Performance by asset class

As Exhibit 86 below highlights, Positive Tilt funds had a positive performance in H1 2024, regardless of the asset class they are focused on. However, the ones focused on equities recorded the best performance (9.2%).

Exhibit 86. Average performance of Positive Tilt funds

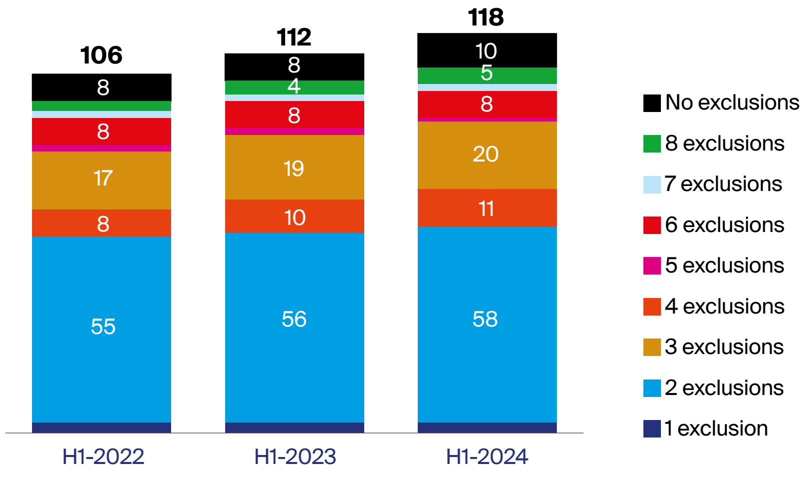


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.1.3. Exclusions and sectoral analysis

Out of 118 Positive Tilt funds in H1 2024, 58 (49.1%) applied two exclusions while 57 (48.3%) applied at least three (Exhibit 87).

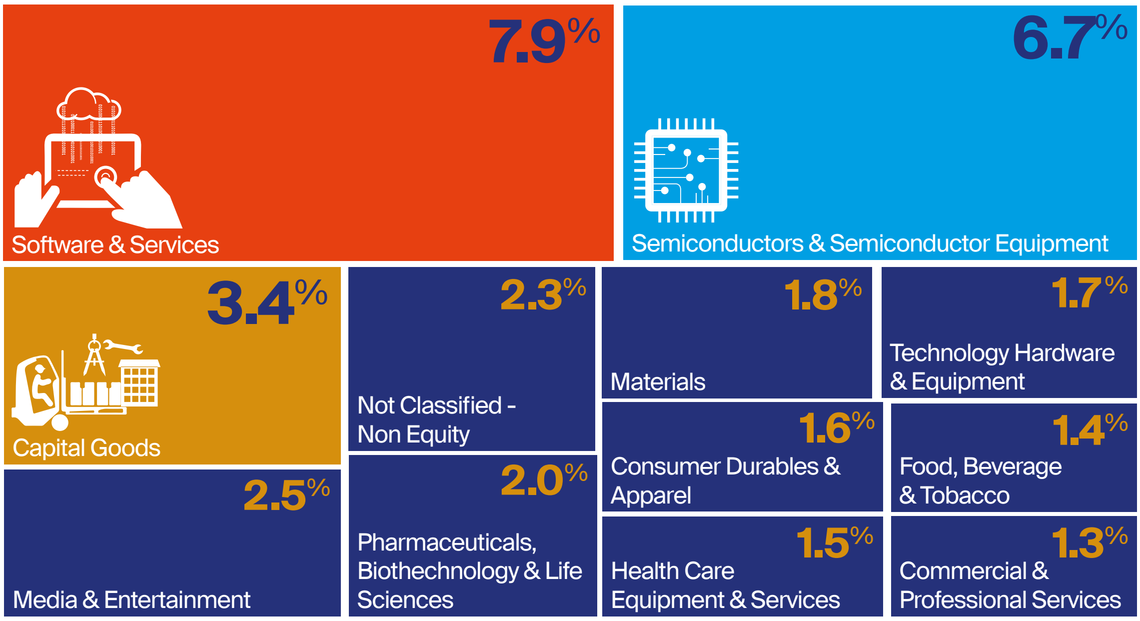
Exhibit 87. Number of exclusions applied by Positive Tilt funds (number of funds)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

The top two sectors Positive Tilt funds invested in are Software & Services (7.9%) and Semiconductors & Semiconductor Equipment (6.7%), while Capital Goods stood at a relatively distant third place (3.4%) (Exhibit 88).

Exhibit 88. Positive Tilt funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *The total AuM of funds for which sector data was available is EUR 47.3bn or 44% of the EUR 108.2bn displayed previously. The remaining sectors account for 9.5% of the allocation.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

