

A Scientific Portfolio Publication

# Do ESG Scores and ESG Screening Tell the Same Story? Assessing their Informational Overlap

December 2024

Introduction	5
1. Data and Method	7
2. Limitations of ESG Scores in Identifying Harmful Companies	10
3. Exclusion of Harmful Companies Tend to Improve ESG Score	13
4. Conclusion	17
5. Appendix	19
References	22
Scientific Portfolio Publications	24

### **About the Authors**



**Vincent Bouchet** is Scientific Portfolio's Director of ESG and Climate research. After a master's degree in finance, he obtained a PhD in management science from École polytechnique (France) in partnership with the Caisse des Dépôts group, where he spent three years working on the integration of climate risks. He then worked for the French Ministry of Economy and Finance on public policies related to climate and biodiversity.



**Jenna Jones** joined Scientific Portfolio in January 2022 as a Senior Researcher. Previously, she worked as an equity research analyst at Bloomberg and as a business analyst at a consultancy firm, and spent four years working as a researcher for an investment fund. She received a Bachelor's degree in Finance from the University of Florida and a Master's in Actuarial Science from HEC Lausanne, where she specialized in extreme event risks.



**Mathieu Joubrel** is is an entrepreneur and researcher in sustainable finance. In 2022, he co-founded ValueCo, a company providing professional investors and listed issuers with ESG market sentiment data. He has published several articles and books on sustainable finance and the integration of ESG factors into investment strategy and decision-making.



**Aurore Porteu de La Morandière** joined Scientific Portfolio's ESG and Climate research team in 2022 after she graduated from the double degree Master in Management and MSc in Financial Markets at EDHEC. During her studies, she had several work experiences in asset management, working alongside fund managers at Cholet Dupont and Louvre Paris, as well as a previous experience in fintech at Younited Credit, where she studied the market and structure of ABS funds.



**Shahyar Safaee** joined Scientific Portfolio in September 2022 as Deputy CEO and Director of Business Development. Previously, he built a 20-year track record in both sell- and buy-side roles in London, Paris and NYC, primarily serving institutional clients at J.P. Morgan by taking and managing financial risks before joining EDHEC-Risk Institute to contribute to both research and business development efforts. He holds Master's degrees in engineering (Ecole des Mines de Saint-Etienne) and financial mathematics (Université Claude Bernard in Lyon).

## **Abstract**

This study examines the informational overlap between environmental, social, and governance (ESG) scores and ESG exclusionary screening strategies within equity portfolios. While ESG scores are widely used for integrating sustainability considerations in portfolio management, they may not fully align with exclusion criteria targeting companies engaged in controversial activities or behaviour. By comparing the results of both approaches on a set of 417 indices, the analysis reveals that reliance on ESG scores alone omits a substantial proportion of companies that fail to meet "do no harm" criteria. However, the results show that exclusion strategies can enhance a portfolio's ESG score, suggesting a complementary role in achieving sustainable investment objectives.

Introduction

### Introduction

The Global Sustainable Investment Alliance (GSIA) defines sustainable investment as an "investment approach that considers environmental, social and governance (ESG) factors in portfolio selection and management" (GSIA, 2021). Under this broad definition, the volume of global sustainable investments reached USD30.3 trillion in 2022, representing approximately 38% of all professionally managed assets. Within sustainable investment strategies, exclusionary screening, ESG integration<sup>1</sup>, and engagement represent the most prevalent approaches. While these strategies may theoretically complement one another, in practice, they rely on diverse data sources which can lead to inconsistent outcomes. This study focuses on examining the relationship between exclusion screening, guided by "do-no-harm" criteria, and ESG integration, guided by ESG scores.

Exclusion screening, historically the earliest practice within sustainable finance, remains widely adopted despite a recent slowdown (GSIA, 2023). The Financial Exclusion Tracker Initiative reports that exclusions currently emphasise climate-related concerns. For instance, the EU regulation on climate benchmarks mandates exclusion criteria concerning fossil fuel-related activities and adheres to the "do-no-harm" principles embedded in the EU Taxonomy. In practice, investors implement these exclusion thresholds based on data detailing companies' operational activities (e.g., revenue composition, energy mix) and behaviour (e.g., controversies).

In contrast, ESG integration has gained momentum, driven by client preferences and regulatory pressure (GSIA, 2023; PRI, 2023). Integrating ESG criteria is increasingly recognised as part of an investor's fiduciary duty and is a prerequisite for claiming alignment with sustainable objectives, as outlined in Articles 8 and 9 of the Sustainable Finance Disclosure Regulation (SFDR). In practice, ESG scores – whether proprietary or provided by external data providers – are the most common data source supporting this approach.

