



FinanceMap Methodology

Analyzing asset managers on portfolios, engagement, and resolutions through a climate lens

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Introduction

The IPCC’s October 2018 *Special Report on Global Warming of 1.5°C* clearly laid out the urgent need to transition the global energy mix and, in particular, speed up the introduction of renewable and transport electrification technologies. However, current Nationally Determined Contributions (NDCs) to the Paris Agreement remain *insufficient to meet even the 2°C target* and governments worldwide lag on introducing meaningful and binding climate policy designed to drive this transition.

Given the urgency of the climate crisis, increasing attention has turned to the finance sector to drive meaningful progress. For example, in April 2019, the Governor of the Bank of England Mark Carney published an *open letter* stating the financial sector has a “crucial role to play” in tackling climate change, calling on the industry to address the significant risks posed to financial stability. In line with these calls, FinanceMap provides a platform that looks at the asset management sector through a climate lens, examining portfolios, investor-engagement processes, and shareholder resolutions. The twin objectives are to allow asset owners and other key stakeholders insights into how the asset management sector is performing on climate change and drive improvement within the sector itself by providing benchmarking information.

The following is a breakdown of activities undertaken by the asset management sector and how they may impact actual climate change emissions through investments and engagements with companies and through policy advocacy/CSR activities. The following is a somewhat subjective view based on numerous discussions by the FinanceMap team with key stakeholders.

FinanceMap Coverage

Activity	FinanceMap Coverage	Impact on Climate at Present & Trend	Transparency & Availability of Data
Own Company & Supply Chain Emissions	Scope 1 and 2 Emissions	Moderate	High
Portfolios & Investment	Secondary Markets	Moderate	High
	Primary Market Activity ¹	High	Moderate

¹ This includes IPOs, corporate/project issuances and direct investments by asset managers outside of secondary markets

Engagement with Companies & Resolutions	Engagement	Moderate, likely to increase	Low
	Shareholder Resolutions	Moderate, likely to increase	Moderate
Wider Societal Impact and Policy Influencing	Lobbying on Climate Related Policy	Low, likely to increase	Low
	CSR Activities	Low	High
FinanceMap Coverage Key	Covered by other sources	FinanceMap covers at present	FinanceMap to cover in 2021

FinanceMap launches with a focus on the asset management sector, as opposed to the asset owners (pension funds, wealth funds, etc.) This is in part due to the more extensive availability of information on portfolios held by the asset management sector. However, it also reflects the prominent role that the asset management industry has in direct engagement with the corporate sector on the governance of issues like climate change. FinanceMap does recognize, however, the important and growing role asset owners are having in shaping portfolios/investments and driving the corporate engagement process on climate change and will likely encompass this part of the finance sector in our assessment in the near future. FinanceMap focuses on activities that have the most impact and/or are likely to grow in importance and where independent and publicly available analysis is lacking. It does not attempt to replicate existing and adequate coverage, for example in assessing Scope 1 (direct physical emissions) and Scope 2 (supply chain emissions) by financial companies. The latter are well measured by systems such as CDP and direct disclosures by companies themselves. The construction of the FinanceMap platform involved three distinct components.

Phase 1: Mapping out the Financial System

The term "finance" is used throughout this report to denote investment management activities specifically, rather than banking, insurance, advisory and other services commonly included under the term. As such, FinanceMap is focused on a chain of ownership and influence wherein physical assets operated by companies (e.g. coal mines) are ultimately owned by beneficiaries in the form of individuals (citizens, savers, pension holders, etc.). In the middle of this chain are institutional asset owners like pension funds and government

wealth funds and commercial asset management service providers, the latter of which are the subject of FinanceMap analysis given their dominant role in the ownership chain, as illustrated in the infographic.

In mapping out the asset management sector, FinanceMap assesses approximately 70,000 listed funds (and their constituent holdings of equities/bonds) managed by over 4,400 asset managers globally, which are in turn consolidated into financial groups where relevant (e.g. iShares UK Equity Index Fund is operated by BlackRock Investment Management UK Ltd which is part of the global financial group BlackRock). The 70,000 funds hold \$34 trillion in assets (roughly 17% of the total value of global equity and bond markets²).

FinanceMap also identifies the 30 largest asset management groups with a combined 50 \$Tn in AUM (across all asset classes, as of 2018). The FinanceMap universe thus offers a highly plausible representation of global finance and markets.

Phase 2: Finance through a Climate Lens

FinanceMap's focus, based on the framework in the table above is on three areas: (1) portfolios, (2) the company engagement process, and (3) direct lobbying on policy areas that could impact climate.