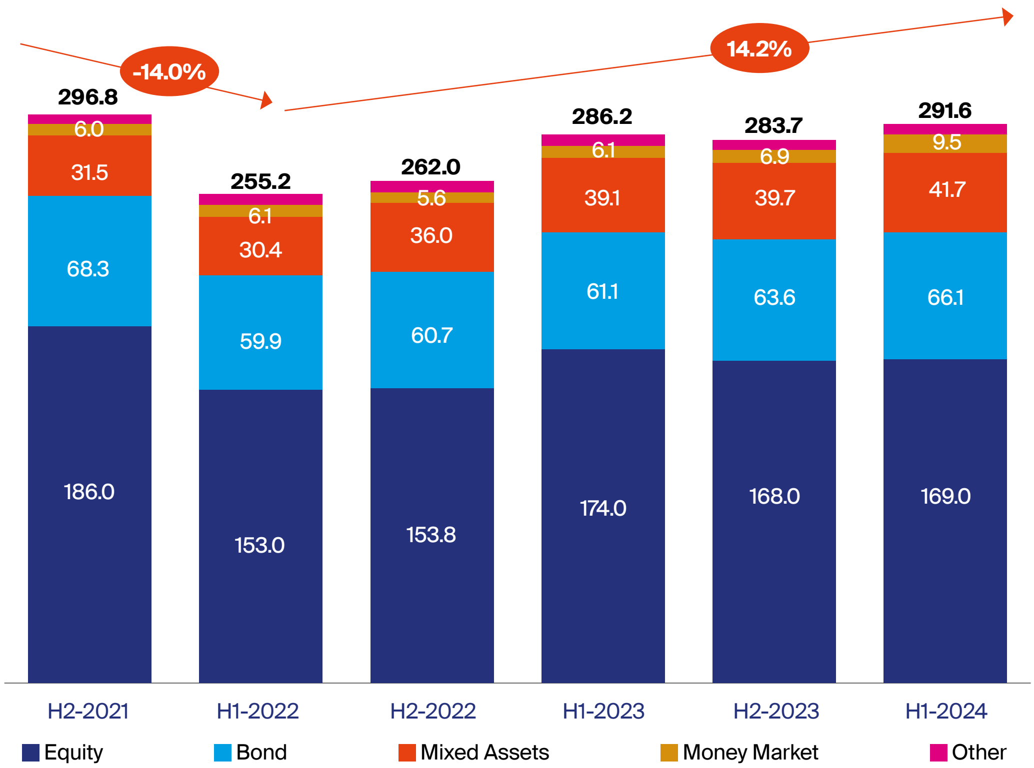
C.2. BEST-IN-CLASS FUNDS

C.2.1. AuM and net flows

Best in Class funds have shown a rather stable development over time in terms of AuM, with the growth experienced in H1 2024 slowly offsetting the losses that characterised 2022. This growth happened despite negative net flows over the same period (Exhibit 89), which – as is the case with Positive Tilt funds – indicates positive market performance.

In terms of asset class, Best-in-class funds maintain the split observed in the overall funds market, with the ones focused on equities holding the majority of AuM (58%), followed by funds focused on bonds (22%) and mixed assets (14%).

Exhibit 89. AuM of Best-in-class funds (by semester, EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Exhibit 90. Net flows of Best-in-class funds (by semester, EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	1.4	-0.1	3.0	-4.0	-10.2
Bond	-1.9	1.1	-0.5	-0.3	2.2
Mixed	2.4	1.0	0.3	-0.8	-0.1
Money Market	0.1	-0.6	0.2	0.7	2.4
Other	1.0	0.1	-0.2	-0.7	-0.2
Total	**3.0**	**1.6**	**2.9**	**-5.0**	**-5.8**

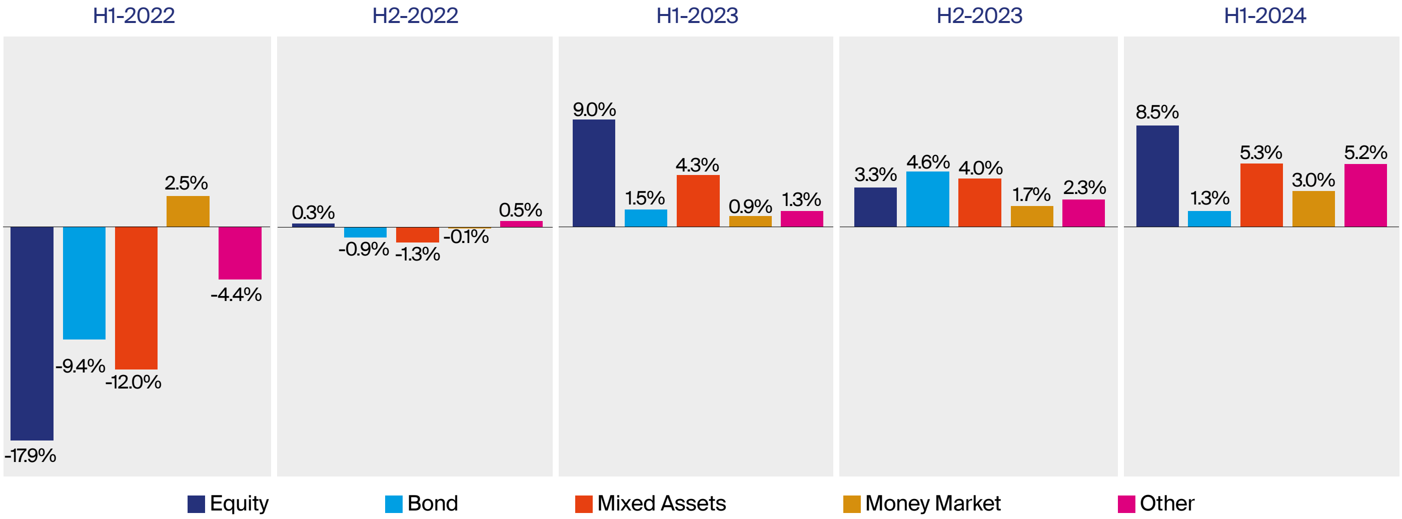
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.2.2. Performance by asset class

Best-in-class funds focused on all asset classes had a positive performance in H1 2024, although the ones focused on bonds had the weakest (1.3%), followed by those focused on money markets (3.0%). Meanwhile, a little over one in ten (10.9%) had no exclusions (Exhibit 91).

Exhibit 91. Average performance of Best-in-class funds



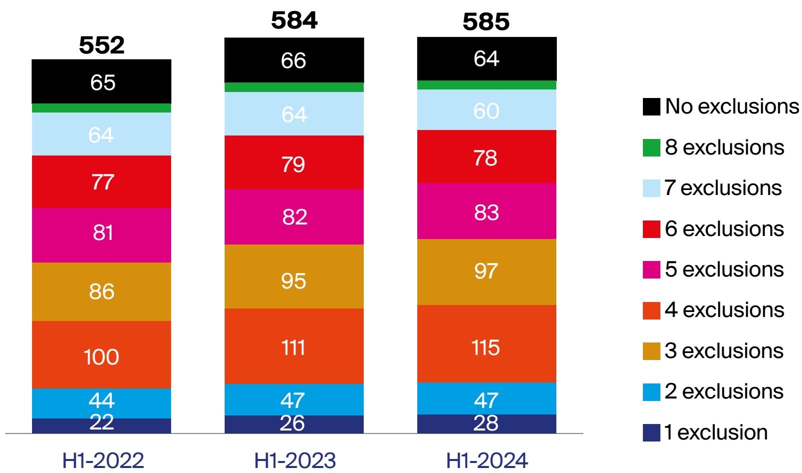
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.2.3. Exclusions and sectoral analysis

When it comes to exclusions, the picture for Best-in-class presents a lot of heterogeneity, as Exhibit 92 below shows. For instance, 115 out of 585 funds – or 19.6% of the total – had three exclusions, while 97 funds (or roughly 16.5%) had four exclusions.

