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CADWALADER



Climate Change Confronts Financial Services

A Benchmark Study on Climate Risk

January 2022

Climate
Analysis
Center

CONSULTING
FOR GOOD

Acknowledgements


Study Background

Sia Partners and Cadwalader, Wickersham & Taft reached out to our clients and colleagues in September of 2021 and asked them to participate in our Climate Risk Study. We want to thank all of you for your participation and for your extended patience in awaiting the results of our work. Over 70 banks, institutional investors, insurance companies and corporations participated in the study from the U.K., Europe, the Middle East, the Asia-Pacific, Canada and the U.S. Institutions participated by completing a survey and more than 30 firms also answered a series of questions in a lengthy interview. The interviews were almost all completed in December of 2021 and January of this year to ensure we captured the most recent developments in the industry and reactions to the climate conference in Glasgow (COP26). We want to express our sincere appreciation to the Securities Industry Financial Markets Association (SIFMA), the Loan Syndications Trading Association (LSTA) and the Institute of International Banking (IIB) who were kind enough to invite their members to also join the study which contributed to additional participation. The final report will only be shared with study participants as agreed. You are encouraged to share this with others in your firm but not outside your institution. We will also provide a formal Summary Document that will be posted on our respective websites and sent out to each of you and with clients who might wish to review the findings.

Methodology

As you review the document you will note a series of graphs and charts throughout the presentation. Each of the questions in the study are analyzed reflecting feedback from: (a) all participating institutions; (b) U.S. Regional Banks; (c) Investment Managers; (d) Foreign Banks (institutions where their headquarters are located outside of the U.S); (e) European Banks (institutions with headquarters in U.K. and EMEA); and (f) G-SIBs. We had a large enough grouping in those six categories to present the results and protect the anonymity of the participants. There are several other categories of participants which there are no graphs, but we did provide color and feedback based upon their submissions. Our extensive interviews were utilized to provide supplemental material beyond the survey and added a handful of topics not covered in the original survey including new global regulatory initiatives which we felt merited redress. Finally, we have also included feedback from public disclosure documents from market participants posted over the past few months.

Acknowledgements



In four segments of the report, we created a Best Practices section. We chose a group of public policy or regulatory recommendations to focus upon for each section: TCFD, Bank for International Settlements (BCBS), European Central Bank (ECB) and the Office of the Comptroller of the Currency (OCC). In our Regulation, Compliance and Legal section we included the IFRS (International Financial Standards Reporting Board) due to their additional focus on disclosure topics. We selected 12 firms which were a mixture of our participant breakout groups (Investment Managers, U.S. Regional Banks, G-SIBs, Foreign Banks, European Banks) and considered how they met a series of practices outlined that were similar in those reports. We used a traditional heat map expressing whether firms were meeting all, some or none of the criterion.

Acknowledgements

We are enormously appreciative for the contributions from a very large team of our consultants who worked endlessly for several months to produce this document- *Brett Watson, Zach Morochnik, Alexander He, Sharon Liu, Eve Blondeau-Elman, Mark Hahn, Miles Dowling, Julia Jeannette, Chad Lewis, Flor Cromphout, Akriti Bhatnagar*. Our firms are grateful for their efforts in compiling the data, analysis for our target groups and considerable research to supplement the very detailed results that we are sharing. We thank all of our colleagues for their efforts including William Sadd from Cadwalader, Wickersham and Taft and Chris Zachodzki from Sia Partners for their assistance throughout this initiative.

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Participant Overview

75%

of study participants have signed the

TCFD



5% > \$50 billion in assets



20% between \$50 - \$250 billion in assets



76% < \$250 billion in assets

95%

of participants have activities in **Wealth Management**

88%

of participants have activities in **Retail Banking**

91%

of participants have activities in **Wholesale Banking**

35+
Ptp

North America

20+
Ptp

Europe

5+
Ptp

Asia



Table of Contents

• 01/ Executive Summary	6
• 02/ Strategy	11
• 03/ Corporate Governance, Finance and Budgeting	36
• 04/ Risk & Technology	59
• 05/ Regulation, Compliance and Legal	88
• 06/ Sales and Distribution	117
• 07/ APAC Overview	131
• 08/ Conclusion	136

01 /

Executive Summary

Executive Summary

Introduction

- *The vast majority, approximately 90% of participants, have at least started the development of a climate-risk framework.*
- *Less than 20% of the participant population had fully engaged business lines to perform risk assessments.*
- *Only 14% of participants have not appointed a leader for climate risk.*

The year 2021 was momentous for climate risk- beginning with Fed Chairman Jay Powell boosting climate change into the financial stability discussion, with momentum building throughout the year as TCFD signatories reached more than 2,500 and culminating with a productive COP where a number of significant coalitions were announced and ambitions for climate change were agreed upon. Accordingly, and not surprisingly, a hallmark from our study is that participants progressed significantly in the development of their climate risk strategies. However, development in the industry is uneven, particularly if one compares developments in the United States against their peers in the European Union and the United Kingdom.

While progress in organizational preparedness is the headline of the study, other thematic principles emerging were some of the challenges slowing the advancement of climate risk adoption. The challenges associated with the transition are very real, and many lines of business still do not have a clear understanding of how climate change will impact them.

First, progress for climate risk efforts is often a reflection of your geographic headquarters and that tracks across each of our strategic, governance and risk sections. Second, the role of regulatory bodies is rapidly coming to the forefront globally requiring all participants to become more proficient in mitigating climate risk. Third, the ability of firms to successfully complete their climate mission will be very dependent on enhanced data. The firms who have succeeded to date are those who have begun efforts to attain quality data to drive many other areas of their programs. Finally, both banking and investor firms who have shown flexibility and creativity in developing their product and distribution models are more likely to have begun efforts to integrate the growth of revenue alongside the management of risk. As we noted, the data collected from participant responses is presented for each peer group and we found significant variance existed across those groups due to business model, size of institution and stakeholder engagement.

Nascent Disclosure Reporting Processes

- *21% of G-SIBs have implemented all recommendations and supplementary guidance published by the TCFD.*
- *77% of respondents have either implemented or are either working on, planning to, or in the process of disclosing information following the recommendations and supplementary guidance published by the TCFD.*
- *55% of participants have conducted full or partial scenario analysis to assess the impact of climate risks and broader environmental risks.*

Participant responses varied as to the driving objective for climate strategies. It is clear by disclosing climate-related information, industry participants will be able to better understand both their own risk profiles, those of their clients, the potential opportunities to offset risk, develop cost savings and generate revenue.

Executive Summary

Participants welcomed the establishment of disclosure standards and of regulatory convergence on those standards, especially multinational institutions challenged by conflicting regulatory approaches.

The TCFD has emerged as the consensus standard for disclosure reporting standards and requirements; however, few study participants have fully implemented all relevant recommendations. Disclosures related to the resilience of a climate strategy were the least reported of the TCFD standards in 2020, with only 13% of financial institutions disclosing in line with the recommendation. It is important to recognize as firms noted, there are meaningful challenges associated with implementing the recommended disclosures. The study strongly suggests the lack of disclosure in many categories may be more attributed to modeling and data insufficiencies rather than a reluctance to make disclosures more robust.

Our study findings suggest that over the next few years there will be significant progress towards a more mature state of climate risk mitigation including enhanced disclosures. Disclosures will focus not only on the materiality of risks, but also on the methodologies and assumptions embedded in their calculations. While investors and social sentiment had been the driving factors for disclosure reporting until now, moving forward regulatory pressure and standards are likely to be the drivers.

Data Integrity

- *Only 45% of participants indicated they had identified initial KRIs and KPIs for utilization.*
- *72% of participants have a hybrid data strategy leveraging external vendors.*

The disclosure process necessarily begins with data. There are significant dependencies on climate risk data from measurement and assessment to product development. More public disclosures will help drive better data but many believe the problems with data accuracy will become more apparent, before improvements occur. For others, progress will happen as standards and taxonomies are published and compliance with those standards are enforced. For most of our study participants good data is a key challenge for a broader climate risk mitigation effort.

According to the CDP, financed emissions could be more than 700 times greater than the Scope 1 and Scope 2 emissions currently disclosed by financial institutions. While understanding this dataset is key to many risk mitigating activities, less than 30 financial institutions are CDP members. Participants indicated a lack of confidence in various risk management activities due to data integrity issues. Establishing and committing to a KRI or KPI is a concern given the scarcity or weakness of data and setting limits or exclusionary policies are not practical with the current market data available.

Careful consideration will be made as the industry develops solutions in order to move climate risk up the chain in their risk frameworks. Hybrid data strategies will be leveraged and accounting standards for financed emissions will be used to generate key metrics, but no solution is without a significant technology lift to capture the data and operationalize the workflow.

Executive Summary

Opportunities

- *A slight majority of participants (51%) are conducting internal research to develop new climate risk products.*
- *G-SIBs had the highest percentage of respondents (80%) actively pursuing the development of sustainable products.*

Across the industry, market participants varied in the development of their sustainable product offerings. However, defining green products with greenwashing in mind remained a consistent challenge, especially with investment managers. There was also a pronounced sentiment from participants that some were approaching climate risk strictly as a revenue generating proposition.

A singular front-office approach may defy prudent risk management practices; however, any offensive effort will drive progress and boost momentum for transitioning to carbon-neutral economy. There are other opportunities presented by the mitigation of climate risk outside of sustainable finance. Waste reduction, a key performance indicator publicly disclosed by many of the study's participants, can offer significant cost savings. As the economy finds ways to do more with less, organizations will benefit from fewer manufactured products to support their operations. Additionally, the innovative, cleantech initiatives contributing to decarbonization are not only working but are also proving to be cost efficient. Although mass adoption will require the influence of big government or balance sheets, income statements will soon be benefiting from environmentally friendly technology.

Carbon markets are also going to play a crucial role in decarbonizing the economy. COP26 produced an agreement on Article 6 of the Paris accord allowing for a functioning market to trade carbon credits. The financial services industry will not only play a crucial role in the compliance market facilitating trading but also participate in the voluntary market as a risk taker.

Divided Regulatory Regimes

- *92% of our respondents believe that regulators should adopt more standardized or detailed disclosure rules.*
- *Nearly all (95%) firms identified international frameworks as a priority for consideration in the development of their framework, emphasizing the need for regulatory convergence.*

The world is very fragmented in the establishment of regulatory regimes providing oversight for climate risks. In Europe, taxonomies, principles and standards have been established by government institutions and non-governmental organizations. The EU risk taxonomy regulation is a key tool for determining environmentally sustainable economic activities. In the United States, it is a different story, with many U.S. participants identifying the of lack of standard taxonomy as a roadblock limiting progress.

The results of the study clearly suggest a convergence of disclosure standards across jurisdictions which participants noted would be highly desirable. Legal and compliance functions are challenged in their efforts to apply differing rules and standards to a global organizations. In the U.S., SEC oversight is anticipated in Q1 for disclosure reporting, but likely the bank regulators will rely on the banks for defining taxonomies.

Outside of disclosure standards and taxonomies the regulators will also play a significant role in establishing carbon markets and monitoring the quality of the credits. Eventually, the regulators also will make critical decisions as to setting aside capital for climate risk on balance sheets.

Executive Summary

Active Engagement

- *Globally for all institutions, just 45% of respondents confirmed they have engagement plans with their investee client companies.*
- *The Investment Manager peer group had the highest response rate for those progressing their engagement models.*

Banks are especially well suited to influence corporate behavior. They often have enormous expertise across their organizations, allowing them to help their clients make the transition and communicate with stakeholders such as regulators, shareholders, and others in their community. For banks, driving the dialogue with clients for both use of capital and how organizations will operate is a significant challenge requiring creative resolutions in the years ahead. And while financial organizations know they can actively engage with clients to help lessen their carbon footprint, having clear climate policies around client engagement, and a strong informational and educational support system, is a major step towards this end.

The industry alignment on progress indicates collaboration however it is also worth digging into why divestment from clients who are currently high-carbon emitting is not viewed as the right approach by many industry participants. For fund managers facing mandates to decarbonize their holdings — including political pressure and legal action as well as regulatory shifts and customer preference — divestment offers a quick way to lower their portfolio's carbon intensity. But such actions merely shift the carbon from one balance sheet to another, likely with less transparency and can undermine deeper decarbonization efforts.

Banking institutions generally believe this is not the most effective path, but rather that they have a major role in the client transition process. Banks generally seek to engage first, rather than divest and some have hired stewardship specialists to usher their investments towards sustainable goals that will lower carbon usage.

Conclusion

- *80% of European bank respondents do not service certain industries while only 11% of U.S. Regional Banks have made exclusionary policies.*
- *25% of participants have no plans to allocate budget towards climate-risk transformation projects and activities.*
- *33% of organizations have no specific considerations for climate risk within their lending and underwriting policy documents.*

Looking ahead, we see a future state where participants are mobilizing large internal programs with feedback loops based on improving data, as we heard for many this is an iterative process with many lessons learned. Effective governance models will drive implementation and more detailed disclosures, which will in turn provide still better data for the industry to measure and analyze, and then to disclose.

The public sector will play a significant role, partnering with and working aggressively with the private sector to produce meaningful change. As capital providers, banks will be pressed to use their balance sheets to create change. And if data is the beginning of the value chain for climate risk, then we see business resilience as the end of the value to protect the future.

02 /

Strategy

Strategy

This section focuses on how firms have built their internal climate risk frameworks. Globally, institutions have recognized the importance of developing climate risk frameworks. However, the maturity of these efforts is subject to significant disparity in maturity across geographical regions. Institutions throughout Europe have initiated these efforts at least a half dozen years ago, and for many of the largest institutions, even longer. Many of those firms noted in our interviews in December and January they had adopted climate risk mitigation approaches before the Paris Climate Accords and carried those efforts forward with initiatives for dialogue in Glasgow late last year. U.S. companies generally had not initiated organizational efforts until the past few years. Given the historical and ongoing differences between the U.S., Europe and Asia in terms of prioritization of carbon reduction among regulators, public policy markets, corporate citizens and general populations, the timing differences and maturity across regions in meeting the aforementioned challenges is not surprising.

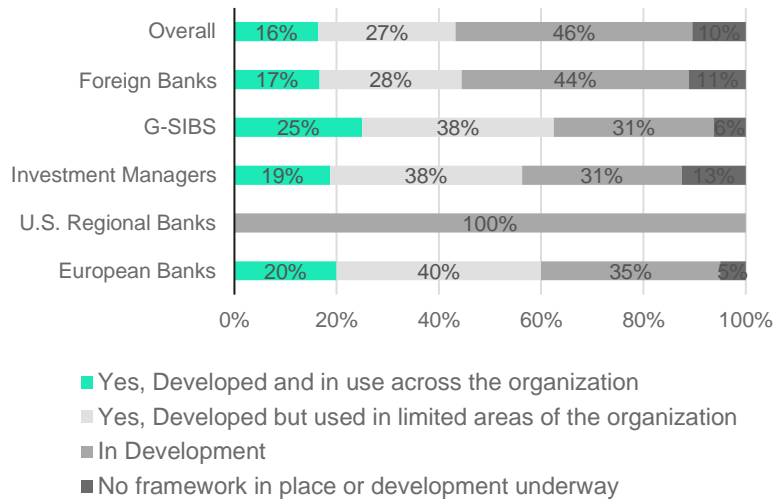
The participants noted the following key challenges in developing a climate risk framework:

- The lack of certainty surrounding practices to be utilized,
- The divergence of regulatory approaches globally, and;
- Limited certainty and standardization around a host of topics from achievable metrics for carbon mitigation to risk measurement techniques for stress testing and scenarios to identify impact of these efforts on individual firms and the market.
- Resource constraints — human and financial to ensure a successful climate risk mitigation effort.

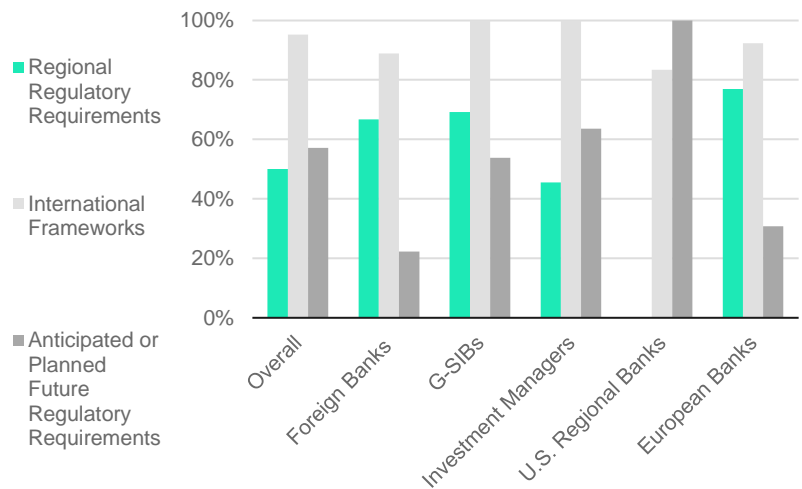
Given this industry backdrop, we asked firms to isolate how they were building out their initial climate risk initiatives and embedding it into their overall risk and operational efforts.

Strategy

1a. Has your organization developed a climate risk framework to incorporate climate risk factors into organizational decisions? (capital allocation, loan approvals, portfolio monitoring, reporting/disclosures, etc.)



1b. If yes, which priorities did you consider in developing your framework?



The vast majority, approximately 90% of participants, have at least started the development of a climate risk framework. Among the participants that identified they were developing their approach, nearly all identified international frameworks as a priority for consideration demonstrating the need for regulatory convergence. Additionally, it is critical for institutions to actively and regularly assess the current and expected effectiveness of both in-development and implemented elements of any climate risk framework. As the industry lobbies for a global convergence on disclosure standards and a sharper focus on risk taxonomies and net zero commitments, some firms may hit a maturity impasse in their efforts to successfully invest in a climate framework without further direction from regulatory or industry bodies.

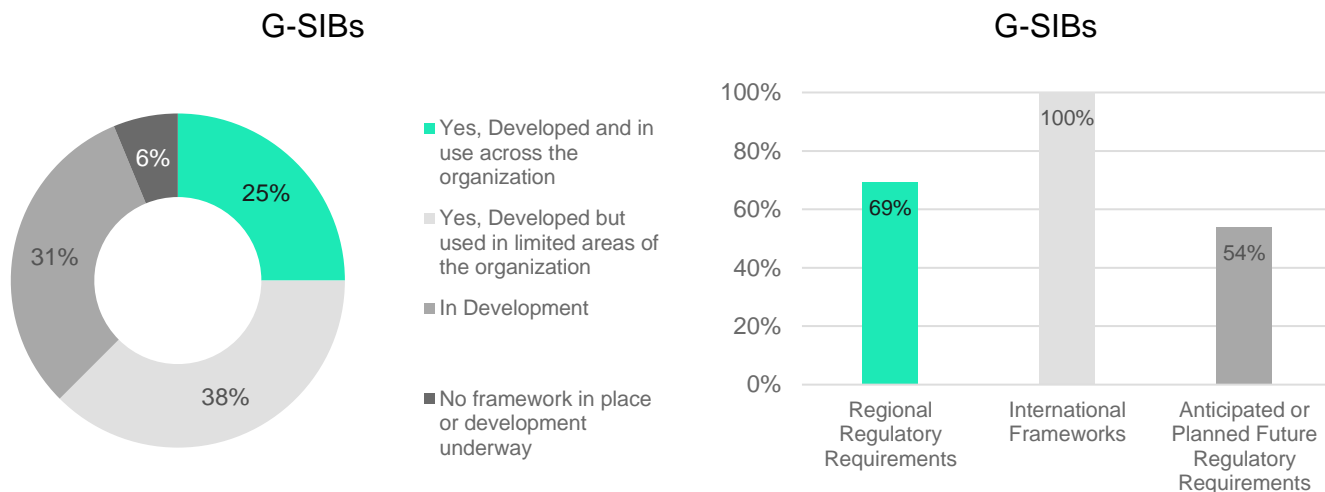
G-SIBs

Near 100% of our participants noted they had fully established a climate risk framework or were in the process of doing so. G-SIBs efforts were a bit 'uneven' globally and often driven by resources locally, the urgency from regulators in those jurisdictions, client demand (which differed by region for product) among other drivers. Institutions noted there was a baseline of a global rollout but there were definitely differences when geographies were newer to adapting these changes and hence less pressure to build out a local framework. Indeed, nearly 70% of the participants in this segment identified "regional requirements" as their most important consideration for proceeding.

Strategy

1. Has your organization developed a framework to incorporate climate risk factors into organizational decisions? If yes, which priorities did you consider?

G-SIBs are serving as an informal touchstone for smaller participants. This is not only through working groups but a number of informal dialogues occurring to discuss the more difficult issues such as data collection and accuracy, risk modelling and product efforts.



U.S. Regional Banks

100% of regional banks in the U.S. identified their climate risk framework as not completed but in progress. Across the peer groups, U.S. Regional Banks were the only set of respondents where no respondents had completed development in some form of a climate risk framework. The current pace set by U.S. Regional Banks highlights a broader theme which the study identified and noted above: a delay, compared to their European counterparts, in building out or leveraging a traditional risk framework within either a first or second line of defense functional group.

Globally, the smaller the organization, the less likely those institutions were in making meaningful progress in their climate risk efforts. For some this was the failure to identify a specific location to host their climate efforts and for others failure to garner sufficient resources to staff and fund those efforts. Anticipated U.S. regulatory initiatives in 2022 will likely spur efforts by smaller U.S. banks and similar efforts globally will do the same for some of the smaller foreign institutions.

European Banks

A limited number (20%) of EU financial institutions participating in the study have fully developed a climate risk framework and performed a companywide implementation. Still, European financial institutions are moving towards implementing these frameworks.

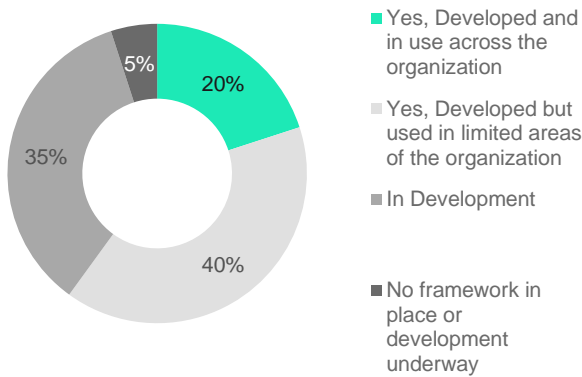
Many European institutions are in the development phase for climate risk frameworks and within this group the level of development is at very different stages. Where some companies are still in the phase of identifying and understanding the correct data, others have already drafted plans for implementation. Most European institutions identified structures in place that enable climate risk to have at least some impact on the decision-making process directly or indirectly.