- *Portfolios*: There are no internationally agreed standards for assessing investment portfolios through the lens of climate change. Initial FinanceMap work focused on the intensity of fossil fuels within portfolios (see *Who Owns the Fossil Fuels, December 2018*) – a useful metric for certain stakeholders, such as asset owners wishing to minimize exposure to these assets. A more granular and valuable analysis is offered by the *Paris Agreement Capital Transition Assessment (PACTA)* developed by *2 Degrees Investing Initiative*, a key FinanceMap partner. The PACTA tool, described in the next section, offers a highly analytical means of measuring the alignment of financial portfolios with the goals of the Paris Agreement based on their ownership of companies in climate-sensitive sectors. This methodology provides the basis of FinanceMap's portfolio analysis at present.
- *Company Engagement*: In the absence of a global standard and or consistent disclosure on the quality of the company engagement process on climate change (or other governance issues), FinanceMap devised a methodology for measuring this process. FinanceMap's methodology to measure the engagement process on climate was developed in consultation with several of the world's leading asset managers and uses key aspects of the UK Financial Reporting Council's *2020 Stewardship Code*. It is noted that FinanceMap includes the shareholder resolution process in the company engagement process as sub-issues with filing and voting behavior assessed based on available disclosures. FinanceMap appreciates

² The total of global equity market capitalization and global bond market outstanding was approximately \$200 trillion in 2019 according to industry body the Securities Industry and Financial Markets Association's (SIFMA) *Capital Markets Fact Book 2020*. <https://www.sifma.org/wp-content/uploads/2020/09/US-Fact-Book-2020-SIFMA.pdf>

that many observers do not include resolution activities within the engagement process and as such, our analysis offers disaggregation of resolution metrics in a stand-alone fashion.

- *Direct Lobbying on Policy:* InfluenceMap pioneered the comparative measurement of the influence companies have on the climate policy agenda in its *Lobbying and Corporate InfluenceMap* platform, launched in 2015, and applied this to companies operating in the real economy (i.e. non-financial companies). This methodology has now been applied to companies and trade associations in the financial sector with an initial focus on the EU's sustainable finance policy push (including the Taxonomy), and will expand to cover relevant US policies in 2021. These results were released on InfluenceMap.org in Q3 2020.

Phase 3: The FinanceMap Platform

The climate analysis described above is integrated into the mapping of the financial sector in an online platform, *FinanceMap.org*, which represents a key workstream within InfluenceMap. FinanceMap's user interface allows search and filtering to easily access the above analysis by fund or financial group in an open-source manner. The platform will evolve over the next years in terms of coverage and methodological improvements based on stakeholder input and access to datasets and disclosures.

Paris Agreement Capital Transition Assessment (PACTA)

FinanceMap's portfolio metrics are based on the *Paris Agreement Capital Transition Assessment* (PACTA) method for climate-driven portfolio analysis, developed by *2 Degrees Investing Initiative*. The platform provides forward-looking analysis of these portfolios' alignment with a Paris-compliant scenario as defined by the International Energy Agency (IEA), using asset-level production data from companies held by the portfolios.

What is PACTA?

The *Paris Agreement Capital Transition Assessment* (PACTA) project is a UN PRI-supported initiative that has developed a methodology for measuring the alignment of financial portfolios with climate transition goals, including a *publicly available online tool* for bespoke portfolio analysis. The underlying methodology, developed by lead partner 2 Degrees Investing Initiative,³ has been tested with hundreds of investors, and since its initial release has been used by a number of European financial authorities to evaluate the entities they regulate.

What is the method for measuring portfolio alignment?

The PACTA method involves three basic steps to determine portfolio alignment.

- **'Roadmap Translation'**: The analysis translates leading climate scenarios such as those published by the IEA into a form which can be compared with financial portfolios. To achieve this, the scenario is adapted to reflect the global availability of key climate-relevant industrial sectors on global financial markets through public equity and corporate bonds. This is then used to construct a theoretical target portfolio whose exposure to different sectors and technologies is aligned with the scenario. FinanceMap uses the IEA 'Beyond 2 Degrees' (B2DS) scenario as a 'roadmap' for the mix of 'technologies'⁴ required to meet global demand while adhering to an emissions pathway that maintains a 50% chance of keeping the global average temperature to 1.75°C above pre-industrial levels. This scenario is currently the most ambitious of the available IEA climate change targets which have been translated for PACTA analysis. The B2DS provides granular technology roadmaps in four key sectors: Automotive, Coal Production, Oil & Gas Production, and Power. As a result, these four sectors form the basis of FinanceMap's portfolio analysis.
- **'Technology Exposure'**: Using industry-specific databases, PACTA determines a company's future production in the climate-relevant technologies over a five-year time horizon from forward-looking

³ In collaboration with the Frankfurt School of Finance and Management, WWF European Policy Office, WWF Germany, Kepler-Cheuvreux, Climate Bonds Initiative, SMASH, CDP and the University of Zurich.

⁴ Used here to refer to key energy sources and products of key industries e.g. renewable power, thermal coal, electric vehicle

production data, such as the company’s verified plans for new capacity. Company production is determined at the physical asset level, e.g. the level of the individual power plant or vehicle manufacturing facility. The company’s total production in a technology is then allocated proportionately to a financial portfolio based on the portfolio’s percentage ownership of the company. For example, in the case of equities, a portfolio with a 3% stake in ExxonMobil is allocated ownership of 3% of ExxonMobil’s annual oil and natural gas production. It should be noted that this allocation method applies only to public equity and differs for corporate bonds. However, corporate bond results are not included in the current FinanceMap release, though they may be incorporated in future iterations of the platform.

- **‘Gap analysis’:** Based on the companies it holds, a portfolio’s total exposure to each technology is compared to the exposure of the target B2DS portfolio. The deviation between the target and the portfolio under consideration is calculated for each technology, giving an initial set of technology-level results. For instance, the portfolio may hold 10% less renewable energy capacity than the target prescribes. A full list of technologies for each of the four key sectors is listed below.

