SOF ESG / PAI Research for Illiquid Assets (2024)

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1. Research Methodology & Management Summary

As a service provider for regulatory investor reporting, Substance Over Form Ltd. (SOF) collects Principal Adverse Impact (PAIs) data from illiquid funds (private equity (PE), private debt (PD), real estate (RE) and infrastructure) and their managers / initiators (GPs).

The PAI reference period 2024 is the third PAI year for which SOF performed this analysis. The findings for the PAI reference periods 2022-2023 can be also accessed on the SOF website (link). Where we make comparisons between years in this paper, we always refer to the comparison between this year 2024 and the previous year 2023.

An important part of the research is our quality of assessment of received European ESG Templates (EETs). This quality assessment is performed automatically and consistently for all received EETs based on pre-defined criteria and can lead to various outcomes from "unusable" being the worst quality and "5 stars" being the best quality. However, prior to using the quality assessments for further decisions, we strongly recommend reviewing and understanding the assessment methodology described in this paper.

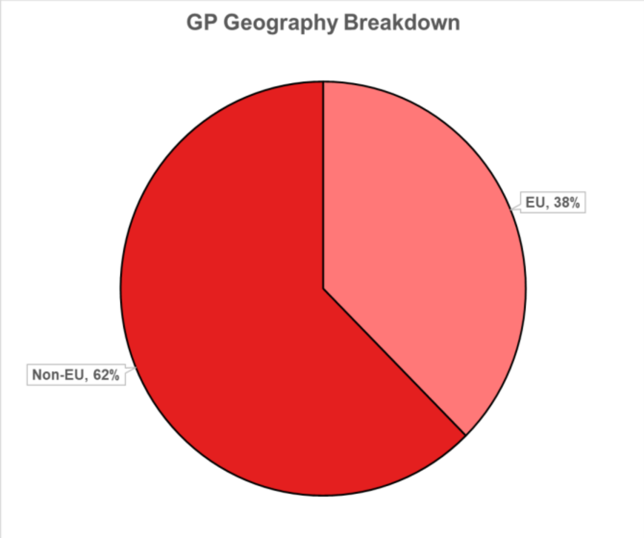
The key findings can be summarised as follows:

- **EET remained an established market standard in 2024**. 65% of all funds delivered an EET for 2024, while 59% of all funds delivered a useful EET.
- **Both, EU GPs and non-EU GPs deliver a significant amount of EETs, whereby the quality of EETs delivered by EU GPs is better on average than of their non-EU counterparts.** 61% (69%) of total funds managed by (non-)EU GPs delivered EETs in 2024, thereof 95% (86%) useful and 51% (39%) valuable.
- **All alternative asset classes provide a significant amount of useful EETs**. While 66% of all real estate provide useful EETs, that is the case for 62% / 56% / 49% of private equity / infrastructure / private debt funds.
- **The EET delivery ratios slightly increased, while the quality strongly increased in 2024 compared to 2023.** 65% vs. 64% of all funds delivered an EET for 2024 vs. 2023. The most notable increase could be observed for the useful EET ratio that is 90% in 2024 compared to 83% in 2023.
- **Overall, the EET data quality further increased in 2024 compared to 2023. EETs and PAIs remain "business as usual" and part of the standard process for many EU and non-EU GPs and across all alternative asset classes.**