To clarify the relationship between exclusion screening and ESG integration, this study addresses the following questions: do strategies based solely on ESG scores naturally shield investors from companies whose activities or behaviours may cause harm? When combined with ESG integration, do exclusion strategies improve ESG scores?

<sup>1 -</sup> Defined as the "consideration of ESG factors within an investment analysis and decision-making process with the aim to improve risk-adjusted returns" (GSIA, 2023, p. 7).

## 1. Data and Method

These questions are explored through an analysis of the composition of 417 diversified indices from the Developed Europe and United States investment regions, as of October 2024.

To capture the variety in exclusion practices – including themes, criteria, and thresholds, three distinct exclusion strategies, developed by Porteu de la Morandière, Vaucher and Bouchet (2025), are considered. The first strategy reflects consensus-based exclusion criteria among the largest 100 asset owners; the second includes additional climate criteria defined by the Paris-Aligned Benchmark standards; the third excludes companies that contribute negatively to the United Nations Sustainable Development Goals (SDGs) (see Appendix for details on the three strategies). In terms of weight excluded, the Consensus and PAB screens have similar impacts for Developed Europe indices, while the SDG screen leads to significantly higher exclusions (Exhibit 1).

Exhibit 1: Descriptive statistics related to ESG screens

		a) Developed Europe					
ESG Screen	Indices (n=130)	Indices (n=130) Benchmark companies (n=406					
	Average weight excluded	Number excluded	Weight excluded				
Consensus	12.5%	35	13.3%				
PAB	15.3%	46	15.9%				
SDG	55.2%	176	58.3%				
		b) United States					

	b) United States				
ESG screen	Indices (n=387)	n=387) Benchmark companies (n=467)			
	Average weight excluded	Number excluded	Weight excluded		
Consensus	13.9%	54	14.3%		
PAB	19.6%	68	17.5%		
SDG	61.2%	213	68.7%		

Note: This table shows, for each ESG exclusion strategy (ESG screen), descriptive statistics related to the stocks that do not meet the criteria defined by the screen. The second column from the left shows the average financial weight represented by these stocks in the indices for each region, while the third and fourth columns show the number of these stocks and their financial weight within the benchmarks for each region.

ESG scores have been the subject of much debate and are known to vary widely across providers. Different providers often assign different scores to the same company or the same fund. For example, among S&P 500 companies, the average correlation between ESG ratings from six providers is less than 0.5 (Gibson Brandon et al., 2022). Furthermore, only 20% of funds deemed ESG-compliant by any one of the three major providers – Bloomberg, Morningstar, or Refinitiv – are classified as sustainable by all three. At the company level, Berg, Koelbel and Rigobon (2022) show that the divergence in ESG scores is mainly explained by differences in the measurement of each of the underlying ESG attributes, but also by different attribute weights, and to a lesser extent by differences in the attributes included in the scope of these scores<sup>2</sup>. To account for this heterogeneity in ESG scores, this study uses a unique database provided by ValueCo<sup>3</sup> that aggregates ESG scores from more than five asset managers for each equity issuer. ValueCo specialises in collecting proprietary extrafinancial assessments developed internally by asset managers to provide an ESG market view, similar to an ESG bid-offer system for financial markets<sup>4</sup>. Notably, companies and indices in the

<sup>2 -</sup> The respective contributions of "measurement", "scope" and "weight" are 56%, 38% and 6%.

<sup>3 -</sup> See https://www.valuecometrics.com/en

<sup>4 -</sup> Scores are normalised between 0 and 100. Unless specifically indicated otherwise, the scores used in this study are the median scores for each issuer.

## 1. Data and Method

Developed Europe region generally have higher average ESG scores compared to those in the United States region (Exhibit 2).

Exhibit 2: Descriptive statistics of ESG scores

Exhibit 2. Descriptive statistics of E		
	a) Develo	ped Europe
Dimension	Average score (cap-weighted) of indices (n=130)	Cap-weighted score of companies (n=406)
ESG	59.8	58.4
Е	56.0	53.0
S	56.9	55.1
G	68.7	66.5
	b) Unit	ed States
Dimension	Average score (cap-weighted) of indices (n=387)	Cap-weighted score of companies (n=467)
ESG	48.6	48.9
Е	45.7	41.6
S	48.3	51.5
G	58.2	57.0

Note: This table shows, for each ESG score dimension, descriptive statistics related to the score of the stocks. The second column from the left shows the average financial cap-weighted score in the indices for each region, while the third and fourth columns show the cap-weighted score of the corresponding regional benchmark. The share of companies covered by scores – with a minimum of five independent ratings per company – is on average 97% for the Developed Europe indices and 94% for the United States indices.