Sector	Technologies					
Automotive	ICE		Hybrid		Electric	
Coal	Coal					
Oil & Gas	Oil			Gas		
Power	Coal Power	Gas Power	Hydropower	Nuclear Power	Oil Power	Renewable Power

FinanceMap Portfolio Paris Alignment

FinanceMap applies the PACTA methodology to a universe of roughly 70,000 financial portfolios (funds) and 4,400 fund managers using publicly disclosed equity ownership data, the results of which are made publicly available through the FinanceMap online platform.

The universe is mapped in a hierarchical manner as follows: at the top are "financial groups" (e.g. BlackRock), which are affiliations of commercial entities with cross-holding structures. Under this are nationally registered entities (e.g. Blackrock Ltd, Blackrock Inc), which are "asset managers" that are the registered owners of shares on behalf of their clients. These asset managers operate "funds" (e.g. iShares ETFs), which are pools of capital market assets, and are the registered owners of shares on behalf of the owners of the listed funds.

Portfolio Paris Alignment

The PACTA analysis produces a measure of a portfolio's deviation from alignment at the level of the individual technology within a sector (e.g. electric vehicles, or nuclear energy). The PACTA method does not aggregate these individual deviation results to the level of the sector (e.g. automotive, power) or the whole portfolio. FinanceMap employs a novel methodology for aggregating these results to produce both sector and portfolio-level metrics, hereafter called a 'Paris Alignment' (PA) score. This single top-line metric at the portfolio level allows a clear top-level comparison between different funds, fund managers, and financial groups.

How is the Paris Alignment indicator generated?

FinanceMap has devised a methodology for aggregating the results of the PACTA analysis, which are provided at the technology level, to produce not only Sector-level indicators but also a single top-line indicator for the full portfolios called 'Portfolio Paris Alignment'. FinanceMap thus generates 'Paris Alignment (PA)' for each portfolio at two levels.

- An overall *Portfolio PA*.
- Individual *Sector PA* for climate-sensitive sectors in the portfolio.

The PA ranges from -100% (highly misaligned) to +100% (exceeding Paris alignment), with a deviation of 0% being Paris-aligned under the IEA Beyond 2 Degrees Scenario. FinanceMap also provides an indicator of the *Exposure Ratio*, or the portion of a portfolio's value exposed to companies active in the sectors covered by the B2DS (Automotive, Coal Mining, Electric Power, Oil & Gas).

The Paris Alignment takes as its basis the technology-level alignment result of the PACTA analysis, scaled to a range of -100% to 100%. This alignment is calculated by comparing the physical production in each technology (e.g. MW of coal-fired power capacity, number of vehicles produced annually), effectively owned by the portfolio, with the production contained in the target B2DS portfolio.

From Technology to Sector Scores

To arrive at the Sector-level Paris Alignment, FinanceMap then generates a weighted average of alignments for each technology in a sector, weighted according to the product of two parameters:

- **Technology Share:** For each technology, the system compares the amount of production in the sector that is contributed by each technology to gauge its relative importance to the portfolio's sector exposure. This means that even if a technology has a modest misalignment, if production in that technology is dominant in the portfolio, it is weighted more heavily than a technology that the portfolio has limited exposure to in terms of absolute production.
- **Contribution to emissions:** Within a sector, each technology makes a different relative contribution to global emissions or emissions reduction. Consequently, changes in the use of some technologies (e.g. coal-fired power and renewable energy) are more crucial than others (e.g. oil power) for meeting the B2DS pathway. To reflect this, each technology in a sector is weighted based on the extent to which its emissions contribution must *change* between 2020 and 2050 based on the changes in total production outlined in the Beyond 2 Degrees (B2DS) scenario. The result is that in addition to weighting the individual technology alignments on the basis of the size of the portfolio's exposure, the Sector alignment also accurately captures the variable importance of different technologies to the global energy transition.

From Sector to Portfolio Scores

The process of rolling up from Sector alignment to Portfolio Paris Alignment closely mirrors that of the calculation to generate the Sector alignment from the technology outputs of the PACTA analysis. The Portfolio Paris Alignment is a weighted average of the Sector alignment scores, with weightings reflecting relative contribution to global emissions and portfolio value exposed to a given sector. This represents a minor variation on the calculation used to aggregate to the sector level:

- **Portfolio Value Exposed:** Unlike weighting different technologies within a sector, between sectors there are entirely different production types (e.g. MW of capacity, tons of coal produced annually), which renders a weighting based on absolute production meaningless. As a proxy, to aggregate the Sector alignment to an overall Portfolio alignment, each Sector alignment is weighted based on the relative portfolio value exposed to that sector according to the calculation below. Note that in this calculation only those companies for which the sector at hand is the company's *primary sector of operation* are counted, in order to avoid double-counting as well as to prevent highly valuable companies with negligible production in a sector (e.g. Apple and Amazon have very small holdings in Power generation assets) from skewing the weighting.

- Contribution to emissions:** In this case, the emissions contribution weight is not derived from the change in emissions required for each sector by 2050. Rather, in line with the IPCC's *October 2018 Special Report on Global Warming of 1.5°C*, which calls for global net-zero emissions by 2050 at the latest, the methodology assumes that *all* industrial sectors must reduce their emissions drastically. FinanceMap, therefore, takes the current emissions share of each sector to represent its 'real-world' importance to emissions reductions.