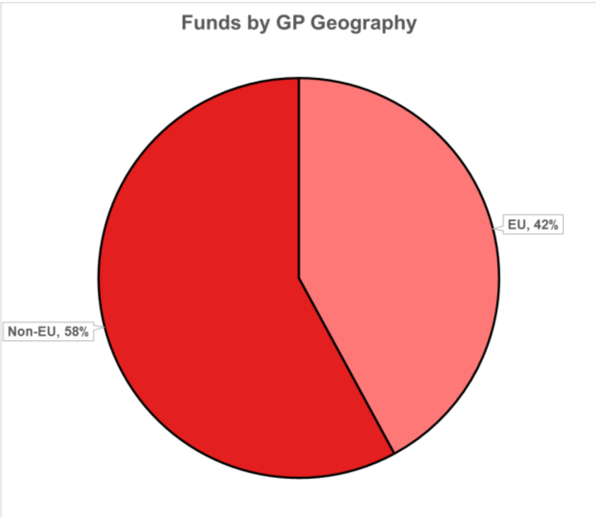
2. General Overview

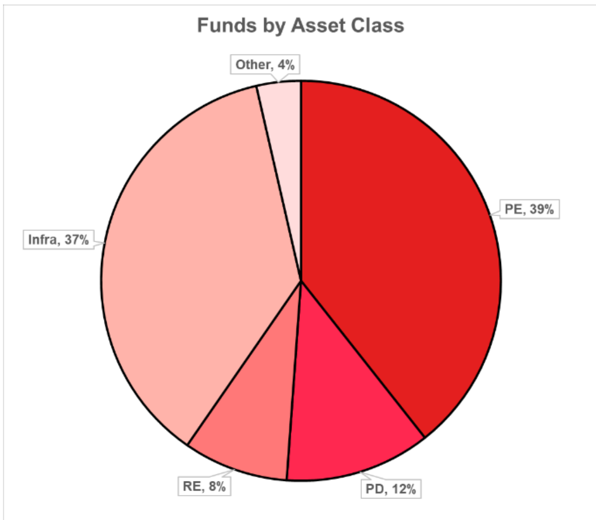
- Timing:
  - Reference Period of ESG data: 1.1.2024 – 31.12.2024 (partly 1.1.2023 – 31.12.2023)
  - Engagement Period with GPs: 6.1.2025 – 15.6.2025

- Total number of GPs covered in the SOF EET Input Management: ca. 360
  - GP Geography: 38% EU, 62% non-EU

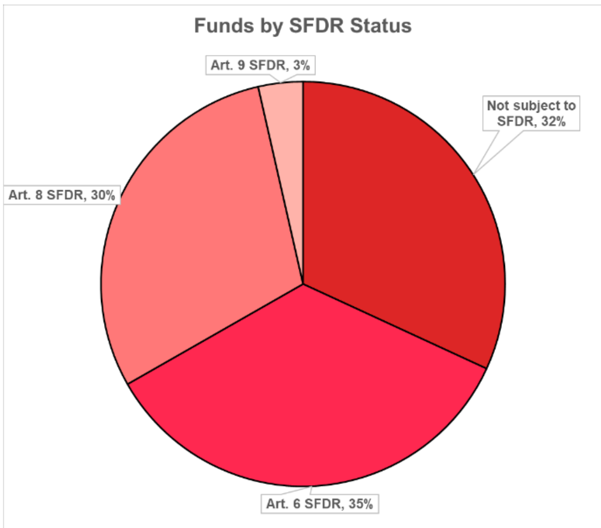


- Total number of target funds covered in the SOF EET Input Management: ca. 1,000
  - Funds by GP Geography: 42% EU, 58% non-EU
  - Asset Class: 39% PE, 37% Infra, 12% PD, 8% RE, 4% Other





- SFDR status as % of funds reporting their SFDR status (364 funds):
  - Not subject to SFDR: 32%
  - Art. 6 SFDR: 35%
  - Art. 8 SFDR: 30% -> *significant increase compared to 18% in 2023*
  - Art. 9 SFDR: 3%



<u>SOF Comment:</u>
Our data sample is notably comparable to that of year 2023 in terms of sample size (ca. 1,000 vs. 900), GP geography, funds by GP geography, and fund strategy. The number of Art. 8 SFDR funds, as disclosed in the EET, increased from 18% in 2023 to 30% in 2024. A possible explanation could be that GPs increasingly recognize the importance of an Art. 8 SFDR status for EU LPs, while it is much easier to achieve than Art. 9 SFDR status reported by only 3% of disclosing funds.

We have excluded the 4% "other" funds from our subsequent analysis. These funds are either specialty funds (e.g., balance sheet of large LPs) or liquid funds, which fall outside the scope of our focus on alternative investments and illiquid assets.

