



Center
Climate
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Charting the Course to Climate-Aligned Finance:

FIVE BARRIERS TO ALIGNMENT AND HOW A SECTORAL APPROACH CAN HELP

insight brief

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As the world comes to grips with the magnitude and speed of economic transition needed to avert catastrophic climate change, the vital role of finance is coming into focus. While finance cannot single-handedly decarbonize the real economy, private financial institutions across the investment chain *can*—and, as worsening climate impacts and rising public expectations suggest, *must*—play a role in the low-carbon transition. Climate change has evolved from being an afterthought in the financial sector’s day-to-day business to a force that—in the words of Larry Fink, CEO of the world’s largest asset manager—can drive a “fundamental reshaping of finance.”¹

After cycling through periods of emphasis on environmental risk management, sustainable finance targets, coal finance bans, and climate-related disclosure, the financial sector’s attention is now converging on the holistic concept of “climate alignment” (Box 1). The idea is elegant in its simplicity: to achieve climate alignment, a financial institution must (1) understand the climate impact of its current portfolio and investment strategy in relation to an emissions pathway consistent with a <2°C future, and (2) commit to take the steps necessary to merge onto that pathway. Climate alignment commitments are only continuing to gain momentum: **by the end of 2019, financial institutions representing \$17.2 trillion had committed to align their portfolios with the temperature goals of the Paris Agreement (Figure 1).**¹

Despite its growing popularity, climate-aligned finance is challenging in practice. In most sectors, there is no single agreed upon decarbonization pathway against which to align lending and investment decisions. Furthermore, methodologies to track the alignment of financial portfolios with these pathways are still in development, which can be complicated by the fact that underlying data may be of poor quality or not available at all. Financial institutions also worry about losing clients or investment opportunities if they move toward alignment faster than their peers.

Finally, and more fundamentally, the universe of “climate-aligned” companies and projects at present is simply not large enough to enable alignment for most investors, based on divestment and capital reallocation. Sectors such as steel, cement, oil and gas, and electricity represent the foundation of the global economy. None are on a pathway to being aligned with the goals of the Paris Agreement. Unless an institution can avoid investing in these sectors—which underpin vital activities such as transport, aviation, and construction—climate alignment is simply unachievable. **Institutions must therefore engage clients and customers to accelerate the zero-carbon transition and honor their climate commitments (Figure 2).**

¹ The 2015 Paris Agreement on climate change, signed by 187 countries, set a goal to limit average global temperature rise to well below 2°C above pre-industrial levels and to pursue efforts to limit the increase to 1.5°C, in recognition that these limits would help avoid the most dangerous impacts of climate change. Climate-aligned dollar commitments include the Collective Commitment to Climate Action (\$13 trillion); the Global Alliance for Banking on Values Climate Change Commitment (3C) (\$153 million); the Net Zero Asset Owners Alliance (\$4 trillion); and the Poseidon Principles (\$100 billion).

Figure 1

The increasing momentum behind climate alignment

Climate alignment has gained significant momentum in recent years—from the methodological groundwork that allowed the first financial institutions to make commitments, to a flurry of climate alignment pledges made last year. **With over \$17 trillion now committed to a below 2°C future**, climate alignment is cementing itself as the gold standard for financial sector climate action.

2019

Taking flight

Several coalitions of financial institutions follow with new alignment commitments. 16 investors commit to transition their portfolios to net-zero under the **Net-Zero Asset Owner Alliance**. The **Poseidon Principles** mark the first global, sector-wide climate alignment agreement among financial institutions. The Katowice Commitment expands to 33 banks under the **Collective Commitment to Climate Action**, and the **Global Alliance for Banking on Values** commits to assess, disclose, and align loan books. Many of these coalitions have only continued to expand in membership since their launch.

Methodologies continue to gain attention globally, as IIGCC-led **Paris Aligned Investment Initiative** begins to develop alignment methodologies for institutional investors and SBTi begins road-testing target-setting methods. Meanwhile, PCAF expands globally.