Paris Alignment Score Formulas

<p>Portfolio PA</p>	$\text{Portfolio Deviation} = \frac{\sum(W_n \times V_n \times S_n)}{\sum(W_n \times V_n)}$ <p>W = emissions weight for the sector V = portfolio value exposed to the sector S = Sector Paris Alignment Score</p>
<p>Sector PA</p>	$\text{Sector Deviation} = \frac{(\sum W_n \times P_n \times T_n)}{(\sum W_n \times P_n)}$ <p>W = emissions weight for the technology P = technology share of sector production T = Technology Paris Alignment Score</p>

Emission Weightings

Why Emissions Weightings?

As noted above, to aggregate alignment from the level of individual technologies (e.g. Renewable Power, Coal Power) to the sector level (Electric Power), trajectory results at the technology level are weighted in part according to their relative importance to global emissions. This ensures that the Sector alignment better reflects real-world impact. For instance, if all technologies in the power sector were weighted equally, alignment for coal and renewable power would have more bearing than alignment for oil-fired power generation, which provides a significantly smaller fraction of global power generation and is not nearly as critical to the energy transition as the elimination of coal power and the massive scaling up of renewable energy. The same logic applies with respect to weighting individual sectors when aggregating to the level of the portfolio.

Brown vs. Green Technologies

Two of the four sectors covered by the Beyond 2 Degrees Scenario, Power and Automotive, contain both 'brown' and 'green' technologies, used here in a simplistic sense to refer to technologies that either do or do not emit CO₂, respectively. For instance, renewable and hydro energy are considered 'green' technologies, while natural gas and coal power are considered 'brown'.

To account for these differences, the methodology employs a measure of each green technology's importance to global emissions by assessing the emissions that have been *effectively avoided* as a result of using the green generating technology, under the assumption that in the absence of these technologies, the resultant gap, be it TWh generated or number of vehicles in the global fleet, would otherwise be filled with 'brown' technologies to meet the same global demand.

The method of calculation is unique to each sector and will be discussed in detail below.

Technology to Sector Level: Power

Calculating Avoided Emissions

To derive the emissions effectively avoided by the non-emitting technologies, a weighted average of CO₂ emissions per TWh generated for each of the three emitting technologies (coal, oil, and gas) is computed. This value is then multiplied by the TWh generated by each non-emitting technology to produce a value for effective emissions avoided.

Emissions Contribution: Change over Time

To capture the relative importance of each technology in the Power sector, it is necessary to compare the *change* in that technology's contribution to emissions over time, in this case between 2020 and 2050, in line with the Beyond 2 Degrees Scenario used throughout this analysis.

The reason for focusing on change over time is simple: if one were to just take the current time point to evaluate emissions contribution, a green technology like renewable power, which has not yet achieved significant uptake globally compared with other power sources, would be significantly underweighted relative to its importance to the energy transition. Conversely, to solely take each technology's emissions contribution in 2050 in line with the scenario would major brown technologies such as coal power to be significantly underweighted relative to their current share of production and to the urgency of phasing out these high emitting forms of production.

The methodology, therefore, calculates the change in TWh for each technology in the Power sector between 2020 and 2050 according to the IEA Beyond 2 Degrees Scenario. It then applies the CO₂ emissions per TWh for each technology to obtain a figure for the approximate change in each technology's contribution to global emissions between now and 2050.

The technologies that must undergo a proportionately significant change, either through an increase or decrease in production, and/or make a major contribution to emissions, are therefore weighted highly. The result is that key technologies like renewable and coal power are weighted highly relative to less critical technologies like oil capacity, which comprises a negligible portion of global electricity generation, as well as to those technologies whose relative share in the energy mix does not change as drastically according to the scenario, such as hydro energy.

Technology to Sector Level: Automotive

Calculating Avoided Emissions

The Automotive Sector similarly has both green and brown technologies. For the purposes of this methodology, these are divided into three distinct categories: Electric Vehicles (EV), Hybrids, and Internal Combustion Engine (ICE) Vehicles.

EVs are zero-emission vehicles while in use, though it is noted that their charging is linked to the release of some CO₂ unless electricity is supplied by non-emitting sources. Within this analysis, EVs are treated as zero-emissions vehicles. Hybrid vehicles may either be non-emitting or low-emitting vehicles while in use depending on a range of variables, such as individual journey length. Average emissions per mile traveled for hybrid vehicles as well as ICE vehicles is available from the *ICCT*.

To calculate the avoided emissions for the two 'green' technologies, the methodology considers the number of vehicles of each type in the global fleet in 2020 and 2050 and calculates the effective emissions that would

have been produced had these vehicles been replaced with ICE vehicles. For electric vehicles, this entails multiplying the number of electric vehicles in the fleet by the weighted average emissions factor for ICE and hybrid vehicles to estimate the effective emissions abated by the replacement of emitting vehicle types with electric vehicles. For hybrids, the number of hybrid vehicles in the global fleet is multiplied by the difference between the emissions factors of ICE vs. hybrid vehicles to create an estimate of the effective emissions abated by the replacement of ICE vehicles in the global fleet with hybrids.