3. EET Delivery Ratio & Quality

EET Delivery Ratio - % of funds that delivered EETs:

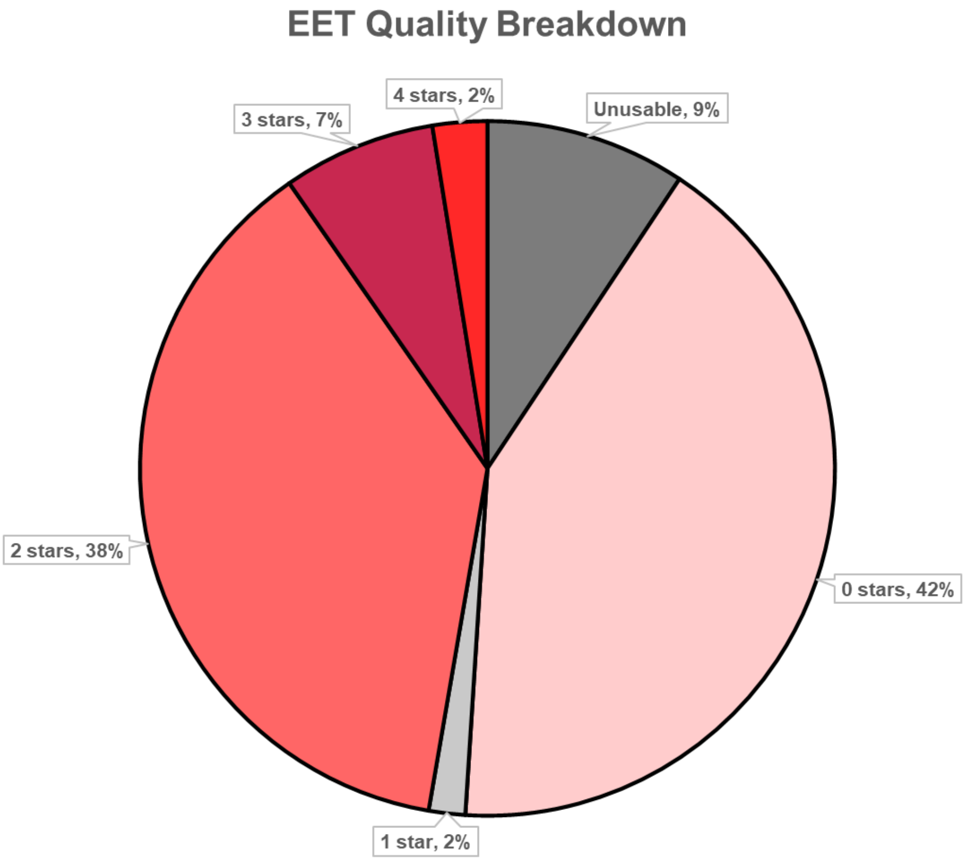
- <u>Total</u>: 65% of all funds in SOF scope (ca. 630 EETs).
- <u>GP Geography</u>: 61% funds managed by EU GPs and 69% funds managed by non-EU GPs delivered EETs.
- <u>Fund Strategy</u>: EETs received from 71% RE funds, 68% PE funds, 68% PD funds, and 61% infra funds.

<u>SOF Comment:</u>
The number of received EETs continuously increased in 2024 in absolute terms (approximately 1,000 vs. 90) and in percentage terms (65% vs. 64%). This improvement specifically applies to funds managed by non-EU GPs, as well as across 3 asset classes (RE, PE, PD, Infra).

61% of EU GPs managed funds delivered EETs in 2024 as opposed to 67% in 2023. Also, the delivery ratio for RE funds was only 71% in 2024 compared to 78% in 2023. The reason for those declines is manually due to the new ones that were added to the EET scope and haven't delivered any EETs in the first year. We expect some of those non-delivering funds to start delivering in the next years.