2018

Gaining momentum

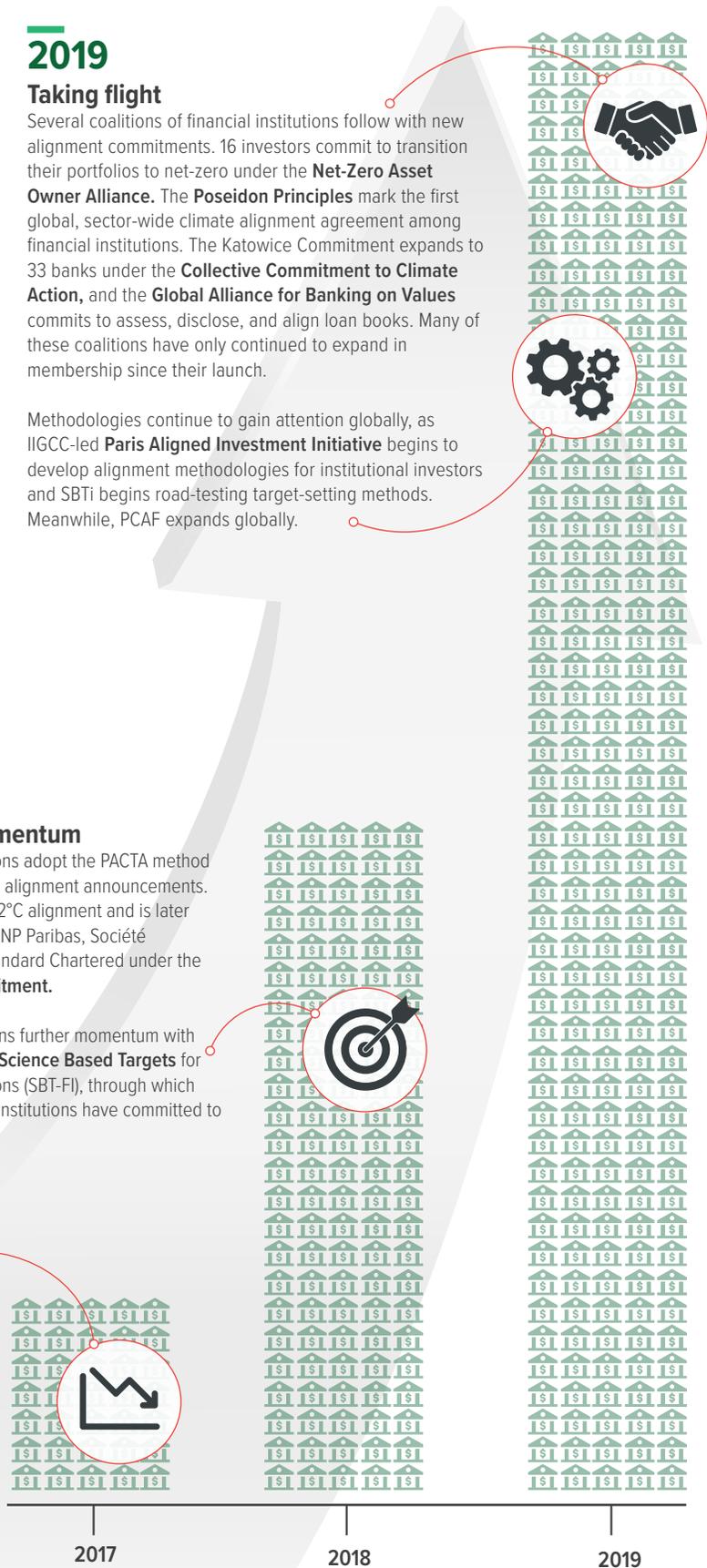
Financial institutions adopt the PACTA method in the first climate alignment announcements. **ING** commits to <2°C alignment and is later joined by BBVA, BNP Paribas, Société Générale, and Standard Chartered under the **Katowice Commitment**.

Target-setting gains further momentum with the launch of the **Science Based Targets for Financial Institutions (SBT-FI)**, through which over 50 financial institutions have committed to set targets.

2017

The groundwork

The first major climate alignment methodologies are released, with **2dii's Paris Agreement Capital Transition Assessment (PACTA)** methodology and the **Platform for Carbon Accounting Financials (PCAF)** method.

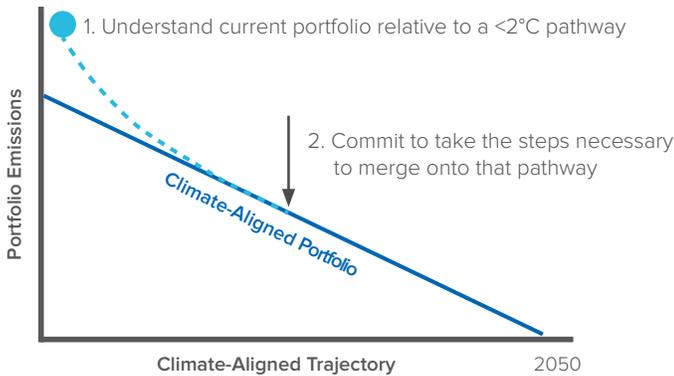


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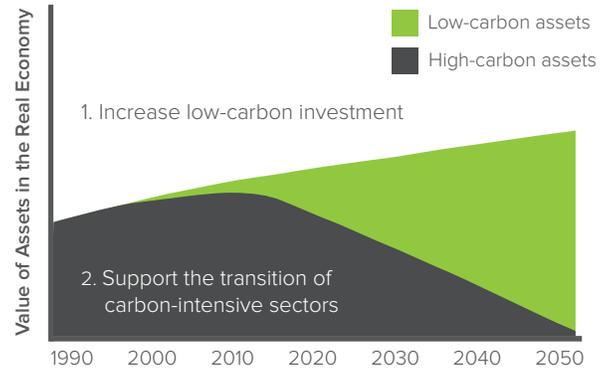
Figure 2

Climate Alignment: aligning financing and investing decisions with <2°C pathways

To achieve climate alignment, a financial institution must:



Merging onto this pathway will require financial institutions to:



Source: Figure partially adapted from Climate Finance Leadership Initiative. *Financing the Low-Carbon Future*, 2019, <https://www.bloomberg.com/cfi>

Given these challenges, the ambition and expectations around committing to climate alignment are evolving much more rapidly than the understanding of how to implement it. **This insight brief takes stock of the key challenges financial institutions—from banks to asset managers and asset owners—face in their journey to climate alignment and proposes a pragmatic, systematic way forward.** Of course, investors are not monolithic, and each will face its own particular set of challenges. Yet, there are common barriers that hinder the path to alignment, and common solutions to overcome them.

In particular, rather than aiming to align entire portfolios spanning most corners of the global economy off the starting block, it will be more effective to separate financial portfolios and decision-making into manageable parts: by sectors of the real economy. A sector-by-sector approach not only allows for targeted problem-solving of the technical challenges to climate alignment, but also allows financial institutions to make headway on their commitments.

BOX 1. How we got here: From evolving expectations, a consensus on alignment

As the effects of climate change are felt more acutely and predictions for future impacts grow more dire, citizens are increasingly demanding action from both governments and private institutions, including companies and financial actors. The pathway that financial institutions have followed with respect to climate action mirror the steady heightening of expectations from those institutions' key stakeholders. While at first shareholders, clients, and civil society expected financial institutions to simply avoid adverse climate impacts, they began to look for more robust and measurable sustainable finance commitments. Soon thereafter, managing and disclosing climate-related risk became an expected responsibility of financial institutions. Now, expectations are coalescing around the notion that a truly responsible institution must actively contribute to climate goals. Climate alignment sits firmly at the end of this evolution, arguably cementing itself as a gold standard for financial sector climate action.