Exhibit 92. Number of exclusions applied by Best-in-class funds (number of funds)

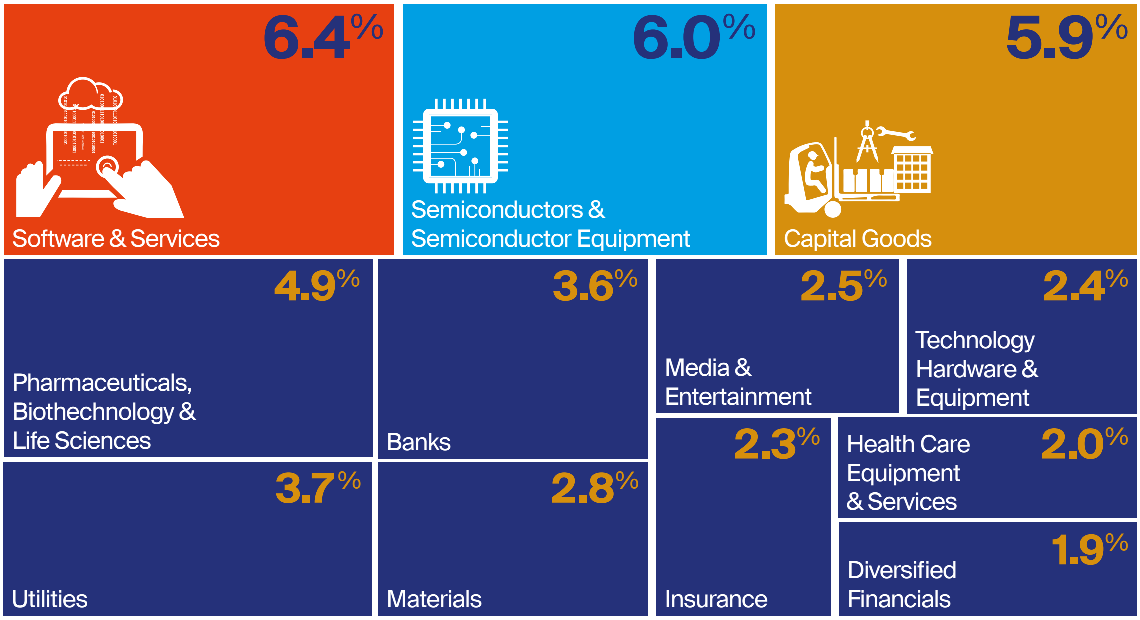


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Similar to Positive Tilt funds, the top two sectors which Best-in-class funds focused on in H1 2024 are Software & Services (6.4%) and Semiconductors & Semiconductor Equipment (6.0%). However, Capital Goods came at a relatively close third place (5.9%) (Exhibit 93).

Exhibit 93. Best-in-class funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *The total AuM of funds for which sector data was available is EUR 173.8bn or 59.6% of the EUR 291.6bn displayed previously. The remaining sectors account for 15.2% of the allocation.

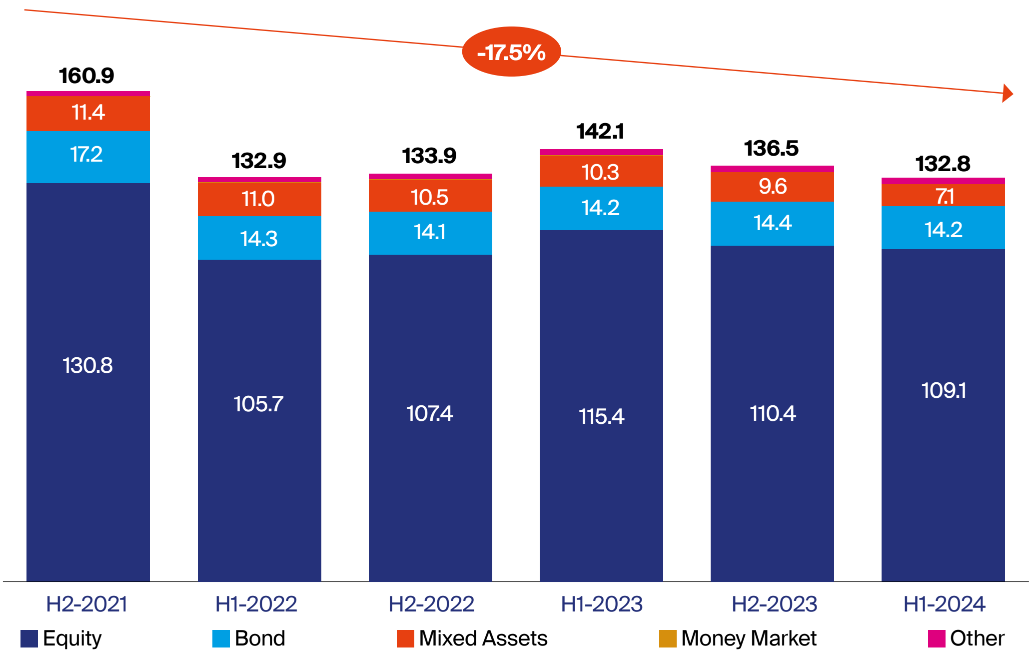
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.3. THEMATIC FUNDS

C.3.1. AuM and net flows

Unlike the previous two sub-strategies, ESG Involvement funds adopting the Thematic sub-strategy have experienced a clear downward trajectory in AuM during the analysed period, resulting in an overall decline of 17.5% since H2-2021 (Exhibit 94). Although equities constituted the greatest proportion of these funds' AuM (82% of total AuM), it also provided the biggest net outflow of EUR 8.8bn (Exhibit 95).

Exhibit 94. AuM of Thematic funds (by semester, EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Exhibit 95. Net flows of Thematic funds (by semester, EUR bn)

