



Excellent TCFD Disclosure Selected by GPIF's Asset Managers Entrusted with Foreign Equity Investment

Government Pension Investment Fund (GPIF) requested its 25 external asset managers entrusted with foreign equity investment (hereinafter, "external asset manager") to nominate "excellent TCFD disclosure".

GPIF requested external asset managers to nominate up to 5 companies as "excellent TCFD disclosure" and up to 3 companies each as "excellent disclosure of (1) governance, (2) strategy, (3) risk management, and (4) metrics and targets", respectively. The result of the survey was compiled into two lists, comprised of 60 companies below selected for having excellent TCFD disclosure, and 95 companies in aggregate selected for excellent disclosure of each four TCFD disclosure shown in page 5.

[Companies nominated by two or more external asset managers for their excellent TCFD disclosure] (number of external asset managers)

◇ BHP GROUP LTD	(4)	◇ ENI SPA	(2)
◇ MICROSOFT CORP	(4)	◇ EQUINOR ASA	(2)
◇ CITIGROUP INC	(3)	◇ NESTLE SA	(2)
◇ JPMORGAN CHASE & CO	(3)	◇ TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	(2)
◇ CVS HEALTH CORP	(2)	◇ VALERO ENERGY CORP	(2)

[Companies selected by GPIF's external asset managers for excellent TCFD disclosure]

Company name	Number of nominations	Company name	Number of nominations	Company name	Number of nominations
AIA GROUP LTD	1	DISCOVERY LTD	1	MOODY'S CORP	1
AIR LIQUIDE SA	1	ENEL SPA	1	NATWEST GROUP PLC	1
AIRBUS SE	1	ENI SPA	2	NESTLE SA	2
ALPHABET INC	1	EQUINOR ASA	2	NEWMONT CORP	1
AMAZON.COM INC	1	ESTEE LAUDER COMPANIES INC	1	NEXTERA ENERGY INC	1
ASTRAZENECA PLC	1	EXXON MOBIL CORP	1	PROLOGIS INC	1
BANK OF AMERICA CORP	1	FORD MOTOR CO	1	RIO TINTO PLC	1
BHP GROUP LTD	4	FREEPORT-MCMORAN INC	1	S&P GLOBAL INC	1
BLACKROCK INC	1	GENERAL MOTORS CO	1	SALESFORCE INC	1
BP PLC	1	ILLUMINA INC	1	SASOL LTD	1
CANADIAN NATIONAL RAILWAY CO	1	ING GROEP NV	1	SHELL PLC	1
CIE FINANCIERE RICHEMONT SA	1	INTERNATIONAL FLAVORS & FRAGRANCES	1	STANDARD BANK GROUP LTD	1
CISCO SYSTEMS INC	1	JOHNSON & JOHNSON	1	TAIWAN CEMENT CORP	1
CITIGROUP INC	3	JPMORGAN CHASE & CO	3	TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2
CITY DEVELOPMENTS LTD	1	MAGNA INTERNATIONAL INC	1	TARGET CORP	1
CMS ENERGY CORP	1	MANULIFE FINANCIAL CORP	1	TECHTRONIC INDUSTRIES CO LTD	1
COMERICA INC	1	MARSTON'S PLC	1	TELUS CORP	1
COSTCO WHOLESALE CORP	1	MASTERCARD INC	1	THE FOSCHINI GROUP LTD	1
CSX CORP	1	MICROSOFT CORP	4	UNION PACIFIC CORP	1
CVS HEALTH CORP	2	MONDELEZ INTERNATIONAL INC	1	VALERO ENERGY CORP	2

Note: The above list is composed of companies whose TCFD disclosure were selected by external asset managers as "excellent TCFD disclosure". (Listed in alphabetical order) The companies highlighted in blue were nominated by two or more external asset managers.