The Evolving Expectations of Financial Institutions



² The Bank of England recently announced that it would include physical and transition risk in the next round of mandatory stress tests on banks and insurers while the U.S. Commodity Futures Trading Commission launched a Climate-Related Market Risk Subcommittee in November 2019.

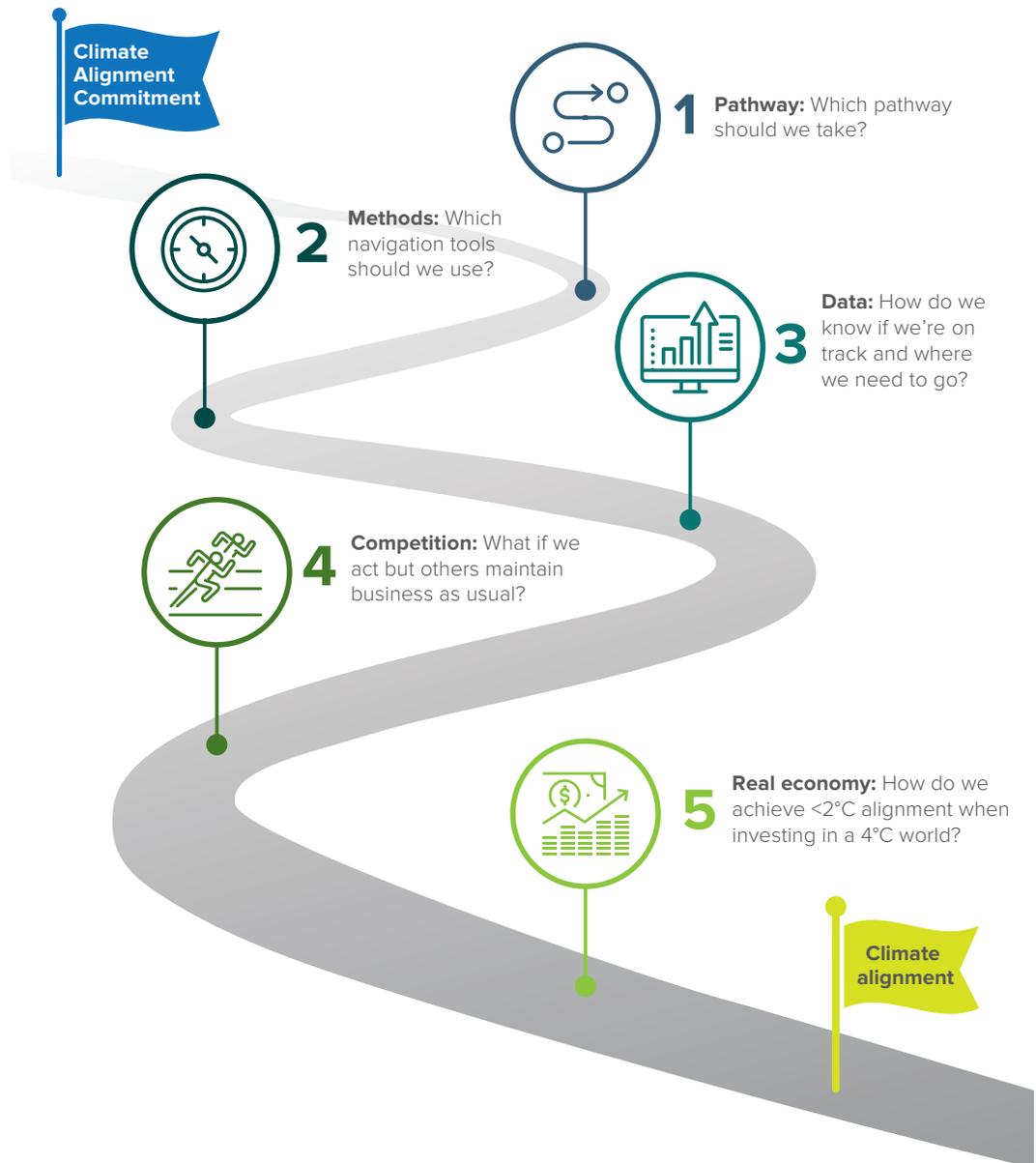
³ In order to limit average global temperature rise to 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) predicts emissions must decline to net-zero by around mid-century. Additional information on net-zero emissions commitment can be found through the [Climate Ambition Alliance](#).

IIIIIIII **Five Barriers to Climate Alignment:
A Long and Winding Journey**

Making the commitment to become climate aligned is a bold step for any financial institution, but only the first along an uncharted route. While strategies are likely to vary between different types of financial institutions, all face a common set of barriers on their journey toward climate alignment. **By overcoming five critical challenges—multiple decarbonization pathways, varying methods, inadequate data, competitive disadvantages, and the need to actively create solutions in the real economy—the financial sector can chart a course to delivering truly climate-aligned outcomes.**

Figure 3

**Five Barriers Financial Institutions Face
in the Journey to Climate Alignment**



||||||| BARRIER 1: Choosing Between Multiple Decarbonization Pathways

One of the first steps in moving toward climate alignment is identifying decarbonization pathways to a <2°C future. For financial institutions, this requires understanding the different paths for real economy segments of portfolios—such as oil and gas, power utilities, or shipping—that help establish the foundation for how the climate impact of a financial institution’s portfolio should evolve.

Yet, there are nearly limitless pathways to well-below 2°C; the Intergovernmental Panel on Climate Change’s (IPCC) latest report profiled no fewer than ninety 1.5°C pathways.^{iv} The assumptions used in these scenarios—including technology costs and deployment rates, population and energy demand growth—can vary considerably depending on who does the modeling and what they expect is likely to happen in the future. At best, the preponderance of “climate-aligned” scenarios is confusing to navigate; at worst, it could lead to conflicting objectives.