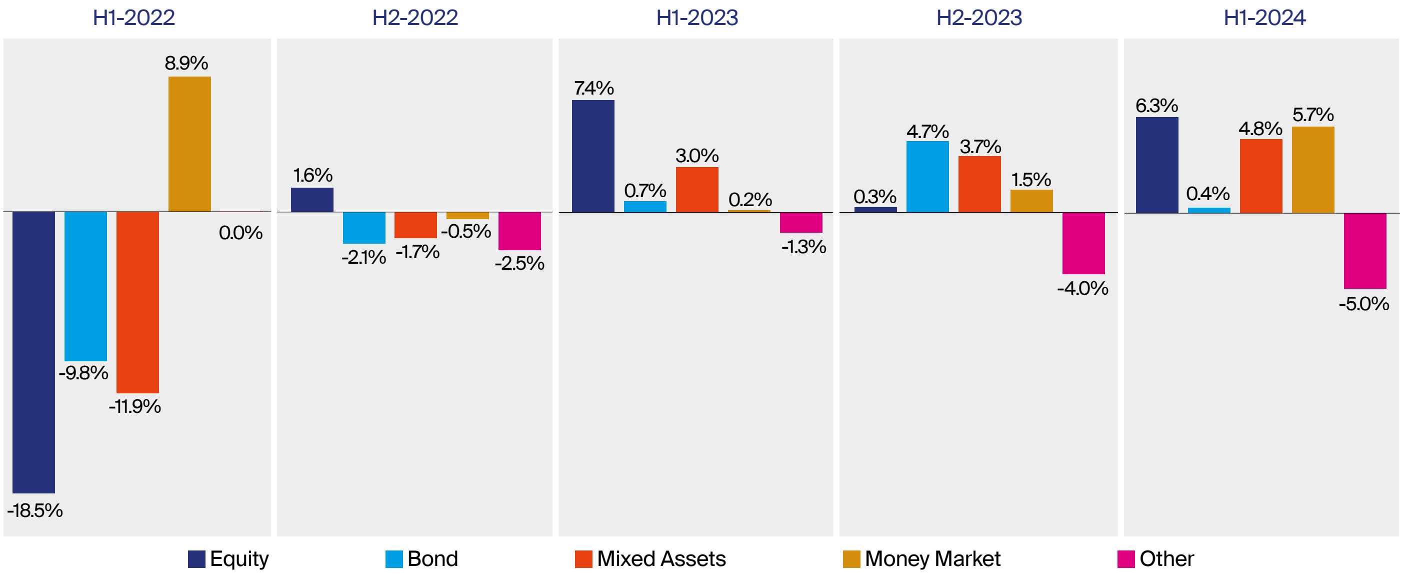
Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	2.2	-0.2	-1.2	-4.2	-8.8
Bond	-1.4	0.2	0.1	-0.4	-0.2
Mixed	0.7	-0.4	-0.8	-0.9	-1.3
Money Market	0.0	0.0	0.0	0.0	0.0
Other	0.3	0.0	0.1	0.0	0.1
Total	**1.8**	**-0.4**	**-1.8**	**-5.5**	**-10.1**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.3.2. Performance by asset class

Although Thematic funds focused on equities, money markets and mixed assets experienced positive performances of 6.3%, 5.7% and 4.8% respectively, their counterparts focused on bonds had a positive performance of just 0.4% in H1 2024 (Exhibit 96).

Exhibit 96. Average performance of Thematic funds



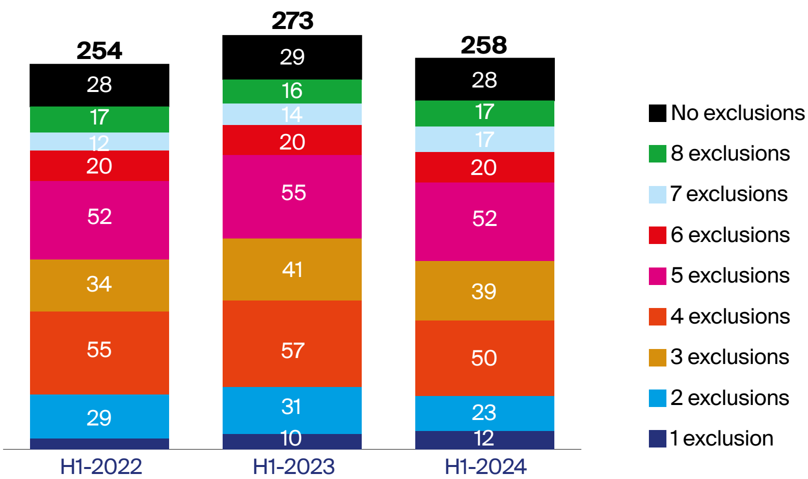
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.3.3. Exclusions and sectoral analysis

Similar to Best-in-class funds, Thematic funds present a lot of heterogeneity when it comes to the number of exclusions they apply. For instance, 34 out of 258 apply at least seven exclusions, 40 had either no exclusion or just one (Exhibit 97).

Exhibit 97. Number of exclusions applied by Thematic funds (number of funds)

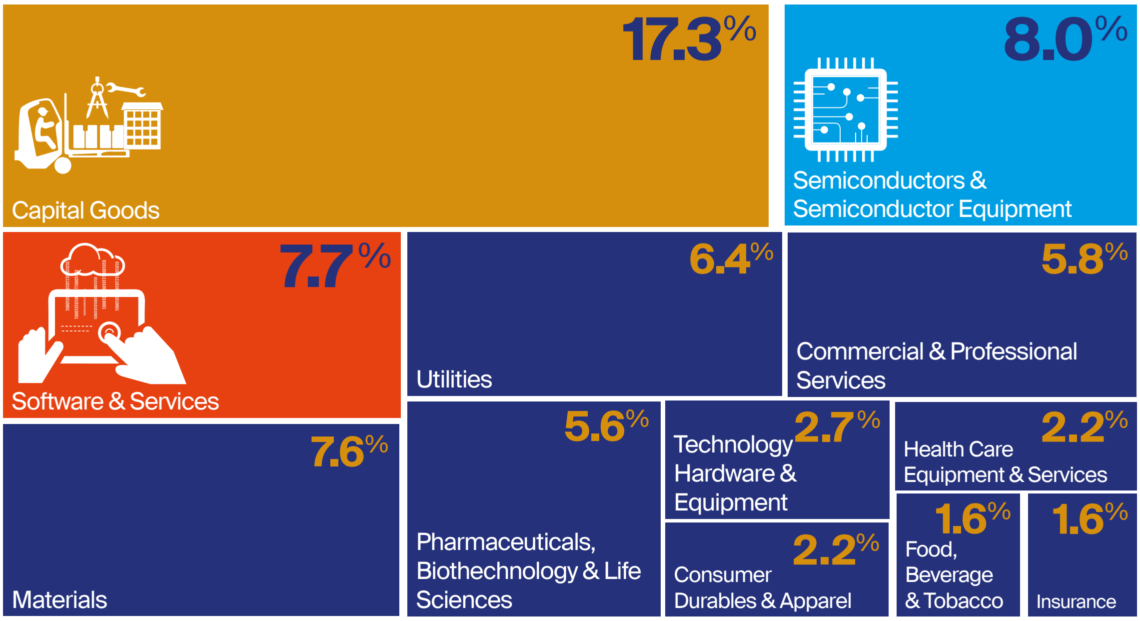


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As for Thematic funds' sectoral allocations, Capital Goods (17.3%) was the top sector, followed by Semiconductors & Semiconductor Equipment (8.0%) and Software & Services (7.7%).