Emissions Contribution: Change over Time

Using the same method as the Power Sector, the methodology calculates the difference between the effective emissions contribution from each technology in the global vehicle fleet in 2020 and in 2050 as prescribed by the Beyond 2 Degrees Scenario. The relative size of the change in emissions associated with each technology (expressed as a % of the total change) is then used as the final weighting. The result is that ICE and EVs are weighted significantly more heavily than hybrid vehicles, for which fleet size is projected to change to a much smaller degree between 2020 and 2050, and which contributes a modest emissions contribution/abatement relative to ICE and electric vehicles respectively.

Technology to Sector Level: Oil & Gas

The Oil & Gas sector contains only brown technologies. However, oil is significantly more carbon-intensive than natural gas and therefore, according to the scenario, the necessary pace for phasing out oil production is significantly faster than for natural gas. Indeed, the Beyond 2 Degrees scenario allows for moderate increases in the production of natural gas in the near term, while requiring more immediate phase-out of oil production. The methodology considers the change in emissions contribution from oil & gas production for primary energy use between 2020 and 2050 in line with total primary energy demand according to the Beyond 2 Degrees scenario. The result is that oil production is weighted more heavily than natural gas, reflecting its higher emissions profile and stricter requirements for reductions in its use in the scenario.

only a tiny amount of production in renewable energy, are excluded from the calculation.

Commentary on IEA Scenarios

The Beyond 2 Degrees Scenario

FinanceMap uses the IEA's 'Beyond 2 Degrees' (B2DS) scenario, published 2017 in *Energy Technology Perspectives*, which outlines a trajectory for the 2050 global energy mix to be compatible with a 50% likelihood of remaining within 1.75°C of warming from pre-industrial levels this century. As the IEA scenario with the lowest explicit temperature target, the scenario is the IEA's most ambitious from a climate perspective, and the only IEA scenario to explicitly aim for compliance with the full goals of the Paris Agreement (i.e. an ambition of 'well below 2 degrees'). The decision to use an IEA scenario as the basis for FinanceMap analysis was taken primarily due to the scenario's granularity and breadth of sector coverage. As the most ambitious of the IEA scenarios from a climate perspective, the B2DS was selected as the available scenario that best met the criteria both of ambition and granularity.

A common critique of IEA scenarios is their relatively low ambition with respect to temperature targets. Research by *Oil Change International and IEEFA* indicates that the primary scenarios⁵ in the IEA's annual World Energy Outlook (which excludes B2DS) outline a path for more than 2°C of warming. This point was underscored in a *public letter* to the IEA from leading asset managers, including Allianz, Legal & General Investment Management, and Hermes Investment Management, criticizing the non-Paris-compliance of the mainstream scenarios, and calling on the organization to develop a new model that explicitly aims for a 1.5°C target.

Though the B2DS is more ambitious from a climate perspective than the World Energy Outlook's mainstream scenarios, it does have certain limitations. First, the scenario currently offers just a 50% probability of meeting its temperature target. Future scenarios should increase this probability in order to be more in line with IPCC recommendations, namely a 66% chance. Further, the B2DS scenario does not provide production trajectories for the following sectors: shipping, aviation, cement, and steel. Instead, the PACTA-based analysis of these sectors is derived from emissions intensity targets set out in the Sustainable Development Scenario, which aims to meet the Paris Agreement's higher 2°C target. It is worth noting that, in general, IEA estimates and scenarios have been found to be notably conservative, particularly with respect to the build-out rates of new technologies like renewable energy. Thus, it is possible that the B2DS scenario provides a less ambitious outlook than will actually be required to meet a 1.5°C trajectory. Some recent reports have suggested the IEA may be in the process of producing an explicitly 1.5°C compatible scenario. Should such a scenario become available, FinanceMap will update its analysis.

⁵ Includes the 'Current Policies Scenario' and 'New Policies Scenario'

Investor-Company Engagement

Introduction

Investor engagement with the companies they own has become an increasingly important lever of change in the climate finance space, as well as a growing source of value in the marketing of portfolios by asset managers keen to differentiate their offerings. There has also been a rise in investor collaboration and strategic company targeting in company engagements on climate. The *Climate Action 100+*, a collaborative investor-company engagement initiative established in December 2017 (now with over 545 institutional investors with US \$52Tn under management) has three asks of the targeted 167 companies, representing the most climate-important listed corporations in the world.

- Governance of climate risks/opportunities,
- Reduce greenhouse gas emissions across the value chain, consistent with limiting global average warming to well below 2C,
- Provide enhanced disclosure aligned with the TCFD process.

The CA100 tracks indicators to measure the factors above including emissions targets, decarbonisation strategy, capital allocation, lobbying on climate policy and board-level oversight of climate by the company. Given the prominence of the CA100 currently within the climate stewardship process, it is expected that asset managers should demonstrate contact with these indicators in their corporate engagement processes.

Despite this importance being placed on the investor-company engagement process, there is a dearth of publicly available, objective metrics to judge the quality of this process both generally and with respect to climate. FinanceMap's methodology to measure the engagement process on climate was developed in consultation with several of the world's leading asset managers and uses key aspects of the UK Financial Reporting Council's *2020 Stewardship Code*. The Stewardship Code was chosen to benchmark engagement quality as it appears to provide an ambitious framework and detailed definitions available of what constitutes effective engagement, while being aligned with CA100 three asks

Through this document, the term 'engagement' is used to refer to all private and public investor communications designed to influence the companies they hold shares in.

