



The Role of Green Finance in Pension Investment

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Government Pension Investment Fund

GPIF in Numbers

As of March 31, 2020 (\$1=¥107.96)



ESG in Equity Investment

Focus	Region	Index	Concept	# of equities	AUM (\$ bn)
ESG	Japan	FTSE Blossom Japan Index	• It is a broad ESG index that selects stocks with high absolute ESG scores and adjusts industry weights to neutral.	181	8.6
		MSCI Japan ESG Select Leaders Index	• This index is comprised of stocks with relatively high ESG scores in each industry.	248	12.1
	Non Japan	MSCI ACWI ESG Universal Index *1	• This Index adjusts the weight of constituents based on each issuer's current ESG rating and rating trend to elevate the ESG metrics of the index overall.	2,100	9.3
E	Japan	S&P/JPX Carbon Efficient Index	• These are designed to increase index weights of the companies which have low Carbon to Revenue Footprints (annual greenhouse gas (GHG) emissions divided by annual revenues) and actively disclose carbon emission information.	1,725	9.1
	Non Japan	S&P Global Ex-Japan LargeMid Carbon Efficient Index		2,037	15.8
S	Japan	MSCI Japan Empowering Women Index	• It calculates the gender-diversity scores based on information disclosed under “the Act on Promotion of Women’s Participation and Advancement in the Workplace” and selects companies with higher gender diversity scores from each sector.	305	7.4
	Non Japan	Morningstar Gender Diversity Index *2	• It determines investment weights primarily based on the Equileap Gender Scorecard, which rates issuers’ efforts in gender equality.	1,765	2.8

Note: Data as of March 31, 2020 except for *1 and *2.

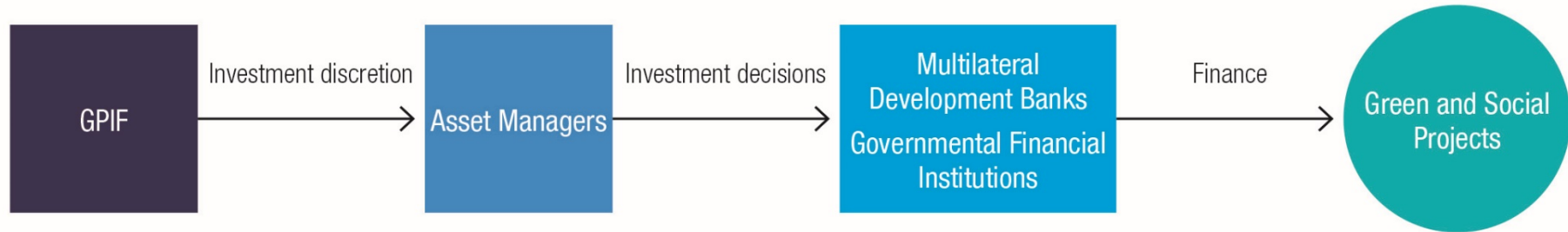
Source: Prepared by GPIF based on data from each index provider

*1 Official name is “MSCI ACWI ex Japan ex China A ESG Universal with Special Taxes Index” and the data is as of December 18, 2020.

*2 Official name is “Morningstar Developed Markets ex Japan) Gender Diversity Index” and the data is as of December 18, 2020.

ESG in Fixed Income Investment

Investment Framework in Green, Social and Sustainability Bonds



Multilateral Development Banks and Governmental Financial Institutions in Partnership with GPIF



ESG in Alternative Asset Investment

ESG in Real Estate Investment



<Investment Example>

This logistics facility held by a European real estate fund in which GPIF invests has received WELL Certified™ Gold certification for its measures to ensure the health and wellness of the people that work there.