Take two extremes in the IPCC’s 1.5°C scenarios. One scenario predicts that natural gas consumption will have to *decrease* 88 percent by 2050 in order to limit average global temperature rise to 1.5°C, while another estimates that it will *increase* 85 percent.^v If a bank, for example, were to use the first scenario as its goal post, it would aim to phase out its lending to the natural gas industry. If a competitor were to use the latter, it would grow its lending to the sector, while counting on a breakthrough in carbon capture and storage technology. While both banks could claim climate-alignment, the bank choosing the natural gas-heavy pathway would have considerably more investment opportunities than the bank choosing the more conservative scenario. The lack of a standard alignment pathway also exposes both to increased transition risk, as regulators will need to determine which pathway to enforce.

||||||| BARRIER 2: Navigating Varying Methodologies

After agreeing on a climate-aligned pathway, a financial institution must pick the methodology it will use to measure its progress toward merging onto that pathway. Here too, varying tools and methodologies have emerged from a proliferation of green finance and climate alignment initiatives. In particular, two approaches have gained traction with financial institutions: (1) financed-emissions approaches that quantify the carbon footprint of a portfolio of investments, and (2) forward-looking approaches, which leverage emissions scenarios, technology pathways, and carbon budgets in order to inform financial decision-making.

One of the leaders in developing standardized methods for calculating financed-emissions is the Partnership for Climate Accounting Financials (PCAF), launched in 2015 by several Dutch financial institutions. PCAF aims to produce a simple, accessible framework that produces relatively straightforward outputs, following the logic that you can’t manage what you don’t measure.

PCAF uses different asset classes as the main building block to assesses the carbon footprint of investments and loans. This methodology may cover a number of relevant asset classes, including listed equity, corporate debt, and alternative investments such as project finance, mortgages, and commercial real estate. By aggregating financed emissions across these asset classes, PCAF offers a way to calculate the emissions footprint of an entire portfolio or loan book. While not an alignment methodology in itself, financed emissions approaches provide the tools for tracking progress toward financial institutions' emissions or emissions-intensity targets—whether at a portfolio or sector level.

A leading forward-looking methodology is the Paris Agreement Capital Transition Assessment (PACTA), developed by 2 Degrees Investing Initiative (2dii), which focuses on the technology shifts required in key emitting sectors to achieve a climate-aligned emissions trajectory. Under this approach, a financial institution's investments in different technologies—whether directly or indirectly—are benchmarked against projections for how this technology mix will need to change in order to keep warming well-below 2°C. PACTA uses highly granular, asset-level production and capacity data to help steer financial institutions' decision-making.⁴

While both financed emissions approaches and forward-looking approaches have experienced uptake among financial institutions, each have their own benefits and drawbacks.

A financed emissions approach is relatively easy to understand, allowing financial institutions to calculate their portfolio emissions in-house. It also provides a simple way for financial institutions to disclose their climate impact and identify emissions “hot spots” within a portfolio.

However, while it provides a high-level characterization of portfolio emissions at a single point in time, it may offer less insight into what actions are needed to steer those emissions into alignment. In addition, accounting methodologies face challenges in attributing climate impact among different financial stakeholders. ING Global Head of Sustainability Léon Wijnands has pointed to the potential for double-counting of emissions when a bank has, for example, a revolving credit facility for a parent company, as well as individual lending activity with an associated subsidiary.^{vi} Depending on the nature of a financial institution's investment or lending services, different methodological approaches could attribute different emissions levels to the company.

In contrast, forward-looking approaches offer a framework for guiding future lending and investment decisions. However, they rely on a wider range of data inputs and resources. As a result, they may face challenges with respect to transparency and flexibility, and their scalability may be hindered as the organizations that have developed methods may lack the capacity to scale and adapt approaches to a wide range of financial institutions—some of which have portfolios valued in the trillions of dollars.

⁴ Note that PCAF and PACTA are not the only two methods, but are two predominant methods gaining traction among financial institutions. For example, Carbon Delta has a forward-looking method that assesses the “warming potential” of an investor's portfolio, which has been used by insurance companies AXA and Aviva.

||||||| BARRIER 3: Sourcing Adequate Data

Even after navigating alignment methods, the lack of quality, decision-useful data to plug into these methods is one of the largest challenges financial institutions face today. For example, as implemented today, financial institutions applying PCAF's financed emissions methods often use readily available data. Yet granular emissions data for many sectors and asset classes is often of poor quality or unavailable, making it difficult to produce comparable, decision-useful results.

For example, in the absence of adequate data, financial institutions applying PCAF may rely on average asset emissions intensity (e.g. typical emissions values for a residential mortgage or auto loan), rather than observable asset-level data (e.g. actual emissions from the company's mortgage or auto loan holdings). As a result, a financial institution's footprint would track the average emissions-intensity of a sector, even if it made efforts to steer investments toward low-carbon alternatives. Although forward-looking approaches such as PACTA may utilize asset-level data, it too is limited by the availability of sufficiently granular data in certain sectors.