Strategy

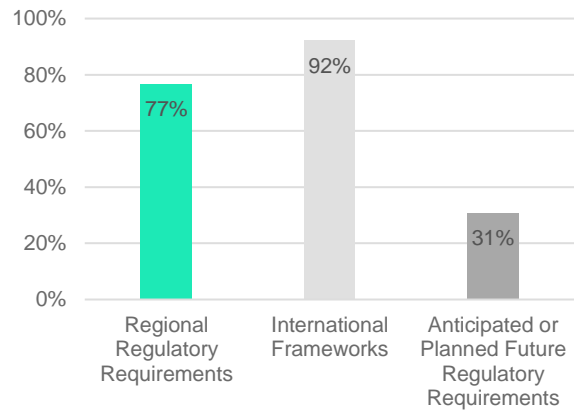
1. Has your organization developed a framework to incorporate climate risk factors into organizational decisions? If yes, which priorities did you consider?

European financial institutions are actively implementing climate risk in organizational decision making with a significant share addressing climate risks in their governance structures. This is in some part because of the European regulatory bodies and the requirements they impose on financial institutions active within the EU-area. The European Central Bank (ECB) has communicated its expectations in *The report on the supervisory review of banks' approaches to manage climate and environmental risk*¹. The second supervisory expectation of the ECB within the guide on climate related and environmental risks states that; "when determining and implementing their business strategy, financial institutions are expected to integrate climate-related and environmental risks that have an impact on their business environment in the short, medium, or long term". Although this is not yet the case at most companies, most of them are actively engaged in development and implementation. This is also recognized by the ECB itself as it stated that after their supervisory review, they saw that in many cases institutions have made substantial progress. The degree of alignment with the expectations also varies considerably across institutions' asset sizes, with the largest institutions performing the best. The lack of clear data is one element that deferred the development and implementation of the risk frameworks, combined with a lack of awareness and confusing terminologies on ESG.

European Banks



European Banks

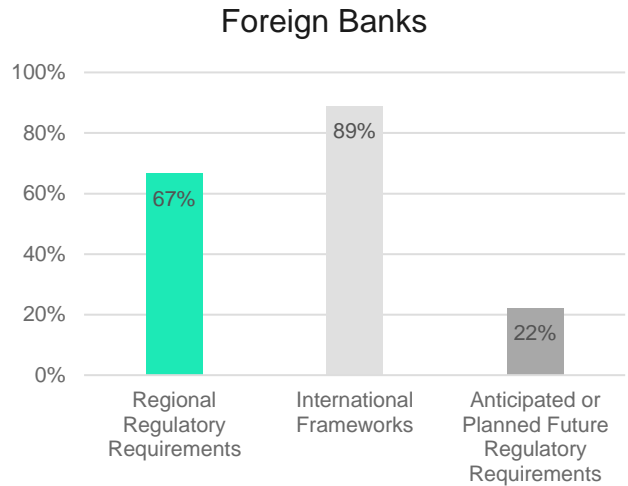
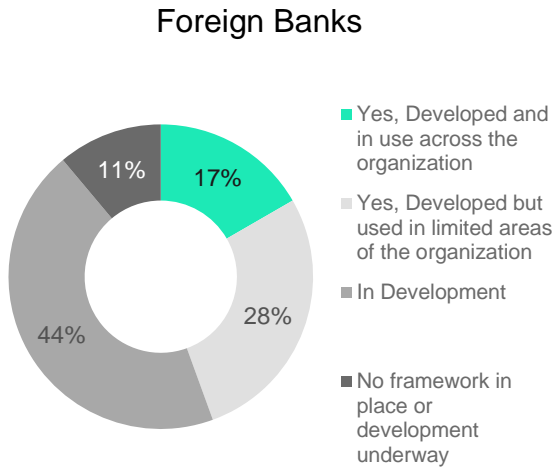


Strategy

1. Has your organization developed a framework to incorporate climate risk factors into organizational decisions? If yes, which priorities did you consider?

Foreign Banks

87% of respondents to the question are at least in the development stage of a climate risk framework to incorporate climate risk factors into organizational decisions, with 44% in the development stage and 33% having partial roll out of a completed framework.

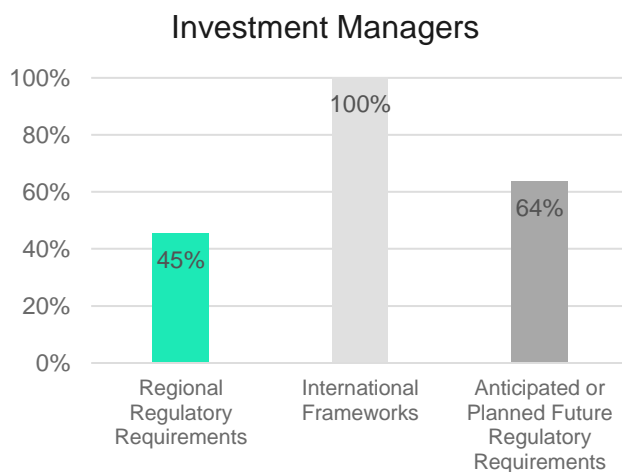
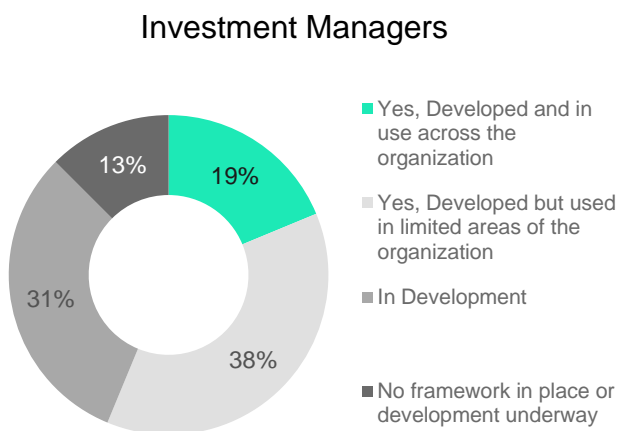


Strategy

1. Has your organization developed a framework to incorporate climate risk factors into organizational decisions? If yes, which priorities did you consider?

Investment Managers

Investment Manager respondents, like most groups, have largely begun development of a climate risk framework to incorporate climate risk factors. While 19% of respondents have developed a climate risk framework fully utilized across the firm, an additional 38% of respondents have completed a framework, utilized in a limited fashion.



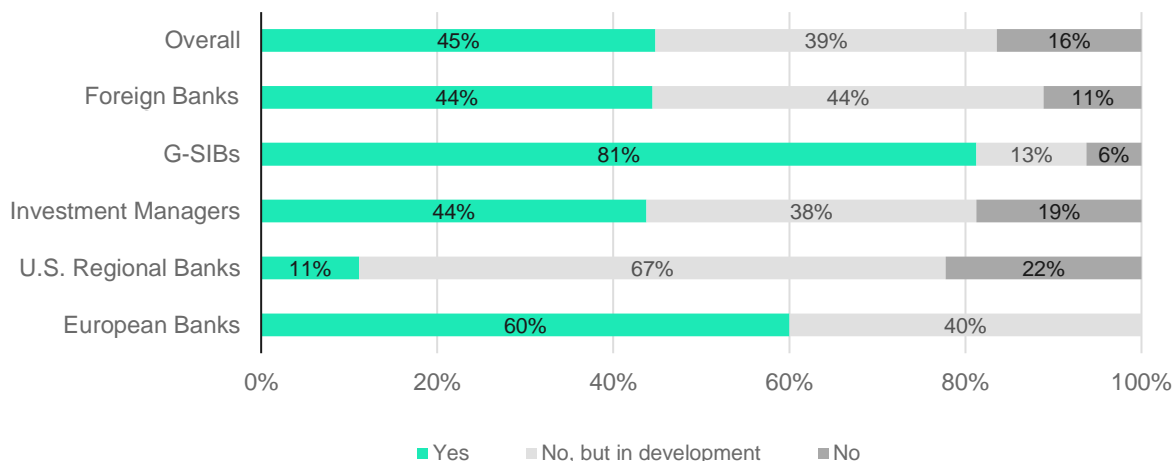
Insurance

Insurance companies have made moderate progress in developing a climate risk framework as most respondents were still developing measurable targets and a capability-building program.

“We have been doing ESG for the past years and moving to climate risk; very focused on standards for climate related requirements; we have subgroup to set up governance; working groups with plans to address assessments; investments risk strategies; and getting these ready for next year. Board is engaged as well.”

Strategy

2. Has your organization defined measurable targets and KPIs / KRIs?



Somewhat more than 4 in 5 participants (84%) have at least started to build out targets KPIs/KRIs to support the future development of decision making. The respondents to this question can be segmented into 3 distinct groups. G-SIBs were not surprisingly the leader in this regard, where 81% of this group had already defined an initial set of KRIs and KPIs.

Institutions noted a series of obstacles in developing climate risk metrics. First, many firms had yet to identify, let alone collect the necessary data to build out risk or performance indicators. Second, numerous participants pointed out the lack of a standardized approach to metrics. Third, operationalizing the data capture and system workflow to produce the metrics requires upgrades to platforms which have not yet been developed. Finally, participants conveyed hesitation for establishing performance indicators due to the reputational pressure in achieving objectives. The industry is well along in addressing shortcomings and it is anticipated a far more robust set of accomplishments in the months ahead.

More than half of the banks with a European-domiciled headquarters (60%) indicated they had identified initial KPIs and KRIs for utilization. Larger European banks have been investing in climate risk initiatives both in business units and risk functions for many years. Th more mature institutions noted developing risk and performance data was essential to their climate risk strategy.

G-SIBs

The results of the feedback for developing measurable KRIs and KPIs is very high in the G-SIB peer group--near 90% of the participants had completed the definition process and a slightly smaller group reported confidence in in their targets and definitions, however, some identified concerns for the process. Many noted this is a work-in-progress, but the preliminary work had been completed which satisfied their internal requirements. A series of challenges going forward from better practices, improved data, and regulatory inputs for their methodologies and approaches will require a feedback loop. G-SIBs also separates this group from others through their level of commitment as demonstrated by their effort in collecting client data to contribute to their KRIs/KPIs and the cost associated with the use of third-party vendors. Those investments and the leadership across the industry is reflected in the numbers in a very straight-forward manner.

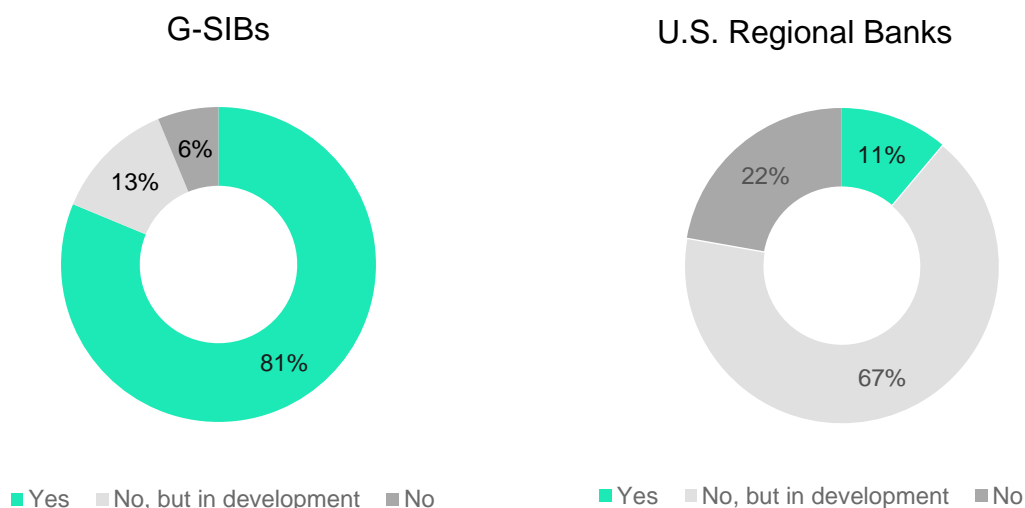
Strategy

2. Has your organization defined measurable targets and KPIs / KRIs?

A series of G-SIB participants indicated a lack of maturity in the process across the industry with very few counterparts finding comfort in the process. Firms noted their business efforts were substantial in collecting data and their risk teams were significantly engaged in data cleansing and building out the models associated with climate risk. G-SIBs stressed the enormous amount of work for the industry as a whole, and all market participants need to be part of that effort.

A U.S.G-SIB discussed their approach:

“We certainly are doing the work—we have not identified those KRIs and the way we think about them, but we will have them soon. We are discussing the KRI’s with the businesses soon and internally developing an appropriate cascading process for these additions to our effort. However, socialization and maturation will take time. Attaining the correct KRIs is a big investment and we do not take it likely. Make sure they are right—can be measured and useable.”



U.S. Regional Banks

U.S. Regional Banks are predominantly in the planning stage for the development of KRIs/KPIs. Regional banks acknowledged they have far more to do across the climate risk initiatives and investments and recognize the need to create measurable goals. The past year has been a solid year of progress and anticipate moving rapidly to enhancing their identification of risks and designing their approaches for data collection.

A large U.S. Regional Bank comments:

“Data improvements are now required along with formulating goals; we need to aggregate the moving pieces and then stand it up for the more intensive efforts for the future. We anticipate possible climate regulation and aligning those guidelines with climate financials and make our work auditable and nail down those processes and focusing on those right now, We know that it is difficult to pool data in different places and all comes back to data and going forward and have more sound and consistent disclosures.”

Strategy

2. Has your organization defined measurable targets and KPIs / KRIs?

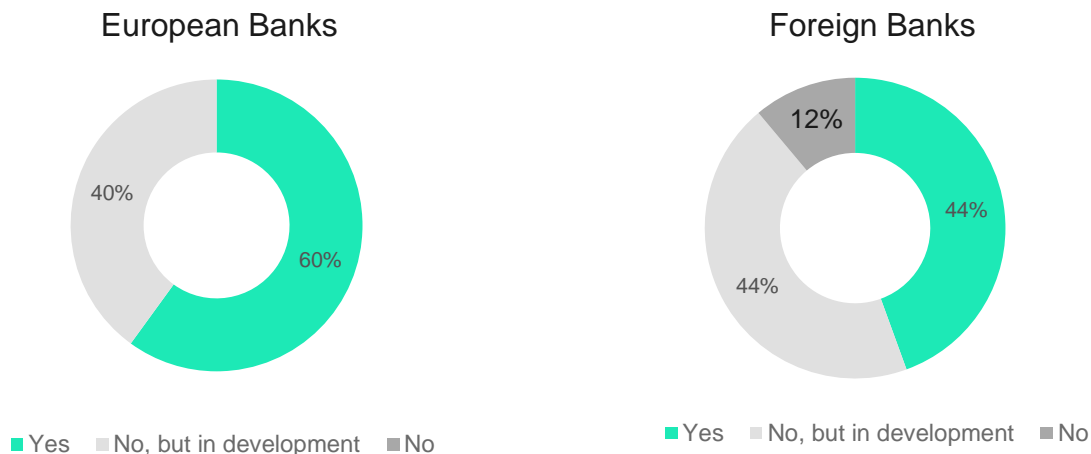
European Banks

The only peer group which did not have responses indicating there has been no progress, European Banks are clearly illustrated as a best practice in this category. The ECB also found in its supervisory review that KPIs for sustainability in business strategy are well-implemented in 25% of institutions, however, there is a high level of disparity in the implementation of KPIs and KRIs. Some participants are tracking metrics on a group level where others have implemented the figures based on asset and branch location. Feedback loops have been identified as a critical process for an orderly transition and we see evidence of them here as institutions are actively refining their KPIs/KRIs in order to refine and correct the data for confident decision making.

A European Bank discusses its process:

“KPIs are an iterative process, we have a handful on group-level but are not yet cascading them”

Some institutions are still having difficulties identifying measurable and informative KPIs and KRIs. In March 2021, the EBA advised the European Commission on KPIs that can be used for increasing transparency on climate related topics in European financial institutions. The impact was seemingly small as 40% of study participants in this peer group are still in the process of developing the measurements.



Foreign Banks

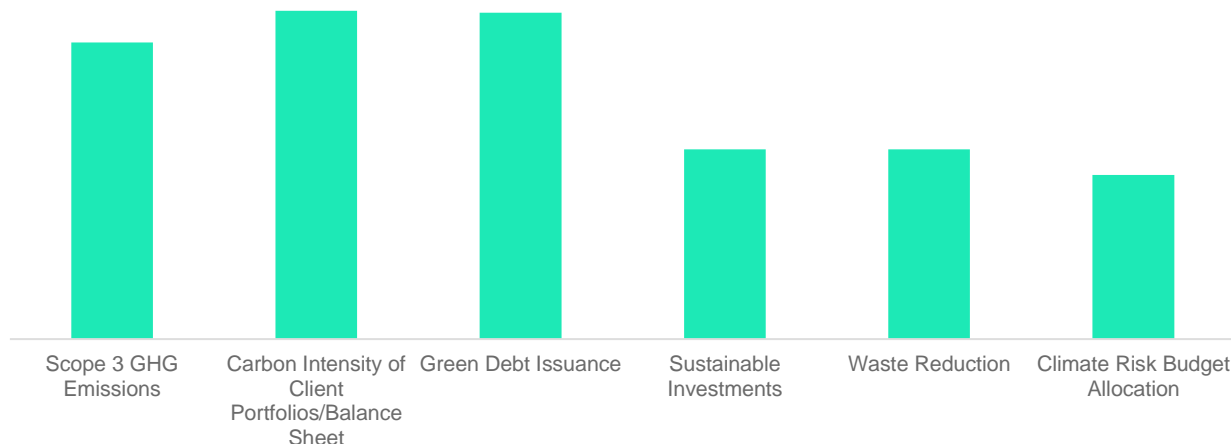
While Foreign Banks have identified good progress on the development of targets and metrics, U.S. Regional Banks were the only peer group to report less progress for establishing the process. This peer group might be experiencing some latency in the transfer of institutional knowledge from other more jurisdictions that are more advanced in the development of their risk taxonomies and frameworks. Additionally, participants who categorize Climate Risk as separate level-1 risk, rather than a driver for traditional risk categories might encounter a heavier burden when developing workflow for reporting as it is likely a new process.

Investment Managers

Investment Managers responded fairly in line with other peer groups. 44% of investors have established KPIs/KRIs while 19% of the respondents conveyed, they have not completed the development of metrics. As distributors of sustainable products, asset managers track significant amounts of ESG data, however participants in this peer group were also vitally aware of the greenwashing risk and therefore may be hesitant to establish performance indicators due to a lack of transparency, contributing to slower progress for this workstream. Notwithstanding, this peer group is focusing on common goals for disseminating digestible data in an efficient manner and this peer group is expected to become a leader in developing metrics given their sophistication and proximity to corporate issuers.

Strategy

3. Participant KPI Rankings in order of priority



Carbon Intensity of Client Portfolios or Balance Sheets garnered the highest priority for internally tracked KPIs. Green Debt Issuance and Scope 3 GHG emissions were also identified as key metrics for monitoring climate risk. While the data for calculating Green Debt Issuance tends to be readily accessible, the availability of client and financed emission data presents challenges. Unifying and leveraging accounting protocols for GHG Scope 3 emissions will drive progress and significantly reduce the potential for double-counting, however, capturing this data will also be an important aspect of data strategy. Green Debt Issuance is expected to remain increasingly pertinent as a sustainable product market continues to develop. For example, if transition bonds gain momentum, those bonds could provide for an effective tool for investors to monitor an issuer’s transition as their unique structure is designed to ensure proceeds are used to meet pre-defined, science-based goals for the issuer’s net zero transition.

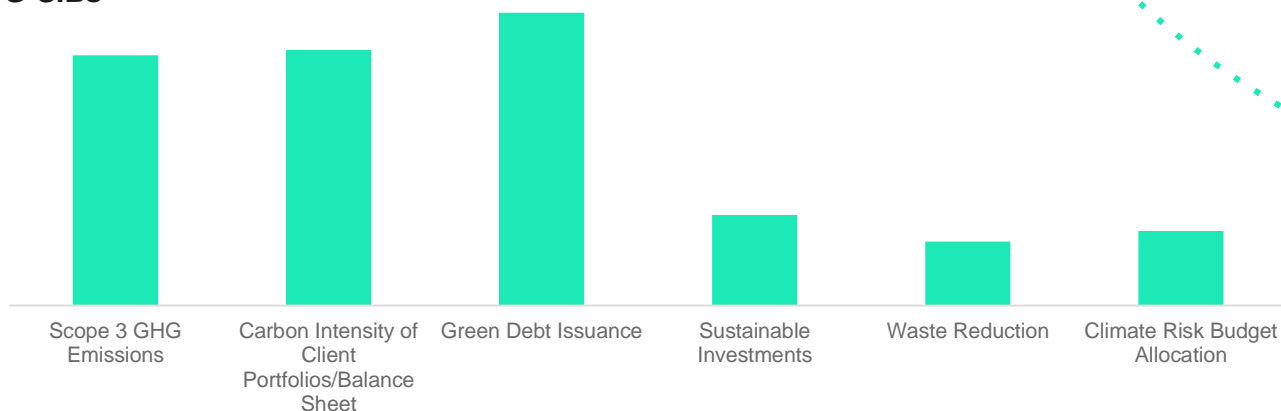
A participant noted:

“Moving into next year; we have key priorities around continuing our data and technology journey and a three-year plan to address those issues. We are working closely with our front office and what needs to be collected from clients; already began working on our scenario analysis and requirements overseas on stress testing and also working with the front line what are the key indicators and KPIs and KRIs metrics and start monitoring and disclosure for that. and seeing different disclosure requirements voluntary vs. compulsory.”

