

A4S SUMMIT 2017 CFO/INVESTOR ROUNDTABLE



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Russell Picot HSBC Bank (UK) Pension Scheme

OVERVIEW OF THE TCFD RECOMMENDATIONS

BACKGROUND

G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board (FSB) to review how the financial sector can take account of climate-related issues.

The FSB established the Task Force on Climaterelated Financial Disclosures (TCFD) to develop recommendations for more effective climate-related disclosures that:

- could "promote more informed investment, credit, and insurance underwriting decisions" and,
- in turn, "would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks."

Industry Led and Geographically Diverse Task Force

The Task Force's 31 international members, led by Michael Bloomberg, include providers of capital, insurers, large non-financial companies, accounting and consulting firms, and credit rating agencies.





BACKGROUND (CONTINUED)

The Task Force on Climate-related Financial Disclosures published its recommendations in June 2017.

The recommendations help address climate-related disclosure challenges faced by:

- **Issuers** who generally have an obligation under existing law to disclose material information, but lack a coherent framework to do so for climate-related information, and
- **Investors, lenders, and insurers** who need decision-useful, climate-related information to make informed capital allocation and financial decisions





FOCUS ON FINANCIAL IMPACT

The Task Force focused on financial impact of climate-related risks and opportunities on an organization, rather than the impact of an organization on the environment.





DISCLOSURE RECOMMENDATIONS

The Task Force developed **four widely-adoptable recommendations** on climate-related financial disclosures that are applicable to organizations across sectors and jurisdictions.

The recommendations are structured around four thematic areas that represent core elements of how organizations operate:



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities



DISCLOSURE RECOMMENDATIONS (CONTINUED)

The four recommendations are supported by **specific disclosures** organizations should include in financial filings or other reports to provide decision-useful information to investors and others.

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.
Recommended Disclosures	Recommended Disclosures	Recommended Disclosures	Recommended Disclosures
A. Describe the board's oversight of climate-related risks and opportunities.	A. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	A. Describe the organization's processes for identifying and assessing climate-related risks.	A. Disclose the metrics used by the organization to assess climate- related risks and opportunities in line with its strategy and risk management process.
B. Describe management's role in assessing and managing climate-related risks and opportunities.	B. Describe the impact of climate- related risks and opportunities on the organization's businesses, strategy, and financial planning.	B. Describe the organization's processes for managing climate-related risks.	B. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	C. Describe the potential impact of different scenarios, including a 2°C scenario, on the organization's businesses, strategy, and financial planning.	C. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	C. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.



SUPPLEMENTAL GUIDANCE

In addition to guidance for all sectors, the Task Force developed **supplemental guidance** for financial and non-financial organizations to assist those organizations in implementing the recommended disclosures.

Financial Industries

- Banks
- Insurance Companies
- Asset Managers
- Asset Owners

The financial sector was organized into four major industries largely based on activities performed. The activities are lending (banks), underwriting (insurance companies), asset management (asset managers), and investing (asset owners).

Non-Financial Groups

- Energy
- Transportation
- Materials and Buildings
- Agriculture, Food, and Forest Products

The non-financial groups identified by the Task account for the largest proportion of GHG emissions, energy usage, and water usage.



KEY ELEMENTS OF DISCLOSURE RECOMMENDATIONS

Location of Disclosure

- The Task Force recommends that organizations provide climaterelated financial disclosures in their mainstream (i.e., public) **annual financial filings**.
- The recommendations were developed to apply broadly across sectors and jurisdictions and do not supersede national disclosure requirements for financial filings.
- If certain elements are incompatible with national disclosure requirements, the Task Force encourages organizations to disclose those elements in **other official company reports**.
- Organizations in the four non-financial groups that have more than one billion U.S. dollar equivalent (USDE) in annual revenue **should consider disclosing** strategy and metrics and targets information in other reports when the information is not deemed material and not included in financial filings.

Financial Filings

Required annual reporting packages in which organizations deliver their audited financial results under the laws of the jurisdictions in which they operate.

Other Official Company Reports

Should be issued at least annually, widely distributed and available to investors and others, and subject to internal governance processes that are the same or substantially similar to those used for financial reporting.