While voluntary initiatives such as CDP and TCFD have made tremendous progress in mainstreaming corporate climate data disclosure, comprehensive GHG emissions reporting is not yet standard practice across all industries and geographies. Of the companies included in the MSCI World Index, which represent about 60 percent of global market capitalization, just under half report their GHG emissions.^{vii} Even for companies that do report emissions, fewer than 2 percent of companies provide a *full accounting* of all direct emissions, with even fewer reporting indirect emissions (e.g., emissions from purchased goods and services, the use of products or services provided by a company).^{viii} Certainly, one remedy for poor reporting levels is to strengthen mandatory reporting requirements. Over 40 countries and regions currently have mandatory reporting programs, but key parts of the world with rapidly growing GHG emissions do not.^{ix}

Reporting gaps and challenges are also sector specific. Among a subset of about 100 companies that account for over 80 percent of global corporate GHG emissions, companies in the consumer products, transportation, and electricity sectors reported GHG emissions to CDP at a rate of 80-100 percent, while the mining and metals industry had only a 57 percent reporting rate.^x Overcoming these challenges often requires bespoke solutions to industry-specific gaps, as illustrated by the example of methane emissions in the oil and gas sector (Box 2).

⁵ The Greenhouse Gas Protocol distinguishes between Scope 1 emissions that arise directly from a company's operations (e.g., methane emissions from an oil well), Scope 2 emissions that arise indirectly from operations (e.g., emissions from electricity or heat consumed in an oil refinery), and Scope 3 emissions that arise indirectly up- or downstream the value chain of a company (e.g., emissions from gasoline combusted in a vehicle). Particularly for Scope 2 and 3 emissions, inconsistency in methodologies for attributing emissions can result in investors under- or over-counting emissions.

BOX 2. Understanding the data challenge: A look into the oil and gas sector

The use of oil and gas—whether to propel our cars, heat our buildings, or power our electricity system—represents 55 percent of energy-related carbon dioxide (CO₂) emissions.^{xi} Yet the oil and gas sector is also a major emitter of methane, a lesser-known greenhouse gas with a climate impact over 80 times that of CO₂ over a 20-year period, and which experts believe will drive one-quarter of the global warming we will experience in the next 20 years.^{xii}

However, methane is a hidden problem: invisible to the naked eye, often difficult to predict, and likely sorely underestimated. A recent study in *Science* estimates that in the United States, methane emissions from oil and gas are likely 60 percent higher than the values reported by the Environmental Protection Agency (EPA).^{xiii} While the EPA's inventory is based partially on reported data, it is supplemented by modeling that helps fill reporting gaps. However, methane leaks, particularly large leaks that can occur during abnormal operations, are nearly impossible to capture in models that typically assume industry-average figures and operations.

Measured data, or data captured directly through sensors, can be an alternative or supplement to models and reported data. This data, which can be captured through satellites, aircraft observations, or ground-based sensors, is typically the best-in-class source, offering both granularity and quality—and as measurement improves, it could be used by regulators to better enforce methane emissions limits.

In the absence of more comprehensive, verifiable reporting, making methane visible to investors at a reasonable price tag will likely involve modeling calibrated with measured data. This solution will allow investors and lenders to oil and gas companies to pinpoint the investments and companies most responsible for unabated methane—and therefore wholly misaligned with a low-carbon, climate resilient future.

■■■■■■■■ BARRIER 4: Overcoming Competitive Disadvantages

Climate alignment is not an endeavor that can easily be undertaken alone: a single financial institution, at most representing several trillion dollars, cannot singlehandedly move the \$80 trillion global economy. **First movers toward climate alignment also risk losing clients and investment opportunities to competitors.** For example, more stringent lending conditions stipulated by a climate-aligned bank, whether through a covenant requiring clients to disclose emissions data or a requirement to meet certain emissions-intensity targets, could lead that client to seek a loan elsewhere.

Similar tradeoffs also exist in equity markets: an investor may find that the carbon-intensive shares it sells off in order to align its equities portfolio are quickly purchased by neutral investors, negating the potential penalty to the carbon-intensive business and eliminating the original investor's ability to actively influence the corporate's business direction as a shareholder. This

challenge of emissions “leakage” risks punishing the financial institutions willing to move ahead of the curve on climate ambition, without actually reducing emissions in the real economy. Emitting assets simply live on, financed and owned by more neutral institutions.

The need for collective action on climate alignment is clear: effective initiatives must engage a large enough coalition of financial institutions to move markets and ensure that first-mover institutions are not penalized for their climate action. Already, collective action on climate has proven popular with a range of private financial institutions. Thirty-three banks have committed to align their portfolios with the Paris Agreement through the Collective Commitment to Climate Action, and 23 leading national and regional development banks under the International Development Finance Club (IDFC) have committed to pursue alignment of financial flows.

Climate Action 100+, while not a climate alignment initiative, utilizes the collective power of more than 370 investors to engage the world’s most emissions-intensive companies on climate change. While financial institutions have already taken the initial step of joining with peers and competitors through these initiatives, they now face the challenge of spurring initiatives toward meaningful collective action. In order to realize their commitments, financial institutions can embrace the opportunity for collective action presented by platforms such as Climate Action 100+ and push their ambition to drive greater action from the world’s most systematically important emitters.



BARRIER 5: Moving Beyond Divestment To Actively Influencing The Real Economy

Even after navigating decarbonization pathways, methodological complexity, data gaps, and the challenge of moving progressively without losing competitive advantage, **financial institutions still face their biggest barrier: achieving <2°C alignment when investing in a 4°C world.** The global financial system is investing in projects on track with 4°C of warming, and despite growth in green asset classes in recent years, total sustainable investment remains only a small fraction of the larger financial sector. For example, total cumulative green bond issuance is approximately 0.5 percent of the global bond market.^{xiv}

The result is a wholly insufficient supply of prospective assets available for new investment, let alone a pool of assets and projects that could absorb capital from wide-scale portfolio reallocation. Faced with a severely limited universe of climate-aligned investment opportunities, a large financial institution that wanted to align their portfolio or loan book with less-than 2°C would find it impossible today.

A particularly striking example of how real economy misalignment stymies financial actors is the experience of French insurer AXA. A leader in taking climate action, AXA has already eliminated coal and oil sands assets from its investments and business relationships, and aims to achieve a Paris-aligned portfolio. The company uses its own environment, social, and governance (ESG) assessment tools alongside specialist research support from Carbon Delta, Beyond Rating, and Trucost to assess its corporate assets, sovereign debt holdings, and overall carbon footprint.