Strategy

3. Participant KPI Rankings in order of priority

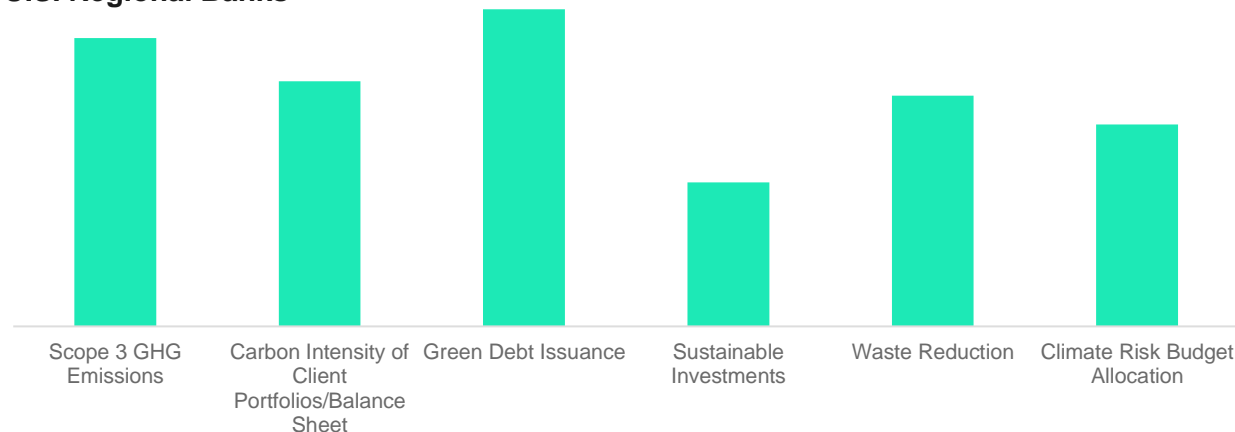
G-SIBs



G-SIBs were a best practice peer group for development of KPIs/KRIs leading in the identification of metrics and development of the process to produce those figures. G-SIBs also benefit from consistent dialogue with regulators and other sophisticated firms, however, many of the participants in the G-SIB peer group are still reporting metrics at high-level (volume, transactions) which is in line with Green Debt Issuance ranking as the highest priority.

G-SIBs also ranked Scope 3 GHG Emissions and Carbon Intensity the highest priority among banks, and while they may be a priority, these metrics are still yet to be produced through a robust process. Mining this data presents a key challenge for producing these metrics. However, there are tools which can be leveraged to support these activities, such as the CDP's platform for engaging with clients and their supply chain suppliers and accounting protocols to standardize metrics for equitable comparisons.

U.S. Regional Banks

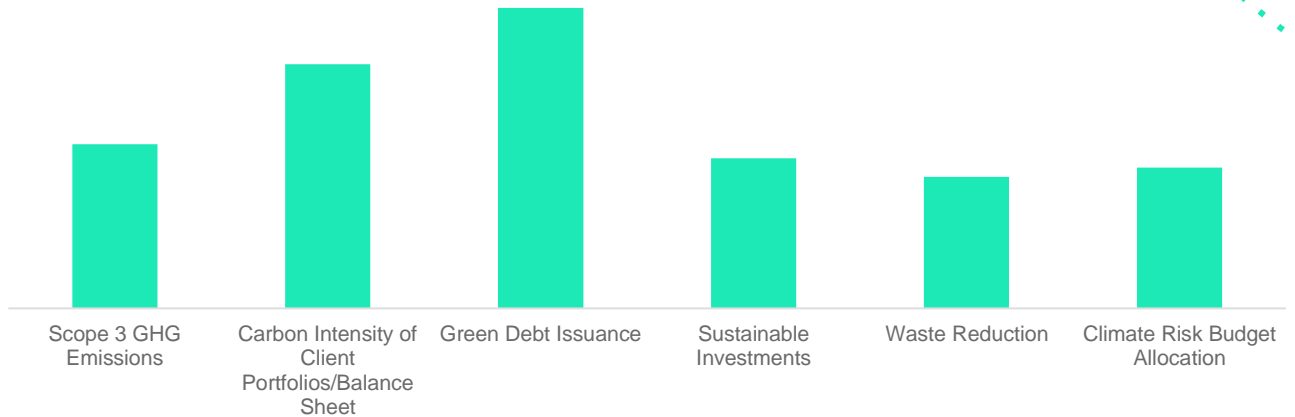


Regional banks identified Green Debt Issuance as their most important metric to for tracking. This may be indicative of their product offering or also the relatively simple calculation methodology. U.S Regional Banks had one of the highest response rates for the metric associated with budget allocation illustrating their focus on scaling their climate risk programs to prepare for market pressures and potential regulatory oversight. Some of the smaller regional banks are lacking sufficient data and have limited pressure from stakeholders in comparison to other peer groups who are more advanced the development of metrics and targets. Additionally, as smaller banks with fewer resources, the U.S. Regional Banks are heavily dependent on industry disclosure standards and taxonomies for the development of their climate risk strategy.

Strategy

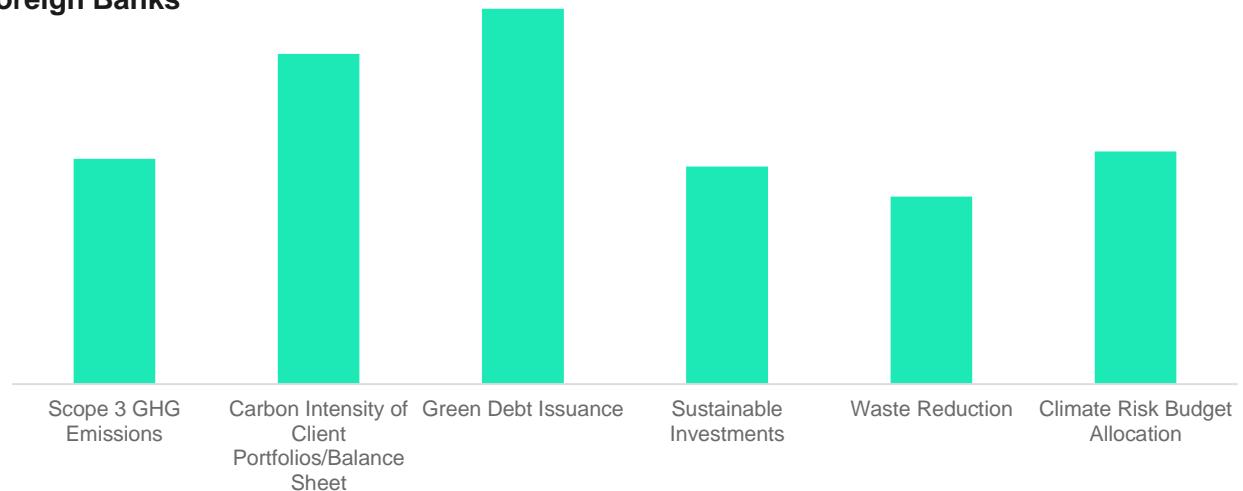
3. Participant KPI Rankings in order of priority

European Banks



The most prioritized KPI by the European Bank Peer Group is Green Debt Issuance. This priority might be influenced by the European Green Bond Standard, an effort to increase the transparency into the projects aligned with the EU taxonomy as well as allowing for the supervision of bond terms by ESMA. From 2022 onwards the ECB will implement stress testing into the supervisory review process methodology eventually influencing the pillar 2 requirements for banks. As stress testing becomes a focal point, especially for the EU in the near term, priorities could shift to financed emission data due to the pressure from regulators for incorporating this type of granular data in models to apply scenarios to bank's balance sheets.

Foreign Banks



Accordingly, the data for the Foreign Bank peer group aligned with the European Bank data cut. Across this participant group, institutions will be focusing on refining these metrics as many feel this is a very iterative process, especially as participants start to analyze more complex data sets prioritized as illustrated in the graph. The more complex data may be exposed to issues around data integrity and uncertainty which may cause reliance on third-parties and other service provider for assistance.

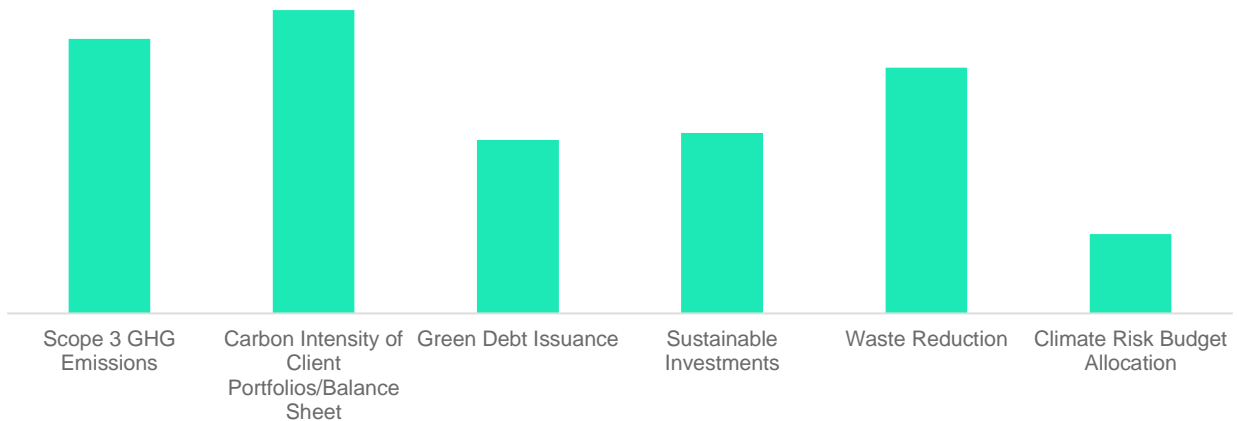
One of our foreign bank participants noted:

"Climate risk is fundamental and top line risk and interlinkages with the risk indicators. We do think it will get its own analytics and disclosure approaches. Not seen by normal liquidity and credit risk provisions in that regard."

Strategy

3. Participant KPI Rankings in order of priority

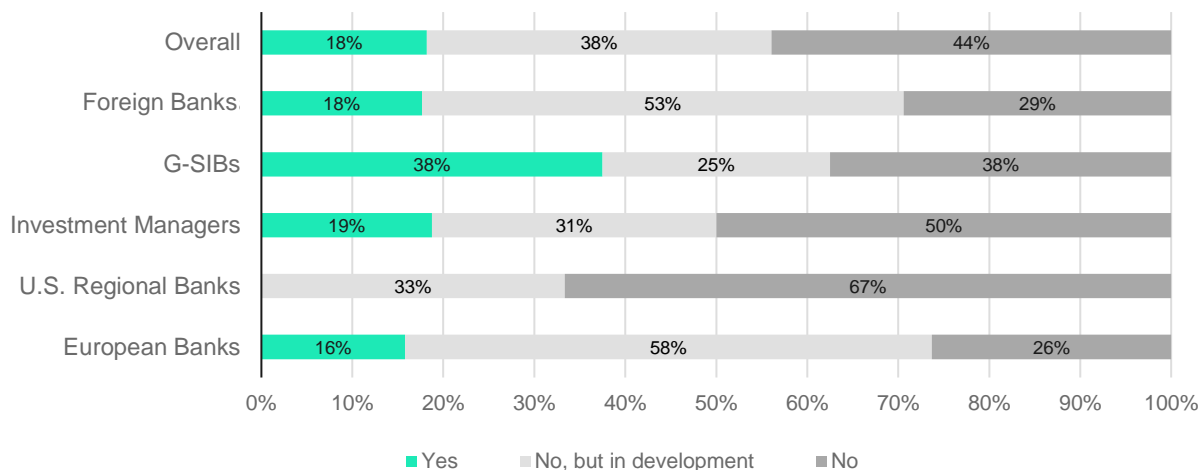
Investment Managers



The Investment Manager peer group largely aligned with the rest of the peer groups, albeit except for Green Debt Issuance which was significantly prioritized by others. While Investment Managers aligned with the rest of the peer groups, they are uniquely aligned between asset owners and the investee companies. This could expose them to greater and more relevant data sets to buoy their metrics. Proxy voting is also expected to take on a bigger role in the shareholder engagement model divulging more information about corporates enriching data sets.

Strategy

4. Have you defined “Stakeholder Impact Maps” across business lines? (Mapping the company’s different stakeholders to the climate risk issues that affect them, the operations of the company that impact those issues, the company’s responses in each area, its engagement with affected stakeholders, its objectives and recent outcomes)



Less than 20% of the overall participant population had engaged business lines to perform risk assessments. While almost 40% of participant have begun the process almost half of the participants have still not started the process. Efforts for conducting risk assessments and exposure mapping can take many forms with both top-down and bottom-up approaches as well as a hybrid approach including both. The process is heavily reliant on granular data sets and coordination across business units to manage risk correlations.

The low percentage of firms who have been able to define stakeholder impact maps across business lines is indicative of several factors; 1) For certain business lines, it is well understood that physical and transition risk will be drivers impacting credit risk, however the impact to market risk might be less understood, 2) Limited data availability may require the use of proxies at the industry level and more rigorous analysis, and 3) The cultural shift in recognizing the risks associated with climate change may take time and require firms to establish robust training programs to educate business lines on how to manage their products and portfolios with a climate risk lens.

G-SIBs

Less than 40% of G-SIB participants have defined “stakeholder impact maps” across business lines, with an additional 25% of G-SIB respondents currently developing such impact maps. The remaining 35–40% of G-SIB participants noted no current development. As the industry looks to make very important changes and decisions over the course of the next few years, there is a lot at stake in determining the best approach to categorizing and servicing current or target clients. Organizations are experiencing pressure to be more focused on climate related products, offerings and impacts. While G-SIBs need to be able to adhere to local regulations, there will continue to remain the need to create a global plan, at both the enterprise and line of business level, that encompasses all stakeholders.

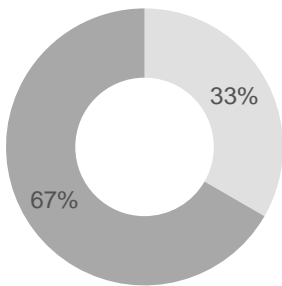
Strategy

4. Have you defined “Stakeholder Impact Maps” across business lines?

U.S. Regional Banks

There were no regional banks in the study which had completed stakeholder impact assessments, however 33% had begun the process. In comparison to the larger banks, regional banks recognize there is more to do—practices to emulate and a chance to better perform impact assessments for business lines once disclosures, methodologies and regulations have been decided and finalized. As major global banks mature their risk assessments and aggregations, regional banks should follow leveraging those best practices. Once regional banks are able to mobilize a capability-building program, stakeholder impact maps should follow soon behind.

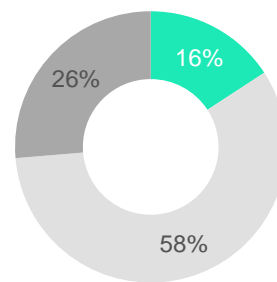
U.S. Regional Banks



■ No, but in development

■ No

European Banks



■ Yes

■ No, but in development

■ No

European Banks

The European Banks had one of the lowest responses (16%) for participants with completed stakeholder impact assessments, however, this peer group had the highest rate (58%) of responses for the amount of participants currently performing these assessments. The peer group is not a leader for this activity which came as a surprise as the EU has created an ESG risk taxonomy to support the regions goals set forth in the European Green Deal, an agreement aimed at redirecting investments towards sustainable projects. In order to reach these goals, the EU has created the taxonomy to create a clear definition of “sustainable”. The classification system helps investors in identifying sustainable projects, avoid greenwashing, and lower firm’s climate risk profiles. The UK also has a taxonomy which focusses on many on the same topics. These taxonomies should help the banks in this peer group as they are calculating exposure measurements and risk identification activities.

Foreign Banks

Foreign Banks are also in the process of performing stakeholder impact assessments and should also benefit from the risk taxonomies released by the UK and EU. Currently, 53% of respondents are developing a method to determine impact while 18% of respondents have completed these assessments. Even with the support of a common risk taxonomy, the lack of progress in this area illustrates the significant effort associated with these activities.

Strategy

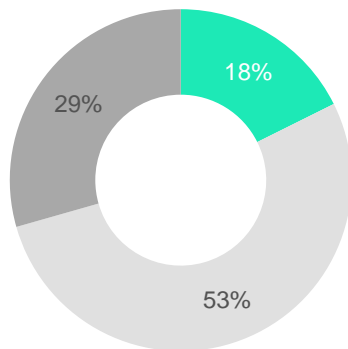
4. Have you defined “Stakeholder Impact Maps” across business lines?

Investment Managers

The Investment Manager peer group reported limited progress in performing risk assessments, with 50% of participants reporting they have not begun the assessments. While common taxonomies serves as industry reference points to determine sustainability for activities or services and are helpful for analysis, understanding the supply chain of your business or client is equally as important for calculating a carbon footprint. For those participants who not progressed with these assessments, we understand the challenges to be significant impediments to performing thorough analysis.

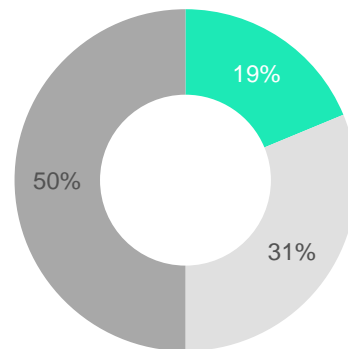
“Going into 2021 we are increasingly focusing on integrating climate change risk and opportunities considerations at the corporate and entity level and this will be a major area of work for our corporate risk and management team.”

Foreign Banks



■ Yes ■ No, but in development ■ No

Investment Managers

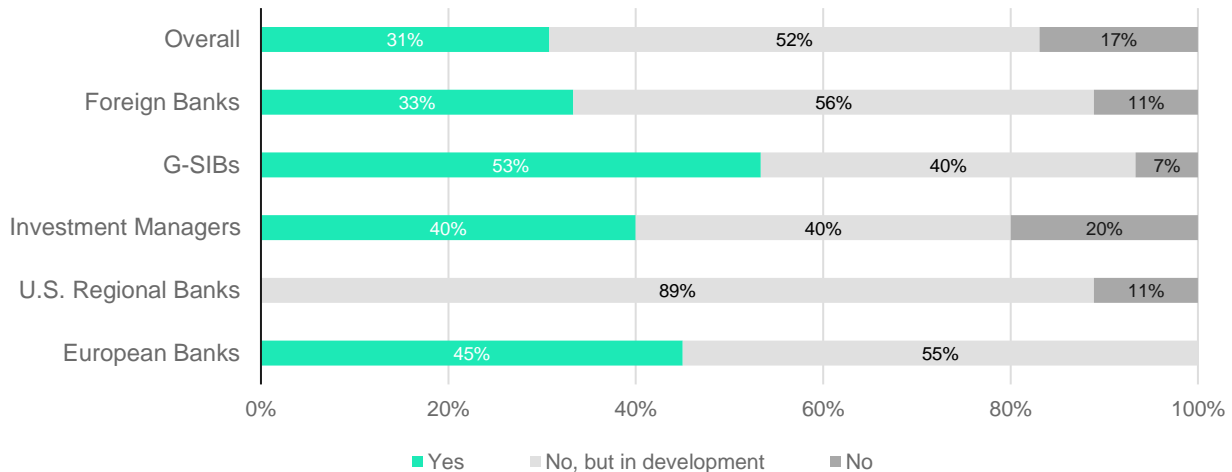


■ Yes ■ No, but in development ■ No

Strategy

5. Do you have a capability-building program in place specific to climate risk?

(Program to equip staff, through training and other capability building programs, with adequate expertise to assess, manage and monitor environmental risk in a rigorous, timely and efficient manner)



The majority of respondents affirmed a capability building program has or will be put into place. This re-emphasized that the participants are aware of the need to mobilize and implement a climate strategy from a process, people and technology standpoint. Through participant responses and interviews, capability-building programs are a key the first step in achieving scale for a climate risk framework implementation. Participants noted these programs are an important step to help close institutional gaps.

Conversely, we identified certain roadblocks associated with participants who were further behind in development of capacity building programs. Examples of roadblocks included:

- Lack of internal maturity in governance/reporting structures to support a capability building program
- Budget constraints
- Lack of formalized approaches from the public sector

G-SIBs

Similar to other areas of measurable progress, G-SIBs were a leader among the other participant groups related to progress in developing capability programs. Specifically, over 90% of G-SIB participants cited a completed or in-development capability building program. The study results identified a strong correlation between completing the more advanced tasks in framework implementation and the development of capability-building program.

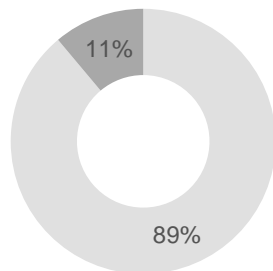
Strategy

5. Do you have a capability-building program in place specific to climate risk?

U.S. Regional Banks

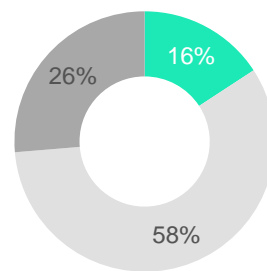
The development of capability building programs for climate risk is in a development stage for U.S. Regional banks. In the interviews those banks commented that they are awaiting further guidance before delegating responsibilities to departments to focus on climate risk. Many banks are currently taking in data and building out smaller initiatives in discrete divisions of the bank, with the ultimate goal to build awareness and also see where they should house their climate risk programs. The slow organic development is consistent with the culture and approach of regional banks on numerous public policy issues.

U.S. Regional Banks



■ No, but in development ■ No

European Banks



■ Yes ■ No, but in development ■ No

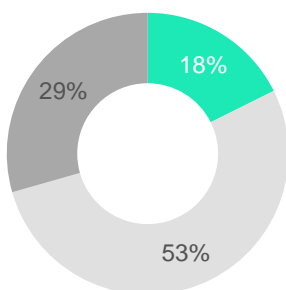
Foreign Banks

In an almost direct opposite view, when compared to US Regional Banks, foreign banks are very advanced in terms of developing a capability-building program specific to climate risk. Of all respondents to the question, 89 percent have at least begun creating a capability-building program within their company for climate risk, with 38 percent already utilizing one. Countries outside of the United States are more advanced in their understanding of where they look to house climate risk within their organization.