Exhibit 98. Thematic funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *The total AuM of funds for which sector data was available is EUR 105.5bn or 79.5% of the EUR 132.8bn displayed previously. The remaining sectors account for 10.7% of the allocation.

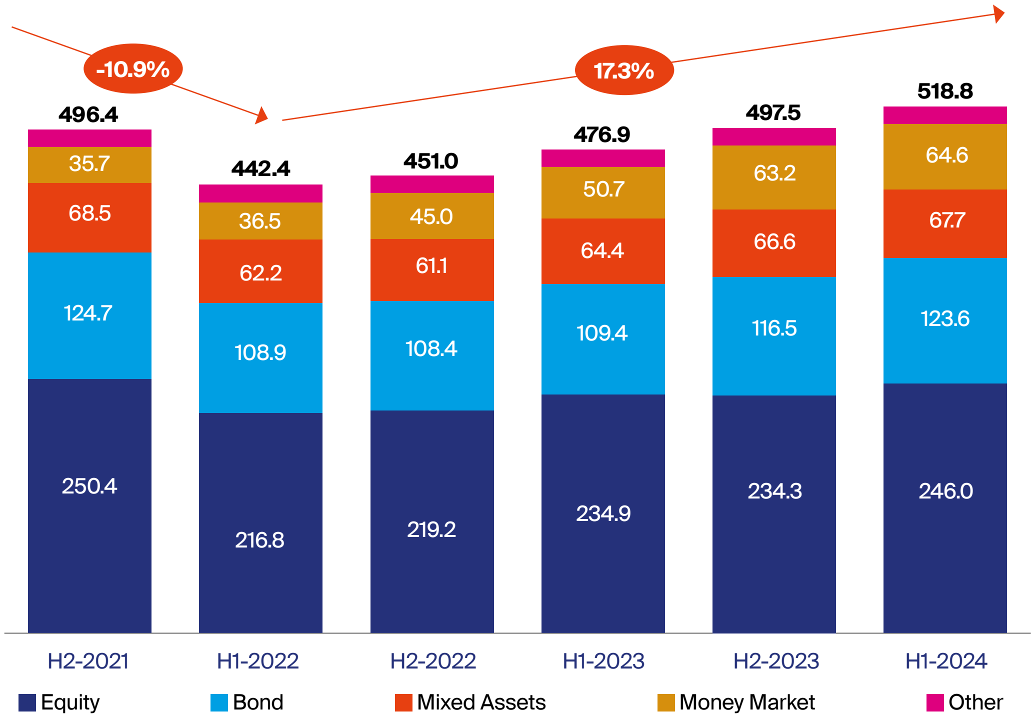
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.4. SDG FUNDS

C.4.1. AuM and net flows

After seeing their AuM drop from EUR 496.4bn in H2 2021 to EUR 442.4bn in H1 2024, SDG funds experienced a significant rebound, growing to EUR 518.8bn by H1 2024. This growth came despite net outflows standing at EUR 7.4bn in H1 2024, indicating the funds' strong performance.

Exhibit 99. AuM of SDG funds (by semester, EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

Exhibit 100. Net flows of SDG funds (by semester, EUR bn)

Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	7.0	0.7	-1.9	-8.1	-10.7
Bond	-4.7	1.1	0.8	0.9	6.5
Mixed	1.6	-0.8	-0.9	-2.6	-2.4
Money Market	-0.4	9.2	5.9	12.8	-0.4
Other	1.3	-0.3	-0.4	-0.8	-0.3
Total	**4.8**	**9.8**	**3.5**	**2.3**	**-7.4**

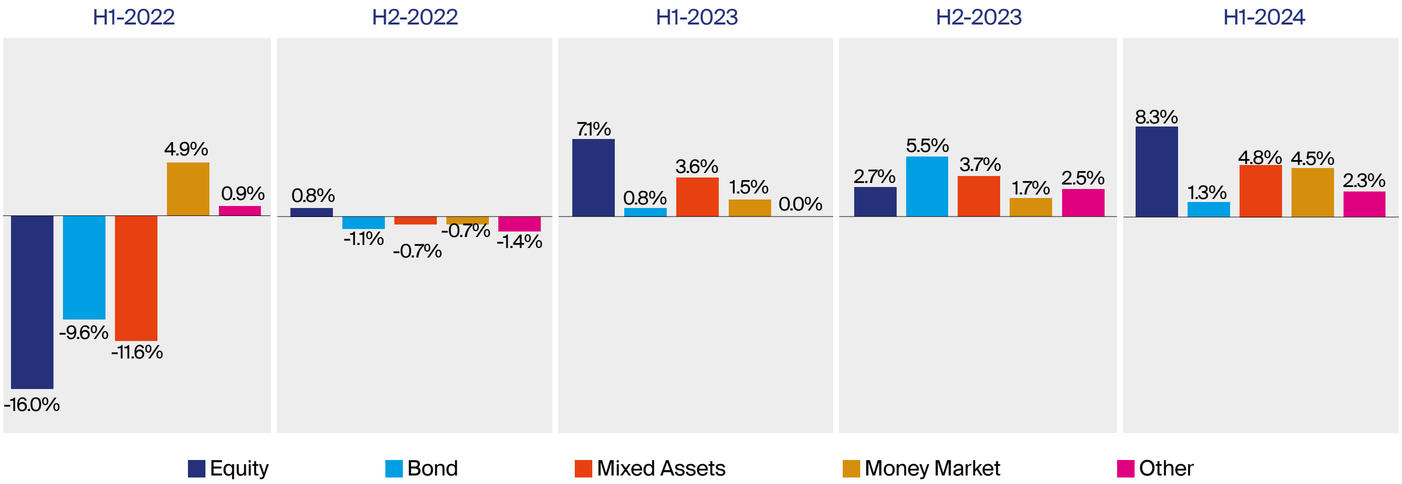
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.4.2. Performance by asset class

SDG funds focused on all asset classes had positive performances in H2 2023 and H1 2024. However, while those focused on bonds had the best performance (5.5%) in H2 2023, they subsequently had the lowest performance (1.3%) in H1 2024, whereas funds focused on equities had the best performance (8.3%).