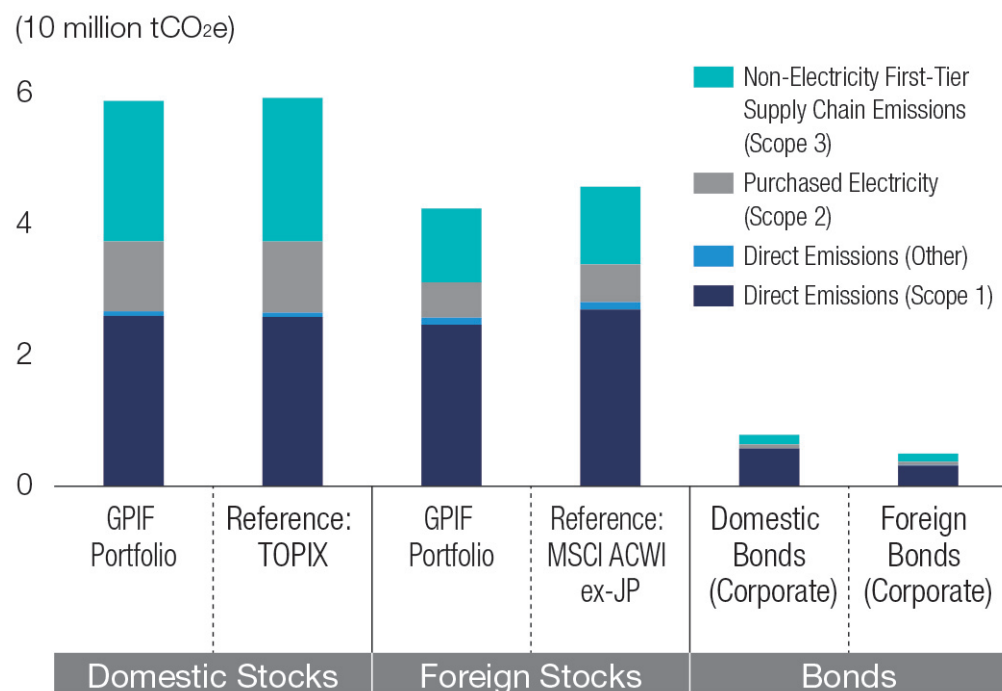
ESG in Infrastructure Investment



< Investment Example >

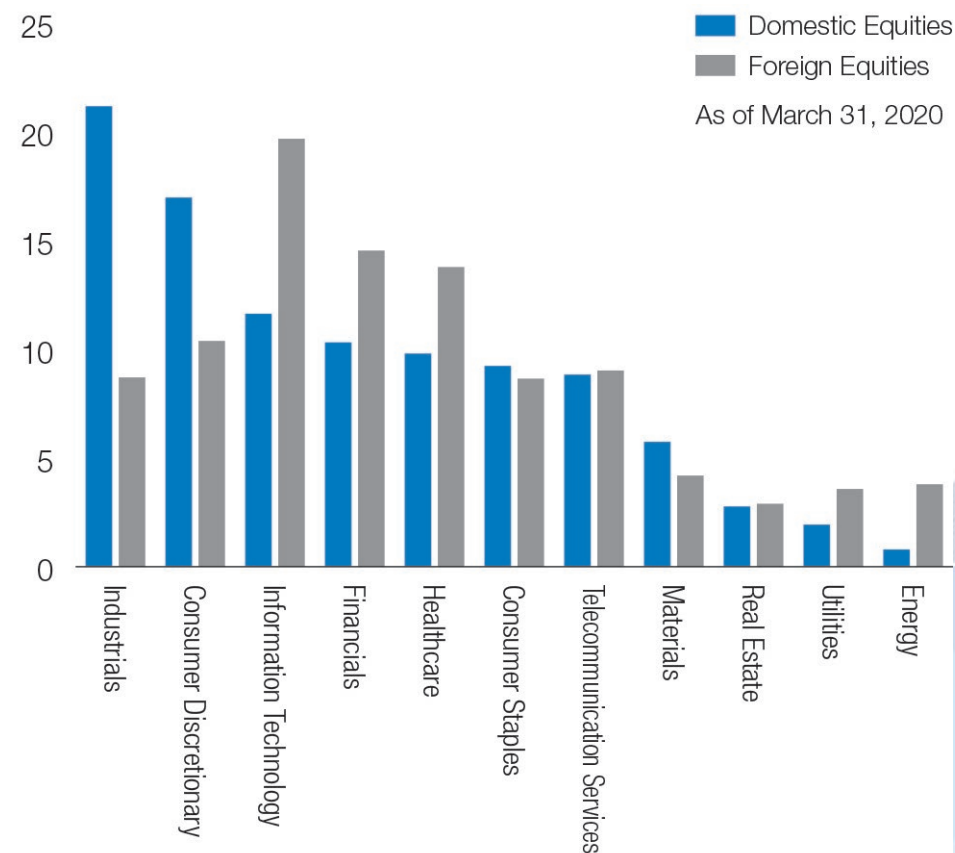
Shown above is the wind farm held by a North American infrastructure fund in which GPIF invests. The facility has an overall power generation capacity of 803MW. Stable revenue is ensured through long-term power purchase agreements.

Greenhouse Gas Emissions by Sector



Source: S&P Trucost Limited © Trucost 2020.

Breakdown of GPIF Equity Portfolio by Sector (%)