EET Quality[1]:

- Total funds that delivered EETs:
  - Unusable: 9%
  - 0 stars: 42%
  - 1 star: 2%
  - 2 stars: 38%
  - 3 stars: 7%
  - 4 stars: 2%



<u>SOF Comment:</u>
Almost 60% of all funds delivered a useful EET, while 90% of all EETs are useful – a significant increase of delivery ratios compared to 2023. *The proportion of useful EETs (defined as 0, 2, 3, or 4 stars for the purposes of this study) relative to all received EETs has increased from 83% in 2023 to 90% in 2024, which in turn led to the increase of delivery ratio relative to total funds from 53% in 2023 to 59% in 2024. Furthermore, approximately 44% of received EETs in 2024 are deemed particularly valuable as opposed to 34% in 2023.*

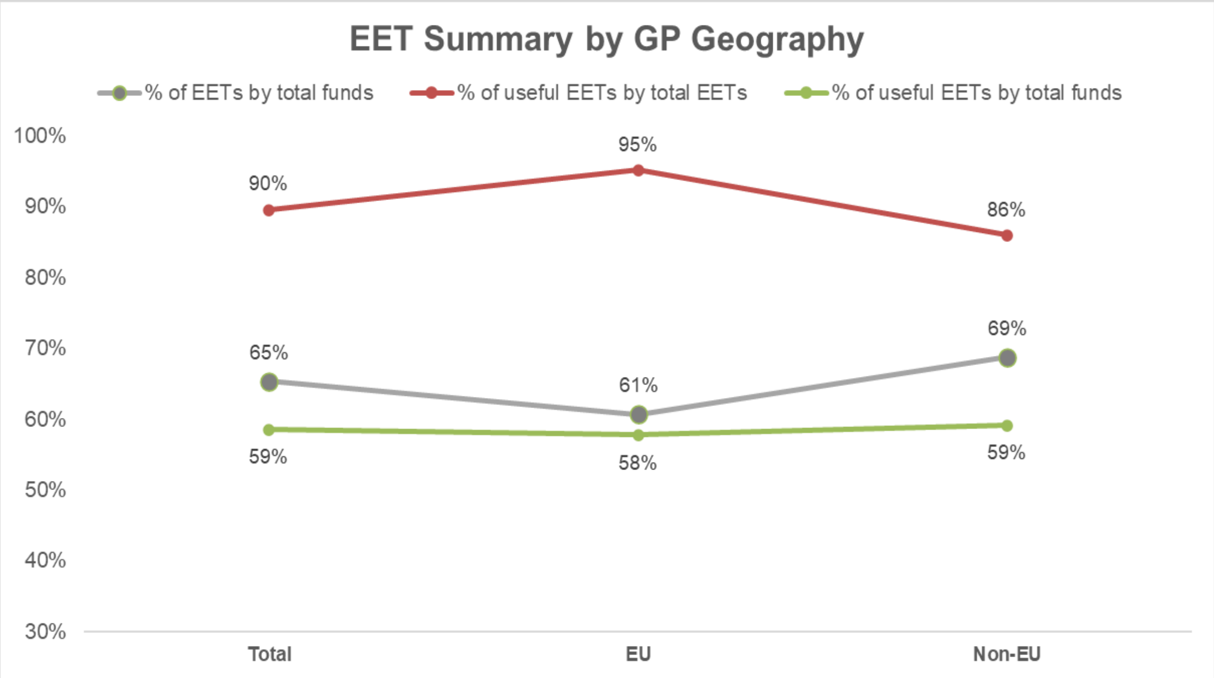
[1] SOF EET quality assessment mechanism:
- **Unusable:** Incorrect or inconsistent PAI eligibility ratios for any PAI categories incl. NACE-specific PAIs.
- **0 stars**: Unusable criteria fulfilled + at least one PAI coverage ratio and corresponding PAI value correct.
- **1 star**: At least one correct and consistent PAI eligibility ratio for each PAI category incl. NACE-specific PAIs.
- **2 stars**: 1 star criteria fulfilled + at least one PAI coverage ratio and corresponding PAI value correct.
- **3 stars**: 2 stars criteria fulfilled + all mandatory PAI coverage ratios = PAI eligibility ratios and PAI values correct.
- **4 stars**: 3 stars criteria fulfilled + all mandatory and additional PAI coverage ratios = PAI eligibility ratios and PAI values correct.