Exhibit 101. Average performance of SDG funds



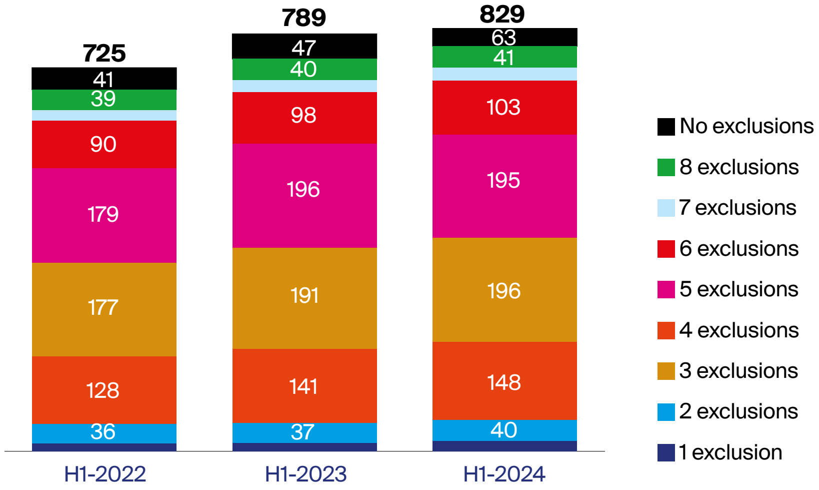
Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.4.3. Exclusions and sectoral analysis

Over two-thirds (67.4%) of SDG funds apply at least four exclusions, while only 7.5% apply no exclusions.

Exhibit 102. Number of exclusions applied by SDG funds (number of funds)

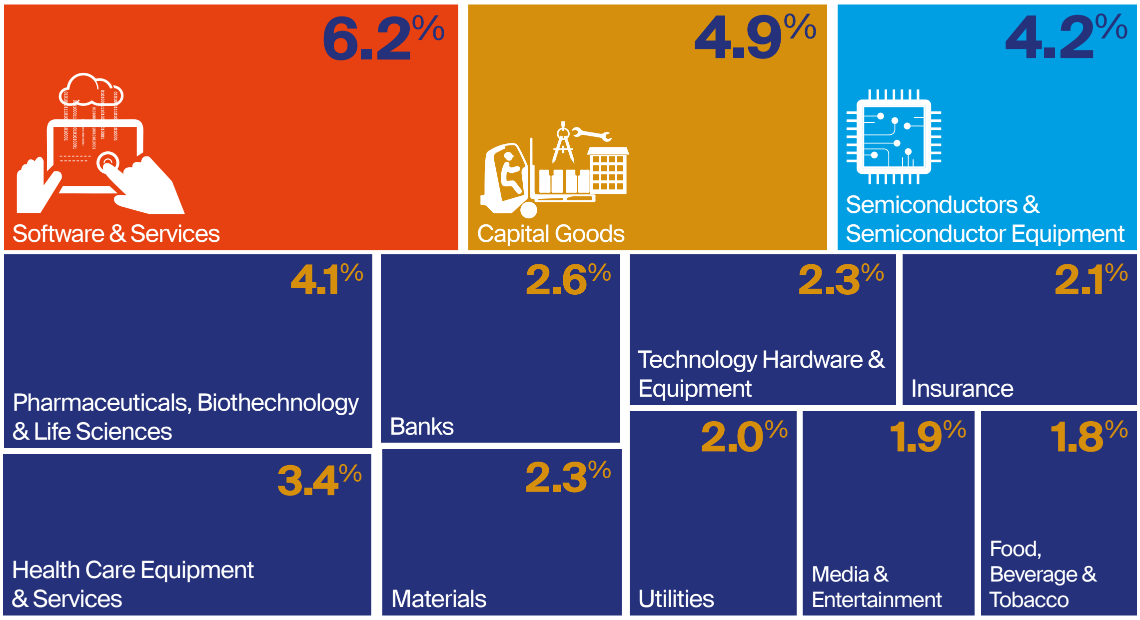


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As for sectoral allocations, SDG funds follow in the footsteps of Positive Tilt and Best-in-class funds, as Software & Services (6.2%) is the sector in which they had the most capital allocations in H1 2024. Capital Goods (4.9%) came in the second place, followed by Semiconductors & Semiconductor Equipment (4.2%) (Exhibit 103).

Exhibit 103. SDG funds – indicative AuM* allocation to main sectors (in percentage; H1-2024)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database. *The total AuM of funds for which sector data was available is EUR 263.3bn or 50.8% of the EUR 518.8.8bn displayed previously. The remaining sectors account for 12.8% of the allocation.

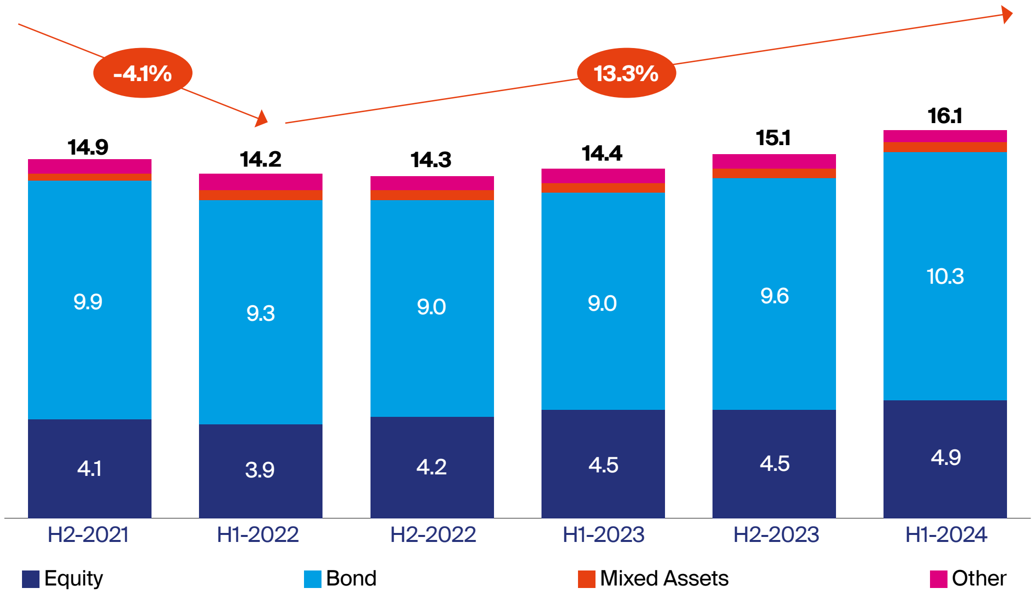
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.5. MICROFINANCE FUNDS

C.5.1. AuM and net flows

After seeing their AuM drop in H1 2022, Microfinance funds experienced a solid rebound every semester. In fact, their AuM stands at EUR 16.1bn in H1 2024, an increase of more than EUR 1bn since the previous height seen in H2 2021. Unlike other sub-strategies within the ESG Involvement funds cluster, the majority of AuM of Microfinance are in bonds, amounting to EUR 10.3bn (roughly 64% of the overall AuM) (Exhibit 104).