2. Limitations of ESG Scores in Identifying Harmful Companies

# 2. Limitations of ESG Scores in Identifying Harmful Companies

The first result from this study is that good ESG scores, whether at the company level or aggregated index level, are not sufficient to guarantee that a company's activities or behaviour align with the do no harm criteria. Although indices with the best aggregate ESG scores (those in the fourth quartile) typically contain fewer harmful stocks than those with lower ESG scores<sup>5</sup>, a notable proportion of stocks within these high-scoring indices should still be excluded according to the three exclusion screens. For example, of the 97 indices with the best ESG scores in the United States, 41 hold more than 8% of companies that are considered harmful according to the consensus criteria (by way of reference, the US benchmark contains 14% of such companies) (Exhibit 3).

These results are consistent when analysing the constituents of the regional benchmarks: the companies with the best ESG scores do not necessarily meet the do-no-harm criteria. In the Developed Europe benchmark, out of the 101 companies in the top quartile in terms of ESG score, nine companies (approximately 10%) fail to meet the criteria associated with the Consensus screen. This discrepancy can be attributed to several factors.

- Firstly, most of these companies operate in the Energy and Utilities sectors, which face structural sustainability challenges and are often excluded from PAB-aligned portfolios. On the other hand, best-in-class ESG scoring approaches may identify leaders within these sectors and assign them high scores for performing better than their peers, even though they remain large carbon emitters.
- Secondly, ESG scores often take into account a broad range of factors, while PAB filters focus on climate-related metrics. Good performance or ambitious commitment on other environmental topics, or regarding social and governance challenges, may lead a company to get high ESG scores in spite of harmful practices and activities from a climate-focused point of view.
- Finally, some of these companies are actively transitioning towards more sustainable practices, which are valued in their ESG scores, but still have fossil fuel exposure excluded under PAB. The forward-looking dimension of ESG scores may inflate the results of companies showing steady and credible improvements in their practices before they actually meet the criteria to be included in PAB-aligned portfolios<sup>6</sup>.

Exhibit 3: Impact of exclusion according to the ESG score quartile at the indices level and at the benchmark company's level

	a) Developed Europe								
Indices (n=130)				Benchmark (n=406)					
Quartile	Average score of			Quartile	Average score of the	Nb. of the	e benchmark co excluded	ompanies	
	Indices	Consensus	PAB	SDG		benchmark companies	Consensus	PAB	SDG
q1 (n=33)	55.6	13.4	24.4	60.1	q1 (n=102)	45.9	19.0	22.0	54.0
q2 (n=32)	59.1	11.3	13.2	56.8	q2 (n=101)	57.0	4.0	8.0	38.0
q3 (n=32)	60.8	6.8	8.5	55.0	q3 (n=102)	62.1	3.0	5.0	41.0
q4 (n=33)	63.7	8.1	8.8	49.2	q4 (n=101)	68.8	9.0	11.0	43.0

<sup>5 -</sup> The difference between the top-quartile (q4) indices and those in the second and third quartiles (q2, q3) is not statistically significant for Developed Europe indices.

<sup>6 -</sup> Companies with higher ESG scores also tend to have more divergent scores (see Appendix). However, the test results remain similar when using the score from the first quartile of the score distribution for a given company.

# 2. Limitations of ESG Scores in Identifying Harmful Companies

	b) United States								
	Indices (n=387)				Benchmark (n=467)				
Quartile	e Average Average weig score of	Average weight excluded of indices		Quartile	Average score of the	Nb. of the	e benchmark co excluded	ompanies	
	Indices	Consensus	PAB	SDG		benchmark companies	Consensus	PAB	SDG
q1 (n=97)	42.6	20.7	35.2	68.6	q1 (n=117)	32.4	40.0	52.0	84.0
q2 (n=96)	48.1	14.0	18.3	61.1	q2 (n=117)	47.3	5.0	7.0	42.0
q3 (n=96)	50.1	11.5	15.3	59.9	q3 (n=116)	53.7	2.0	2.0	42.0
q4 (n=97)	53.6	7.0	8.1	55.1	q4 (n=117)	62.1	7.0	7.0	44.0

Note: This table shows the evolution of the weight of stocks that do not meet the "do no harm" criteria associated with the three screens, as a function of the ESG score. The left columns show the average weight of these stocks for different indices grouped by quartile according to their EGS score (indices in q4 are those with the highest scores), while the right-hand columns do the same for benchmark stocks.