One Foreign Bank discusses how climate risk agendas are advanced within their firm:

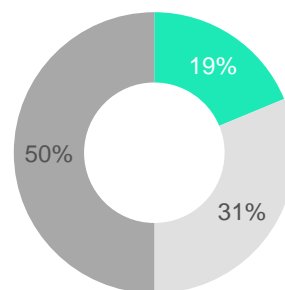
“BMO’s General Counsel Chairs the BMO Sustainability Council...The Sustainability Council supports and advises on the implementation of BMO’s sustainability strategy, and meets quarterly to discuss sustainability topics, including risks, opportunities and disclosures related to climate change.”- BMO Climate Report 2020

Foreign Banks



■ Yes ■ No, but in development ■ No

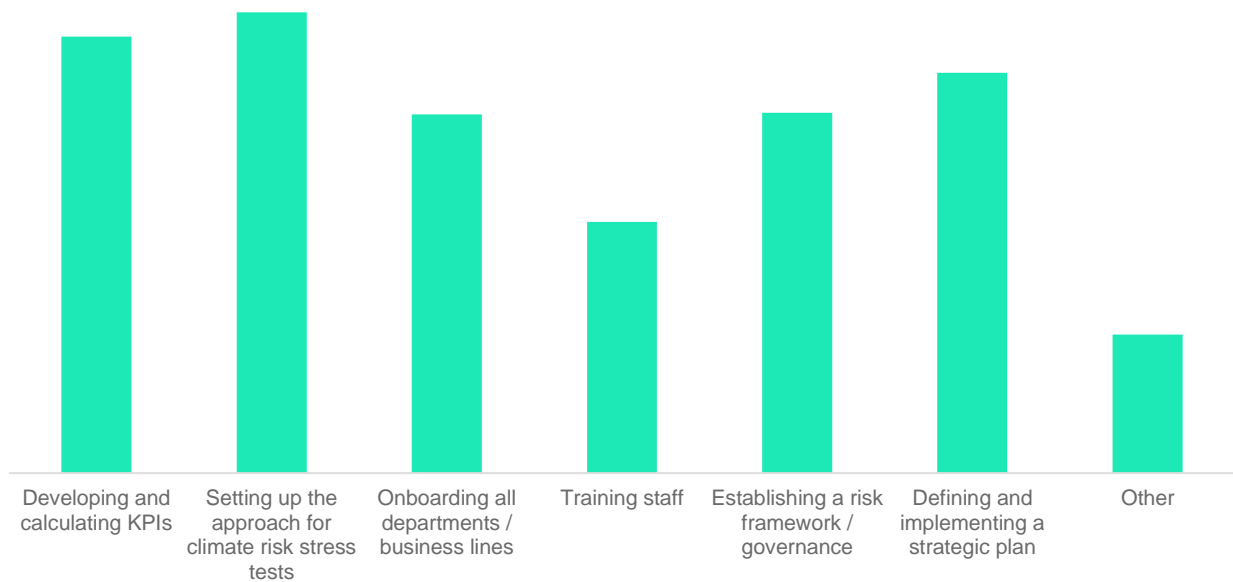
Investment Managers



■ Yes ■ No, but in development ■ No

Strategy

6. Climate Risk related topics posing the most organizational challenges



Stress testing and scenario development are the biggest challenge for participants. Uncertain conditions and long-term forecasts do not allow for confident predictions as to how a portfolio will evolve throughout the transition. Additionally, traditional macroeconomic models are not built to forecast in the long-term and will present operational challenges and model risk.

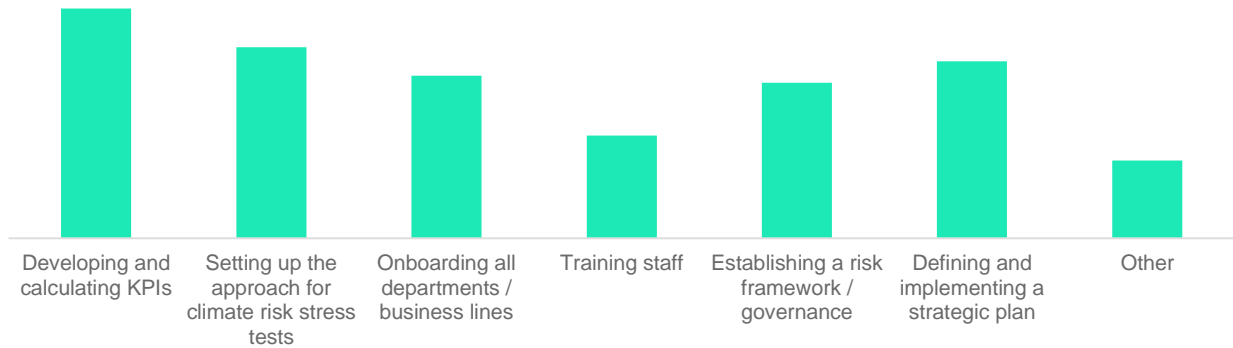
Participants also identified the development of KPIs as a key challenge to operationalizing a Climate Risk strategy. Not only will data capture and workflow need to be developed requiring significant technology upgrades but also there is a concern for the integrity of the data used to calculate these indicators. As common risk taxonomies and standards for disclosures are developed, the industry is expected to have more confidence in committing to developing these metrics and sharing them with their peer groups.

Additional challenges which were defined included the effort associated with defining and implementing a strategic plan. This challenging factor for implementing a plan is likely solved through good governance, however defining a strategy includes many factors. Some participants believe you need scenario analysis in order to develop strategic planning. Given the materiality and timing of climate risk's impact on our participants is largely unknown, scenario analysis may help understand a variety of future possibilities from which you can gather a level of understanding of what the future holds and determine a strategy.

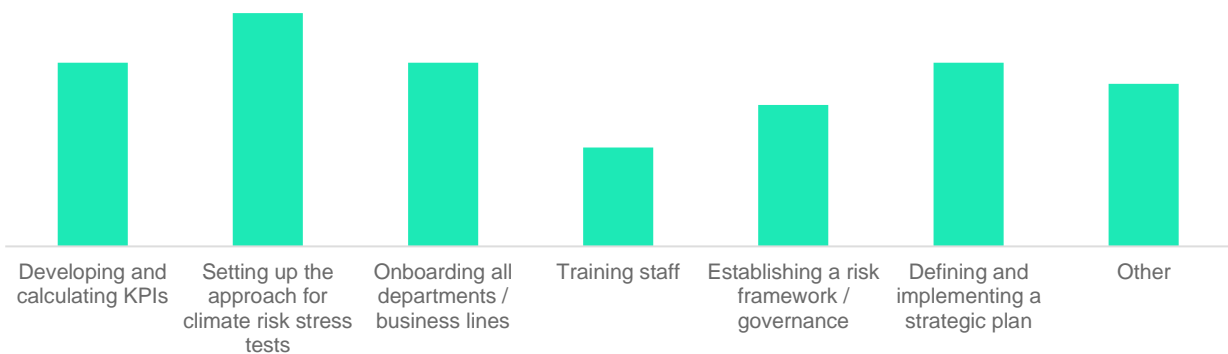
Strategy

6. Climate Risk related topics posing the most organizational challenges

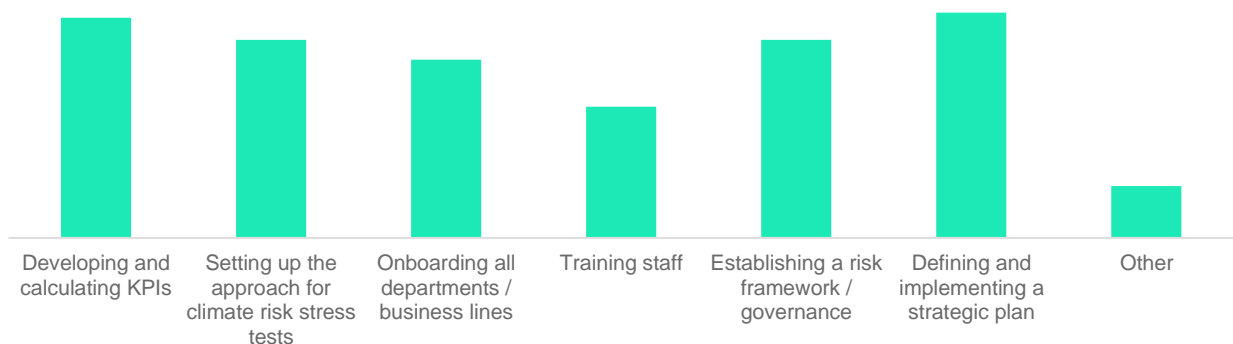
G-SIBs



Regional Banks



European Banks



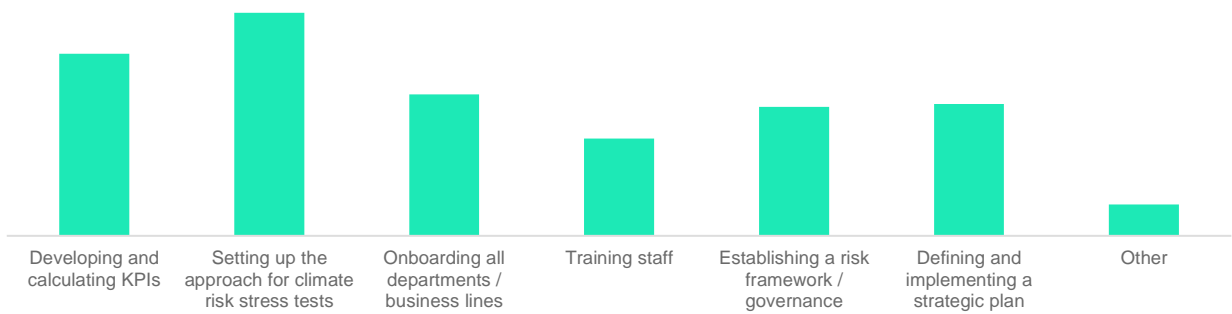
Strategy

6. Climate Risk related topics posing the most organizational challenges

Foreign Banks



Investment Managers



Strategy

Best Practices

For Strategy Best Practices, we identified recommended approaches for developing business strategy, procedures, controls, and oversight to implement those efforts.

Key criteria outlined in each guiding document:

Topic	TCFD	BCBS
Incorporation of climate risks and opportunities into the institution's strategy <i>see slide 34</i>	Recommended Disclosure for Strategy: b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	Principle 3: Banks should adopt appropriate policies, procedures and controls to be implemented across the entire organization to ensure effective management of climate-related financial risks
	ECB	OCC
	Supervisory Expectation #1: Institutions are expected to understand the impact of climate-related and environmental risks on the business environment in which they operate, in the short, medium and long term, in order to be able to make informed strategic and business decisions. Supervisory Expectation #3: The management body is expected to consider climate-related and environmental risks when developing the institution's overall business strategy, business objectives and risk management framework, and to exercise effective oversight of climate-related and environmental risks	Strategic Planning: The board and management should consider material climate-related financial risk exposures when setting the bank's overall business strategy, risk appetite, and financial, capital, and operational plans. As part of forward-looking strategic planning, the board and management should address the potential impact of climate-related financial risk exposures on the bank's financial condition, operations (including geographic locations), and business 3 objectives over various time horizons

Strategy

Best Practices

Below we describe in the four policy documents, specific practices evaluating business priorities, resilience, operational plans to meet climate mitigation goals.

Best Practice - Incorporation of climate risks and opportunities into strategy.

The public policy/regulatory frameworks we examined recommended that firms include:

- a) A description of **the impact of climate-related risks and opportunities** on the organization’s businesses, strategy, and financial planning,
- b) The adoption of **appropriate policies, procedures and controls** to be implemented across the entire organization,
- c) The consideration of risks’ impact on **resilience and priorities of business model** over various time horizons; and
- d) The consideration of material climate-related financial risk exposures when setting the bank’s overall business strategy, **risk appetite, and financial, capital, and operational plans**.

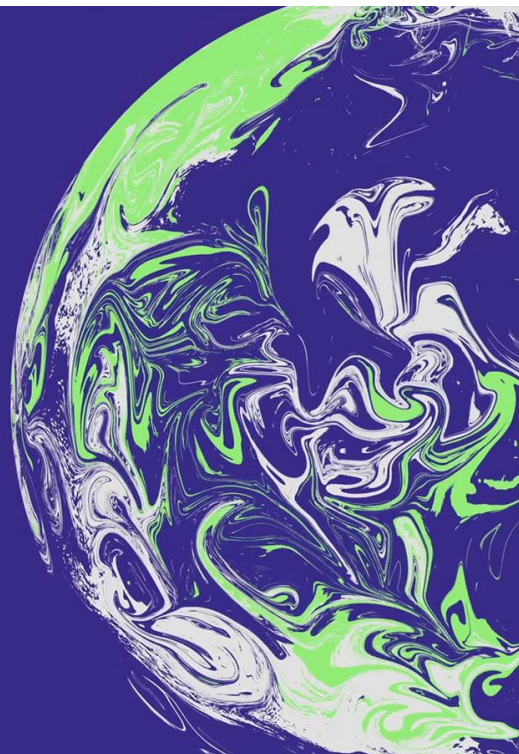
	TCFD	BCBS	ECB	OCC
Institution #1	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #2	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #5	Meets all criteria	Meets some criteria	Meets some criteria	Meets all criteria
Institution #6	Meets all criteria	Meets all criteria	Meets some criteria	Meets some criteria
Institution #7	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets some criteria	Meets all criteria	Meets some criteria	Meets some criteria
Institution #10	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #11	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #12	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria

Legend Meets all criteria Meets some criteria No considerations

01-12 NOV 2021
GLASGOW

COP26

IN PARTNERSHIP WITH ITALY



For two weeks in November 2021, representatives from nearly every country in the world met to align on the next steps in the global fight against climate change, resulting in the Glasgow Climate Pact. It was also the “fifth anniversary” (delayed by a year due to Covid-19) of the historic Paris Agreement, executed in 2015, making it a year in which countries were to revisit and update their Nationally Determined Contributions (NDCs). There were several key climate pledges made during COP26 that will have long-term ramifications, especially if the goals are actually met. These climate pledges include cutting carbon dioxide emissions, reducing reliance on coal, and speeding up adoption of clean technology. There was also an agreement related to Article 6 on carbon markets, which will make the Paris Agreement operational.

A number of actions were announced that will have a direct impact on the financial sector.


These include:

- *The formation of the International Sustainability Standards Board (ISSB), which will develop a comprehensive global baseline of high-quality sustainability disclosure standards to meet investors’ information needs.*
- *A commitment backed by \$130 trillion in assets for the net zero transition by GFANZ, the Glasgow Finance Alliance for Net Zero.*
- *The ISSB noted that its purpose is to “develop, in the public interest, IFRS Sustainability Disclosure Standards that provide a global baseline of disclosure requirements designed to give investors high quality, globally comparable sustainability information that can be used by jurisdictions on a standalone basis or incorporated into requirements to meet broader, multi-stakeholder or public policy needs.” The ISSB will work in close cooperation with the International Accounting Standards Board (IASB) to develop compatibility between IFRS Accounting Standards and IFRS Sustainability Disclosure Standards.*

03 /

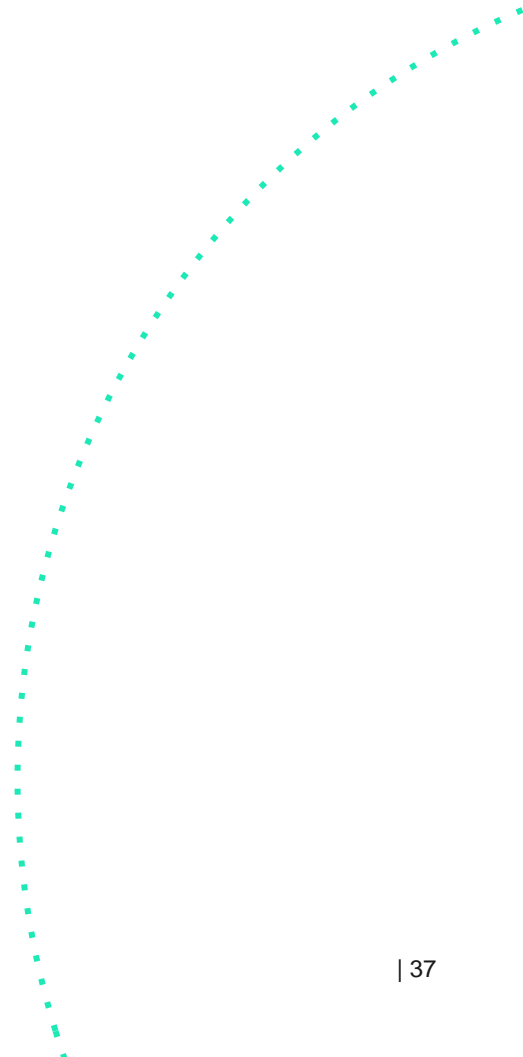
Corporate Governance, Finance and Budgeting

Corporate Governance, Finance and Budgeting



This section reviews the steps institutions have taken to establish their corporate governance for climate risk. A large group of organizations began strategy development with the businesses without alignments with second and third lines of defense. Participants highlighted a half dozen or more years ago, their lending teams along with other business lines had begun interacting with clients on a few green products and began to develop an offering to market sustainable products. The additional focus from the Paris Climate Accords, broader globalization of climate risk initiatives, and the engagement of the private sector who were receiving the initial set of pressures from investors and shareholders magnified those efforts. Like all 'new product' development, eventually management recognized there should be the appropriate support from the first lines of defense and the proper oversight from key departments—risk, operations, accounting, etc.

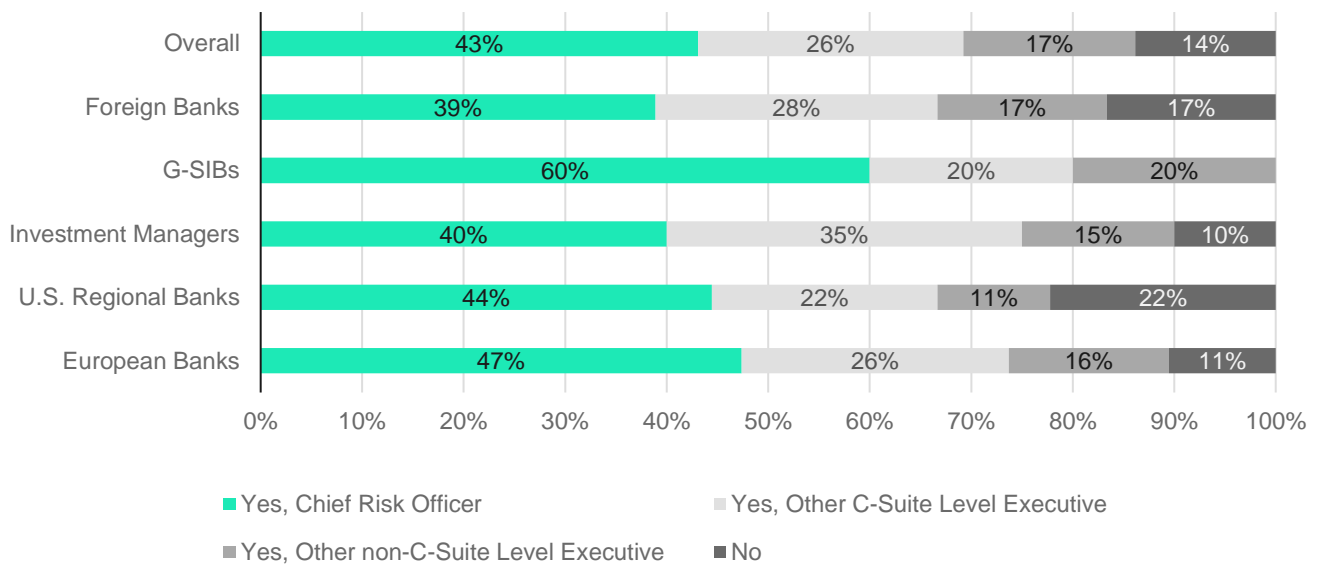
Accordingly, for some set of our respondents, the structures we describe could be a year or two old and in other cases of established environments, somewhat longer. There would also be distinct differences between financial institutions (the normal breakouts on size of firm, sophistication of product distribution in this space) as well as between investment firms and banks. The former identified significant responsibilities for management of climate risk to be placed in the hands of individual portfolio managers and would likely have more limited formal responsibilities in structure for anyone in the C-Suite. Second, participants recognize there will always be a “regulatory” driver for discussions surrounding this question. Hence our interviews pointed to longer term initiatives undertaken in Europe with structured governance efforts and shorter-term efforts in the US. Many of these were related to efforts in EMEA/U.K. by the public sector years ago and engagement in the U.S. more recently. And on this topic in specific, it would be difficult to ignore that regulators took a four year ‘break’ of sorts on this topic between 2016-2020 in the previous administration and the focus has grown immeasurably in the past 6-9 months. Whatever one views as the practical value of this, re-engagement the momentum by U.S. policymakers to play some catch up can’t be denied. And hence the pressure on U.S. institutions—global and otherwise to make up for lost ground and build in more formal governance structures consistent with their global colleagues.



Corporate Governance, Finance and Budgeting

1. Has your organization assigned a leader(s) responsible for climate risk?

The majority of the participants in the study, approximately 86%, have designated a corporate leader for climate risk. The G-SIB peer group consistently maintained a best practice, where all participants indicated a designation for a leader of climate risk.



Among all the institutions 43% have assigned the responsibility for climate risk to the Chief Risk Officer (CRO) with 26% of participants having delegated climate risk to another C-Suite-member and the remaining 17% have designated this role to another group. Many firms noted climate risk is part of an ESG structure that had been put in place and therefore ownership roles could be part of much broader initiatives covering environmental, social and governance efforts across organizations. Additionally, many participant institutions identified climate risk as a driver to the traditional level-1 risks as this ownership was somewhat predetermined.

A large American institution expressed a similar sentiment:

“The way we think about it, we integrate this into our risk management framework. We integrate with risk identification, risk measurement, and conducting scenario analysis and stress tests for those risks. From there, we start to set up limits, policies and procedures.”

G-SIBs

In almost all respects there is a gap between U.S. financial institutions and those domiciled outside the U.S. However, among the G-SIB population, there is a group of U.S. G-SIBs that are not party to that gap and reasonably match the sophistication and investment made by other geographies. Given their size and sophistication, G-SIBs are much further along in the development of a corporate governance structure for climate risk relative to the other institutions that participated in our survey. G-SIBs were the only group in our study that have all assigned a corporate leadership team or an individual to climate risk mitigation, with the majority placing that ownership in risk and with the Chief Risk Officer.