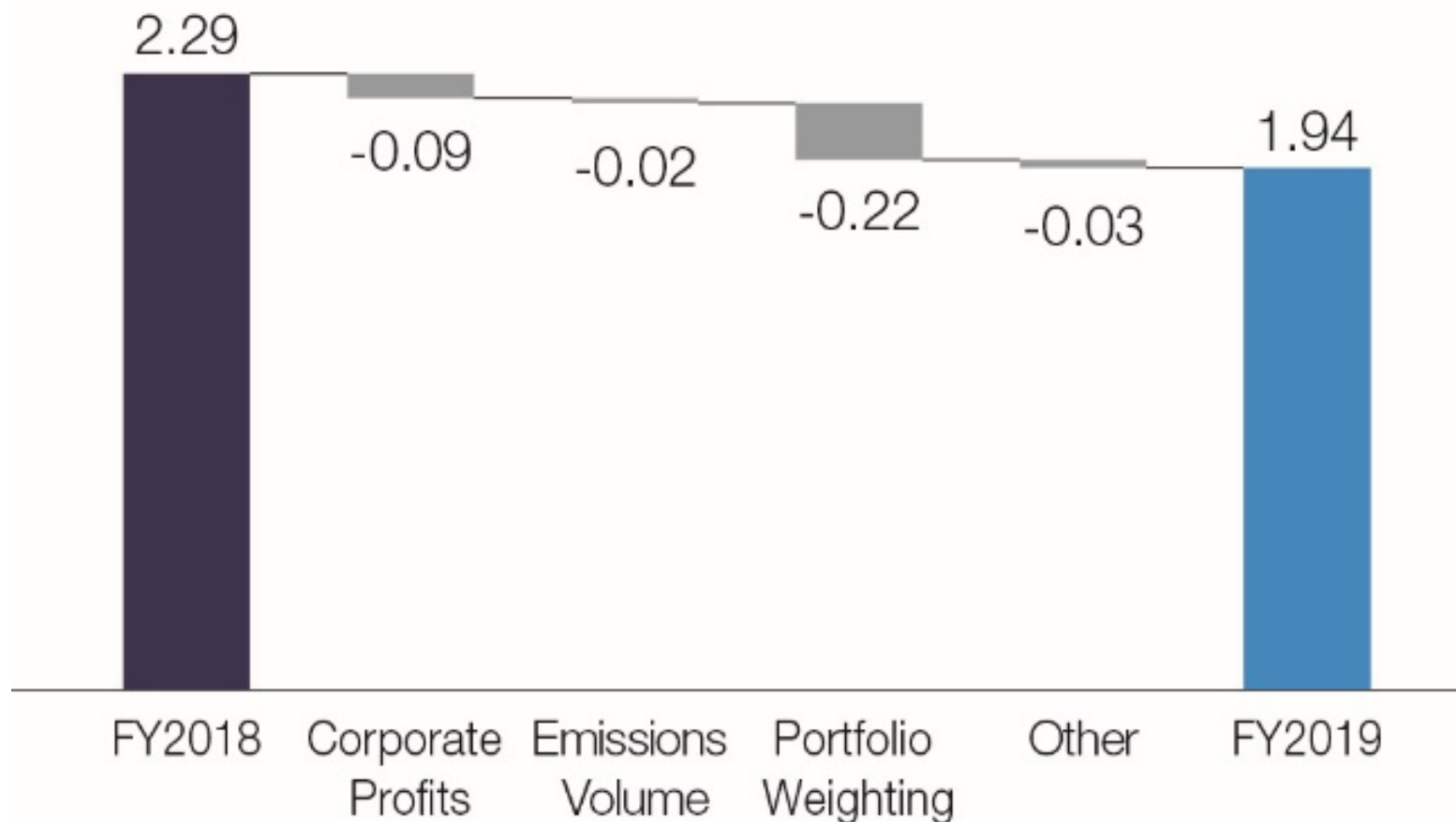


Source: GPIF.

Carbon Intensity

Analysis of Factors Contributing to Carbon Intensity

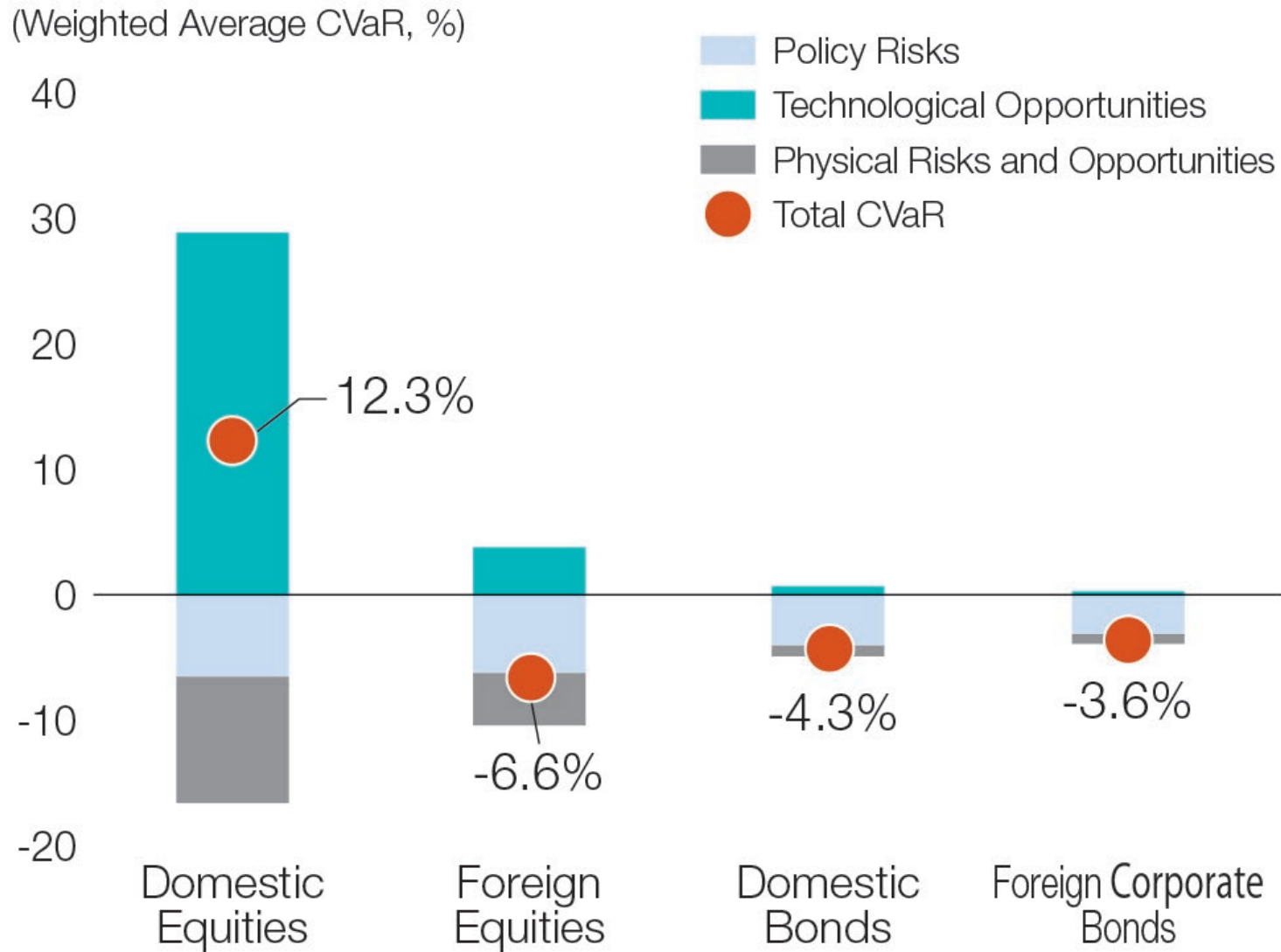
(tCO₂e per million yen of sales)