*This indicates **significant improvements in both the delivery ratio and quality of EETs** in the this year, aligning with our expectation from last year that GPs who began delivering EETs are more likely to enhance their quality over time provided a targeted engagement was performed.*

One notable point is that the percentage of 0-star EETs (which include at least one PAI value, though PAI eligibility ratios are inconsistent or incorrect) remains significant and similar to the last year. This could stem from several factors: (i) GPs focusing primarily on reporting PAI values while ignoring or not understanding the concept of the PAI eligibility ratio, (ii) lack of data for granular NACE-specific PAI KPIs, and (iii) data gaps resulting from target funds held by fund of funds that fail to deliver useful EETs. Therefore, addressing the data gaps in EETs (particularly for fund of funds) might potentially be a major task and challenge in the upcoming reference year.

- Funds that delivered EETs by GP geography:

	% of total EETs delivered by EU GPs	% of total EETs delivered by non-EU GPs
Unusable	4%	12%
1 star	1%	2%
0 stars	44%	46%
2 stars	38%	34%
3 stars	11%	4%
4 stars	2%	2%
Useful (0 and 2-4 stars)	95%	86%
Valuable (2 stars or higher)	51%	39%



<u>SOF Comment:</u>
*In 2024 **non-EU GPs outperformed the EU GPs first time with regard to EET delivery ratios** (61% EU vs. 69% non-EU). This is because delivery ratios of non-EU GPs increased (from 62% in 2023 to 69% in 2024), while delivery ratios of EU GPs dropped (from 67% in 2023 to 61% in 2024). As explained above, this is due to the new EU GP managed funds that were approached first time in 2024. We expect some of them to start delivering in the upcoming years as a consequence of the engagement process.*

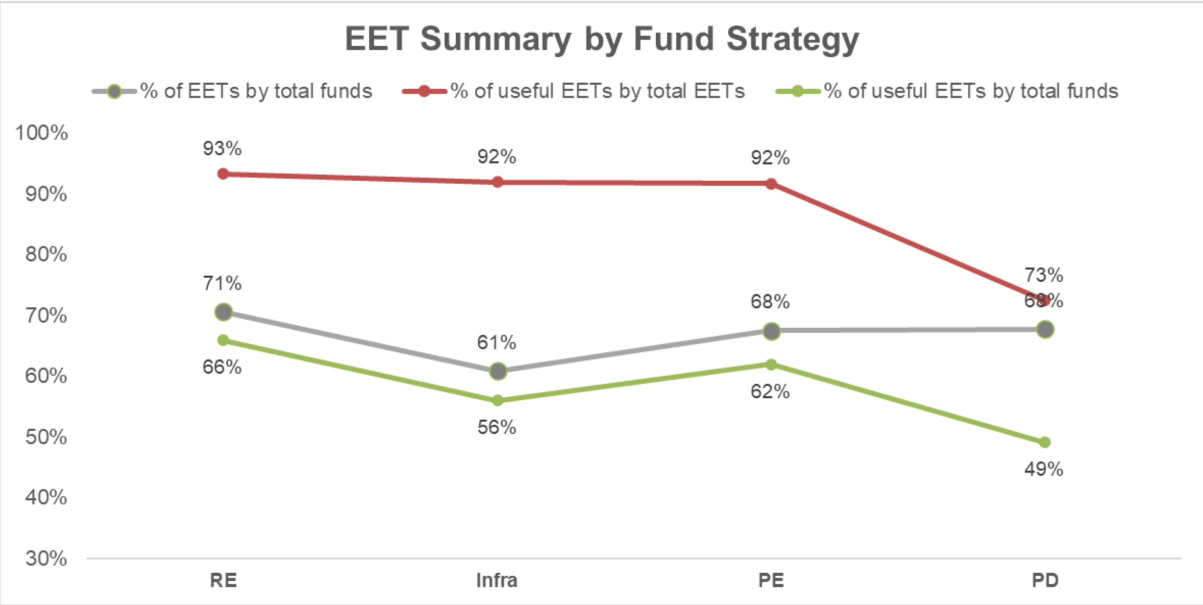
*The comparisons reveal that EU GPs continue **outperforming their non-EU counterparts in terms of EET quality** (51% EU vs. 39% non-EU for valuable EETs; 95% EU vs. 86% non-EU for useful EETs).*