Exhibit 104. AuM of Microfinance funds (by semester, EUR bn)



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

As for net flows, Microfinance funds witnessed inflows every semester since H1 2022 – except in H1 2023 (Exhibit 105).

Exhibit 105. Net flows of Microfinance funds (by semester, EUR bn)

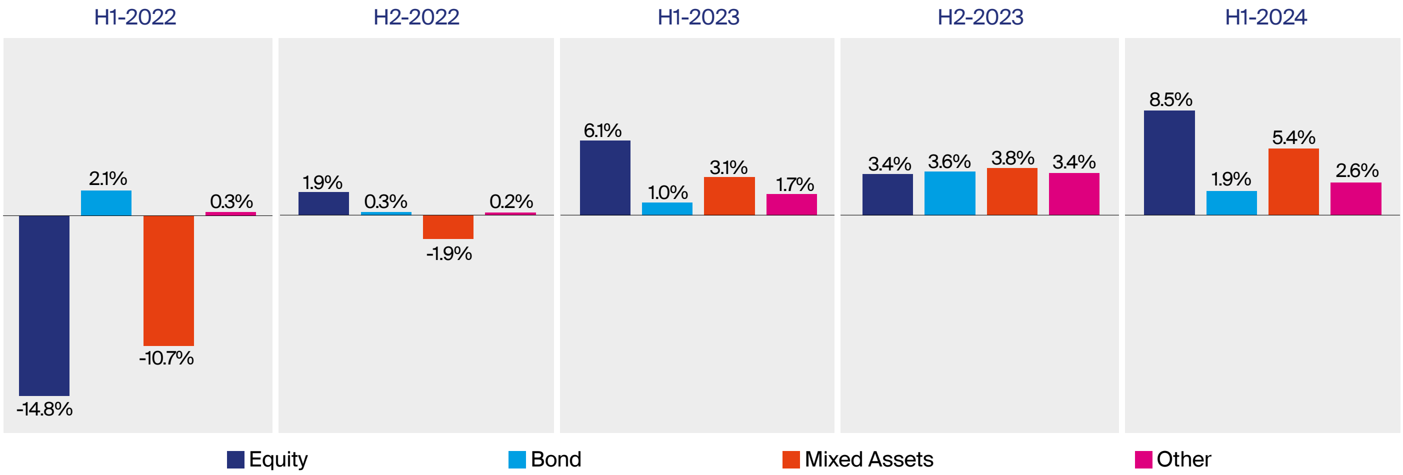
Asset Class	H1-2022	H2-2022	H1-2023	H2-2023	H1-2024
Equity	0.4	0.3	0.0	0.0	-0.3
Bond	-0.1	-0.2	-0.2	0.3	0.7
Mixed	0.2	0.0	0.0	0.0	0.0
Money Market	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	-0.1
Total	**0.5**	**0.1**	**-0.2**	**0.2**	**0.2**

Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.5.2. Performance by asset class

Microfinance funds focused on equities had the best performance (8.5%) in H1 2024, followed by those focused on mixed assets (5.4%) (Exhibit 106).

Exhibit 106. Average performance of Microfinance funds



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

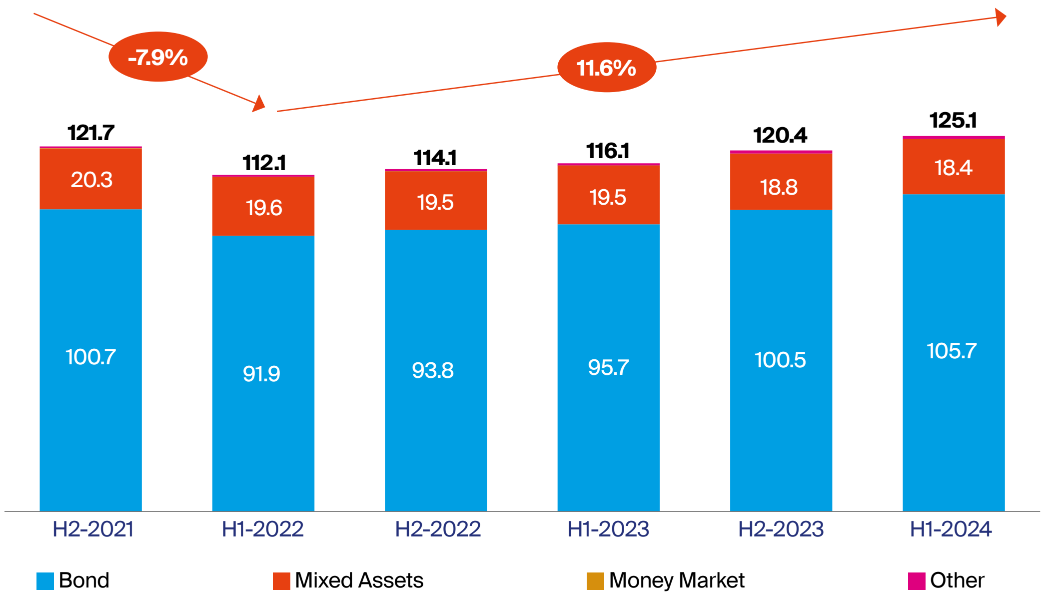
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.6. SUSTAINABLE BONDS FUNDS

C.6.1. AuM and net flows

After experiencing a 7.9% drop in AuM between H2 2021 and H1 2022, Sustainable Bonds funds saw their AuM grow steadily in subsequent semesters, and in H1 2024, the figure reached EUR 125.1bn, surpassing the highs of 2021. This growth was steered by both positive net flows and by positive market performance, with the former being the main driver of growth in the last period.