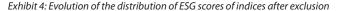
The second result of this study is that targeting companies with the lowest ESG scores within these benchmarks does not allow for proper identification of companies with harmful activities or behaviours. Within the Developed Europe benchmark, a selection of the 35 companies with the lowest ESG scores – corresponding to the number of exclusions under the Consensus screen – reveals that only 12 companies overlap with those identified by the Consensus filter. Consequently, an exclusion approach based on ESG score rankings alone would fail to capture roughly two-thirds of the companies that are deemed to have a negative impact according to the consensus criteria.

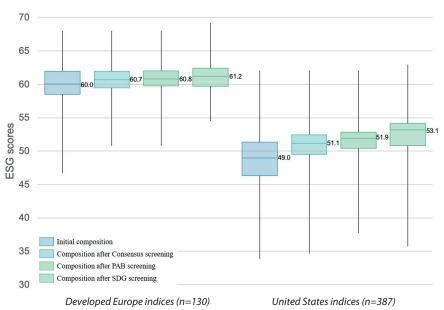
3. Exclusion of Harmful Companies Tend to Improve ESG Score

# 3. Exclusion of Harmful Companies Tend to Improve ESG Score

As outlined in the previous section, ESG integration based solely on ESG scores may not adequately ensure alignment with a "do no harm" principle. This calls for an examination of the potential compatibility between ESG integration and exclusionary screening approaches. In particular, it is crucial to assess the impact of exclusions on strategies aimed at maximising a portfolio's ESG score.

The analysis suggests that excluding harmful stocks does not hinder such strategies. On the contrary, exclusions tend to have a positive effect on the aggregate ESG score. Applying the three exclusion screens to the set of indices, followed by a proportional reweighting, leads to a significant increase in their weighted average ESG scores (Exhibit 4).





Note: This graph shows the evolution of the ESG scores of the indices for each region, after different ESG exclusion strategies (ESG screens). Whatever the ESG screen considered, the improvement in the ESG score is significant.

These results are consistent when analysing the constituents of both benchmarks. Companies that do not meet the criteria set by the Consensus and PAB screens typically have ESG scores significantly below the average, a trend that is especially pronounced among US companies<sup>7</sup> (Exhibit 5).

<sup>7 -</sup> In contrast, companies excluded by the SDG filter tend to have ESG scores close to the benchmark average.

# 3. Exclusion of Harmful Companies Tend to Improve ESG Score

Exhibit 5: Score of benchmark constituents with controversial activities or behaviour

t the criteria
VI
SDG
57.1
53.3
53.7
67.0

b) United States				
Score	Average score of constituents	Average of constituents that do not meet the criteria		
		Consensus	PAB	SDG
ESG	48.8	33.1	33.4	44.8
Е	41.6	40.9	41.1	40.6
S	51.5	51.3	48.9	48.9
G	57.0	56.8	55.4	55.4

Note: This table shows the average score (ESG, E, S, and G) of stocks that do not meet the "do no harm" criteria of the different ESG screens within each regional benchmark. Stocks corresponding to companies that do not comply with the Consensus and PAB screens have significantly lower ESG scores than the other benchmark constituents.

However, the impact of exclusions on the aggregate ESG score depends on the initial level of the aggregate ESG score. For Developed Europe, indices already exhibiting a high ESG score (in the fourth quartile q4), exclusions have no significant positive effect (Exhibit 6).

Exhibit 6: Impact of exclusion on the weighted average scores of the indices by quartile

a) Developed Europe				
a) Developed Europe				
		Indices (n=130)		
Quartile	Average score of Indices	New weight	ted average indices scores aft	er exclusion
		Consensus	PAB	SDG
q1 (n=33)	55.6	58.3	58.6	59.0
q2 (n=32)	59.1	60.3	60.4	60.8
q3 (n=32)	60.8	61.1	61.1	61.6
q4 (n=33)	63.7	63.6	63.6	63.7

		b) United States		
	Indices (n=387)			
Quartile	Average score of Indices	New weight	ted average indices scores aft	er exclusion
		Consensus	PAB	SDG
q1 (n=97)	42.6	46.2	47.7	48.7
q2 (n=96)	48.1	50.4	51.2	52.1
q3 (n=96)	50.1	51.7	52.4	53.6
q4 (n=97)	53.6	54.2	54.4	55.6

Note: This table shows the changes in the cap-weighted average ESG score of indices after different ESG exclusion strategies, according to the starting ESG score of these indices (by quartiles). For Developed Europe indices already exhibiting a high ESG score (q4), none of the exclusion strategies have a significant effect.