[Key remarks on the “excellent TCFD disclosure” nominated by two or more external asset managers]

OBHP GROUP LTD

- BHP takes a risk-based approach to adapting to the physical impacts of climate change. They work with third parties globally to obtain regional analyses of climate science to inform resilience planning at an asset level and improve their understanding of the potential climate vulnerabilities of their assets, operations and communities in which they operate. BHP considers the impacts of climate change in strategic planning, and uses a broad range of scenarios to consider how divergent policy, technology, market and societal outcomes could impact their portfolio of assets, including low likelihood, extreme shock events.
- BHP reporting is strong in all four pillars, particularly for strategy and metrics & targets. They have a clear strategy and are transforming their portfolio towards future facing commodities. For metrics & targets, BHP has provided a breakdown of goals and targets within scope 3 and every year reports on the progress on its scope 1 & 2 targets.
- BHP conducts detailed assessment on target setting etc. including Scope 3.
- BHP have detailed climate disclosures, but the integration of TCFD factors into their annual report demonstrates how the issue is incorporated into strategy and operational decision making. A clear table for where to find specific elements of TCFD disclosure is included. The company covers each element in detail and is starting to provide more quantitative outputs from their scenario analysis and including them in their financial reporting, putting them ahead of peers in the sector.

OMICROSOFT CORP

- Microsoft provides extensive disclosure across all four TCFD core elements. Detailed information is provided, outlining not just where accountability lies, but also the distinct role that different board-level committees and management level business functions play in providing oversight on climate-related risks and opportunities. Overall, the company exhibits comprehensive climate transition risk processes, with strong oversight, target-setting and transparency, including TCFD and CDP (Grade: “A”) reporting, Net Zero commitment, and short and longer terms targets that have been approved by the SBTi.
- Microsoft demonstrates solid overall TCFD disclosures. In addition to having SBTi approved targets and its listing on CDP’s A list, they have a structured and separate TCFD report, which broadly follow all the recommendations. They provided clear descriptions of the board and management oversights, identified transition and physical climate-related risks that can potentially impact them. The company describes their approach to managing climate-related risks and opportunities, along with the associated impacts on the company's business. They have a comprehensive mid-term climate plan (2030) with several clear targets on metrics on how to manage it.
- Microsoft provides a standalone TCFD report that comprehensively addresses each of the four TCFD pillars. In particular, it does an excellent job describing the various tools used in its climate-related assessments. Further, it has identified four core sustainability pillars and established commitments pertaining to each one. It reports on progress towards achieving these commitments annually.
- The company's reporting meets the TCFD principles for effective disclosure and assists investors in seeking to understand how the company considers and assesses climate-related risks and opportunities, and their financial impacts.

OCITIGROUP INC

- Citigroup has been reporting in line with TCFD recommendations since 2018 and its standalone TCFD Disclosure report is comprehensive (~75 pages). Citigroup uses TCFD guidelines to report on the net zero plan for its own operations and for its Energy and Power loan portfolios. Citigroup includes methodology for all of

its estimations/calculations and discloses any areas where data may differ from CDP responses due to the inclusion of updated figures.

- We also find Citigroup's TCFD reporting to be robust and comprehensive as well. Outside of TCFD, Citigroup has signed onto the steering committee for the Partnership for Carbon Accounting Financials (PCAF), an industry initiative to develop an accounting methodology for banks and asset managers to disclose Scope 3.
- Detailed analysis

○JPMORGAN CHASE & CO

- JP Morgan Asset Management released its own TCFD report separate from the Bank's report. It presents each section of the report well and gives guidance as to how it will be handling emissions intensive sectors.
- JPM publishes a standalone climate report. JPM's December 2022 climate report provides comprehensive qualitative and quantitative detail across each of the four main topics (governance, strategy, risk management and metrics & targets). They have done well at articulating both the risk and opportunities associated with climate change. Of note, they have detailed their framework to assess clients transition plans (page27) which not many banking peers have published publicly yet and have also provided financed emission metrics for additional sectors (page 59) that extend beyond an initial 2-3 high emitting sectors, supporting the view that JPM are ahead of their regional peers.
- JPM discloses detailed information on risks, including physical risk, transition risk, operational risk and credit risk, and heatmap.