Exhibit 107. Average AuM of Sustainable Bonds funds

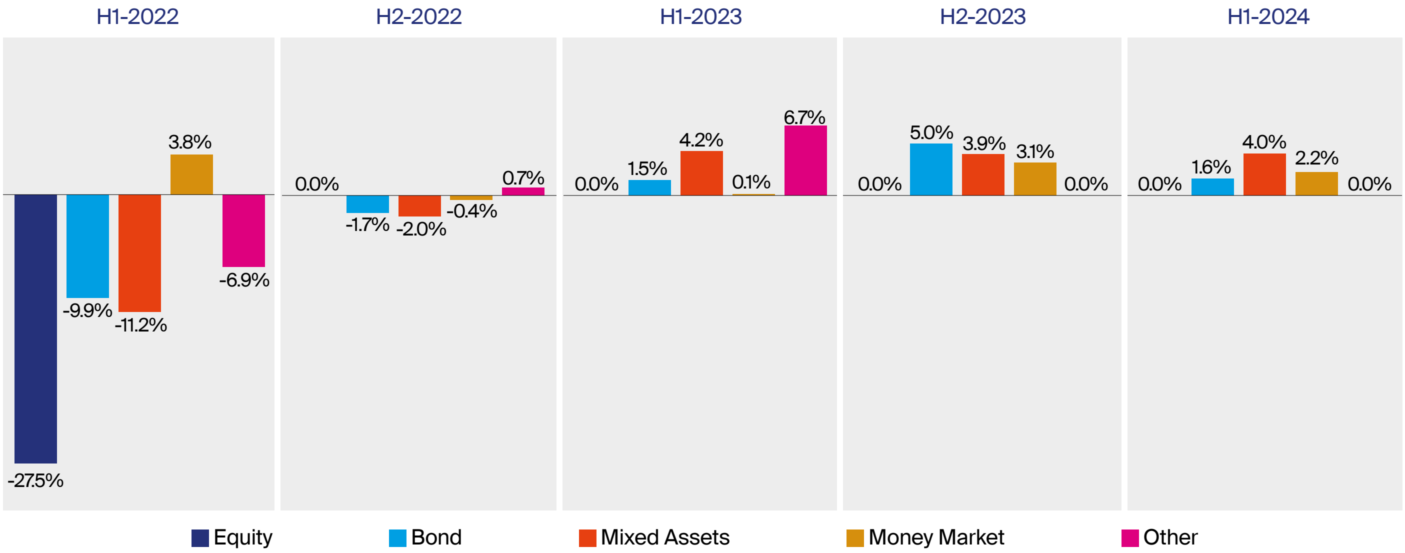


Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.
Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

C.6.2. Performance by asset class

Given that Sustainable Bonds funds are mainly focused on bonds has a positive performance of 1.6% in H1 2024, while their counterparts focused on mixed assets fared better, with their AuM growing by 4.0% (Exhibit 108).

Exhibit 108. Average performance of Sustainable Bonds funds



Note: Data excludes Funds of Funds. The figures presented in this exhibit cannot be compared with the figures from the 2022 and 2023 editions of this study as LSEG Lipper's database has been updated. The figures presented above are from the updated database.

Sources: PwC Global AWM & ESG Research Centre, LSEG Lipper

ABOUT THE SPONSORING COMPANIES

About The Luxembourg Sustainable Finance Initiative (LSFI)

The Luxembourg Sustainable Finance Initiative (LSFI) is a not-for-profit association and a public-private partnership, founded in 2020 by the Ministry of Finance, the Ministry of the Environment, Climate and Biodiversity, Luxembourg for Finance (the agency for the development of the financial centre) and the High Council for Sustainable Development (Conseil Supérieur du Développement Durable), which is an independent advisory body to the Luxembourg Government about sustainable development matters. The LSFI serves as a coordinating entity of all Luxembourg sustainable finance actors with the mission to:

- raise awareness on sustainable finance;
- help the financial sector further transition towards sustainability;
- be the central point of information on sustainable finance;
- design and implement the Luxembourg Sustainable Finance Strategy for the Luxembourg financial centre.

Through its past and current projects, the LSFI aims to achieve its objective of helping the financial sector transition towards sustainability, raising awareness of Sustainable Finance, and fostering collaboration and regular dialogue among all the stakeholders within the Luxembourg Sustainable Finance landscape (financial institutions, public bodies, civil society, research and education, and corporates, among others). It acts as a central source of information for all Sustainable Finance actors in Luxembourg by regularly collating news, events, regulatory updates, publications, and tools. The LSFI also fosters dialogue and coordination, facilitating regular exchanges on Sustainable Finance topics, challenges, and needs, in a bid to advance Sustainable Finance at the country level.

In addition, the LSFI has the mandate from the Luxembourg Government to design and implement the Luxembourg Sustainable Finance Strategy for the Luxembourg financial centre. In particular, under the Luxembourg Sustainable Finance Strategy Pillar 3, "Measuring Progress", the LSFI seeks to help the industry understand where it stands and the progress made in terms of Sustainable Finance, which are fundamental to identifying areas for improvement. The materialisation of this involves analysing and reporting on progress in Sustainable Finance and also conducting regular studies on Sustainable Finance in Luxembourg, which are adapted based on data availability, the regulatory landscape, and other identified needs. As the second in the series, this study is meant to be objective and provide a regular analysis for the country to understand its strengths and challenges - with an emphasis on continuously expanding the scope in subsequent editions, while the available metrics evolve. Its ultimate objective is to include all actors and financial vehicles/products to be able to provide a comprehensive view of the status of sustainable finance in Luxembourg.

The LSFI is not a regulatory, public affairs or advisory entity. Thus, it does not provide commentary on regulation. However, following its mission to raise awareness, the LSFI regularly follows and relays the latest regulatory update to industry participants in a neutral way.

Find out more by visiting **www.lsfi.lu**

About PwC Luxembourg

PwC Luxembourg (**www.pwc.lu**) is the largest professional services firm in Luxembourg with over 3,800 people employed from 90 different countries. PwC Luxembourg provides audit, tax and advisory services including management consulting, transaction, financing and regulatory advice. The firm provides advice to a wide variety of clients from local and middle market entrepreneurs to large multinational companies operating from Luxembourg and the Greater Region. The firm helps its clients create the value they are looking for by contributing to the smooth operation of the capital markets and providing advice through an industry-focused approach.

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 149 countries with more than 370,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com and www.pwc.lu.

LSFI

Luxembourg
Sustainable Finance
Initiative

Luxembourg Sustainable Finance Initiative

12, rue Erasme
L-1468 Luxembourg