Non-EU GPs produce three times the percentage of unusable EETs, while EU GPs disclose more than twice the number of EETs that include all mandatory PAIs without data gaps (3 stars or higher).

*Despite these differences, **both, EU and non-EU GPs,** have **significantly improved the quality of their EET deliveries compared to the previous year**.*

- Funds that delivered EETs by Fund Strategy:

	% of total EETs delivered for RE funds	% of total EETs delivered for Infra funds	% of total EETs delivered for PE funds	% of total EETs delivered for PD funds
Unusable	2%	6%	8%	26%
1 star	5%	2%	0%	1%
0 stars	20%	47%	50%	44%
2 stars	30%	38%	37%	26%
3 stars	38%	4%	4%	0%
4 stars	5%	3%	1%	3%
Useful (0 and 2-4 stars)	93%	92%	92%	73%
Valuable (2 stars or higher)	73%	45%	42%	29%



<u>SOF Comment:</u>
***RE funds** have achieved both, the **highest delivery ratio (71%)** and the **highest quality (73% valuable and 93% useful**, only 2% unusable) across asset classes. What is particularly striking is that more than 40% of the RE EETs attain 3 stars or higher, indicating that all mandatory PAIs are reported without data gaps. Given the relatively less complex requirements for RE PAI disclosure (only 2 mandatory PAIs for real estate), RE EETs should indeed perform best in delivery ratios and quality.*

*While for **infrastructure funds** the percentage of **useful EETs has increased from 89% in 2023 to 92% in 2024** (close to RE funds), the proportion of **valuable EETs has increased from ca. 40% in 2023 to 45% in 2024**. This trend suggests that some infra funds that were rated 0 stars last year have improved by reporting all PAI eligibility ratios (evidenced by some reduction in 0-star ratings from 49%*

to 47%), leading to a greater proportion of valuable infrastructure EETs. These findings reinforce our earlier arguments: while investee company PAIs required for infrastructure investments are significantly more complicated than the RE PAIs, a potential explanation for both asset classes may be that collecting at least some PAIs for project finance structures is generally easier than for corporate finance due to the high degree of control and standardisation as well as the narrow strategy in a SPV.

Another finding is the quality of ***PE funds have shown the most substantial improvement compared to last year in both, the proportions of valuable EETs (from 24% to 42%) and useful EETs (from 79% to 92%)****. Specifically, we observe a significantly lower proportion of unusable EETs and a higher percentage of EETs with reported PAI values. Notwithstanding their overall quality is lower than the RE funds,* ***over 60% of PE funds can deliver useful EETs this year****. However, similar to infrastructure funds, the percentage of 3-star or higher EETs from PE funds remains rather low, likely due to the greater quantity and complexity of PAIs for investee companies compared to real estate PAIs.*

The ***quality of EETs received from PD funds slightly decreased*** *in 2024 compared to 2023****. While the % of useful EETs was 73% in both years, the % of valuable EETs decreased from 32% in 2023 to 29% in 2024.***

Summary*: (i) At the between-year level, we observe an increased delivery ratio for Infra, PE, and PD, while the RE delivery ratio decreased but remained above 70%. Quality increased for both PE and Infra, with PE showing the most significant improvement. For RE and PD the quality decreased with, RE showing the biggest drop while still providing 93% usable and 73% valuable EETs. (ii) At the within-year level, RE, Infra, and PE funds exhibit relatively high quality, with 92–93% rated as useful and 42–73% as valuable. In contrast, PD appears to be the laggard, with 73% useful and only 29% valuable..*