Corporate Governance, Finance and Budgeting

1. Has your organization assigned a leader(s) responsible for climate risk?

Many firms, in addition to incorporating climate risk into their existing risk management strategies, establish a team specifically focused on climate risk:

“Our approach involves multiple elements. This includes an ESG team and their committees, a cross membership functionality, and a sustainable finance team that sits in the front line, is business driven, and has membership on all committees.”

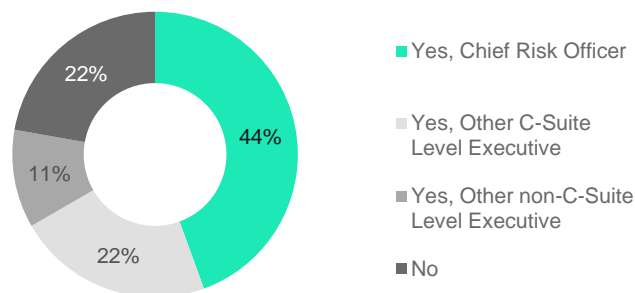
A somewhat broader and holistic approach was identified by another project participant which noted:

“Our firm has integrated climate transition into the way we strategically manage our business and identify commercial opportunities. We have established dedicated sustainability councils within each of our business segments to identify key ESG-related priorities, developing capabilities across work streams and delivering sustainability-focused solutions to clients in a holistic way, including on areas related to climate.”

U.S Regional Banks

Many of the U.S. Regional Banks in our study identified as a baseline, climate risk impacts nearly all or almost all segments of their business, however as a group, and consistent with other findings, regional banks are behind the rest of peer groups in establishing a governance structure. Factors contributing to the latency include slow reaction to social sentiment, lack of regulatory pressure and a decidedly smaller level of climate risk exposures. Indeed, almost a quarter of our U.S. Regional Bank participants had yet to assign a leader to climate risk although, again, in some cases this team was consolidated within a broader ESG effort. For many of the U.S. Regional Banks, where there are no current regulatory requirements for building climate risk into the structure of the organization, it is still too soon to have a dedicated owner for climate risk although they have some clear sense of where the ownership will exist.

Regional Banks



One such firm noted:

“We do have a small team that is fully dedicated to ESG research, analytics, and corporate sustainability. Every analyst is responsible for integrating climate into opportunities for their team. In the infrastructure team, four members form the core for ESG, which includes climate, and they are fully dedicated to advancing that discussion at the firm. There is no ‘Climate Risk person’ at the firm. Climate risk is not a standalone risk on its own, but a driver.”

Corporate Governance, Finance and Budgeting

1. Has your organization assigned a leader(s) responsible for climate risk?

Some firms, particularly the U.S. Regional Banks, have initially delegated climate risk primarily to the legal department or the office of the general counsel.

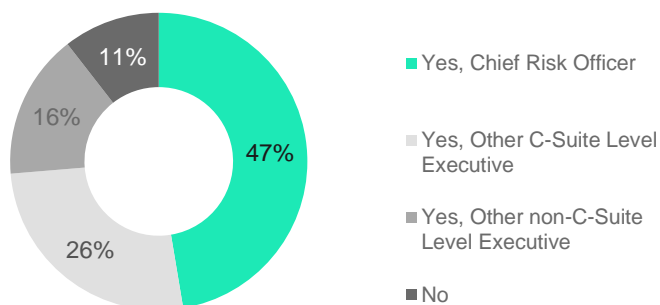
The larger role of the legal department was highlighted by a U.S. Regional Bank:

“Everything is under our legal department. However, our environmental group is under risk management, which is responsible for overseeing the pillars for how it fits under risk. We work closely with credit portfolio management, and our whole responsibility is sustainability for finance and metrics, which overlaps with Environmental and Social risk work. The governance is primarily handled by the legal department.”

European Banks

In Europe, financial institutions are expected to assign responsibility for the management of climate-related and environmental risks within the organizational structure in accordance with the three lines of defense model. We see here that this is currently at least partly the case in most European-based respondents. Only 11% financial institutions indicate not to have appointed a leader for climate risk. Most of them indicated to have appointed a Chief Risk Officer or other C-level role, showing that the impact of climate is perceived as an important part of financial institutions’ operating models.

European Banks



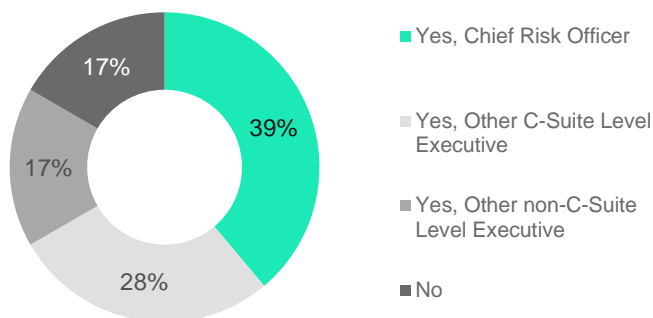
Foreign Banks

The Foreign Bank peer group cut is an amalgamation of non-G-SIB firms with headquarters outside of the U.S. resulting in a wide assortment of global institutions based in Europe, Canada, APAC, and the Middle East. However, a very meaningful number of these firms (83%) had assigned a leadership team to their climate risk efforts reflecting substantial progress in that arena.

Corporate Governance, Finance and Budgeting

1. Has your organization assigned a leader(s) responsible for climate risk?

Foreign Banks



Similar to other peer groups, the foreign banks assigned ownership for climate risk to the CRO. However, several foreign banks noted organizations structures may not be identical in each region in which they operate and likely are modeled around the current or anticipated regulatory approaches.

One foreign bank commented on the integration of climate risks into their broader risk frameworks:

“Integrating climate risks and ESG risks is no different than the way we implement any other types of risks. We see them as gravitating factors rather than new prudential risks. We integrate factors such as climate risk where they are appropriately linked to both financial and non-financial risks, such as reputation.”

Other institutions commented about the breadth of the efforts that would be included in these integrations:

“We have a Sustainability finance team — if there is a transactional effort, AM, Wealth, and Capital Markets could go to that team and get their opinion on how climate risk affects the business. They are tied together; but not sure if right now we have a formal feedback loop that informs guidance.”

The challenge for many of these foreign banks is managing multilateral requirements from regulatory bodies both in their headquarters and affiliate/subsidiary locations. While this would not be any different than the G-SIBs or even a large institutional investor, the size of many of the Foreign Banks is considerably smaller than their larger bank counterparts.

Corporate Governance, Finance and Budgeting

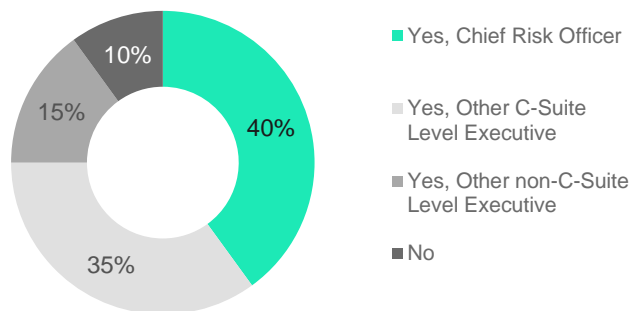
1. Has your organization assigned a leader(s) responsible for climate risk?

Investment Managers

The SEC has opened a line of communication with firms regarding climate risk, indicating that governance—driven by disclosure will be one of the major areas of focus in 2022 and onward. In a memo to several firms, the SEC requested information related to efforts to “Establish a framework for internal governance and oversight of climate-related issues, including strategic planning, metrics, and key performance indicators.” Some of our major participants in the study were of the view that the role of the SEC could easily supplant those of the banking prudential officials who have their own primary oversight. We had a very broad range of investor participants and hence the feedback wide ranging on some topics.

Institutional investors operate in an environment where the regulatory oversight differs markedly from their banking counterparts. A majority of institutional investors have begun to set up a governance structure for climate risk, with the vast majority having designated some leader team to climate risk. The participants in this group do not see infrastructure in the same vein as banks do for a host of reasons. Many investment managers believe it is important for them to view climate risk as a profitable business—relying on their portfolio management teams to handle risk management (consistent with their other offerings) and would see their other C-Suites as a secondary (second line of defense) oversight.

Investment Managers



The Investment Manager peer group had the highest percentage of respondents indicating climate risk was owned and managed in the C-Suite, however not by the Chief Risk Officer. The peer group’s unique response rate is likely attributed the aforementioned business models as well as their existing well-established ESG businesses.

A firm spoke to the more explicit efforts they were taking:

“We view climate risk as a subset of ESG and sustainability, considering the infrastructure, resources, and framework for ESG and Sustainability also apply to climate. We do have a small team that is fully dedicated to ESG research and analytics – every analyst is responsible for integrating climate into opportunities for their team. There is no one ‘Climate Risk person’ at the firm, considering we view it as a driver rather than a standalone risk.”

Corporate Governance, Finance and Budgeting

1. Has your organization assigned a leader(s) responsible for climate risk?

Insurance

Insurance companies are still developing their corporate governance to support a climate risk framework and have generally allocated a budget towards climate risk transformation projects / activities; however, it seems that insurance companies have yet to integrate climate risk into the capital allocation process.

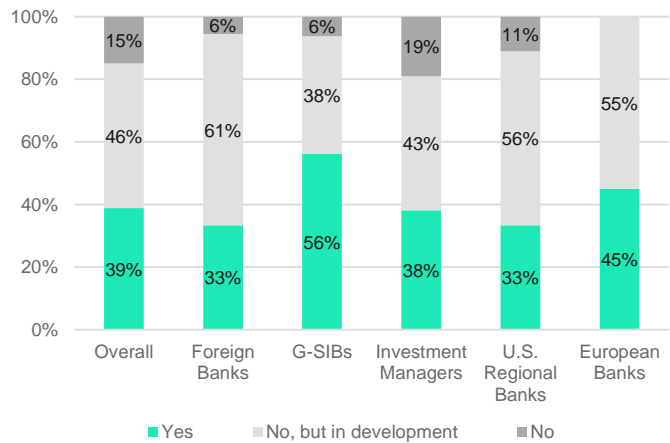
One Insurance participant noted:

"We are in the midst of doing [an impact assessment on different business lines]; preliminary view on ops risk and some on underwriting risk and investment risk on portfolio side as well. We are teeing that up and have a good understanding already- we expect that to be 2022 deliverable. We have performed a Greenhouse Emissions calculation already; we know our sites for climate risk and business continuity with physical risks. Resilience and end to end process flows have been kicked off this year with a lot of traction."

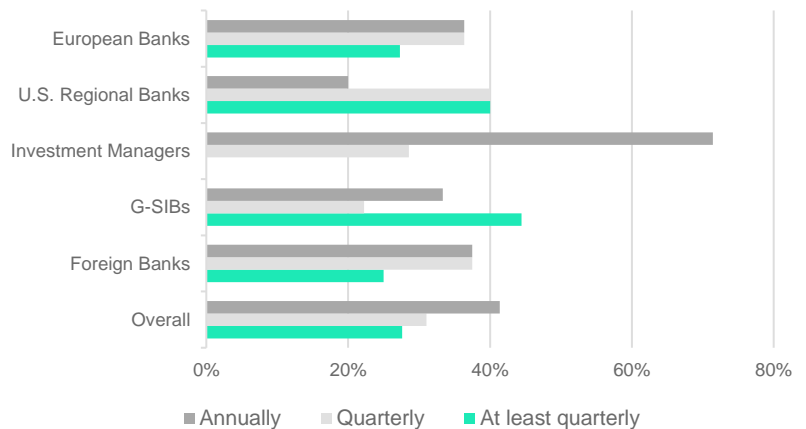
Corporate Governance, Finance and Budgeting

Most firms (46%) have started but are still working to develop their internal reporting frameworks for climate risk. A somewhat smaller group of firms (39%) have already fully developed internal reporting for climate risk.

2a. Has your organization developed internal reporting for climate risk exposures for the Board of Directors or Enterprise Risk Committees?



2b. If yes, how frequently are these reports distributed?



Collectively, firms were challenged in a few respects and while the infrastructure for traditional reporting exists, institutions are still identifying the suitable reporting formats and type of data to provide. Moreover, organizations with less advanced frameworks were concerned a formal process for distributing to the appropriate stakeholders may not exist, whereas for other public policy or regulatory requirements there would be clarity from working groups and committees as to the distribution of this reporting (e.g. task forces, senior management reporting, Executive Committees, Board of Directors). Therefore, participants were not at the point where this information was similarly disseminated. Additionally, various participants assembling the data were concerned the distribution of this information would not be valuable to a broad set of stakeholders.

Operationally, a key dependency for developing a verifiable, repeatable reporting process is data management. As firms become more comfortable with the underlying data, the internal reporting will become more robust. For some institutions, their reliance on external data means accurate integration with their own data capabilities. Additionally, as we see more industry participants become signatories for protocols including the TCFD, publicly available data will become increasingly available to be leveraged with confidence and introduced into formal metrics.

Part of the evolution for firms for moving internal climate reports from more ad hoc in nature to more formal, firm-wide distributions:

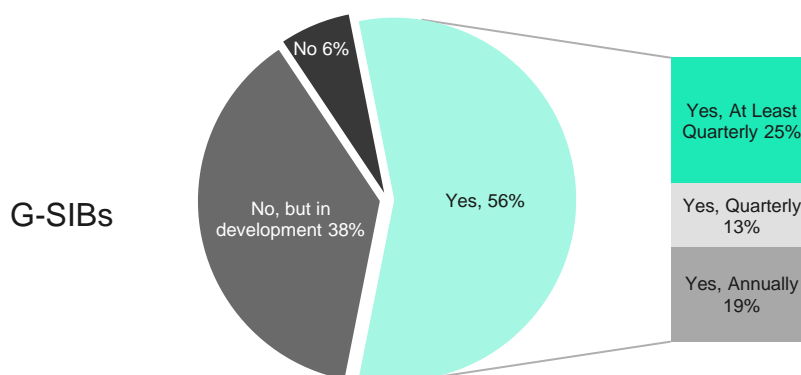
“We have not developed internal reporting yet. Briefings are ad hoc right now, and we have not planned to begin developing these until 2022 or beyond.”

Corporate Governance, Finance and Budgeting

2. Has your organization developed internal reporting for climate risk exposures? If yes, how frequently are these reports distributed?

G-SIBs

Multiple regulatory bodies including the Bank of England, OCC, EBA, etc., have identified communication as vital for establishing internal accountability and sound governance structures. Nearly all G-SIBs either already have or are developing reporting surrounding climate risk exposures for internal distribution. For those that have not yet developed these capabilities, the feedback we received from interviews complemented by the data from our survey suggests that they are actively working on it.



As we noted at the outset, internal reporting is heavily dependent on the quality of the data firms can obtain (internal, vendor-based, public information) and the ability to process that data. Performing risk assessments within business units would likely be seen as a precursing requirement for robust internal reporting. The initiatives would require setting up a coherent reporting framework with governance (working groups, task forces, etc.) to drive the effort, however, many firms are leveraging current capacities to mobilize climate risk reporting less sufficiently. The largest global banks have had the ability to start those efforts at least several years ago and thus have a dynamic reporting process.

Additionally, the OCC has released draft principles for Climate-Related Financial Risk Management guidance for large banks (>\$100b) which includes topics for effective governance structures. One anticipates that more US firms will follow these guidelines in addition to foreign banking organizations (FBOs) who are also subject to OCC oversight.

The OCC noted in its recently released guidance that:

“Sound governance includes reviewing information necessary to oversee the bank, allocating appropriate resources, assigning climate-related financial risk responsibilities throughout the organization (i.e., committees, reporting lines, and roles), and clearly communicating to staff regarding climate-related impacts to the bank’s risk profile.”

U.S. Regional Banks

While only 33% of U.S. Regional Banks surveyed have fully developed internal reporting, in comparison to other peer groups, the progress for this activity is not far behind other peer groups and in line with the Foreign Bank peer group. Additionally, 56% report they are developing their internal reporting capabilities. With limited regulatory direction in the U.S., many of the reports are ad hoc or pilot-based, however the U.S Regional Bank peer group distributes their reporting in-line or more frequently than the other peer groups.

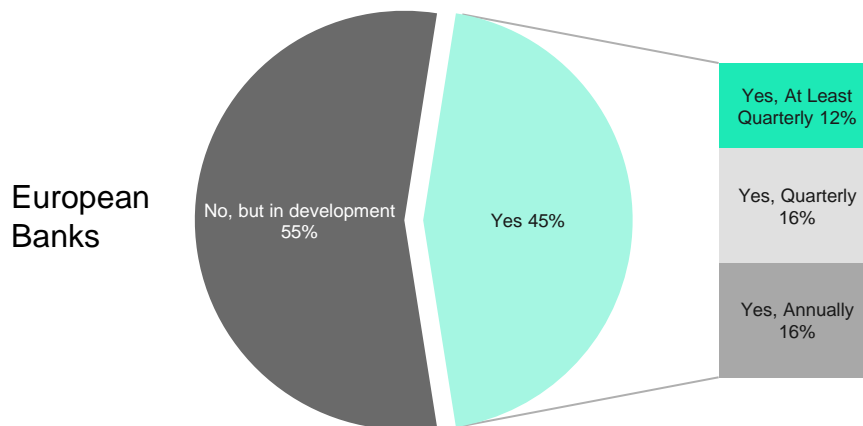
Corporate Governance, Finance and Budgeting

2. Has your organization developed internal reporting for climate risk exposures? If yes, how frequently are these reports distributed?

European Banks

Regarding internal reporting, institutions are expected by the ECB to report aggregated risk data that reflects their exposures to climate-related and environmental risks with a view on enabling the management body and relevant sub-committees to make informed decisions. We see that within the European group of financial institutions this is an active topic as all respondents reported to be at least in the development phase of internal reporting procedures.

This is in line with the study results and with European Bank disclosures which confirmed the majority of the industry is still in the process of implementing the climate risk requirements in their business models and that only a minority of institutions already completed the integration of robust internal reporting frameworks. Considering the importance of climate risks in the long-term decision-making process of financial institutions and the active engagement of European regulatory institutions the low number of negative responses among European respondents is expected.



Foreign Banks

Relatively few foreign banks have finished the development of internal reporting surrounding climate risk, although the vast majority have begun the change process, likely attributed to their domicile in a region with advanced regulatory agendas. Developing internal reporting is a challenge for many mid-sized institutions without significant regulatory guidance and therefore feedback for foreign banks is not surprising given the need to align with market forces both in the U.S. and abroad. That reporting is either quarterly or annually suggesting that this effort will require further resources to increase the frequency.

One foreign bank remarked:

“We have significant cross-working group initiatives. Much of our climate reporting is currently qualitative with more simplistic assumptions, but we are spending a lot of time collecting data to widen our quantitative reporting.”

Corporate Governance, Finance and Budgeting

2. Has your organization developed internal reporting for climate risk exposures? If yes, how frequently are these reports distributed?

Investment Managers

Institutional investors reflected as a larger majority than any other peer group that Board involvement is key when it comes to successfully incorporating climate risk into their practice. Organizations where the CEOs are heavily engaged in the profitability of the business is key to that process. One investor commented:

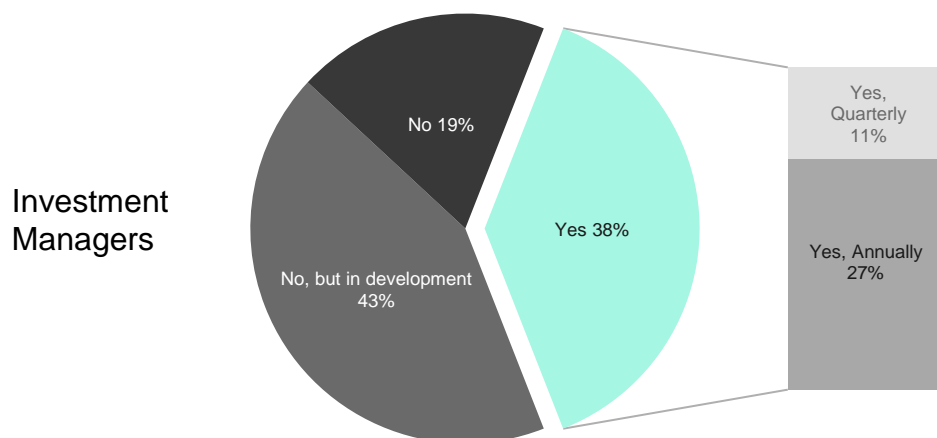
“We think it is important to engage with the board, so they are informed about what we are doing. We have a formal mid-year update in addition to some offline meetings. Corporate risk management and audit are also involved; monthly conversations around governance regularly involves climate.”

Institutional Investors, for the most part, are still in the process of implementing internal reporting for climate risk more broadly across organizations. The Investment Manager peer group has strong individual portfolio reporting and will leverage those frameworks as their governance structures become more formalized. Those that report mainly do so on an annual basis likely driven by more structured reports for the TCFD or similar requests.

Additionally, since the change in administration, the SEC has placed a stronger emphasis on the importance of climate and ESG disclosures. This initiative, flagged in numerous discussions, has provided guidance regarding the involvement of firms’ board of directors and this was going to help dictate efforts in the years ahead:

One firm suggested efforts for coordination in the US will improve due to forthcoming regulatory efforts:

“Internal reporting is a work in progress. We currently have a regulatory and legal team responsible for State reporting, the NYDFS, and various coordination bodies. However, we have no single firm-wide report and disclosure. In general, there is more to come in terms of climate risk reporting.”