BOX 3. US Utilities – A Carbon-Heavy Industry Ripe For Investor Engagement

The electricity sector is one of the largest contributors to climate change, accounting for approximately 40 percent of global CO₂ emissions.^{xvii} In the United States, power generation contributed just under one third of emissions in 2018, driven by coal (65 percent) and natural gas (33 percent).^{xviii} Many of the challenges laid out in this brief are surmountable for investors in US electricity companies. Emissions data is reported in detail through mandatory submissions to regulatory authorities, and hourly plant-level information is commonly available through industry service providers. Allocation of utilities' emissions to financial stakeholders is reasonably simple, as US utilities raise much of their capital through public equity and bond issuance. While remaining competitive with peers is always a consideration for financial institutions, many firms have already indicated an interest in aligning investments with low-carbon power generation through exclusion policies that preclude future financing or insurance for new coal-fired plants.

Still, investors are left with the daunting task of influencing utility companies to decarbonize their fleets. Fortunately, transitioning to zero-carbon power generation increasingly makes good business sense, and protects companies from climate transition risk. As a recent RMI report shows, the costs of electricity generation from clean energy portfolios (including wind, solar, and storage) have dropped dramatically in recent years, and are now cheaper than new gas generation, while providing the same grid reliability.^{xix} Across the country, more and more residential and corporate customers are demanding green electricity options, placing pressure on utilities to deliver.

Yet, while renewables are increasingly the clear winner for new capacity investments and beating out existing fossil generation in some competitive markets, many regulated utilities are saddled with the issue of an existing coal fleet that not only prevents new clean power from coming online, but in many cases is racking up losses that ratepayers must cover. Transitioning US utilities therefore requires a multi-pronged response from the financial sector. First, investors can engage utilities on their transition strategies. In December 2018, Xcel Energy (one of the top 10 US utilities both by market capitalization and by CO₂ emissions) became the first major US utility to commit to delivering carbon-free electricity by 2050. Notably, Xcel is a Climate Action 100+ focus company, demonstrating how investor initiatives and engagement can help steer corporate decision-making to better align the real economy with a sustainable future. Second, financial institutions can underwrite and enable the financial solutions, such as the securitization of coal fired power plants through rate-payer backed bonds, to accelerate the retirement of misaligned power sector assets.

In a recent annual climate report, AXA noted that while its combined portfolio (debt and equities) indicates an emissions trajectory below the business as usual, it remains on a 3.3°C “warming potential” pathway, well above 2°C.^{xv} AXA’s head of climate and environment has shared the sobering reality that the company would need to divest all of its top 100 corporate holdings in order to achieve a portfolio aligned with 1.5°C of warming.^{xvi}

“The world is not yet Paris-aligned...while proactive investors can reorient some capital flows, for example via divestments and sector reallocations, they remain largely dependent on a broader macroeconomic situation which traps economies into carbon intensive pathways.”
– AXA’s 2019 Climate Report

Facing this dilemma, how, then, can financial actors credibly adopt climate targets that they actually hope to achieve? **The answer lies in harnessing the financial sector’s tremendous influence in order to effect change in the real economy.** Financial institutions have a wide set of tools at their disposal, including shareholder engagement, client relationships, and the ability to provide innovative financial products (see Box 3). The key is understanding how to most effectively put these tools to work across different sectors, types of financial institutions, and geographies.

||||||| The Way Forward: A Sectoral Approach To Climate Alignment

Climate alignment at speed is a necessity if the worst effects of global temperature rise are to be mitigated. Yet the barriers financial institutions face—from conflicting decarbonization pathways, varying methods, inadequate data, first mover disadvantages, and the lack of climate-aligned investments today—can be daunting. While some NGOs and financial institutions have made tremendous progress in developing methods and tools to address some of these barriers, none have yet charted a way to systematically overcome all five barriers for the diverse range of sectors, geographies, and asset classes in which a financial institution may be active.

Rather than trying to overcome these barriers across the entire global economy, tackling climate alignment sector-by-sector offers a more efficient, pragmatic, and effective way forward. A sectoral approach helps break down challenges into more manageable pieces, and brings the locus of problem-solving to the relevant level. Sectors, such as power generation, shipping, aviation, or steel production, each have their own distinct political economies, technological and business model pathways toward decarbonization, and data gaps.

Rather than adhering to pathways defined by regulatory bodies, technical experts, together with progressive companies operating in specific sectors and their customers, are more likely to develop **realistic decarbonization pathways** based on sector-specific technology and demand-side trends. For example, in sectors such as aviation that are wholly dependent on the availability of low-carbon jet fuels to decarbonize, working in collaboration with fuel suppliers will be critical to ensure alignment between supply and demand signals, and that investments in clean jet fuels are anticipated accordingly.

Approaching alignment through a sector lens—and with the input from stakeholders in that sector—can also reveal **fit-for-purpose methodological and data solutions** that might otherwise get lost through a more generic-whole portfolio approach. For instance, in sectors that must undergo complex transitions, including many hard-to-abate sectors such as steel or cement, developing the metrics to help inform investors and lenders which companies are progressing in the low-carbon transition will require an understanding of how that transition may unfold.

Sectors also often have distinct financing arrangements, with each relying more or less on different sources of capital to fund their activities. As a result, different sectors may have different “pinch points” through which one or two types of financial institutions yield greater influence or are more incentivized to act in a sector. By understanding where sectoral pinch points lie, financial institutions can focus efforts on mobilizing a **targeted coalition of financial actors in each sector to collectively drive change**.