Note: "Other" represents the cross term of "Corporate Profits," "Emissions Volume" and "Portfolio Weighting."

Source: S&P Trucost Limited © Trucost 2020.

Climate Value-at-Risk (CVaR)



Note: Calculated on the assumption of a 2°C scenario.

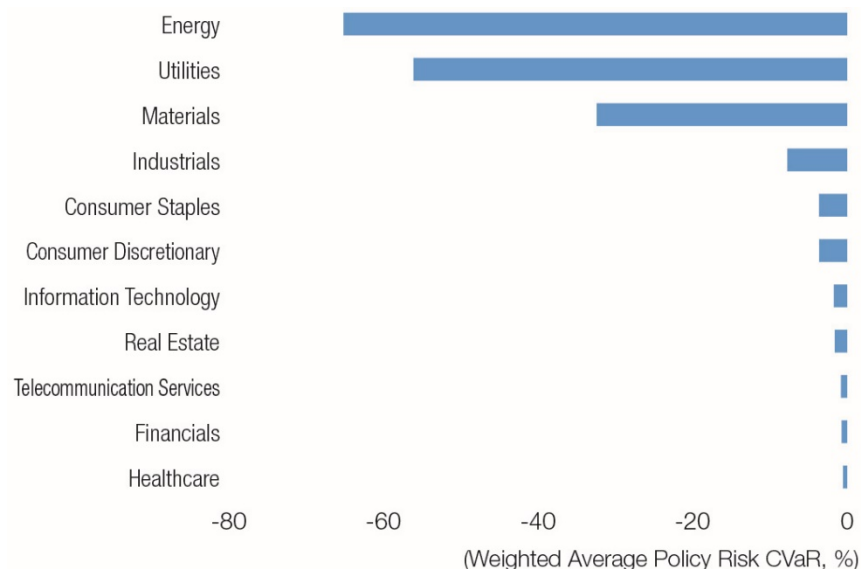
Source: Reproduced by permission of MSCI ESG Research LLC ©2020.