○CVS HEALTH CORP

- CVS Health links climate change not only to environmental sustainability, but also human health, which is reflected in its TCFD reporting. For example, the impact on CVS Health's business from climate change can have serious implications for its customers who rely on the company for their health care needs. As such, CVS Health's TCFD reporting contains detailed information about its response to climate change, including climate risks in its value chain, which may further threaten business continuity. The company's reporting across all TCFD core elements is robust.
- Company considered leading as targets are validated by the SBTi.

○ENI SPA

- Clear climate strategy and reporting on progress toward goals; climate integration into overall business strategy and culture; TCFD index
- ENI is one of the most progressive companies on climate strategy and rates well against peers.

○EQUINOR ASA

- The company is strongly committed to increasing capacity and investments in renewables and undertaking a climate transition. It has already become the world's largest offshore wind operator.
- Equinor has a detailed report that discusses all four pillars of TCFD recommendations with a clear index reference on page 75. It is a leader in the energy sector in terms of disclosing and having a strategy for transitioning to a net zero economy. Apart from setting targets on its scope 1, 2 and 3 (excluding supply chain) emissions, it explains its approach to scope 3 emissions including in the supply chain. In terms of risk management and also disclosed the findings from testing its portfolio against various scenarios from the IEA's World Energy Outlook. In terms of strategy, Equinor is one of the few players which announced capex-related ambitions – it has an ambition to allocate 30% of gross capex by 2025 and more than 50% by 2030 to renewables and low carbon solutions, and has started making progress towards the ambition in 2021.

ONESTLE SA

- Strong disclosure for a non-high emitting sector; TCFD index; climate targets linked to temperature pathways
- Nestle's analysis on climate risk based on various scenarios, and disclosure of its impact.

OTAIWAN SEMICONDUCTOR MANUFACTURING CO LTD

- Comprehensive with management accountability, achievements and future targets
- TSMC outline their response to TCFD in a separate report which is clearly split into the four categories. Governance charts show how different committees with a focus on climate change report up to the Board of Directors. There is also a breakdown of the responsibilities of each committee, their achievements, and members. Targets are clearly linked to management strategies.

OVALERO ENERGY CORP

- Valero publishes a standalone annual TCFD report that includes additional qualitative commentary on Valero's stance on the importance of the data being disclosed and a policy outlook. Their comprehensive disclosure is especially notable given the materiality of environmental impact in the energy sector.
- We find Valero to have a comprehensive TCFD report. Valero 's TCFD reporting provided important information around governance that suggested board members are actively engaged on the company's transition strategy. We found the disclosure around the board's focus on transition risks to be additive to our analysis of the company's governance.

GPIF also requested its external asset managers entrusted with domestic equity investment to nominate “excellent TCFD disclosure” and the result was posted on its Japanese website. (https://www.gpif.go.jp/esg-stw/202303_excellent_TCFD_disclosure_j.pdf) The English version will be posted in the beginning of April. (<https://www.gpif.go.jp/en/investment/stewardship-activities.html>)

[Companies selected by GPIF's external asset managers for excellent disclosure of each four TCFD disclosure]