4. PAI Disclosure & Core PAI KPI Analyses

PAI Disclosure[2] – Number of reported PAI values (PAI coverage ratios > 0):

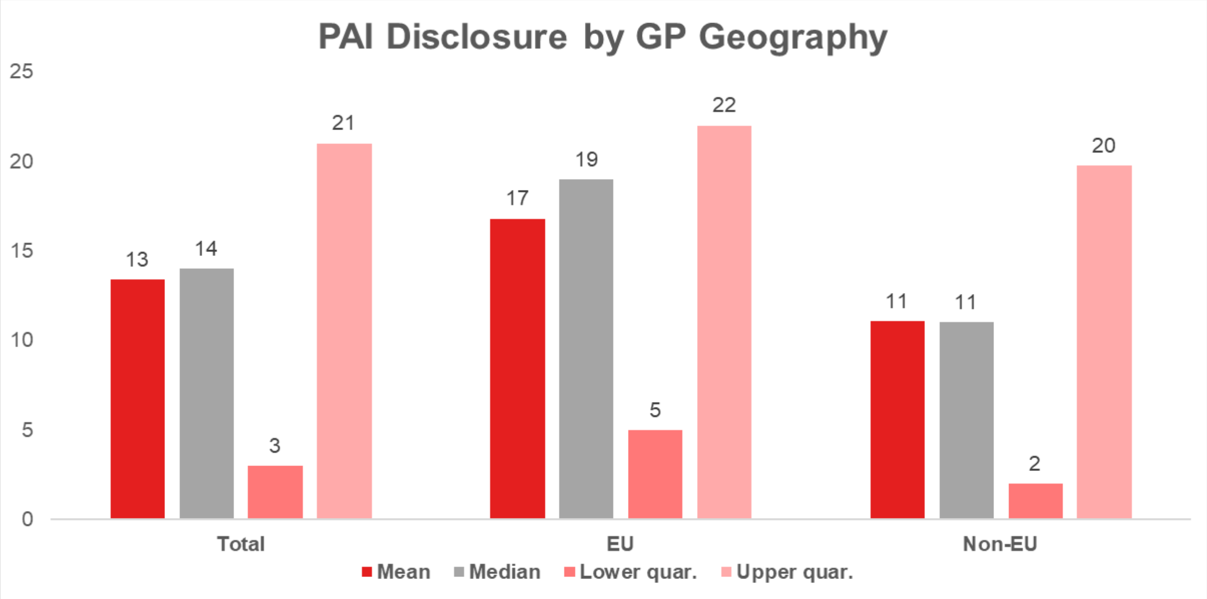
- Total: Received EETs report 13 PAIs in average, 14 PAIs in median, 21 PAIs in upper quartile, and 71 PAIs as maximum.

SOF Comment:
The received EETs in this year report more PAIs across the mean, median, and upper quartile. Notably, 50% of EETs now can disclose at least 14 PAI.

- PAIs in EETs by GP Geography:

	PAI values in EETs delivered by EU GPs	**PAI values in EETs delivered by non-EU GPs**
Number of EETs	240	350
Mean	17	11
Median	19	11
Lower Quartile	5	2
Upper Quartile	22	19.75
Maximum	71	51

[2] The statistical results in this section are presented after SOF internal validations on received EETs and auto-deletions of non-valid PAI values. For instance, if one EET reports a PAI value without populating the corresponding PAI coverage ratio, this PAI value will be auto deleted and would not be taken into account for subsequent analysis.