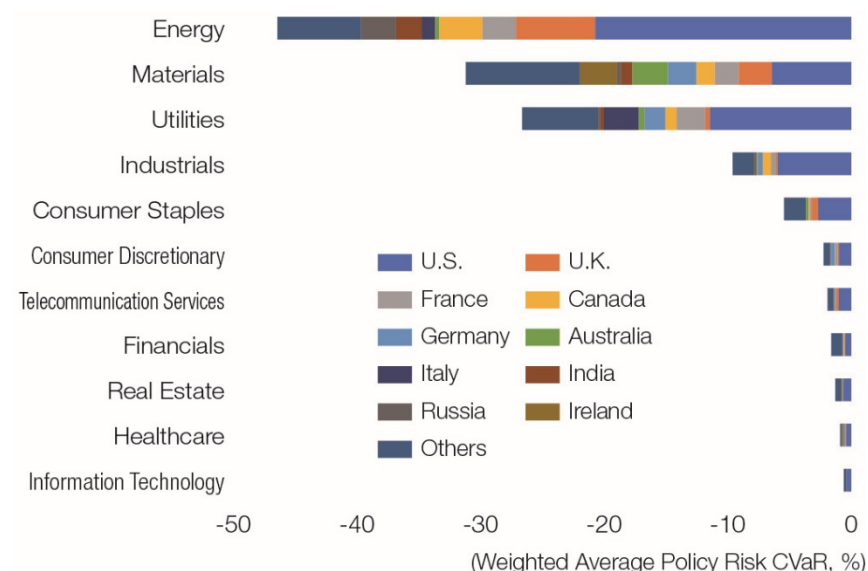
Appendix

CVaR: Policy Risk

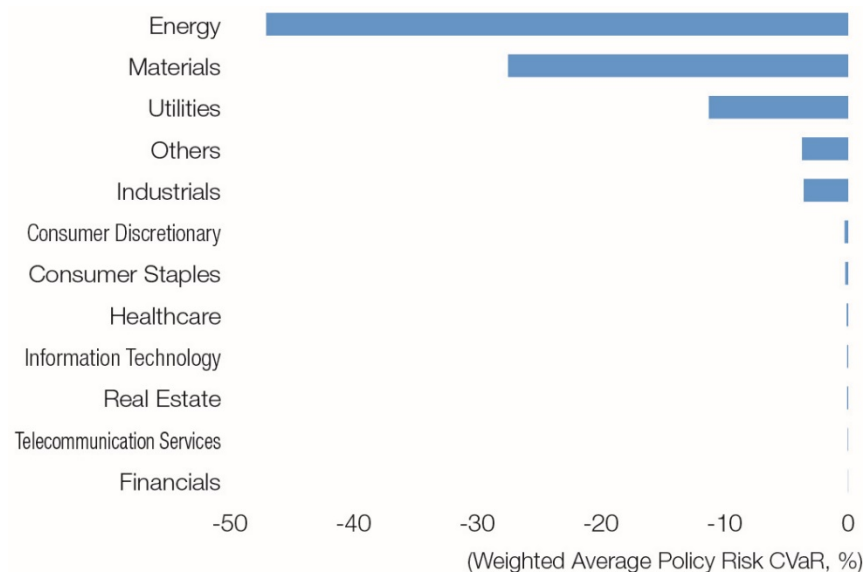
Domestic Equity Portfolio



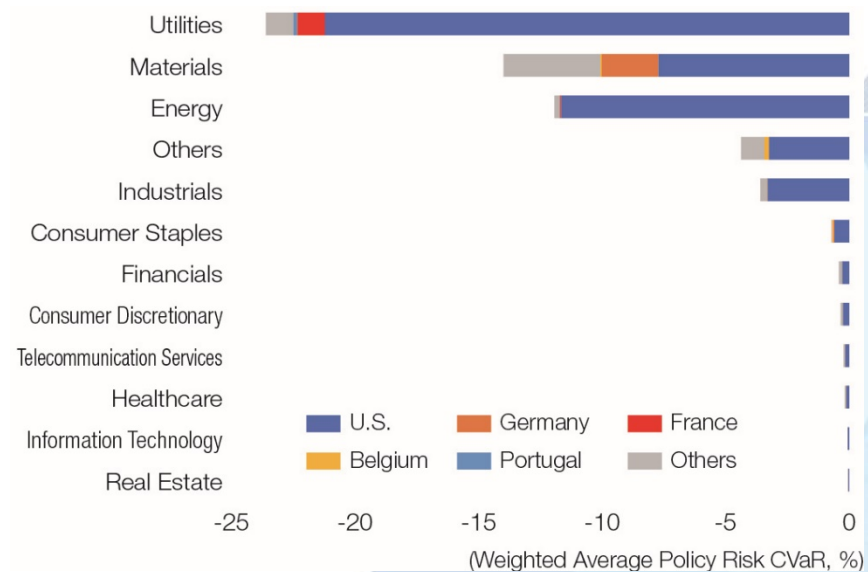
Foreign Equity Portfolio



Domestic Corporate Bond Portfolio

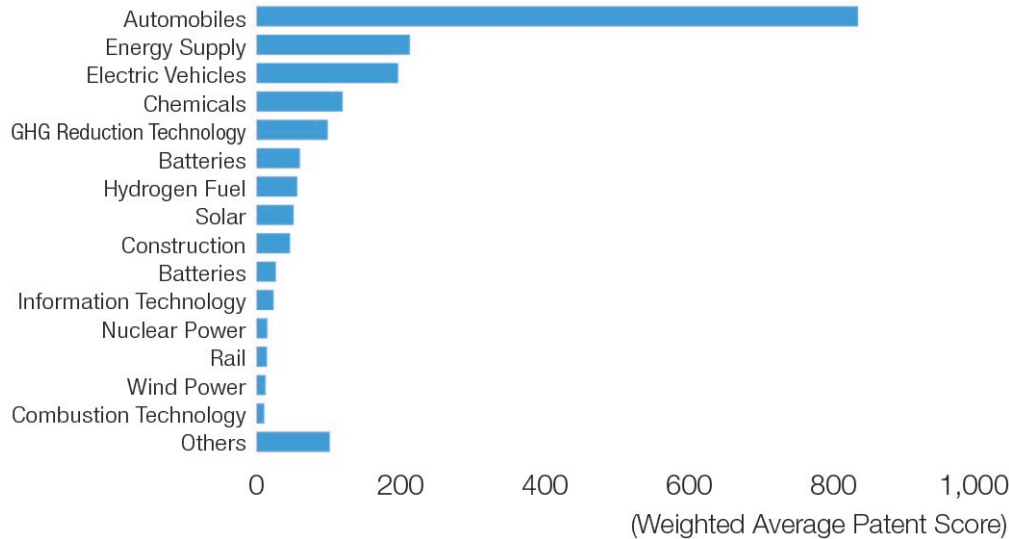


Foreign Corporate Bond Portfolio

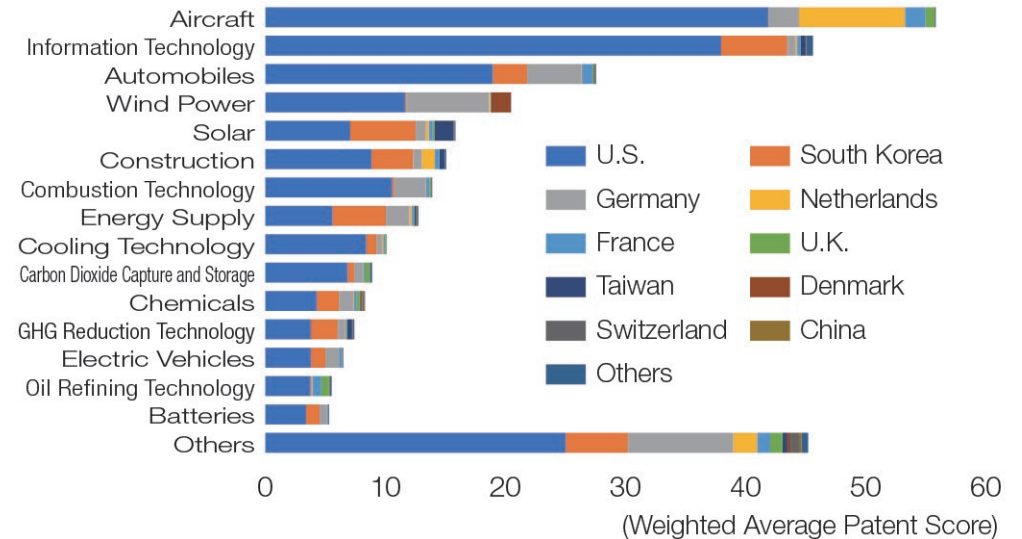


CVaR: Technological Opportunities

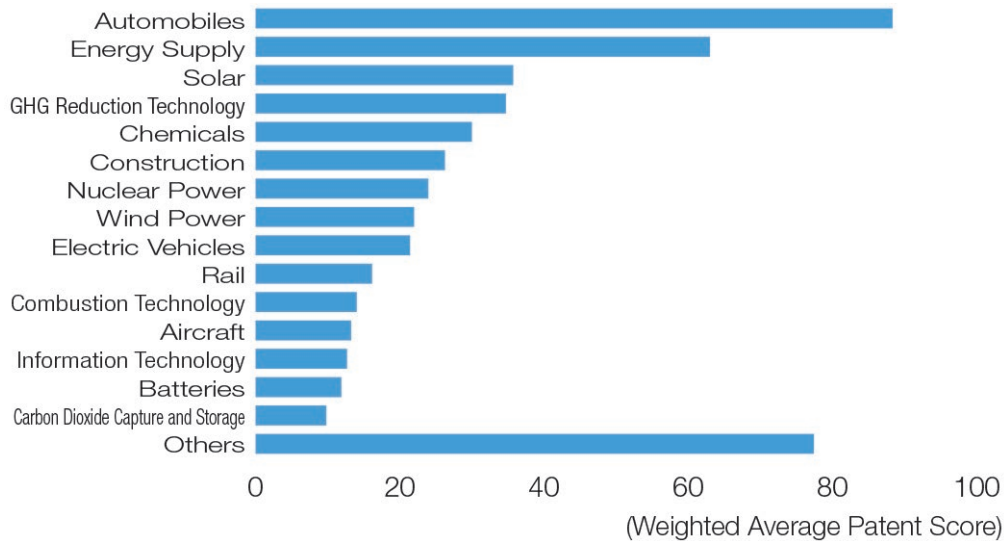
Domestic Equity Portfolio



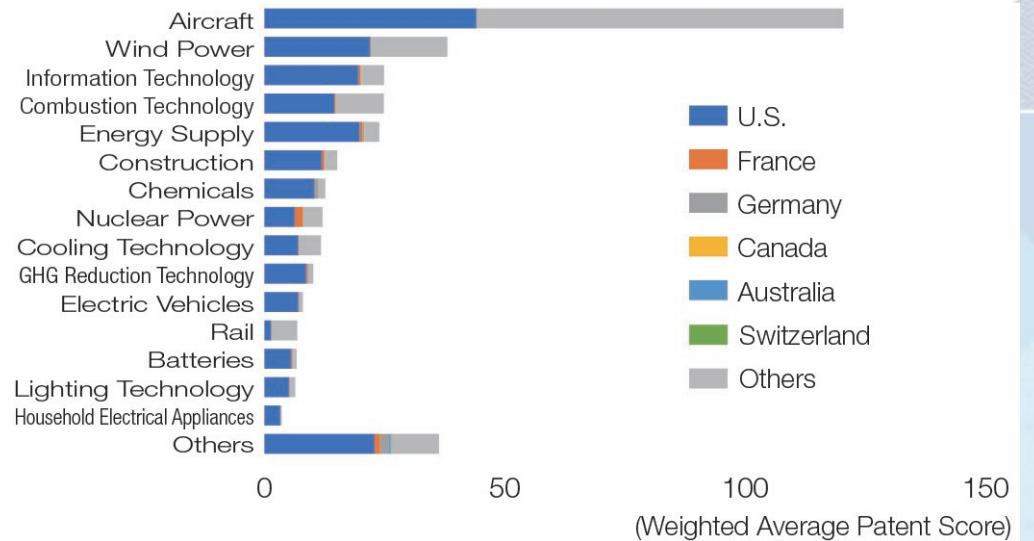