- Private communications and meetings with corporate management and appointed advisors.
- Questions at the AGM or other company meetings.
- Comments on the company in the media or public fora.
- Shareholder resolution measures and voting

The methodology is designed so that particular parts of these engagement processes (e.g. resolution metrics) may be isolated and examined in detail for any particular asset manager.

Key Assumptions

The methodology is based on the following concepts which have been discussed with asset managers, asset owners, and other stakeholders throughout 2019 by the FinanceMap team.

- **Information limitations:** Investors may be concerned about maintaining relationships with companies they invest in and may disclose little information on private engagements, especially around sensitive topics. This lack of disclosure is an inherent limitation to any engagement assessment methodology.
- **Applicability of the UK Stewardship Code to the engagement process.** Although asset managers will be subject to different regulatory or voluntary standards across geographies, FinanceMap engagement analysis is benchmarked against the *UK 2020 Stewardship Code* (henceforth Stewardship Code) released in October 2019. The scoring is also consistent with requirements under EU Disclosure Regulation for investors such as *EU Directive 2017/828*. The Stewardship Code was chosen to benchmark the quality of engagement because it provides detailed definitions of what constitutes good engagement. The analysis scores the robustness of asset managers' engagement programs on climate by evaluating their alignment with the principles of the Stewardship Code. However, this should not be taken to mean that the engagement score offers a complete or representative assessment of an investor's *compliance* with the Stewardship Code.
- **Effective engagement on climate.** The Stewardship Code states that "When applying the Principles signatories should "consider [...] environmental and social issues, including climate change". The analysis assesses the degree to which engagement on climate constitutes "effective stewardship." The behavior of companies with respect to climate, and by extension, the targets and aims of investor engagement, should be aligned with global political and scientific agreements. In particular, the 2015 *Paris Agreement*, article 2.1(a) states as its goal: "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels." An engagement that follows the recommendations of the IPCC is thus subject to the evolution of the IPCC's science-based recommendations, in particular, the Global Warming of 1.5°C release of November 2018.

Engagement Assessment Methodology

Introduction

The following section outlines the key queries and data sources by which asset managers engagement programs are assessed within a system devised by InfluenceMap in 2019, which breaks down the area being assessed into sub-issues and data sources to generate a matrix structure. FinanceMap applies set criteria for the selection of data sources. Firstly, FinanceMap aims to ensure as much comparable data as possible across organizations to allow for fair scoring. Secondly, FinanceMap draws evidence from credible and public sources (direct company disclosures or respected third party sources).

To break down investor engagement into sub-issues, FinanceMap uses a series of eleven queries that can be applied across all data sources, constructing a matrix of queries (Q1...Q11) against data sources (D1...D4) for each investor. All queries are then weighted against one another in a matrix system to arrive at a final top-level score. Data sources are listed across the top horizontal row, in dark shading. This results in a scoring matrix, with sample scores (five-point scale of -2,-1,0,1,2) or NA (not applicable)/NS (not scored) in the sample matrix below⁶.

Engagement/Resolution Categories (Queries)			Data Sources			
			Company Disclosures	External Data Sources	Financial Disclosures	Media Reports
	Weighting of Query					
1	Engagement Transparency	6%	2	NS	NA	NS
2	Climate Engagement Framework	9%	1	NS	NA	NS
3	Milestones for Success	9%	1	NS	NA	NS
4	Escalation Strategy	9%	1	NS	NA	NS
5	Engagement on Paris Aligned Business Models	10%	2	NS	NA	NS
6	Engagement on Climate Lobbying	10%	1	NS	NA	2
7	Climate Engagement Impact	12%	2	2	NA	1
8	Collaborative Engagement	10%	2	NS	NA	2

⁶ Please note. The order of queries may vary in the organization profiles on InfluenceMap.org

9	Resolutions: Voting Transparency	6%	1	NS	NS	NS
10	Resolutions: Climate-Relevant Voting	10%	1	NS	1	1
11	Use of Shareholder Authority	10%	1	NS	NS	1

It is thus possible to score each sub-issue across the various data sources within the cells of the matrix. Pieces of evidence within each cell (e.g. time-stamped webpage PDFs) are assessed and scored by FinanceMap team members according to pre-set criteria for each cell, in a manner so that the score is independent of particular team member i.e. is as objective and consistent as possible. Evidence pieces are scored on a 5-point scale (-2; -1; 0; 1; 2), tagged with date, region and other useful filters. Each cell, data source, and sub-issue is weighted. An algorithm is applied across the matrix to result in sub-scores for each sub-issue and a total score for the entire matrix. If no evidence is found in a particular cell or the cell is not relevant to the entity being scored (noted as NS or NA) the weighting for that cell is allocated to other cells in the row where there are evidence pieces and scores. Scored evidence in each cell is aggregated across the matrix structure using a range of carefully weighted algorithms. These calculations produce an organizational score metrics to describe the asset manager’s stewardship program.

- Organization Score** (value of 0-100) A measurement of a company’s stewardship of investee companies on climate. Above 85 (graded A-, A, A+) indicates strong and consistent engagement to transition companies in line with the Paris Agreement. Between 70-85 (graded B) suggests the asset manager is actively engaging companies to improve their climate performance, although the engagement is not sufficiently firm or clearly in line with the Paris Agreement. Asset managers scored 50-65 (graded C) engage companies on climate, although are not driving clear behavior change i.e. around the companies’ business models. Below 50 (graded D) indicates that the asset manager does not appear to engage companies on climate.