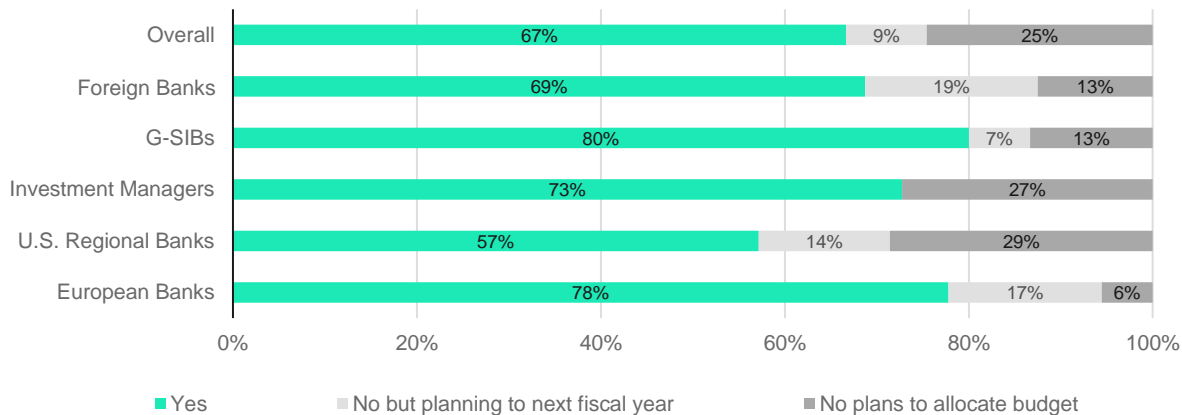


Others are pulling from the process for portfolio management reporting:

“Most of our reporting is at a portfolio level and on a monthly basis. We are looking at a range of things: underlying metrics, such as carbon emission numbers, as opposed to summary scores or indicators from third parties, such as a risk rating. We are relying on external data since our clients and competitors have it. For us, it is important to have a range of data to understand what is most materially relevant.”

Corporate Governance, Finance and Budgeting

3. Has your organization allocated any budget towards climate risk transformation projects / activities?



Institutions noted since program mobilization tended to begin with the C-Suite, and not a specific risk category or line of business it often presented challenges for the initial funding of programs. Some institutions leveraged cost centers assigned to their ESG efforts, others specifically for climate risk, and some participants noted costs were absorbed in head count outside of a sustainable project budget. Participants beginning to mobilize large-scale programs identified budget requests as being difficult.

67% of the respondents have already allocated budget towards climate risk transformation projects and activities. Of the remaining 33%, 9% are planning to allocate budget in the following fiscal year. The challenges identified were not related to determining the prioritization rather identifying the cost centers who were being charged for the resources.

The G-SIBs, Foreign Banks and Europeans Bank participants are the most advanced in financial planning for climate risk programs, with the large majority of them either having already or planning to allocate budget towards climate risk. This is partially due to the regions in which they are located and the enhanced regulatory efforts requiring disclosure reporting or pilot exercises for stress testing which required resources and data vendors.

For Investment Managers, few participant who had not already allocated a budget was planning to do so in 2022. However, for many of those firms, an existing effort with business units was already in place and as a result the governance efforts and budgeting has and will be part of the business growth strategy to expand product and the capacity for current first lines of defense to handle those issues.

G-SIBs

For G-SIBs, climate risk programs often started as a segment within their ESG programs and as a result they found initial budgeting as part of their larger sustainability and CSR efforts. Nearly all G-SIBs have budgeting built into all these initiatives but in some cases have not formalized a distinct allocation of resources for climate risk as a standalone investment. With the requirement of having additional resources across the first and second lines of defense—additional regulatory attention for compliance among other items—budgeting for climate risk will grow and steadily throughout this year.

One G-SIB commented on the progress of their climate risk-specific budget:

“We do not have an overall climate budget yet, but we are having active discussions around this. We are working on having our budgets rolled into multiple units. My view is that this is not a long way off, since there is agreement that it needs to be done reasonably soon.”

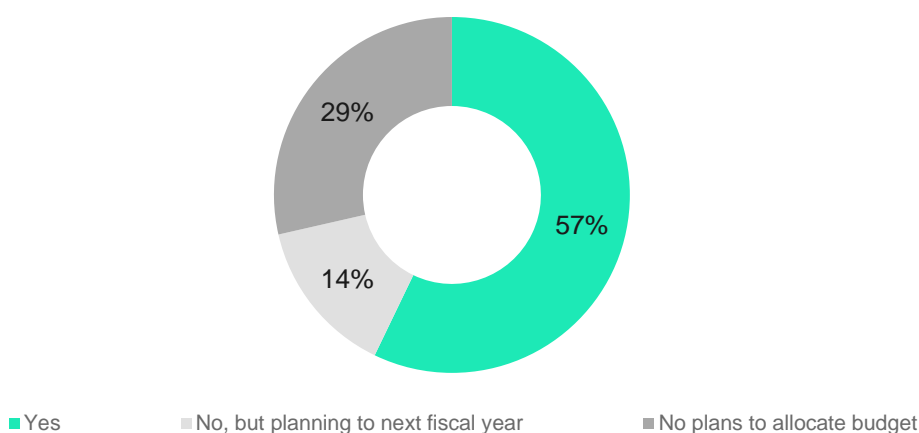
Corporate Governance, Finance and Budgeting

3. Has your organization allocated any budget towards climate risk transformation projects / activities?

U.S. Regional Banks

While U.S. Regional Banks have allocated budget towards climate risk transformation projects they also had the highest percentage of respondents with no plans to allocate budget. Many of these institutions have attempted to establish their own governance structure with limited guidance from U.S. regulators. Regional banks are expected to move ahead aggressively in 2022 for most, if not all governance efforts. For those who responded with a lack of budget allocation, it is key to rolling out critical pieces of their governance structure.

U.S. Regional Banks



As one regional U.S. Bank commented:

“Budgeting comes into play with the roles we have created and filled. We still need individualized roles and more organization from a risk and disclosure perspective. There continues to be a focus on initiatives from an environmental perspective, specifically resourcing, evaluating, and building a business case around them.”

European Banks

The EU's goal to eliminate its net emissions by 2050 will require significant financial investments, and much of this will come from the private sector. The EU's taxonomy aims to make green activities more visible and attractive to investors. Our survey shows that most of the European financial institutions are already assigning a budget for climate risk transformation projects and activities with the high percentage (78%) of participants already allocating budget and the fewest respondents (6%) with no plans to allocate budget.

In Europe, many investors are also already responding to their customers changing investment attitudes and are already considering environmental, sustainable, and governance (ESG) factors in their investment decisions and are channeling funds to more sustainable companies.

Corporate Governance, Finance and Budgeting

3. Has your organization allocated any budget towards climate risk transformation projects / activities?

Foreign Banks

Most foreign banks (87%) either have or are planning to allocate budget towards climate risk transformation projects. However, in some geographic areas, these efforts were less mature and requiring further progress. Obstacles of needing more refined data, additional resources, awaiting regulatory direction before investing all were common feedback.

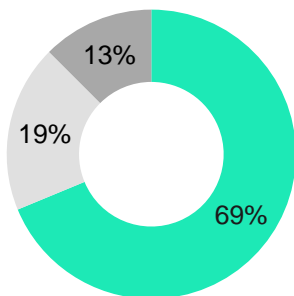
A larger foreign bank participant commented:

“We do have a separate budget for climate risk, but it is difficult to quantify. We don’t have anything firm at the moment, but part of our climate roadmap is to dedicate funds to the climate space and develop data for infrastructure and resources.”

Investment Managers

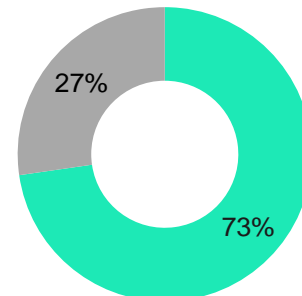
Most institutional investors in our study have already allocated budget towards climate risk transformation projects. Consistent with the other governance responses, investors who are set up through their portfolio managers have budget and human resources committed to their climate risk mitigation efforts through the pertinent parts of the organization. Firms did not reflect a concern about insufficient amounts of capital for their efforts and suggested that if there are expanded requirements (as anticipated) by the SEC that additional resources to support those filings and support for shareholder information/disclosure will be provided.

Foreign Banks



- Yes
- No, but planning to next fiscal year
- No plans to allocate budget

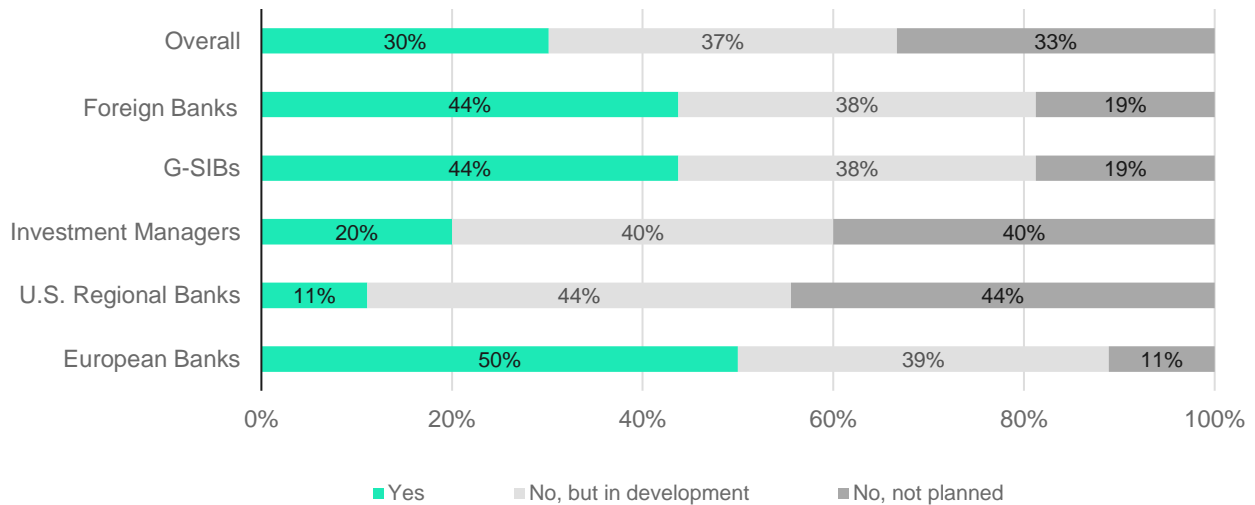
Investment Managers



- Yes
- No, but planning to next fiscal year
- No plans to allocate budget

Corporate Governance, Finance and Budgeting

4. Have you integrated climate risk into the capital allocation process?



A limited number of firms (30%) have integrated climate risk into the capital allocation process. The remaining 70% of firms are fairly evenly split between those developing and not developing climate risk capital allocation.

The survey results suggest this risk scheme is seemingly correlated to the size of the firm, and geographic location. Many participants are waiting for guidance from regulatory bodies before determining their investment in regulatory capital. There was no sense from participants that the allocation of ECAP or an economic capital model was yet in place. Some firms had considered it but not enacted anything. Other participants suggested it was inevitable requirement eventually but not yet a priority.

G-SIBs

The role of all global regulators encourages a tie between regulatory capital set aside for potential climate risk losses and building that into scenarios and stress tests faces more than a few challenges as we discuss in greater detail in our section on Risk Management and Data. G-SIBs mirrored the concern for getting ahead of regulatory requirements in this scheme, specially in the U.S., where the current sentiment has been tentative in relation to aligning with EU and U.K. on this topic.

One participating G-SIB commented:

“The uncertainty of modelling climate risk in an accurate manner is a big challenge. We have climate driven scenarios and capital loss associated with it, but we do not believe that climate risk belongs in our capital framework. Event risk is already captured, but the data shows that there is a mismatch between how timelines and events evolve. We have heard that despite Europe adopting capital, the Fed will not.”

Corporate Governance, Finance, and Budgeting

4. Have you integrated climate risk into the capital allocation process?

U.S. Regional Banks

The sentiment from U.S. Regional Banks demonstrates a lag in the development of this risk management activity in comparison to other peer groups. Of the U.S. Regional Banks surveyed, only 12.5% had integrated climate risk into the capital allocation process, compared to approximately 30% for all other participants. There are challenges since many of those in the U.S. Regional Bank peer group do not have advanced capital allocation processes to begin with and therefore an integration of this type would not happen until well into program project plans for climate risk integration.

On the interplay between regulation and capital allocation, one such firm noted:

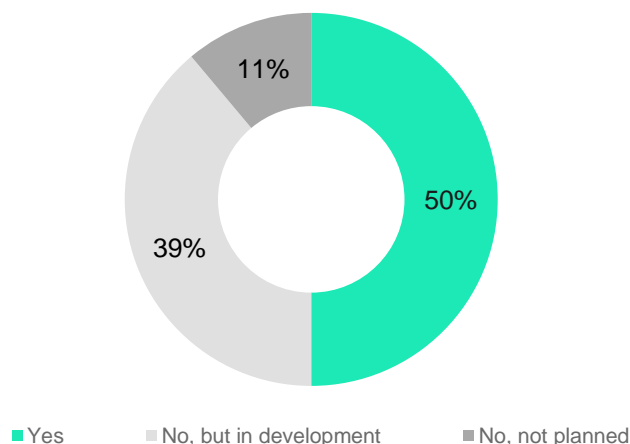
“We do think that from a regulatory perspective, capital allocation will be required, but it is not imminent. There is a lot of work in Europe on this topic, but it is not likely to develop quickly in the U.S. The main challenges we face are reliability of data and predictability of the industry – holding capital demands to a level of accuracy that we do not currently have.”

European Banks

In Europe, banks can use internally developed models for identifying and calculating risks and estimating the capital they must hold to bear financial losses caused by these risks. The ECB already expects institutions to assess whether material climate-related and environmental risks could cause net cash outflows or impact liquidity buffers. Institutions using internal models have already started implementing ESG criteria in their risk models. Yet, according to Lars Overby, head of risk-based metrics at the European Banking Authority, these institutions are facing the challenge of having the right data available in order to feed sufficient and correct data in their calculations, and this is a common issue identified in study results.

The aim of implementing climate risk in the allocation of resources and into budgeting is translated by the results of this research. Almost all companies have integrated or are in the development phase of integrating these risks into budgeting and capital allocation processes.

European Banks



Corporate Governance, Finance and Budgeting

4. Have you integrated climate risk into the capital allocation process?

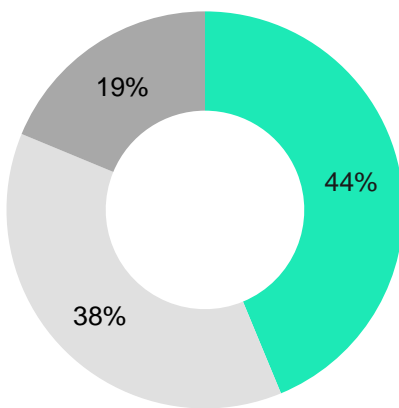
Foreign Banks

Participants identified challenges face on capital allocation including the linkages to regulatory capital models and the learning process for U.S. firms compared to their European counterparts:

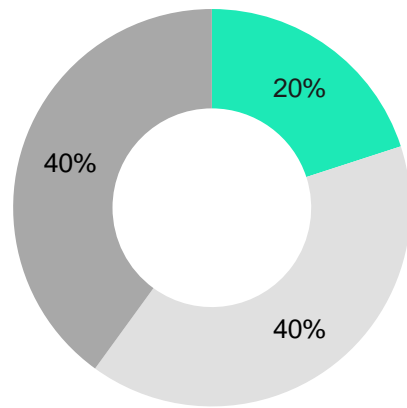
“Capital allocation is led by regulators, which to this point is non-existent in the U.S. We have been looking at the guide and roadmap put out by the ECB and EBA, but ultimately, we are only thinking about it in the U.S. We will eventually see a more pronounced stance, considering that Paris Climate Agreement includes guidance for financial flows, but it is very difficult to get this right without more guidance.”

“Capital allocation is premature in our view, since we are still struggling to understand the impact climate drivers has on risk. In order to understand these drivers and models, we need statistical data to integrate them into the models, but we do not have enough knowledge of data series, nor does historical data predict future outcomes. Various European regulators have done work on this, so we are learning from them, but this is still very much a work in progress.”

Foreign Banks



Investment Managers



■ Yes ■ No, but in development ■ No, not planned ■ Yes ■ No, but in development ■ No, not planned

Corporate Governance, Finance and Budgeting

Best Practices

Governance and Finance best practices focused on the policy makers recommendations for the build out internal accountability and the role of the board inside financial institutions.

Key criteria outlined in each guiding document

Topic	TCFD	BCBS
Role of the Board see slide 55	<p>Recommended Disclosure for Governance: a) Describe the Board's oversight of climate-related risks and opportunities</p>	<p>Principle 2: The board and senior management should clearly assign climate-related responsibilities to members and committees and exercise effective oversight of climate-related financial risks. The board and senior management should identify responsibilities for climate-related risk management throughout the organizational structure.</p>
	ECB	OCC
	<p>Supervisory Expectation #5: Institutions are expected to assign responsibility for the management of climate-related and environmental risks within the organizational structure in accordance with the three lines of defense model.</p>	<p>Governance: A bank's board and management should demonstrate an appropriate understanding of climate-related financial risk exposures and their impact on risk appetite to facilitate oversight. Sound governance includes reviewing information necessary to oversee the bank, allocating appropriate resources, assigning climate-related financial risk responsibilities throughout the organization (i.e., committees, reporting lines, and roles), and clearly communicating to staff regarding climate-related impacts to the bank's risk profile.</p>

Corporate Governance, Finance, and Budgeting

Best Practices

We isolated whether firms could provide effective oversight & monitoring; level of Board involvement and reporting provided to ensure management engagement.

Best Practice – Role of the Board

The public policy/regulatory frameworks we examined recommended that firms include:

- a) Descriptions about **effective oversight and monitoring** of climate risk,
- b) Discussion on the **extent of involvement** of the Board,
- c) The **allocation of management responsibilities**, and
- d) The **process and frequency** of reporting to the Board.

	TCFD	BCBS	ECB	OCC
Institution #1	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #2	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets all criteria	Meets all criteria	Meets some criteria	Meets all criteria
Institution #5	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #6	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #7	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets some criteria	Meets all criteria	Meets some criteria	Meets some criteria
Institution #10	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #11	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #12	Meets all criteria	Meets all criteria	Meets some criteria	Meets all criteria

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

Corporate Governance, Finance and Budgeting

Best Practices

Governance and Finance best practices focused on the policy makers recommendations for the build out internal accountability and the role of the board inside financial institutions.

Key criteria outlined in each guiding document

Topic	TCFD	BCBS
Climate Risk Responsibility and Internal Accountability Structures <i>see slide 57</i>	Recommended Disclosure for Governance: b) Describe the management's role in assessing and managing the climate-related risks and opportunities	Principle 1: Banks should develop and implement a sound process for understanding and assessing the potential impact of climate-related risk drivers on their businesses and on the environments in which they operate. Banks should consider material climate-related financial risks that could manifest over various time horizons and incorporate these risks into their overall business strategies and risk management frameworks.
	ECB Supervisory Expectation #6: For the purposes of internal reporting, institutions are expected to report aggregated risk data that reflect their exposures to climate-related and environmental risks with a view to enabling the management body and relevant sub-committees to make informed decisions.	OCC Governance: Responsibility and accountability may be integrated within existing organizational structures or by establishing new structures for climate-related financial risks. Where dedicated units are established, the board and management should clearly define these units' responsibilities and interaction with existing governance structures. Additionally, management is responsible for regularly reporting to the board on the level and nature of risks to the bank, including climate-related financial risks Policies, Procedures, and Limits. Management: should incorporate climate-related risks into policies, procedures, and limits to provide detailed guidance on the bank's approach to these risks in line with the strategy and risk appetite set by the board

Corporate Governance, Finance, and Budgeting

Best Practices

These best practices focused on management resourcing, climate specific structures and support for climate mitigation tasks related to the three lines of defense.

Best Practice – Climate risk responsibility and internal accountability structures.

The public policy/regulatory frameworks we examined recommended that firms include:

- a) The **assignment of responsibility** for climate-related tasks in accordance with the **three lines of defence model**,
- b) Identification of **climate-related management structures** or sub-committees,
- c) Any internal structures to that enable **accountability**, and
- d) Discussion on the **resources senior management are equipped** with to engage with climate risk.

	TCFD	BCBS	ECB	OCC
Institution #1	Meets all criteria	Meets all criteria	Meets some criteria	Meets all criteria
Institution #2	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets all criteria	Meets all criteria	Meets some criteria	Meets some criteria
Institution #5	Meets all criteria	Meets all criteria	Meets some criteria	Meets all criteria
Institution #6	Meets some criteria	Meets all criteria	Meets some criteria	Meets some criteria
Institution #7	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #10	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #11	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #12	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria

Legend Meets all criteria Meets some criteria No considerations



One of the other large initiatives announced at COP26 was the assembling of the Glasgow Financial Alliance for Net Zero (GFANZ), a group of banks, insurers, and investment firms that have committed to putting climate change at the center of their work. This group of nearly 500 global financial services firms in 45 countries announced its agreement to align \$130 trillion – some 40% of the world’s financial assets – with the net zero goals set out in the Paris Agreement, including limiting global warming to 1.5°. The coalition includes among its members BlackRock, HSBC Holdings, Morgan Stanley, and Deutsche Bank. GFANZ said the pledge amounted to a transformation of the global financial system that would help entire industries undergo fundamental restructuring for a carbon-neutral future.

“We now have the essential plumbing in place to move climate change from the fringes to the forefront of finance so that every financial decision takes climate change into account.”

-Mark Carney, UN special envoy on climate action and finance and GFANZ chairman.



04 /

Risk & Technology

Risk & Technology



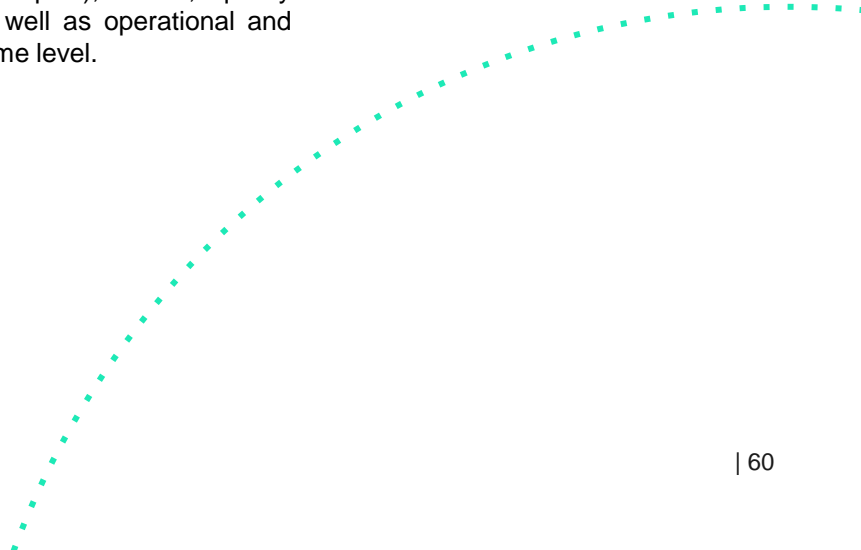
This section explores the industry treatments of risk from climate change including measurement approaches, scenario analysis, stress testing. Institutions touched on a variety of challenges they were facing, but there was a consensus around several topics.