Foreign Equity Portfolio



Domestic Corporate Bond Portfolio

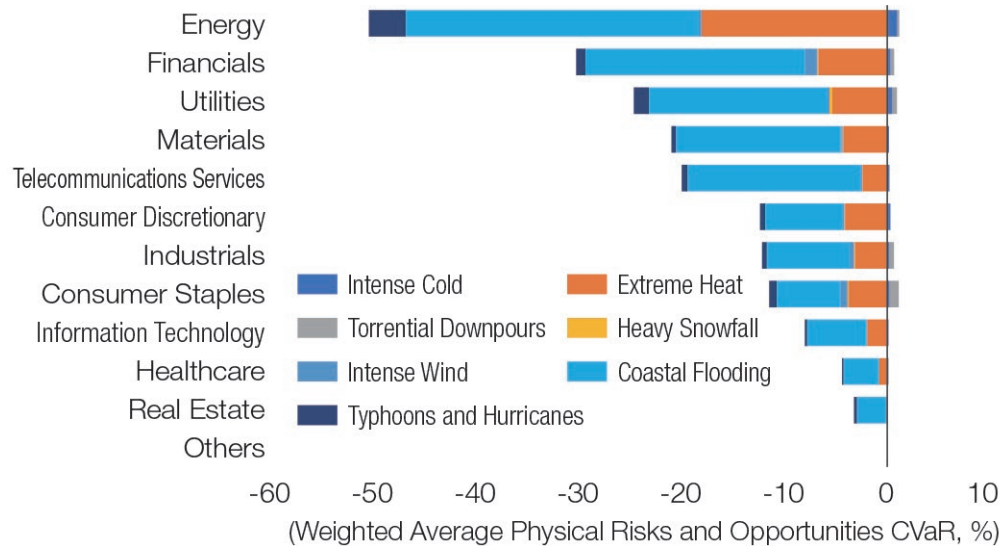


Foreign Corporate Bond Portfolio

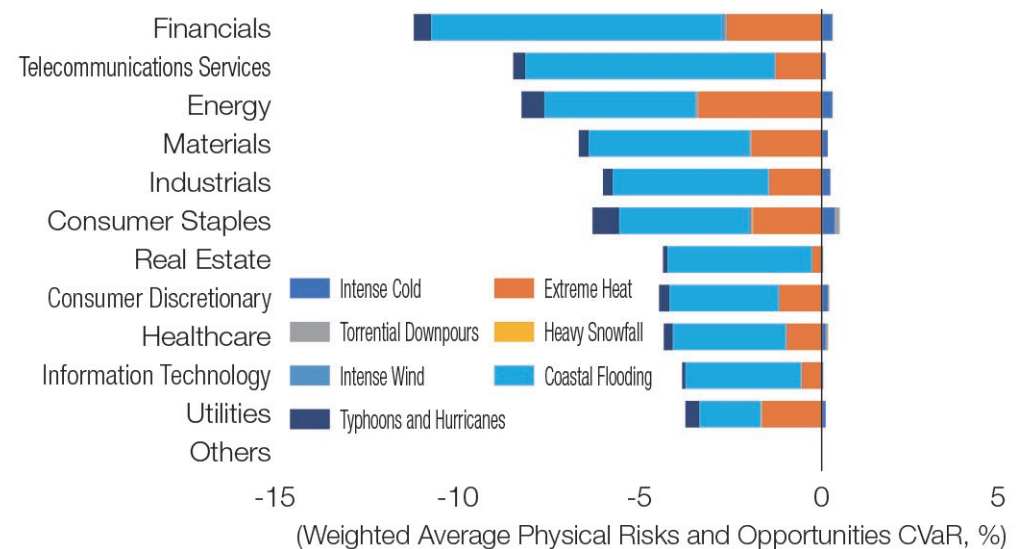


CVaR: Physical Risks and Opportunities

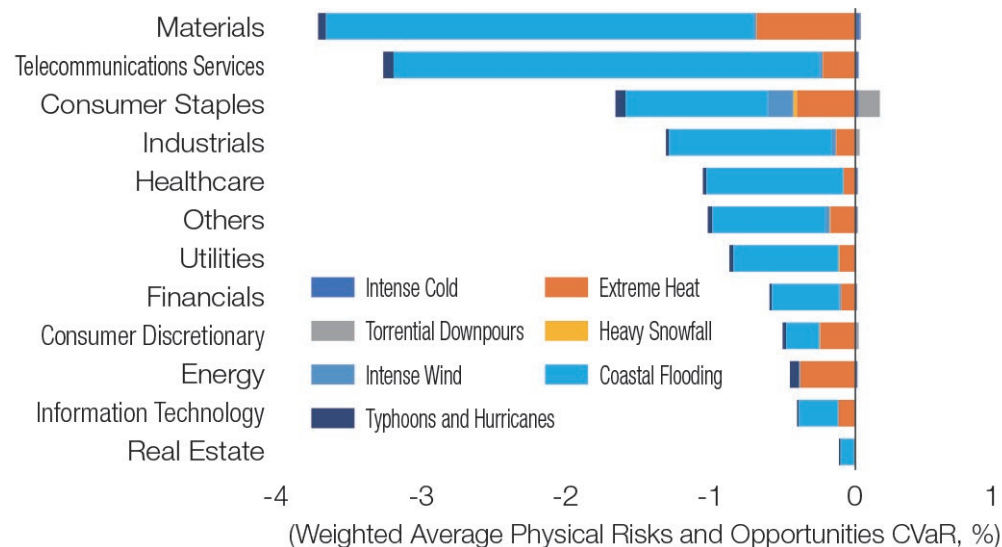
Domestic Equity Portfolio



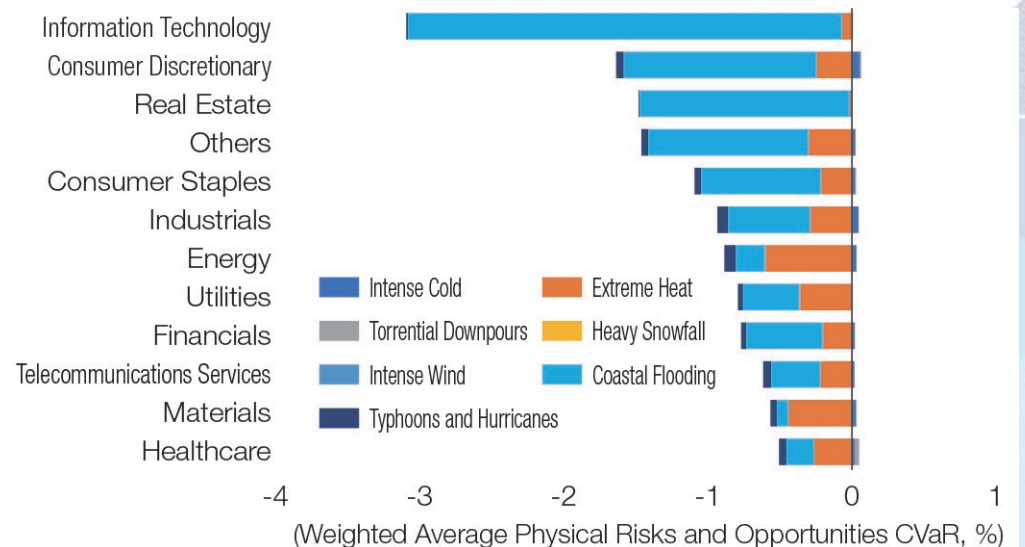
Foreign Equity Portfolio



Domestic Corporate Bond Portfolio



Foreign Corporate Bond Portfolio



CVaR by Temperature Increase Scenario