KEY ELEMENTS OF DISCLOSURE RECOMMENDATIONS (CONTINUED)

Principle of Materiality

- The disclosures related to the Strategy and Metrics and Targets recommendations are subject to an assessment of materiality.
- The disclosures related to the Governance and Risk Management recommendations should be provided because many investors want insight into the governance and risk management context in which organizations' financial and operating results are achieved.

Scenario Analysis

- The Task Force encourages forward-looking information through scenario analysis—a useful tool for considering and enhancing resiliency and flexibility of strategic plans.
- Many investors want to understand how resilient organizations' strategies are to climate-related risks.
- Recommended disclosure (c) under Strategy and the related guidance asks organizations to describe the resilience of their strategies, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

2°C Scenario

Provides a common reference point that is generally aligned with the objectives of the Paris Agreement.

Scenario Analysis Threshold

The Task Force established a threshold for organizations that should consider conducting more robust scenario analysis to assess the resilience of their strategies (those in the four nonfinancial groups with more than 1B USDE in annual revenue).



ILLUSTRATIVE IMPLEMENTATION PATH

The TCFD expects that **reporting of climate-related risks and opportunities will evolve** over time as organizations, investors, and others contribute to the quality and consistency of the information disclosed.





BENEFITS OF IMPLEMENTING THE RECOMMENDATIONS

Some of the potential benefits associated with implementing the Task Force's recommendations include:

- easier or better access to capital by increasing investors' and lenders' confidence that the company's climate-related risks are appropriately assessed and managed
- more effectively meeting existing disclosure requirements to report material information in financial filings
- increased awareness and understanding of climate-related risks and opportunities within the company resulting in better risk management and more informed strategic planning
- proactively addressing investors' demand for climate-related information in a framework that investors are increasingly asking for, which could ultimately reduce the number of climate-related information requests received



INITIAL STEPS FOR IMPLEMENTATION

Organizations can begin to implement the recommendations by:

- Considering to what extent existing disclosures already align with the TCFD recommendations
- Reviewing processes for identifying and assessing risks and opportunities and whether they account for the unique nature of climate-related issues
- Identifying areas of enhancement in disclosures to more closely align with TCFD recommendations
- Considering relevant scenarios and how those scenarios could affect the organization's strategy
- Evaluating existing climate-related risk indicators to select key metrics and targets
- Assessing whether new or changed reporting systems and controls are necessary to identify and report metrics on climate-related risks



TIMELINE FOR THE TASK FORCE'S WORK





APPENDIX: TASK FORCE MEMBERS

Chair and Vice-Chairs

Michael Bloomberg

Chairman Founder and President Bloomberg L.P.

Yeo Lian Sim

Vice-Chair Special Adviser Singapore Exchange

Graeme Pitkethly

Vice-Chair Chief Financial Officer Unilever

Members

Jane Ambachtsheer Partner, Chair-Mercer

Wim Bartels

Partner Corporate Reporting KPMG

David Blood

Senior Partner Generation Investment Management

Denise Pavarina Vice-Chair Managing Officer Banco Bradesco

Christian Thimann Vice-Chair

Group Head of Strategy. Sustainability and Public Affairs AXA

Matt Arnold

Managing Director and Responsible Investment Global Head of Sustainable Finance JPMorgan Chase & Co.

Bruno Bertocci Managing Director, Head of Sustainable Investors UBS Asset Management

Richard Cantor Chief Risk Officer Moody's Chief Credit Officer Moody's Investor Service Koushik Chatteriee Group Executive Director. Finance and Corporate Tata Group

Liliana Franco Director, Accounting Organization and Methods Air Liquide Group

Neil Hawkins Corporate Vice President and Chief Sustainability

Officer The Dow Chemical Company

Diane Larsen

Audit Partner, Global Professional Practice FY

Mark Lewis

European Utilities Equity Research Barclays

Ruixia Liu

General Manager, Risk Department Industrial and Commercial Bank of China

Eric Dugelay Global Leader. Sustainability Services Deloitte

Udo Hartmann Senior Manager, Group Environmental Protection & Energy Management Daimler

Thomas Kusterer Chief Financial Officer FnBW

Stephanie Leaist Managing Director, Head

of Sustainable Investing Canada Pension Plan Investment Board

Eloy Lindeijer Managing Director, Head of Chief, Investment Management

PGGM

Giuseppe Ricci Chief Refining & Marketing Officer FNI

Martin Skancke Chair, Risk Committee Storebrand

Steve Wavgood

Chief Responsible Investment Officer Aviva Investors

Michael Wilkins Managing Director,

Environment & Climate Risk Research S&P Global Ratings

Deborah Winshel

Managing Director, Global Head of Impact Investing BlackRock

Special Adviser

Russell Picot

Chair, Audit and Risk Committee, LifeSight Board Chair, HSBC Bank (UK) Pension Scheme Trustee Former Group Chief Accounting Officer HSBC.