While sectoral approaches are far from systemic, their value should not be discounted. At the sector level, a climate alignment commitment from a group of key financial institutions can play a critical signaling role, **catalyzing other climate action across the sector**, from spurring technological innovation to driving regulatory action.

The financial sector’s ability to drive social change was perhaps most notably demonstrated during the anti-apartheid movement in South Africa. Originally stemming from a series of announcements made by US university endowments, stockholders increasingly sold off stocks in companies doing business in South Africa to protest the country’s discriminatory policies. While the movement lacked formal coordination among financial institutions and was focused topically rather than by sector, it underscores **the opportunity for finance as a lever to influence corporate behavior, catalyzing action that can result in social change**.

Although only a single building block in implementing and operationalizing climate alignment across the financial system, a sectoral approach can provide invaluable lessons that will only strengthen the financial sector’s capacity in its overall journey toward climate alignment.

A sector approach is not easy, but it has proven to yield replicable results. RMI has deep experience working with a group of banks, industrials, and technical experts to develop a climate alignment agreement for the shipping sector in force today. Currently accounting for 25 percent of all senior shipping debt and growing, the agreement, known as the Poseidon Principles (Principles), provides a model for overcoming each of the five barriers and demonstrates how finance can help a hard-to-abate sector chart a course to low-carbon pathway (see Box 4).

BOX 4. A Sectoral Approach To Climate Alignment: How The Poseidon Principles Overcame The Five Barriers

The Poseidon Principles, launched in June 2019 with signatures from 11 banks representing \$100 billion in senior shipping debt, are the first global, sector-wide climate alignment agreement among financial institutions. Financial institutions who have signed on to the Principles have agreed to assess and disclose the climate alignment of their shipping portfolio, while committing to keeping or bringing it in line with the International Maritime Organization's (IMO) target to reduce shipping emissions by 50 percent by 2050 compared to 2008 levels.⁶

These Principles define the role that banks must play in decarbonizing the maritime shipping sector—a sector currently responsible for around 2.6 percent of global emissions—within the confines of day-to-day business realities of one of the most competitive and decentralized hard-to-abate sectors. Critically, a shipping-specific group of stakeholders, including major shipping banks, cargo owners, ship owners, and technical experts, drafted the Principles, bringing practical insight into how to address the five barriers to crafting an alignment framework for the sector.⁷

Pathway

While there is an established decarbonization glidepath for the entire shipping sector, defined by the IMO's emissions reduction target set in 2018, this target needed to be transformed into a trajectory that could guide individual financial institutions' decisions. Given the nature of the maritime shipping industry, the IMO's absolute emissions reduction target was translated into a carbon-intensity trajectory—or how a ship's CO₂ emissions, normalized by the distance it travels and the weight of cargo it carries, needs to decrease through 2050.⁸ Ships of different sizes are required to facilitate the global economy: from large tankers that ship goods globally, to smaller vessels that serve more regional markets. A carbon-intensity metric, while simple and comprehensive enough to inform financial decision-making, would create a “fair” metric for evaluating ships of different sizes.

Methodologies

After determining the carbon-intensity pathway, the Poseidon Principles working group needed to determine an appropriate carbon-intensity metric to track progress. While a range of different metrics exist, the Principles ultimately chose a pragmatic metric that could be calculated based on data that shipping companies would be required to report under IMO regulations. Although this metric is slightly less precise than other carbon-intensity metrics, as it relies on certain proxies for the cargo weight carried by ships, it minimized the reporting burden for ship owners.

⁶ The shipping sector falls outside of the Paris Agreement, and is instead governed under the International Maritime Organization (IMO).

⁷ The Poseidon Principles were drafted by a multi-stakeholder group including Citi, Societe Generale, DNB, A.P. Møller Mærsk, Cargill, Euronav, Gram Car Carriers, Lloyd's Register, Watson Farley & Williams, Global Maritime Forum, Rocky Mountain Institute, and University College London Energy Institute. Citi chaired, Societe Generale vice-chaired, and Rocky Mountain Institute managed their development.

⁸ A decarbonization trajectory is an ever-decreasing emissions intensity trajectory. Shipping vessels with operations less carbon-intense than this trajectory are aligned. The Poseidon Principles outlines decarbonization trajectories for every size and type of vessel so that smaller vessels are not discriminated against.

Data

Data availability, access, cost, and verifiability are well-known issues in the shipping sector. Yet the Poseidon Principles overcame each of these challenges, largely by leveraging its knowledge of the IMO's upcoming data reporting regulations. In 2016, the IMO passed a resolution requiring all ships to record and report fuel oil consumption—the key data needed to calculate carbon-intensity. While this data was privately reported to the IMO, the Poseidon Principles worked with one of its drafting partners, a law-firm specialized in the shipping sector, to formulate a covenant clause requiring shipowners to give lenders, lessors, and guarantors confidential access to this data. As reporting this data is a regulatory requirement, and independently verified according to IMO's standards, the data is both robust and relatively low-cost for shipowners to provide.

Competition and collective action

Shipping and ship finance are highly competitive industries, making collective action across a sufficiently large coalition of financial institutions critical to prevent both carbon leakage and the loss of business to competitors. Early on, the Poseidon Principles identified debt finance—one of the primary and most concentrated sources of finance in the sector—as a key leverage point. By pinpointing a specific type of financial institution to kickstart change in the sector, Poseidon more easily mobilized a critical mass of signatories: the Principles launched with signatures from 11 banks representing 25 percent of senior shipping debt, and are intended to be scaled globally.

Influencing the real economy

While it's impossible to fully decarbonize a fleet of vessels today, shipowners can realize profitable emission reductions through efficiency improvements, and can implement long-term plans for sourcing or retrofitting zero-emission vessels in the future. Prior to the Poseidon Principles there were no stakeholders in the shipping ecosystem evaluating current environmental performance and future environmental readiness. The Poseidon Principles provide a simple metric by which to evaluate and engage existing and prospective clients, which is now used to supplement traditional financial metrics in financing decisions.