CVaR for the 3°C Scenario	Equities	Corporate Bonds	Total Portfolio
(1) Transition Risks and Opportunities	0.79	-0.37	0.72
Policy Risks	-1.66	-0.48	-1.58
Technological Opportunities	2.45	0.12	2.31
(2) Physical Risks and Opportunities	-6.75	-0.82	-6.37
(3) Aggregate	-5.95	-1.18	-5.65
CVaR for the 2°C Scenario	Equities	Corporate Bonds	Total Portfolio
(1) Transition Risks and Opportunities	9.82	-3.09	9.00
Policy risks	-6.37	-3.55	-6.19
Technological Opportunities	16.18	0.46	15.19
(2) Physical Risks and Opportunities	-6.75	-0.82	-6.37
(3) Aggregate	3.07	-3.91	2.63
CVaR for the 1.5°C scenario	Equities	Corporate Bonds	Total Portfolio
(1) Transition Risks and Opportunities	26.00	-6.56	23.94
Policy Risks	-10.21	-7.29	-10.02
Technological Opportunities	36.21	0.72	33.96
(2) Physical Risks and Opportunities	-6.75	-0.82	-6.37
(3) Aggregate	19.25	-7.38	17.57

Note: Physical risks and opportunities are analyzed under assumptions corresponding to a 4 to 6°C scenario.

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