Andreas Spiegel

Risk

Swiss Re

Fiona Wild

Change

PwC.

BHP Billiton

Ion Williams

Climate Change

Vice President.

Head Group Sustainability

Sustainability and Climate

Partner, Sustainability and

APPENDIX: CLIMATE-RELATED RISKS AND OPPORTUNITIES

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pe_	Climate-Related Risks	Туре	Climate-Related Opportunities
	Policy and Legal - Increased pricing of GHG emissions - Enhanced emissions-reporting obligations - Mandates on and regulation of existing products and services - Exposure to litigation Technology - - Substitution of existing products and services with lower emissions options - Unsuccessful investment in new technologies - Upfront costs to transition to lower emissions technology Markets - - Changing customer behavior - Uncertainty in market signals - Increased cost of raw materials Reputation - - Shift in consumer preferences - Stigmatization of sector - Increased stakeholder concern or negative stakeholder feedback	s Products and Energy Source Efficiency	 Use of more efficient modes of transport More efficient production and distribution processes Use of recycling More efficient buildings Reduced water usage and consumption Lower-emission sources of energy Supportive policy incentives Emergence of new technologies Participating in carbon market Energy security and shift towards decentralization Develop and/or expand low emission goods and service Climate adaptation and insurance risk solutions R&D and innovation Diversify business activities Shifting consumer preferences New markets
hysical Risks	Acute - Increased severity of extreme weather events such as cyclones and floods Chronic - Changes in precipitation patterns and extreme weather variability - Rising mean temperatures Divise ace levels	silience Marke	Community needs and initiatives Community needs and initiatives Development banks Participate in renewable energy programs and adopt energy-efficiency measures Resource substitutes/diversification New assets and locations needing insurance coverage



APPENDIX: DEVELOPMENT OF RECOMMENDATIONS

In developing its recommendations, the Task Force:

- Considered the **challenges for preparers** of disclosures as well as the **benefits** of such disclosures to investors, lenders, and insurance underwriters
- Engaged in significant outreach and consultation with users and preparers of disclosures and other stakeholders, including two public consultations, individual discussions and focus groups with industry, webinars, and outreach events in multiple countries
- Drew from existing climate-related disclosure regimes and sought to develop a decision-useful framework to **align and supplement existing disclosure frameworks**
- Created guidance for all sectors and supplemental guidance for specific sectors

The Task Force expects that **reporting of climate-related information will evolve** over time as organizations, investors, and others contribute to the quality and consistency of the information disclosed.



Carlos Sanchez, Executive Director Capital, Science & Policy Practice Willis Towers Watson

PHYSICAL RISK REPORTING: UNLOCKING CLIMATE RESILIENCE FINANCE



- 1. The risk analytics solutions needed already exist uncertainty can be handled
- 2. It is all about incentives for disclosure
- 3. Climate risk language should be translated into financial risk language
- 4. The time for **action** is now

EXPOSURE TO CLIMATE RISKS ASSESSING AND DEFINING CLIMATE RISK

Growing awareness and concern regarding climate risks is leading to initial attempts to **measure exposure** levels:

- LSE | Value-at-Risk of1.8% of total financial assets, i.e. \$2.5tn
- The Economist | \$4.2tn of financial assets exposed to climate risks



Simon Dietz, Alex Bowen, Charlie Dixon and Phillip Gradwell Climate value at risk of global financial assets