First, participants underscored that the public sector would unquestionably play an important role in climate investments and decision-making. As we have discussed in the sections on Strategy and Governance, there is not a unified view on behalf of the largest prudential regulators worldwide. U.K./EMEA/APAC regulatory bodies have been leading the legislative efforts and, consequently, the discussions regarding issues in this section and the value of capital buffers for credit, market & liquidity risk are now open to substantial debate. The U.S. regulators (Federal Reserve, OCC, SEC etc.) are more hesitant at this moment.

Second, the issues surrounding risk metrics from the measurement related to CO₂ mitigation strategies for transition risks within participant organizations as well as identifying client progress will require significant effort going forward and participants are leery about making substantial policy judgments without meaningful improvements in place.

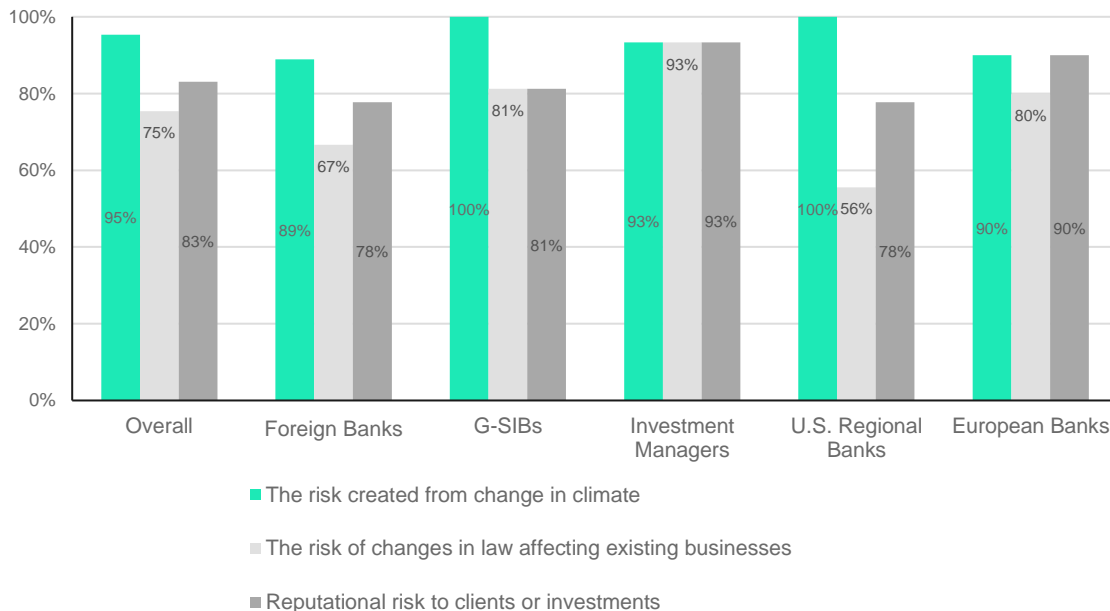
Third, data accuracy is core to this discussion. The nature of data issues challenges both regulators and the industry. Participants are building out their internal data sources and some are beginning the outreach for attaining client data on emissions to contribute to their modelling and an ability to quantify climate risk and ultimately more accurately measure mitigation of such risk at their own firms as well as with clients.

These topics run through all our discussions as we go forward in our analysis of these sections. Institutions recognized that all of the major risks—credit (most prominent for firms that lend capital), market, liquidity (for those who are more market focused) as well as operational and legal risks which confound all participants at some level.



Risk & Technology

1. In defining climate risk, which risks does your organization consider?



In order to analyze participants responses, it is important to align the responses in the context of climate risk drivers. The first response, “The risk created from change in climate” falls under physical risk drivers while the second and third responses, (“The risk of changes in law affecting existing businesses, Reputational risk to clients or investments”) fall under the transition risk driver.

The risk created from change in climate from both chronic and acute physical risks can have a negative impact on a financial institution’s credit risk. This is seemingly the most well understood impact to our participants’ business models which aligns with the risk category receiving the highest response rate. While the transition risk drivers had a lower response rate it was however a quite high response rate indicating transition risk is likely nearly as important to the overall population. Although the impact transition risk will have on participant business models may be less known, it will at some point garner significant attention as it is crucial to the design of scenarios and stress testing. Moreover, the least reported TCFD disclosure in 2020 fell under the “Resilience of Strategy” category which encapsulates the stress testing activities. Already in the spotlight, this disclosure will be highlighted moving forward pressuring financial institutions to prioritize their understanding of the transmissions channels for transition risk and incorporate scenarios in risk measurement.

G-SIBs

The G-SIB population had a full response rate (100%) for the risk related to climate change and had over an 80% response rate for the risks as a result of new law and reputational risk. The diversified nature of most G-SIBs operating models exposes them to a host of microeconomic transmissions channels for physical and transition risks. For example, credit risk downgrades could occur if localized retail client’s default on mortgages due to severe weather events. Similarly, as G-SIBs operate in many areas of the financial services, they may also be exposed to the repricing of corporate assets due policy changes or technology advancements. The full response rate from G-SIBs for a risk category indicates they are the most-versed and keenly aware of the risks associated with climate change.

Risk & Technology

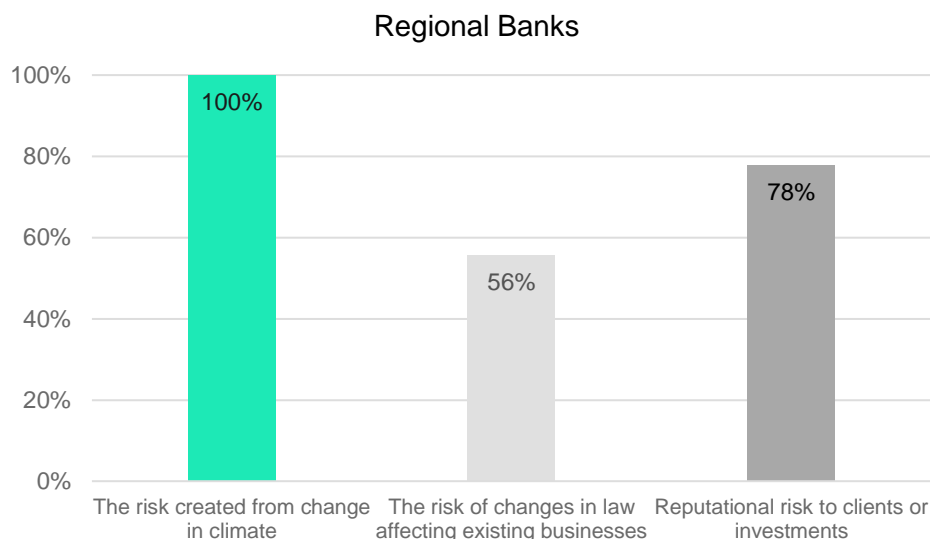
1. In defining climate risk, which risks does your organization consider?

U.S. Regional Banks

The U.S. Regional Bank peer group also had a full response rate (100%) for the risk related to climate change however their response rate for the transition risk drivers was the lowest among all peer groups. The results from this peer group might be related to several themes; 1) Regional Banks are exposed to localized, acute physical risks with many of the participants operating in coastal regions- supporting their responses for the risk from climate change, 2) U.S. Regional Banks are likely less advanced (due to resource constraints) in the most rigorous risk measurements and therefore have not progressed thought leadership for impacts related to potentials laws, such as GHG tax on emissions and how taxes could impact their corporate clients' creditworthiness, and 3) As smaller, less influential market participants, regional banks may not suffer as much reputational damage from negative social sentiment, as compared to a G-SIB.

A regional bank commented:

"We are curious about different concerns in different regions- like in Texas or Southwest? Geographically does it matter—physical risk and location? Something that will happen to the mid-Atlantic region in the US where scenarios leave out the opportunity side and economic growth you see in various regions. Florida could be dramatically different than the way it is now."



European Banks

European Banks responded for all three risk types in more than 80% of cases. Given the maturity of climate change agendas in Europe, the impact of climate risk drivers is well understood by institutions.

The ECB is expecting of European institutions to consider the different categories of drivers in order to integrate them into their risk appetite framework for climate-related and environmental risks.

Reputational risk can be caused by the activities of institutions and can have a great impact on the financial security of institutions. Because of climate being such an active topic within European regulation and society, European institutions are actively monitoring and considering reputational risk as a result of decision impacting climate change.

Risk & Technology

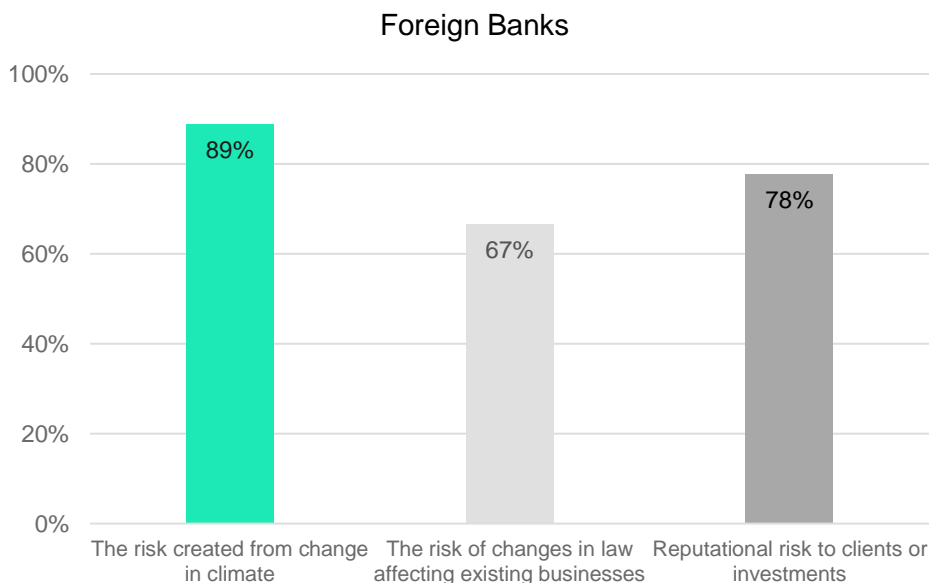
1. In defining climate risk, which risks does your organization consider?

Also, compliance risk is monitored very actively. Europe is a frontrunner in terms of climate regulations, principles, and standards and as many of them are coming into force in the near future, institutions are actively monitoring the impact of these regulations and how they may impact balance sheets. Moreover, the ECB is conducting audits and reviews of the European banks in terms of their approaches and management of climate and environmental risks in the past year- amping up the pressure on the institutions to comply, or at least put effort into complying, with the practices and supervisory expectations regarding climate by the ECB.

Direct climate risk is also monitored actively as we are already physically experiencing the impact of climate change. The supervisory review of the ECB found that half of the institutions are expecting climate and environmental risks to have a material impact in the short-to-medium term. The ECB identified credit, operational and business model risks as the major risk factors.

Foreign Banks

Foreign Banks also echoed the sentiment of other peer groups with high response rates for all 3 risk categories. The Foreign Bank's thought leadership is likely attributed to where they operate which not only includes Europe but also other jurisdictions with advanced sustainability policies such as APAC and Canada. The lack of concern versus other peer groups for reputational risk may similarly be attributed to the jurisdictions in which they operate however those banks may operate in locales such APAC where social sentiment has less impact and therefore those banks may be less concerned with the risk from reputational damage.

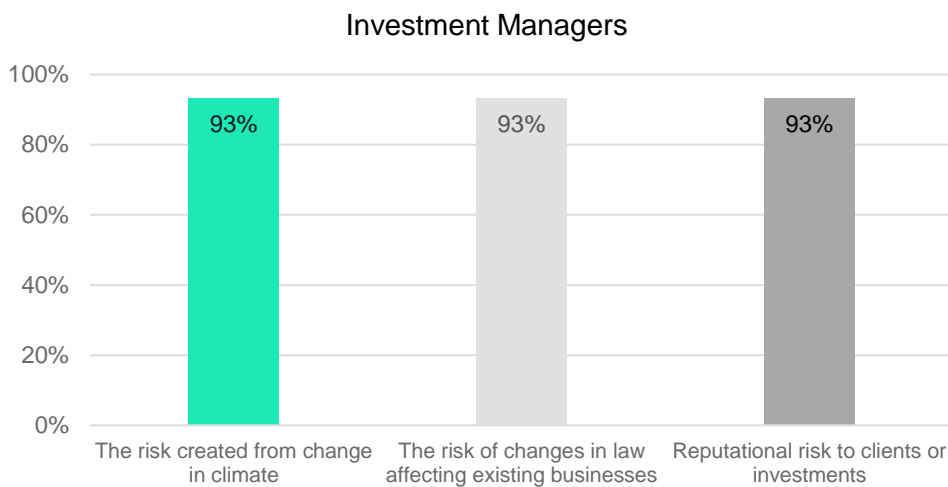


Risk & Technology

1. In defining climate risk, which risks does your organization consider?

Investment Managers

Investment Managers may possibly have the highest risk exposure to reputational damage as the peer group with the largest distributions of products and therefore exposed to reputational risk arising from greenwashing. Reputational damage from a greenwashing complaint has the potential for severe damage resulting in the loss of clients. The risk could be exacerbated as investment managers concentrate portfolios with green products and would therefore experiencing asset outflows from a higher portion of their product base.

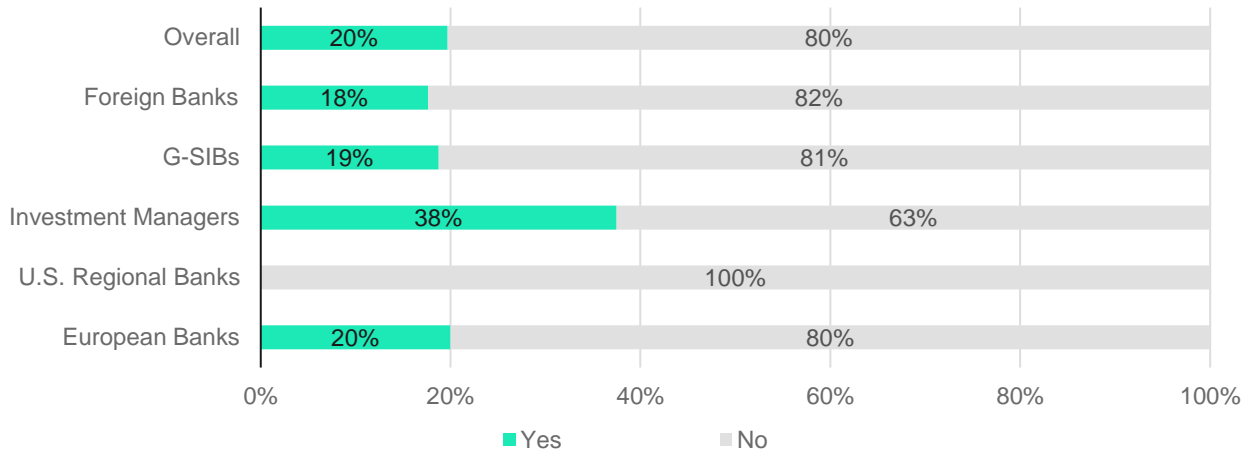


While many clients downplayed the industry's risk related to intentional greenwashing, there have been recent examples of asset managers coming under scrutiny from clients and regulators misrepresenting sustainability factors in products. Some of the most advanced investment managers stressed the need to provide glass-like transparency to clients when calculating financed emissions. Similarly, those advanced respondents also called for protocols to assimilate the calculations of avoided emissions to something akin to the accounting standards that exists today for GHG Scope 3 emissions.



Risk & Technology

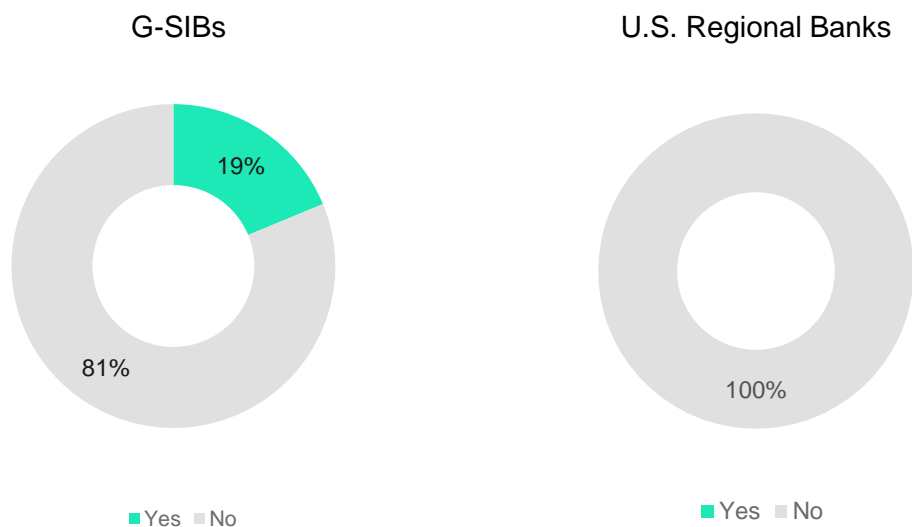
2. Does your organization view the risk related to climate change as a separate risk category?



Across all peer groups, participants were vocal in their decision to categorize climate risk as a risk driver for traditional risk categories rather than identifying climate risk as a level-1 risk itself. There are numerous factors driving the decision however the most influential factor is to limit duplication of process in decision making. BIS issued a report, *Climate-related risk drivers and their transmission channels*¹, in April of 2021 which outlines the potential impacts to Market, Credit, Operational, and Liquidity Risk from climate risk drivers further supporting the industry’s approach to embed climate risk horizontally in existing risk frameworks.

G-SIBs

The majority as we have noted previously do not see climate risk as a distinct risk but rather driver a of the broader risk categories. This approach may run afoul over time with regulatory guidelines, but the strength of the thinking from the market participants is that eventually the public sector will recognize the value of the markets choices and find the integration into structured risk categories as better practice.



Risk & Technology

2. Does your organization view the risk related to climate change as a separate risk category?

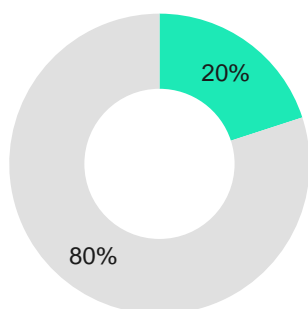
U.S. Regional Banks

No regional bank currently views climate change as its own separate risk category. They considered climate risk as part of physical risk and transitional risk drivers as part of the way they see the broader risk issues associated with climate. Participants stated this approach to classification ensured that they could comprehensively cover all risks within an umbrella. For U.S. Regional Banks this traditional path makes sense given their standard business lines.

One regional bank explained their views succinctly:

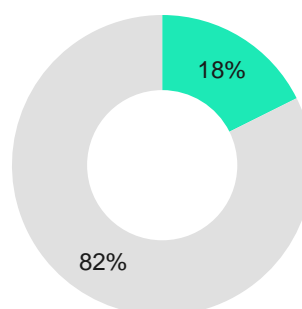
“We see climate risk as a driver; leveraging our current taxonomy and implementing drivers for climate but not a new vertical and leverage what we do and build on practices and programs and just an accelerant.”

European Banks



■ Yes ■ No

Foreign Banks



■ Yes ■ No

European Banks / Foreign Banks

While there were a small majority in both the European and Foreign Bank peer groups, 20% and 18% respectively, that treat Climate Risk as a separate risk category rather than a driver for traditional categories, we expect most of the industry will align with the Basel and ECB standards.

The ECB articulated its expectations in their guidance late last year:

	<p>Institutions are expected to incorporate climate-related and environmental risks as drivers of existing risk categories into their existing risk management framework, with a view to managing and monitoring these drivers over a sufficiently long-term horizon, and to review their arrangements on a regular basis</p> <p>ECB Report</p>	
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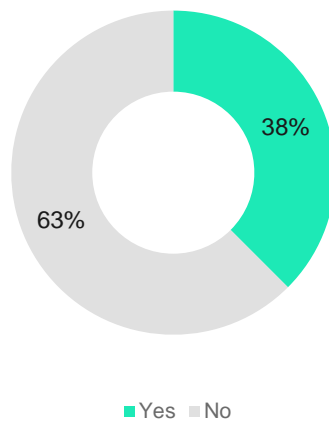
Risk & Technology

2. Does your organization view the risk related to climate change as a separate risk category?

Investment Managers

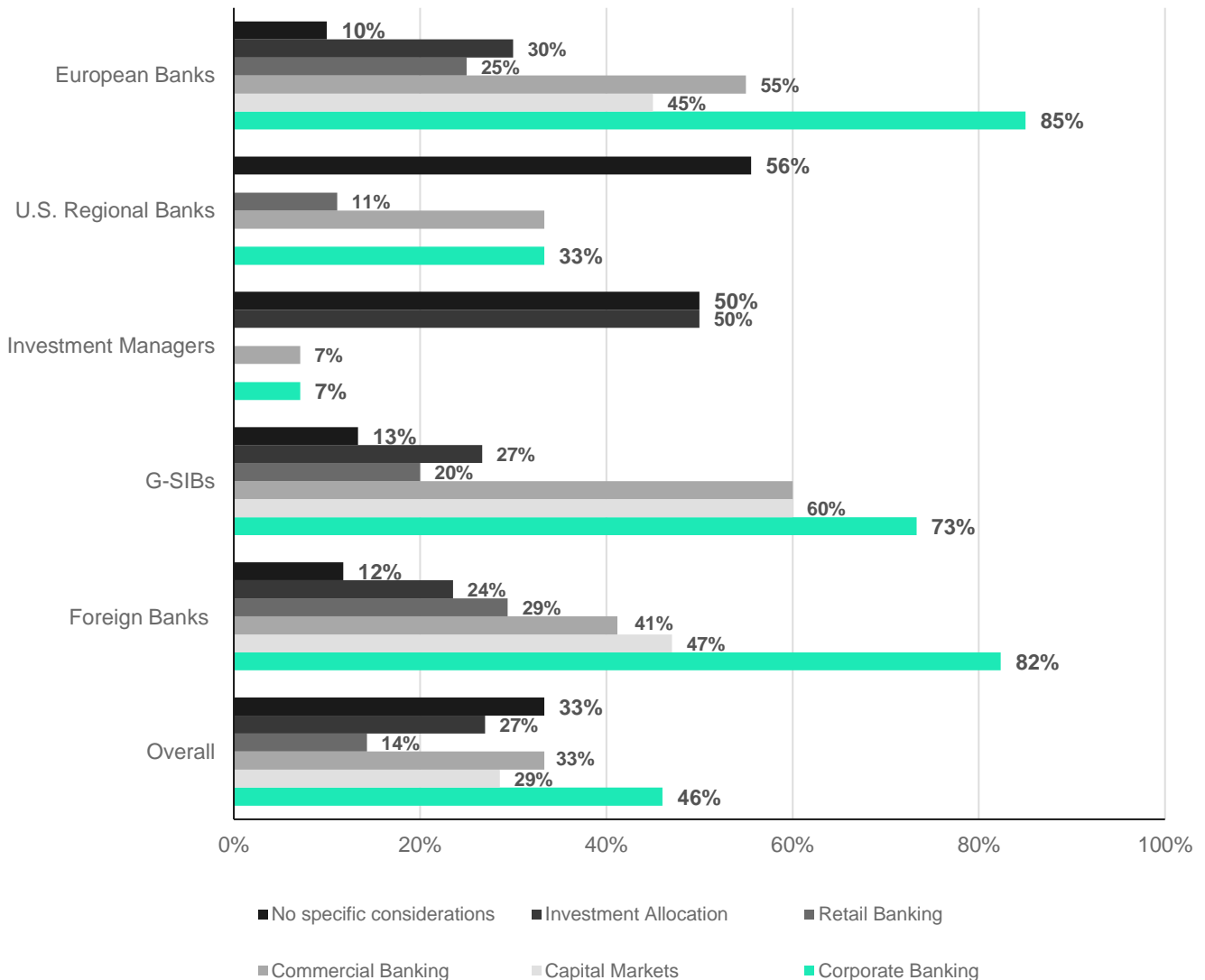
Investment Managers had the highest level of respondents identifying climate risk as a separate risk category. This outlier population may be attributed to their business model which operates uniquely as a fiduciary rather than a balance sheet provider. Alternatively, their responses might be referring to a front-office trading terminology identifying they are trading in a carbon market.