# 3. Exclusion of Harmful Companies Tend to Improve ESG Score

As mentioned in the previous section, certain companies with high ESG scores are excluded, potentially reducing the aggregate ESG score of portfolios concentrated on these stocks. In our index universe, only two indices are subject to a (non-significant) reduction in their aggregate ESG score.

# 4. Conclusion

## 4. Conclusion

This study shows that ESG integration relying solely on ESG scores does not ensure alignment with the "do no harm" principles within portfolios. The analysis of diversified indices from Developed Europe and the United States demonstrates that exclusionary screening based on ESG criteria identifies companies engaging in harmful activities or behaviours that ESG scores alone may fail to identify. However, these two approaches are not incompatible. Applying exclusion screens generally improves the weighted average ESG scores of indices, indicating that exclusions can complement ESG integration by refining portfolio quality without detracting from ESG performance. These findings highlight the potential for exclusionary practices to reinforce ESG integration, supporting the creation of more sustainable and resilient investment portfolios. The natural next step would be to anticipate the financial impact of such exclusions, a topic which is covered in Porteu de la Morandière, Vaucher and Bouchet (2025) where they find that applying exclusions either based on consensus criteria or climate criteria has a relatively low impact on the financial risk profile of indices and that this impact can be further reduced with an optimised reallocation.

5. Appendix

## 5. Appendix

#### **5.1 ESG Exclusion Screens**

The "Consensus" screen is based on an analysis of the exclusion policies of the world's 100 largest asset owners. This analysis resulted in a set of four criteria most frequently used by asset owners that define the screen: the controversial weapons industry, the tobacco industry, the coal industry and controversies related to the United Nations Global Compact (UNGC) 10 principles<sup>8</sup>.

The PAB screen is based on the minimum standards<sup>9</sup> that define EU Climate Transition Benchmarks and Paris-aligned Benchmarks. In addition to minimum reduction of greenhouse gas footprint (not considered in this article), these standards define exclusion criteria related to climate change (coal and fossil fuels industries) and to sustainable development (tobacco and controversial weapons industries, controversies related to the UNGC principles.

Finally, the "sustainable development goals" or SDG screen is based on the United Nations sustainable development goals framework adopted in 2015. This framework consists of 17 goals and 169 targets to be achieved by 2030, covering social, environmental, and economic issues. The exclusion criteria of the corresponding screen cover any activities or behaviour that would hinder the achievement of these goals and targets (the complete methodology for the three screen is available in Porteu de la Morandière, Vaucher and Bouchet, 2025).

### 5.2 ESG score dispersion

Within the EU benchmark, companies with high ESG score – including those that are excluded by the different ESG screens – exhibit a high dispersion in their ESG scores (Exhibit 7), potentially indicating that while these companies perform well in most ESG areas, certain aspects of their operations are heterogeneously penalised by the different asset managers rating scales. Another interpretation could be a misalignment between the reporting and the actual performance of these companies on ESG topics. When they underreport or, on the contrary, indulge in greenwashing, ESG data providers have different methodologies to estimate the gaps or penalise misleading claims. The data sources employed by investors for their responsible investment strategy may therefore introduce divergence in the resulting scores. This is not the case for the US index, where ESG score dispersion is already high across the board, reflecting broader variability in how companies are evaluated by the different asset managers.

Exhibit 7: Dispersion of ESG scores

	a) Developed Europe						
	Average ESG scores dispersion of the companies in the benchmarks	Average ESG scores dispersion of the companies excluded					
Quartile		Consensus	PAB	SDG			
q1	77.1	74.8	74.9	76.7			
q2	78.6	76.5	76.4	77.1			
q3	79.0	74.5	73.0	76.4			
q4	79.3	81.0	81.0	80.0			

 $<sup>8-</sup> The \ ten\ principles\ are\ available\ at: https://unglobalcompact.org/what-is-gc/mission/principles.$ 

<sup>9 -</sup> Commission Delegated Regulation (EU) 2020/1818.