PHYSICAL CLIMATE RISKS AND THE FINANCIAL INDUSTRY MEASURES OF EXPOSURE TO PHYSICAL CLIMATE RISKS

The Levels of Risk



PHYSICAL CLIMATE RISKS AND THE FINANCIAL INDUSTRY MEASURES OF EXPOSURE TO PHYSICAL CLIMATE RISKS



PHYSICAL CLIMATE RISKS AND THE FINANCIAL INDUSTRY MEASURES OF EXPOSURE TO PHYSICAL CLIMATE RISKS

The Measure of the Market



PHYSICAL CLIMATE RISKS AND THE FINANCIAL INDUSTRY EXPOSURE, PERCEPTIONS AND INCENTIVES ALONG THE INVESTMENT VALUE CHAIN

Capital and Mandate Flows

- Exposure to physical climate risks are transmitted throughout the investment chain
- Different players have different perceptions, drivers and incentives
- The lack of climate risk standards results in a **market failure** in the form of an **inefficient allocation of capital** for the protection of assets from physical climate risks
- **Reporting** on climate risks is mostly **tactical**, preventing innovation in subsequent capitalisation processes

PHYSICAL CLIMATE RISKS AND THE FINANCIAL INDUSTRY

EXPOSURE, PERCEPTIONS AND INCENTIVES ALONG THE INVESTMENT VALUE CHAIN



PHYSICAL CLIMATE RISKS AND THE FINANCIAL INDUSTRY THE FRAMING ISSUE

- The difficulty to frame physical climate risks results in a fragmented understanding of such risks
- Awareness and concern regarding physical climate risks, if aggregated, becomes a critical risk



Example of Corporate Materiality Assessment

THE INSURANCE INDUSTRY AND PHYSICAL CLIMATE RISKS THE 1992-2017 JOURNEY

- Tipping point in 1992: Hurricane
 Andrew represented the biggest single insured loss the industry has ever faced
- As a result, regulation was passed mandating capital provisions equal to 1-in-200 year insured loss
- A climate **resilient industry coped with the events of 2011**, the second-worst year on record for natural disasters, without any major systemic threats
- Understanding the key industry metrics, i.e. Annual Average Loss and 1-in-100 exposure, is paramount to handle climate risk



THE OVERARCHING FRAMEWORK FROM METHODOLOGY TO METRICS



FROM UNCERTAINTY TO RISK THE RISK PRICING METHODOLOGY BY THE INSURANCE INDUSTRY



THE FSB TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES A FIRST STEP TOWARDS CLIMATE RESILIENT FINANCE

- 1. TCFD should be interpreted as a **source of opportunity** in connection with a better understanding of the impacts that climate change has on economic activity
- 2. Developing a **benchmark for corporate climate resilience** will trigger climate resilience risk adjusted investment strategies, i.e. passive resilience index investing, PE resilience turnarounds, resilience stewardship, etc.
- 3. Identifying **climate resilience standards** will foster the case for governments to invest in resilient infrastructure as the enabling environment for the attraction of foreign direct investment
- 4. Ultimately, higher demands for transparency, improved data analytics and societal pressure will lead to **mandatory disclosure** of climate risks

Patrice Impey Chief Financial Officer and General Manager of Financial Services City of Vancouver

Climate Change Risk Assessment

MITIGATION Prevent climate change

ADAPTATION Prepare for the impacts

Public Transit

Green

Water

Infrastructure

Tree Planting

Conservation

Reduced Landfill Waste

District Energy

> Building Energy Efficiency

Flood Construction Levels

> Stormwater Management

Sewer Separation

Heat Alerts

ADAPTATION PLANNING PROCESS



PROJECTED CLIMATE CHANGE IN VANCOUVER



2 degrees warmer annually by 2050, more summer heat waves

Increase in intensity and frequency of extreme events

'Coastal Cities at Risk' project ranked Vancouver region as11th most vulnerable in the world for exposed assets

Flood construction level raised by 1.1m in 2014

Based on 1m sea level rise and a 1:500 year storm surge

EVALUATION OF RESPONSE APPROACHES



EXAMPLE OF DECISION MAKING MATRIX

Measure	Scale	BASELINE	PROTECT Park Dike	PROTECT Road Dike	ADAPT Multiple Tools	RETREAT
PEOP	LE					
People displaced temporarily	# of people displaced					
"At risk" people impacted	Social Vulnerability Index (SVI) weighted displacement					
Park and recreational amenity value	Area affected per event (km²)					
Loss of critical services	# of pieces of infrastructure impacted					
ENVIRONMENT						
Risk of contaminant release	# of sites with potential contaminants					
ECONC	DMY					
Damage to infrastructure	Value-weighted km of roads impacted					
Damage to buildings	\$M					
Loss of inventory	\$M					
Business disruption	# of employees working in impacted businesses					
Emergency response costs	\$M					