The entities currently scored on engagement in FinanceMap are asset management groups, which in the FinanceMap system are the top-level entities representing numerous operating companies, which in turn manage funds - e.g. BlackRock - BlackRock UK Ltd - iShares ETFs. In some cases, the brands and engagement activities of operating companies within financial groups are suitably different to warrant separate analysis. For example, Allianz (the financial group) owns the asset manager Allianz Global Investors (Allianz GI), which manages Allianz SE assets as well as other clients. Allianz also, in May 2000, acquired the subsidiary *PIMCO*, a fixed bond specialist with assets under management of US \$1.9 trillion in 2020. As Allianz Global Investors and

PIMCO have sufficiently distinct policies and behavior towards companies on climate, FinanceMap will analyze each entity separately. Allianz's financial group level score is based on its group-level engagement policies and Allianz Global Investors' and PIMCO's engagement scores.

Engagement Sub-Activities

FinanceMap has a set of queries against which all asset managers are assessed on their corporate engagements around climate change. The following section describes these queries and how asset managers' behavior is scored against them.

Q1: Engagement Transparency

According to EU Directive 2017/828, "institutional investors and asset managers should [...] be more transparent as regards their approach to shareholder engagement." For an asset manager to be considered fully transparent within the FinanceMap scoring system, the manager should, for instance, publish the companies they are engaging with alongside an explanation of the issues discussed and the outcomes sought. An equally high transparency score could be obtained by providing detailed case studies of engagements with specific (named) companies across the areas being engaged on. There is no expectation that every engagement merits a case study, as this would be excessive. All disclosures should be freely available on company websites and presented in an accessible format.

Q2: Climate Engagement Framework

The UK's 2020 Stewardship Code Principle 9 expects asset managers to explain "how they have selected and prioritized engagement" & "how they have developed well-informed and precise objectives for engagement with examples". For asset managers to score highly on this query, they should, therefore, have a clear high-level climate change framework that informs what companies they choose to engage with and on what issues to achieve specific results. Legal and General's *Climate Impact Pledge* offers one example of best practice. This program assesses and engages with 1,000 companies across six sectors on climate performance and provides a structure for all climate-related engagements, ensuring engagements are targeted, accountable and logically consistent.

Q3: Milestones for Success

Principle 9 of the Stewardship Code, requires investors to disclose how “how engagement has been used to monitor the company; any action or change(s) made by the issuer(s) [...] Examples should be balanced and include instances where the desired outcome has not been achieved or is yet to be achieved.” Asset Managers are assessed on if engagements are monitored, including if there are processes in place to track specific required outcomes that need to be achieved consecutively or at different time -points, as milestones or success criteria during the engagement. To score highly, companies should have a framework that structures their engagement activities and includes key milestones against which to measure progress and determine whether changes in strategy or an escalation of approach are needed. Hermes Investment Management, *for example*, has a propriety milestone system that measures engagement progress depending on each concern and its related objective.

Q4: Escalation Strategy

The Stewardship Code, Principle 11, states that “Signatories, where necessary, escalate stewardship activities to influence issuers [...] and explain] how they have selected and prioritized issues, and developed well-informed objectives for escalation; when they have chosen to escalate their engagement, including the issue(s) and the reasons for their chosen approach, using examples”. Consistent with the Stewardship Code, highly scored asset managers should have in place escalation strategies and responses that are deployed in certain situations. When asset managers encounter sufficient disagreement or a lack of progress on engagement, it is essential they have a robust escalation strategy in place to prevent the engagement process from stalling. Escalation actions are key in enabling asset managers to be ‘forceful stewards,’ without which engagement is an advisory conversation without consequences. Sarasin & Partners, *for example*, has a particularly forceful strategy, being prepared to: vote against directors, file shareholder resolutions, propose replacement directors, vote against the auditor and/or annual report and accounts, submit formal complaints to regulators, make public statements, and litigate. FinanceMap’s methodology does not prescribe a certain response as necessary, nor pass judgment on which type of response is better than another, so long as the response constitutes a meaningful penalty. Simply ‘increasing engagement intensity’, for example, is considered insufficient.

Q5: Engagement on Paris Aligned Business Models

FinanceMap assesses whether asset managers are engaging companies to transition in line with the Paris Agreement. Climate change already tends to be the primary focus of ESG-related engagements. However, the methodology assesses the extent to which the intent and desired outcomes of engagements are consistent with the IPCC’s Special Report on 1.5°C and the Paris Agreement’s commitment to limit warming to “well

below” 2°C this century. *For example* in 2019, Allianz, in coordination with the Net-Zero Asset Owner Alliance, engaged with companies around decarbonizing their business models in line with the 1.5°C commitment. Engagements that promote GHG emission targets that lack sufficient ambition or have no grounding in climate science are considered insufficient for the highest positive scores in the methodology.

Q6: Engagement on Climate Lobbying

As InfluenceMap has demonstrated through consistent analysis since 2015, corporations remain a primary obstacle to the progress of climate change legislation. Investors have a key role in bringing about corporate behavior change to ensure companies’ direct and indirect policy footprints are consistent with the ambition of the Paris Agreement. Asset owners such as the Church of England Pension Board and Sweden’s AP7 have led an engagement process requesting that companies publicly audit their influence over climate policy. This type of activity, or, for example, engagements to prevent a company opposing specific legislative strands, would receive the highest score.