## 5. Appendix

b) United States						
	Average ESG scores dispersion of the companies in the benchmarks	Average ESG scores dispersion of the companies excluded				
Quartile		Consensus	PAB	SDG		
q1	84.8	83.4	84.1	85.1		
q2	76.8	76.4	77.4	75.5		
q3	76.2	83.8	83.8	77.2		
q4	75.4	76.1	76.1	76.1		

Note: This table shows the dispersion of ESG scores for benchmark constituents according to their initial ESG score (stocks are grouped by quartiles), and according to whether they are excluded by different ESG screens (right columns). The dispersion score is expressed between 0 (no dispersion) and 100 (maximum dispersion) and corresponds to the deviation from the average of the scores given by the different asset managers.

## References

## References

- Berg, F., J.F. Koelbel & R. Rigobon (2022). Aggregate confusion: The divergence of ESG ratings. *Review of Finance* 26(6): 1315-1344.
- Gibson Brandon, R., S. Glossner, P. Krueger, P. Matos & T. Steffen. (2022). Do responsible investors invest responsibly? *Review of Finance* 26(6): 1389-1432.
- GSIA (2021). Global Sustainable Investment Review 2020. Global Sustainable Investment Alliance.
- GSIA (2023). Global Sustainable Investment Review 2022. Global Sustainable Investment Alliance.
- Porteu de La Morandière, A., B. Vaucher & V. Bouchet (2025) [Forthcoming] Do exclusions have an effect on portfolio risk and diversification? *The Journal of Impact and ESG Investing*.
- PRI (2023). ESG Integration in Listed Equity: A Technical Guide.

**Scientific Portfolio Publications** 

### **Scientific Portfolio Publications**

#### **2024 Publications**

- Bouchet, V., Jones, J., Joubrel, M., Porteu de la Morandière A., and Safaee, S. Do ESG Scores and ESG Screening Tell the Same Story? Assessing their Informational Overlap (December).
- Bouchet, V. Attribution Analysis of Greenhouse Gas Emissions Associated with an Equity Portfolio: A Comparison of Existing Frameworks (November).
- Bouchet, V., Porteu de la Morandière A., and Vaucher, B. Do Exclusions Have an Effect on the Risk Profile of Equity Portfolios? (September).
- Bouchet, V., Porteu de la Morandière A., and Vaucher, B. Do Climate-Related Exclusions Have an Effect on Portfolio Risk and Diversification? A Contribution to the Article 9 Funds Controversy (May).
- Bouchet, V., Safaee, S. Institutional Equity Portfolios: How Can Asset Owners Build Coherent Sustainable Strategies? (February).

#### **2023 Publications**

- Herzog, B., Jones, J., and Safaee, S. Remember to Diversify Your Active Risk: Evidence from US Equity ETFs (March).
- Bouchet, V. Decomposition of Greenhouse Gas Emissions Associated with an Equity Portfolio (May).
- Herzog, B., Jones, J., and Safaee, S. The Perceived Advantages of Self-Indexing for Institutional Equity Investors. (September).

#### **2022 Publications**

• Bouchet, V., Vaucher, B., Herzog, B. Look up! A Market-Measure of the Long-Term Transition Risks in Equity Portfolios. (December).

#### Disclaimer

The information contained in this paper has been prepared by Scientific Portfolio solely for informational purposes, is not a recommendation to participate in any particular trading strategy and should not be considered as an investment advice or an offer to sell or buy securities. All information provided herein is impersonal and not tailored to the needs of any person, entity or group of persons. The information shall not be used for any unlawful or unauthorised purposes. The information is provided on an "as is" basis. Although Scientific Portfolio obtains its information from sources which it considers to be reliable, neither Scientific Portfolio nor its information providers involved in, or related to, compiling, computing or creating the information (collectively, the "Scientific Portfolio Parties") guarantees the accuracy and/or the completeness of any of this information. None of the Scientific Portfolio Parties makes any representation or warranty, express or implied, as to the results to be obtained by any person or entity from any use of this information, and the user of this information assumes the entire risk of any use made of this information. None of the Scientific Portfolio Parties makes any express or implied warranties, and the Scientific Portfolio Parties hereby expressly disclaim all implied warranties (including, without limitation, any implied warranties of accuracy, completeness, timeliness, sequence, currentness, merchantability, quality or fitness for a particular purpose) with respect to any of this information. Without limiting any of the foregoing, in no event shall any of the Scientific Portfolio Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits), even if notified of the possibility of such damages.