Company name	Number of nominations			
	(1)	(2)	(3)	(4)
ADIDAS AG	1	-	1	1
AIA GROUP LTD	-	-	-	1
AIR CANADA	-	-	-	1
AIR LIQUIDE SA	-	-	1	-
ALPHABET INC	1	1	-	-
AMAZON.COM INC	-	-	1	-
AMERICAN ELECTRIC POWER	-	-	-	1
ANGLO AMERICAN PLC	1	1	-	-
APPLE INC	1	1	-	-
ASML HOLDING NV	-	1	-	-
ASSOCIATED BRITISH FOODS PLC	-	-	-	1
ASTRAZENECA PLC	-	-	-	1
AYALA CORP	1	-	-	-
BALFOUR BEATTY PLC	-	-	-	1
BANK OF AMERICA CORP	1	1	-	-
BANK OF MONTREAL	-	-	1	-
BARCLAYS PLC	-	-	1	-
BECTON DICKINSON AND CO	1	1	1	1
BHP GROUP LTD	-	2	1	-
BLACKROCK INC	1	1	1	1
BNP PARIBAS	-	1	-	-
BP PLC	2	1	3	1
CANADIAN NATIONAL RAILWAY CO	1	-	1	1
CEMEX SAB DE CV	-	1	-	-
CENTRICA PLC	-	1	-	-
CHEVRON CORP	-	2	-	1
CIE FINANCIERE RICHEMONT SA	-	1	-	-
CISCO SYSTEMS INC	1	-	1	-
CITIGROUP INC	-	-	1	2
CLP HOLDINGS LTD	-	-	2	1
COMCAST CORP	-	1	-	-
CONOCOPHILLIPS	-	1	-	-
CRH PLC	-	-	-	1
CSX CORP	1	2	1	2
CVS HEALTH CORP	-	1	-	-
DBS GROUP HOLDINGS LTD	-	1	1	-
DISCOVERY LTD	-	1	-	-
DUPONT DE NEMOURS INC	-	1	-	-
EDP - ENERGIAS DE PORTUGAL SA	-	-	2	-
ENI SPA	1	-	-	-
EQUINOR ASA	-	-	-	1
ESTEE LAUDER COMPANIES INC	1	-	1	-
EXELON CORP	-	-	1	-
EXXON MOBIL CORP	1	-	-	-
FORD MOTOR CO	2	1	-	-
FORTESCUE METALS GROUP LTD	1	-	-	-
GENERAL MOTORS CO	1	-	-	-
HOLCIM AG	-	-	1	-

Company name	Number of nominations			
	(1)	(2)	(3)	(4)
IBERDROLA SA	-	1	-	-
ILLUMINA INC	1	1	1	-
ING GROEP NV	-	1	1	-
ITOCHU-SHOKUHIN CO LTD	-	-	1	-
JPMORGAN CHASE & CO	2	-	2	2
KEURIG DR PEPPER INC	-	-	-	1
LINDE PLC	1	-	-	-
LOWE'S COS INC	-	-	1	-
MAGNA INTERNATIONAL INC	-	1	-	-
MANULIFE FINANCIAL CORP	1	1	1	1
MARSTON'S PLC	-	1	1	-
MERCURY NZ LTD	-	1	-	-
MICROSOFT CORP	3	1	2	1
MITSUBISHI UFJ FINANCIAL GROUP	-	-	1	-
MONDELEZ INTERNATIONAL INC	-	1	-	1
MONDI PLC	1	-	-	-
MOODY'S CORP	-	-	-	1
NESTLE SA	-	1	1	2
NEWMONT CORP	1	1	-	1
OWENS CORNING	-	1	-	-
PRUDENTIAL PLC	1	-	-	-
RENAULT SA	-	1	-	-
RIO TINTO PLC	-	-	1	2
S&P GLOBAL INC	-	1	-	-
SALESFORCE INC	-	-	-	1
SANTANDER BANK POLSKA SA	-	-	-	1
SASOL LTD	1	-	-	-
SCHLUMBERGER LTD	-	-	-	1
SCHROEDERS PLC	1	-	-	-
SEVERN TRENT PLC	1	-	-	-
SHELL PLC	1	1	1	1
SK HYNIX INC	1	-	-	-
SOUTH32 LTD	-	-	-	1
SOUTHERN CO/THE	-	-	-	2
STANDARD BANK GROUP LTD	1	1	1	1
SWISS RE AG	2	-	-	-
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2	2	2	1
TARGET CORP	1	1	1	-
TECHTRONIC INDUSTRIES CO LTD	1	1	1	1
TELUS CORP	-	1	1	-
TOTALENERGIES SE	1	1	1	1
UBS GROUP AG	-	-	1	1
UNITED UTILITIES GROUP PLC	-	-	1	-
VALERO ENERGY CORP	-	1	-	1
VODAFONE GROUP PLC	1	-	-	1
VOLKSWAGEN AG	-	-	-	1
XCEL ENERGY INC	-	1	-	-

Note: The above list is composed of companies which were selected by external asset managers as "excellent disclosure of each four TCFD disclosure". ((1) governance, (2) strategy, (3) risk management, and (4) metrics and targets) (Listed in alphabetical order) The companies highlighted in blue were nominated by two or more external asset managers.