Russell Picot HSBC Bank (UK) Pension Scheme

THE PENSION FUND PERSPECTIVE

THREE OBJECTIVES

1. A better risk adjusted neutral position

Improve upon a market capitalisation index

2. Climate Change Risk Protection

Trustee's Climate Change Risk Policy

3. Improved Company Engagement

Trustee preference for engagement



Legal & General Future World Fund

A BETTER RISK ADJUSTED NEUTRAL POSITION THE BALANCED FACTOR INDEX



USE FACTOR BASED INVESTING TO CAPTURE MARKET INEFFICIENCIES FACTOR BASED INVESTING IS AN EVOLUTION OF TRADITIONAL INDEX INVESTING

A significant body of academic research has shown that **tilting** the traditional index with the following four **core factors** can add value over the long term, but it is difficult to 'time factors' over the short term:



CLIMATE CHANGE RISK PROTECTION THE CLIMATE BALANCED FACTOR INDEX



IMPROVED COMPANY ENGAGEMENT CLIMATE IMPACT PLEDGE



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HSBC BANK (UK) PENSION SCHEME INTEGRATED ESGTRUSTEE INVESTMENT BELIEFS

The Pensions Regulator	"We expect trustee boards to take account of risks affecting the long-term financial sustainability of the investments"
Law Commission Reforming the law	"Where you think environmental, social and governance (ESG) factors are financially significant, you should take these into account _"
HSBC 🔹	"Environmental (including climate change risks), Social and Governance issues should be a material factor in investment decision making"

The Trustee will support ESG organisations or initiatives if it believes that providing such advocacy will be in the long term financial interest of the Scheme members. Where appropriate the Trustee will also engage with its appointed fund managers to do the same.

HSBC BANK (UK) PENSION SCHEME INTEGRATED ESG

ESG is integrated into all fund management mandates

Annual on-site visits

Trustee adopted a Climate Change Policy

June 2015

Constantly trying to improve

Trustee ESG Steering Group

All Within a Fiduciary Framework

HSBC BANK (UK) PENSION SCHEME CLIMATE CHANGE POLICY

Within the context of its fiduciary responsibility, the Trustee is supportive of the United Nations Framework Convention on Climate Change (UNFCCC) agreement to limit temperature rises to 2 degrees centigrade above pre-industrial levels. In this context, the Trustee:

- Expects its appointed investment managers to be cognisant of climate change risks and opportunities within their investment processes as applied to the assets of the Trustee. Investment managers are further expected to annually report on how these risks and opportunities have been incorporated into the investment process.
- Has a preference for 'Engagement' rather than 'Exclusion' as a method of incorporating climate change risks into an effective fiduciary framework. However, the Trustees expect investment managers to independently consider whether exclusion or engagement is more appropriate within their investment process.
- Encourages the further development of asset classes that are supportive of obtaining the 2 degree target provided they are all based within the primary fiduciary framework.
- Supports the further development of effective climate change risk metrics to enhance the ability of all stakeholders in the investment chain to assess and minimise such risks.
- Recognises that 'Climate Change' will be subject to much further analysis and subsequent policy changes in the coming years. The Trustee is supportive of adopting an evolving policy in order to ensure all relevant developments are captured.
- Is supportive of policy initiatives that, in its opinion, contribute towards achieving the 2 degree target.



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THE A4S ESSENTIAL GUIDE SERIES

Organizations today must navigate an increasingly complex, interconnected, and constantly evolving world. Sustainability factors affecting society, the environment, and the wider economy are generating bigger opportunities and risks. Our CFO Leadership Network has produced a set of essential guides to help organizations embed social and environmental considerations into their strategy, culture and processes. They are developed by finance teams for finance teams, but will also be of interest to others seeking to understand current approaches for integrating sustainability into financial practices and decision making.

LEAD THE WAY	MEASURE WHAT MATTERS
Developing a strategic response to macro sustainability trends • Finance Culture* • Managing Future Uncertainty	Developing measurement and valuation toolsNatural and Social Capital AccountingSocial and Human Capital Accounting
TRANSFORM YOUR DECISIONS	ACCESS FINANCE
Integrating material sustainability factors into	Engaging with finance providers on the drivers of
decision making	sustainable value
 decision making Strategic Planning, Budgeting and Forecasting* Integrated Management Reporting* Capex 	sustainable valueEnhancing Investor EngagementDebt Finance*







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