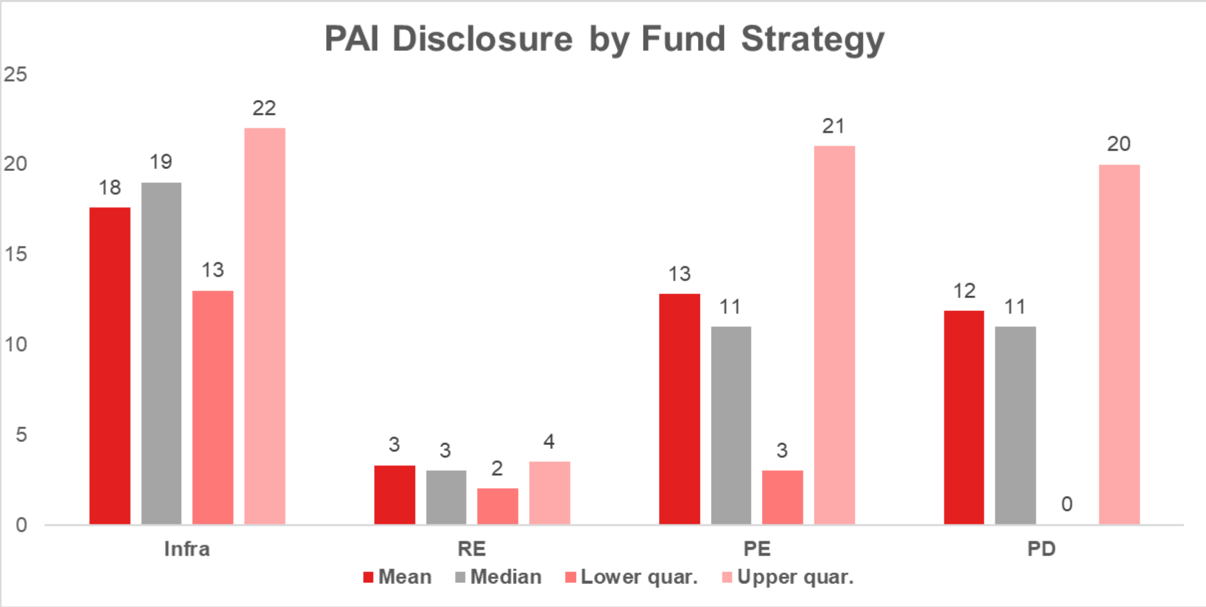


SOF Comment:
The comparisons indicate that EU GPs continue to disclose substantially more PAI values than their non-EU peers, with an ***average of 17 for EU GPs versus 11 for non-EU GPs, and a median of 19 for EU GPs versus 11 for non-EU GPs****. This suggests that EU GPs not only tend to provide more valuable and useful EETs but also deliver them with more PAI values than non-EU GPs.*

Compared to 2023, ***EU GPs kept providing a similar amount of PAIs in 2024****, while the amount of* ***PAIs provided by non-EU GPs significantly increased in 2024*** *compared to 2023 (2023: 6 median, 9 mean; 2024: 11 median and mean).*

- PAIs in EETs by Fund Strategy:

	PAI values in EETs delivered for Infra funds	PAI values in EETs delivered for RE funds	PAI values EETs delivered for PE funds	PAI values in EETs delivered for PD funds
Number of EETs	210	59	245	74
Mean	18	3	13	12
Median	19	3	11	11
Lower Quartile	13	2	3	0
Upper Quartile	22	4	21	20
Maximum	71	10	54	59



<u>SOF Comment:</u>

It should be noted that the amount of PAI values significantly differs between investee companies such as Private Equity, Private Debt and Infrastructure (29 mandatory and 38 additional PAI values) and Real Estate (2 mandatory and 9 additional PAI values).

*The comparisons indicate that **Infrastructure funds** continue to report the **highest amount of PAI values in both average (18) and median (19)** than other asset classes, which is consistent with previous findings that Infrastructure funds deliver EETs with higher quality than PE/PD funds.*

PE and PD funds** still disclose fewer PAI values than Infrastructure funds. **Half of the PE (PD) EETs disclose at least 11 (11) PAI values, similar to last year with PD disclosing 4 PAIs less in the median.

*Since **RE funds** generally have fewer PAI values to report than other investee companies, the **average of 3 and the median of 3 indicate that most funds report at least the 2 mandatory PAI values**, similar to previous findings and last year.*