Q7: Climate Engagement Impact

This query aims to determine the extent to which there has been some impact or materiality as a consequence of asset managers’ engagements. For instance, asset managers would score highly if they have been individually or collectively engaging on an issue where there has been significant observable progress. All asset managers that are observably active within the Climate Action 100+ engagement initiative would receive points for the success of the program as a whole. However, to receive the maximum score there would have to be some evidence of causality or additionality specifically related to the engagement: in other words, evidence that the investor drove a particular outcome. This would include being the lead or co-lead filer of a resolution that appears to have caused the intended change. An investor assigned as the lead engager on a CA100+ company that has materially changed its behavior would also receive full points.

Q8: Collaborative Engagement

Principle 10 of the Stewardship Code states that “Signatories, where necessary, participate in collaborative engagement to influence issuers.” Collaborative investor engagement around climate has become increasingly common and important in recent years. The Climate Action 100+ (CA100+) coalition, for example, represents 545 investors with US \$52 trillion in assets under management, and over a five-year time-period intends to transition 161 of the most significant companies on climate. To score highly on this query asset managers need to be material contributors to collective engagement efforts to transition companies in line with the Paris



Agreement. *For example*, Federated Hermes, which is the CA100+ lead or co-lead engager on 27 companies, would score highly. Accepting that not all asset managers have the resources or authority to lead collaborative engagements, our scoring will assess whether there has been a material contribution to the collaboration and/or an engagement.

Q9: Resolutions: Voting Transparency

The UK's 2020 Stewardship Code Principle 12, states that, for listed equity assets, investors should "provide a link to their voting records, including votes withheld if applicable; explain their rationale for some or all voting decisions, particularly where: there was a vote against the board; there were votes against shareholder resolutions; a vote was withheld; the vote was not in line with voting policy." Subsequently, the highest scores we award are to asset managers that publish their voting records on their website annually (or more frequently) and disclose their voting rationale in line with the Stewardship Code. All disclosures should be freely available on company websites and presented in an accessible format. Sarasin and Partners, *for example*, has a dedicated webpage providing annual voting records with justifications for voting decisions disclosed in downloadable excel sheets. Consistent with the Stewardship Code, to score highly it is not necessary for the voting rationale to be provided for routine votes such as re-election of the board, the appointment of auditors, and accounts, etc.

Q10: Resolutions: Climate-Relevant Voting

FinanceMap filters resolutions deemed to be climate-relevant. The climate-relevance categorization is based on the *IPCC's Special Report on 1.5C* and its concluded need for "rapid and far-reaching transitions in land, energy, industry, buildings, transport, and cities." FinanceMap scored voting on any resolution where the intent and likely outcome is consistent with this IPCC stated need. For example, a resolution requesting a utility company to increase its renewable energy production would be considered climate-relevant. Votes on resolutions where any climate-impact would be indirect or unclear, for example, requesting a company to disclose on ESG, are not scored. The voting data was drawn from proxy voting data provider ProxyInsight, asset managers disclosures to the U.S. Security Exchange Commission (SEC), asset managers' websites (including third-party websites they link to), and directly from the asset managers. The table below provides a summary of the different categories of climate-relevant resolution assessed and the number in each category between 2018-2020. The full list of resolutions assessed is available *here*.

Resolution Category	Number of Climate Resolutions filed globally (2018)	Number of Climate Resolutions filed globally (2019)	Number of Climate Resolutions filed globally (2020)
CO ₂ Emissions Disclosure	6	2	2
CO ₂ Emissions Target Setting	17	11	12
Climate Risk/ Scenario Analysis	13	7	5
Renewable and Energy Efficiency	7	1	0
Deforestation	2	3	3
Climate Policy Lobbying	8	13	17
Disclosure of Voting on Climate-related Resolutions	1	0	1
Preliminary Resolution ⁷	2	7	6
Climate Corporate Governance	0	1	7
Active Ownership of Fossil Fuels	0	11	7

Q11: Use of Shareholder Authority

Owners of corporate equity have significant legal and statutory powers to influence company behavior. FinanceMap assesses whether asset managers have, in their use of shareholder authority, been ambitious, purposeful and forceful in driving companies toward Paris Alignment. Investors that score highly may, for instance, have filed or co-filed shareholder resolutions. Asset managers may also score highly through galvanizing investor support for a climate resolution either individually or as part of a coalition, or other public forms of shareholder activism. For example, examples where asset managers have issued public statements around their voting intentions at company AGMs, engaged with company boards ahead of AGMs about climate concerns or resolutions, or made statements/asked a climate-related question at company AGMs. Trillium Asset Management, *for example*, appears to be the most active investor filers of climate-relevant resolutions, requesting companies set targets for the reduction of GHG emissions and separate targets for increases in renewable energy use.

⁷ Shareholder resolutions at Australian company AGMs are typically filed as two part resolutions. The first being a 'special resolution' that amends the company's constitution to allow advisory resolutions, which InfluenceMap classifies as 'Preliminary Resolutions'. The second resolution contains the substance of the matter the shareholders wish to raise, for this reports' purposes these are the climate-related resolutions tracked and are assigned to the relevant resolution category. See Client Earth's November 2018 [investor briefing](#).