While this will not decarbonize the shipping sector on its own, it does introduce clear expectations of clients today and going forward. In so doing, it enables financial players to begin aligning themselves with climate targets—and thus the assets and companies they finance—without unproductively placing the entire burden of decarbonization on the financial sector alone. In addition, Poseidon played a signaling role in the sector, paving the way for other climate initiatives. The Getting to Zero Coalition, a multi-stakeholder initiative that also includes many Poseidon signatories, is committed to developing commercially viable zero-emission vessels by 2030—a milestone that also underpins the success of Poseidon.



Conclusion

No longer a secondary consideration, climate change is quickly becoming a driver of financial decision-making. Increasingly, financial institutions are committing to greater climate action, raising the bar of responsibility above a pledge to scale green finance, or disclose climate-related risks. Financial actors across the investment value chain are increasingly considering opportunities to actively contribute to align financial decision-making with climate targets, and a growing number has committed to align their portfolios with the temperature goals of the Paris Agreement.

While these commitments are directionally positive, achieving a climate-aligned portfolio—especially for mainstream financial institutions—is a colossal, if not impossible, undertaking at present. Institutions that embark on this journey will face several hurdles along the way including (1) determining the appropriate goal posts for aligning decision-making, (2) methodological uncertainty, (3) a lack of decision-useful data, (4) concerns over losing clients or investment opportunities to less ambitious competitors, and (5) the severely limited universe of climate-aligned investment opportunities.

Rather than trying to overcome these barriers across the entire global economy, approaching climate alignment sector by sector offers a more efficient, pragmatic, and effective way forward. A sectoral approach to climate alignment can not only help define realistic decarbonization pathways but can help break down methodological and data challenges into more manageable pieces. Additionally, positioning climate alignment agreements at the sectoral level can mobilize a smaller coalition of financial institutions to act collectively, thereby overcoming competitiveness challenges, and can send a critical signal to public-sector actors and corporates across the sector, increasing momentum for the transition of assets in the real economy.

Sectoral approaches allow financial institutions to make progress on climate alignment commitments while providing the financial sector an opportunity to better understand what climate alignment is and how they can operationalize it. While essential, a sectoral approach is only the beginning of a broader effort that financial institutions must make to implement climate alignment across entire portfolios and strategies. Integrating sectoral agreements into a single framework will be critical for ensuring comparability, compatibility, and, when possible, synergy between approaches in interconnected sectors. Ultimately, a more holistic framework that systemically guides financial institutions' overall strategies will be required for the climate aligned investor. In the coming months, RMI will publish additional climate alignment resources that address the need for strategic, whole-portfolio agreements that allow institutions to advance their climate goals.

ⁱ Larry Fink, “A Fundamental Reshaping of Finance,” BlackRock, Jan 2020, <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>

ⁱⁱ The most recent iteration of the Equator Principles is available at <https://equator-principles.com/ep4/>.

ⁱⁱⁱ IEEFA, “Over 100 Global Financial Institutions Are Exiting Coal, With More to Come,” February 2019, https://ieefa.org/wp-content/uploads/2019/02/IEEFA-Report_100-and-counting_Coal-Exit_Feb-2019.pdf

- ^{iv} IPCC, “Special report: Global warming of 1.5°C,” 2018.
- ^v IPCC, “Special report: Global warming of 1.5°C,” 2018.
- ^{vi} Hurley, Michael, “**ING: let's align climate reporting frameworks**,” Environmental Finance, 23 October 2019.
- ^{vii} Climate Finance Leadership Initiative, “Financing the Low-Carbon Future,” September 2019, <https://www.bloomberg.com/cfli>
- ^{viii} Climate-KIC, “**Only 20 companies in the world provide 100 per cent greenhouse gas emissions disclosure – Are investors in the dark on climate risks?**” Blog Post, November 2018. See also <https://climatedisclosure100.info/wp-content/uploads/2018/10/100-Club-Criteria.pdf>.
- ^{ix} Singh, Neelam and Lindsey Longendyke, “A Global Look at Mandatory Greenhouse Gas Reporting Programs,” World Resources Institute (WRI), May 27, 2015.
- ^x Climate Action 100+, **2019 Progress Report**, September 2019. Additional information on Climate Action 100+ focus company selection process available at <http://www.climateaction100.org/companies>.
- ^{xi} International Energy Agency (IEA), CO2 Emissions from Fuel Combustion data for 2018.
- ^{xii} Environmental Defense Fund, “Rising Risk: Improving Methane Disclosure in the Oil and Gas Industry,” 2016.
- ^{xiii} R. Alvarez et al., “Assessment of U.S. methane emissions from the U.S. oil and gas supply chain,” *Science*, vol. 361, issue 6398, July 2018.
- ^{xiv} Tiftik, Emre, Khadija Mahmood, Celso Nozema, and Paul Della Guardia, “Sustainable Finance in Focus: Green Bonds Take Root,” International Institute of Finance, April 8, 2019.
- ^{xv} AXA Group, **2019 Climate Report**, 2019.
- ^{xvi} Huck, Vincent, “**Axa's top 100 corporate holdings don't make the cut in a 1.5°C portfolio**,” Environmental Finance, 5 December 2019.
- ^{xvii} According to the International Energy Agency (IEA) CO2 Emissions from Fuel Combustion data for 2017; available at: <https://www.iea.org/subscribe-to-data-services/co2-emissions-statistics>.
- ^{xviii} US EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017. Available at <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2017>.
- ^{xix} Teplin, C., M. Dyson, A. Engel, G. Glazer, **The Growing Market for Clean Energy Portfolios**, Rocky Mountain Institute, Insight Brief, 2019.