Investment Managers



Risk & Technology

3. Has your organization embedded specific considerations for climate risk within your lending and underwriting policy documents across the business lines?



- 46% of the overall population of respondents has incorporated climate risk into policy documents for their Corporate Banking products.
- Institutions also illustrated progress incorporating climate risk product documentation into their Commercial Banking operations as well as their Investment Allocation activities.

Frameworks are still being built for explicit financial and then non-financial risks which would determine some materiality and then potentially a risk appetite constraint. Firms recognize they may well have clients who offend position statements which are in the public domain and where they have red lines resulting in product offering decisions, such as deciding not to finance coal or other fossil fuels. Firms are also considering the status of transactional clients the review process before exiting them.

As an aside, the challenges within Capital Markets are a bit unique. Physical and transition risks will inevitably alter the value of underlying financial assets, which can result in downward price shocks, potentially creating a “stranded asset”. Separately, firms noted they were at least currently focusing far more time on Physical Risk since those climate change impacts are in front of them and the world daily.

Risk & Technology

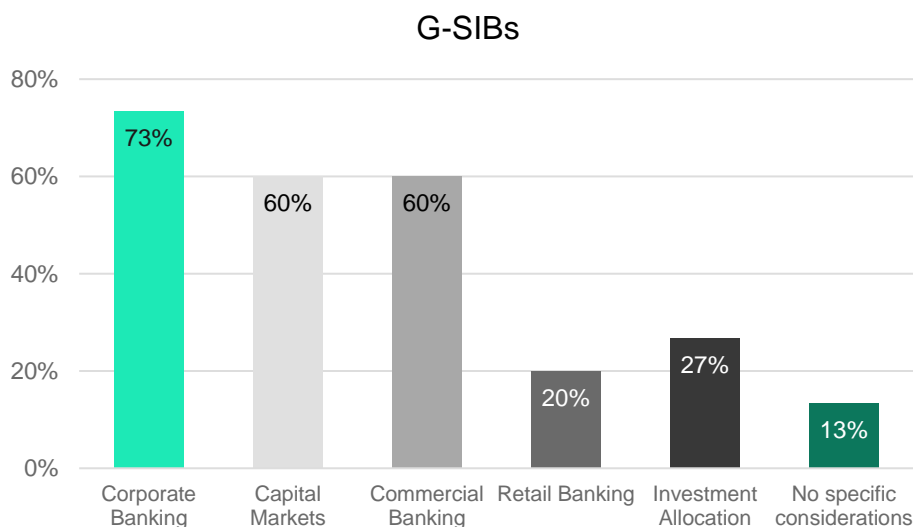
3. Has your organization embedded specific considerations for climate risk within your lending and underwriting policy documents across the business lines?

G-SIBs

There is a clear sense of uncertainty for the timing, intensity and location of future severe weather events or natural disasters and whether they will lead to higher volatility in financial markets, or at least implied volatility based on the forecasted trajectory or a landfall region for a hurricane. With commitments to transition risk—technological advances and investor sentiment could change borrowing costs or re-pricing of financial assets. There are discussions around whether investors in financial markets could reward borrowers who are resilient through or may profit from, transitioning away from a carbon-intensive economy.

73% of firms identified Corporate Banking as a business which policy documents do consider climate risk while 13% of G-SIB respondents currently do not embed any specific considerations for climate risk in their product policies. As diversified financial services organizations, the G-SIBs also have updated policy documents for their Capital Markets and Retail Banking business units to include climate risk considerations. Many of the respondents see the risk tied to specific products they offer rather than to a single legal entity and these decisions sit with the individual business units.

“We sit in sustainable finance; not a lot of layers; core representation across commercial, climate risk and execution and participants in each division and our counsels implement that approach.”

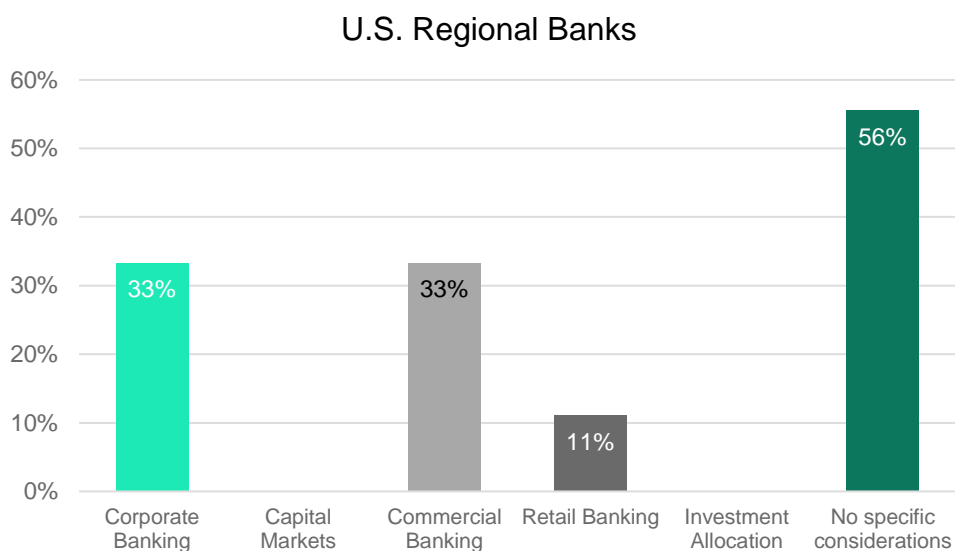


Risk & Technology

3. Has your organization embedded specific considerations for climate risk within your lending and underwriting policy documents across the business lines?

U.S. Regional Banks

Regional banks within the U.S. look to policymakers to define the guidelines to eventually follow. Those guidelines are emerging in Europe, U.K. and APAC ahead of the U.S. Much of what has been created is on the back of the TCFD which, to date, most firms are benchmarking against in their disclosure reports. The OCC has taken some of the prudential lead, with the Federal Reserve acting in its customary role as a “safety and soundness” leader. One would anticipate as leadership on regulation gets clarified at the Federal Reserve (announcements due as this paper is being finalized) that greater clarity will come to the entire U.S. banking industry.

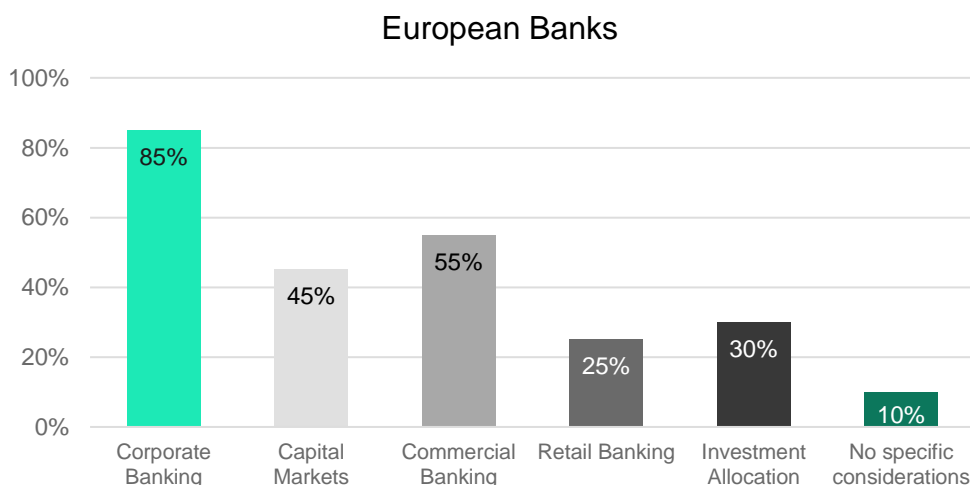


Risk & Technology

3. Has your organization embedded specific considerations for climate risk within your lending and underwriting policy documents across the business lines?

European Banks

Institutions have started implementing climate risks in their business processes with 85% of European Banks incorporating climate risk considerations into their lending operations. Conversely, only 25% of the peer group has included climate risk in policy documents for the Retail Banking businesses. However, few institutions have incorporated these risks into their risk management practices. Commentary provided by the ECB identifies concerns if institutions continue at this pace many will not align their practices with the supervisory expectations and may not be able to manage climate-related risks soundly, effectively and comprehensively.



Foreign Banks

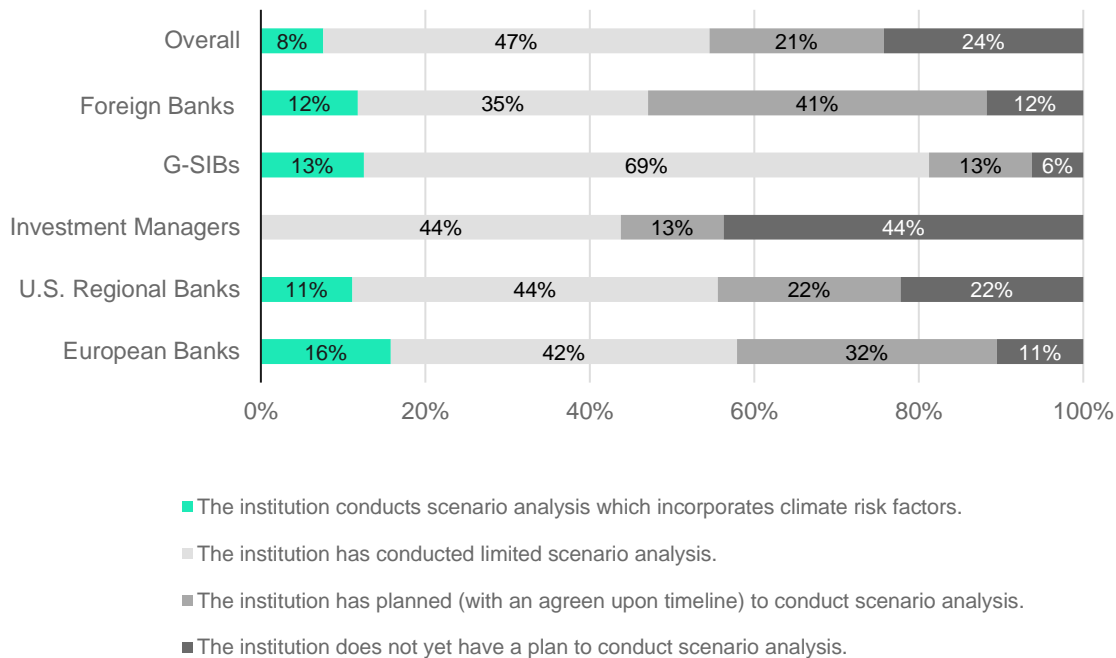
Many foreign banks (82%) have embedded specific considerations within their corporate banking business unit. Their inclusion of specific considerations for climate risk is substantially higher than many peer group and is led by their current regulatory framework.

Investment Managers

In our study institutional investors included a wide range of firms including selective hedge fund managers, Asset managers, Private equity firms, and some entities with cross ownership/investments in insurance companies. As a result, the feedback from these institutions was quite varied as a reflection of their underlying investment and portfolio approaches. Many of these firms have been building their sustainable product base for several years but have not invested as much in climate risk mitigation approaches, frameworks, and governance. Some participants in this peer group are shifting focus due to enhanced regulatory initiatives in the EU and will undoubtedly change in the United States due to upcoming disclosure requirements from the SEC.

Risk & Technology

4. Does the institution conduct scenario analysis to assess the impact of climate risks and broader environmental risks?



Policymakers globally have been giving renewed focus on scenario analysis and stress testing for climate risk. The lead, as with virtually all regulatory efforts has been through the ECB although there have been efforts also in North America.

The ECB began informing regulated entities the week of January 16th about the nature of the stress tests and indicated the tests would run from March 2022 to July 2022. Bloomberg characterized the scenarios to include: “how banks trading books would handle a 50% drop in mining stocks over three years and a surge in fossil fuel companies’ credit spreads.”

In addition, as Bloomberg noted, “European authorities are pushing lenders to prepare for potential losses from extreme weather or government policies that could put polluting corporate clients out of business.” The efforts by the ECB are the first to examine trading books, putting initial focus on more traditional securities and hedging instruments but not more complex products.

The scenarios put forth by the ECB include: 1) the potential for government inaction; 2) assumptions on the Gross Domestic Product (GDP) of specific countries; 3) the futures of several sectors (including energy-intensive ones); and 4) the possibility of a short-term increase in carbon prices. Government inaction in the face of climate change, one of the long-term scenarios selected by the ECB, is a significant risk factor and is considered to be the “biggest global threat in the next decade” according to the latest Global Risks Report published by the World Economic Forum. The ECB’s short-term scenarios have been particularly pessimistic illustrated by the requirement to simulate conditions expected for 2080, as well as examine the impacts over the next 3 years of a \$100 spike in carbon prices.

The OCC has isolated scenario analysis and stress testing among a longer list of prudential initiatives which have been set out for banks in their principles and practices. The LSTA, in their January 14th commentary referenced the broad initiatives being undertaken by the OCC when they wrote:

- The proposal would require that covered banks develop climate-related risk limits and key performance indicators.

Risk & Technology

4. Does the institution conduct scenario analysis to assess the impact of climate risks and broader environmental risks?

Despite the proposal's emphasis that each covered bank should develop climate risk management practices commensurate to its size, complexity, and other factors, the application of certain elements identified in the proposal – mandatory scenario analysis in particular – would be a significant development.

The seriousness in which Congressional bodies are looking at these issues was mirrored in the commentary by Senate Banking Committee Chairman, Sherrod Brown, when he noted, "Should banks not assess risk? When they make loans to people, for homeowners and businesses in hurricane-prone lowlands on the coast? Of course, they should. Banks should assess climate-related financial risks when they're making long-term loans to energy and fossil fuel companies, We need to assess that. That should be part of this,"

Although the efforts by regulatory bodies will differ in the U.S., EMEA and APAC, we should still anticipate the regulators will look at stress testing and scenario analysis as a serious part of their governance efforts.

Overall, only a small percentage of participants have conducted scenario analysis in a meaningful way. This reflects less on preference than on the ability to build the models and obtain the necessary data and have confidence in the figures being put out. The primary reason for participants planning to conduct scenario analysis was regulatory pressure. Hence, more European Banks and G-SIBs have moved to build out the models.

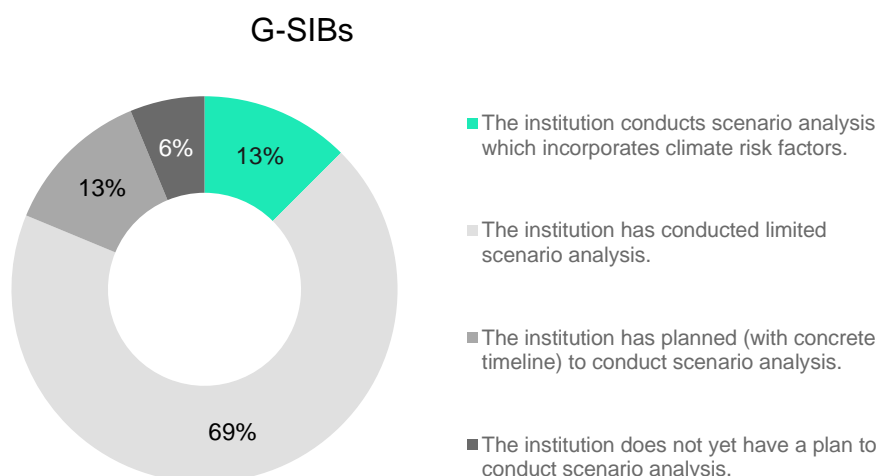
The recent introduction of updates to TCFD standards provided new guidance on stress testing. Similarly, the OCC has put out preliminary guidance for large banks to consider as they continue to develop their framework. Many firms are still in the early stages of development. Those that are in the planning stage are going to create stress tests aligned with anticipated regulatory requirements.

Recent developments including the new proposals from the NYDFS will help inform decision makers within these companies on areas of focus for 2022.

Those participating in early regulatory climate stress testing exercise experienced difficulties due to: (a) long time horizons; (b) poor data quality; (c) high data volumes; (d) granular geospatial forecasting data and (e) a less mature scenario analysis capability.

G-SIBs

G-SIBs were the most advanced when it came to scenario analysis and stress testing, but like many of the respondents this was dependent on geographic requirements, capabilities and investments in models and data. 69% of respondents have conducted limited scenario design, with 13% of respondents designing more developed scenarios.

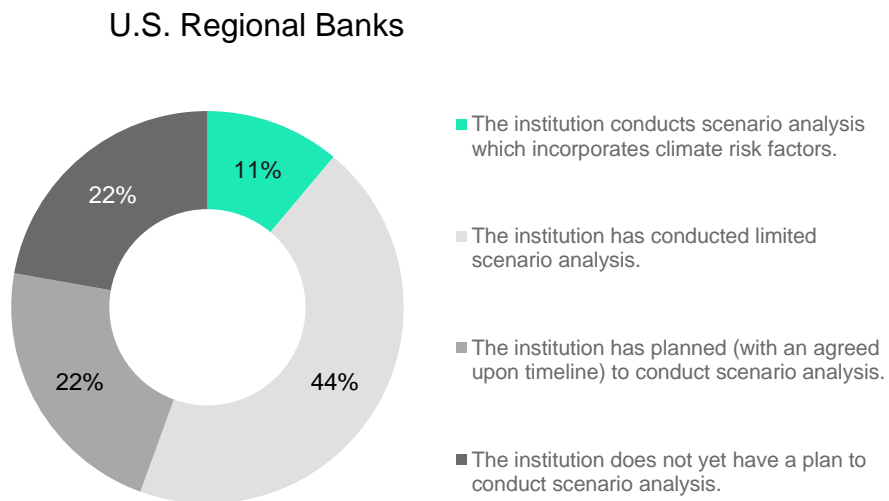


Risk & Technology

4. Does the institution conduct scenario analysis to assess the impact of climate risks and broader environmental risks?

U.S. Regional Banks

Currently only 11% of Regional Bank participants conducts full scenario analysis for climate risk disclosure reporting. The majority of respondents either have limited or are planning to adopt scenario analysis while the rest do not conduct any at all.



One U.S. Regional Bank noted that stress testing currently does not provide a complete picture for the analytics it is looking for:

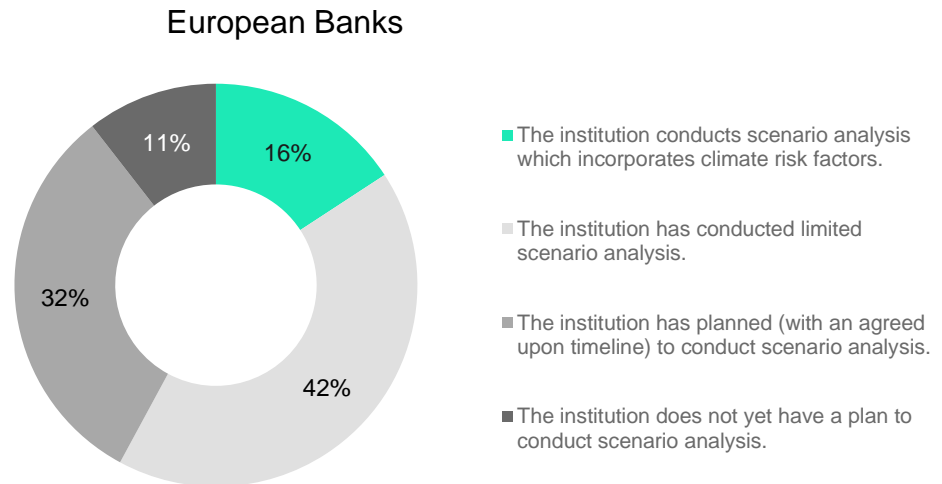
“We do not view stresses as a good use of our time as the other firms do. We will go through our effort and perform risk assessments of targeted portfolios where there are concentrations that we are aware of.”

Risk & Technology

4. Does the institution conduct scenario analysis to assess the impact of climate risks and broader environmental risks?

European Banks

European institutions with material climate-related and environmental risks are expected to evaluate the appropriateness of their stress testing with a view to incorporating these risks into their baseline and adverse scenarios. Only 16% of institutions have implemented this in the development of their strategy.

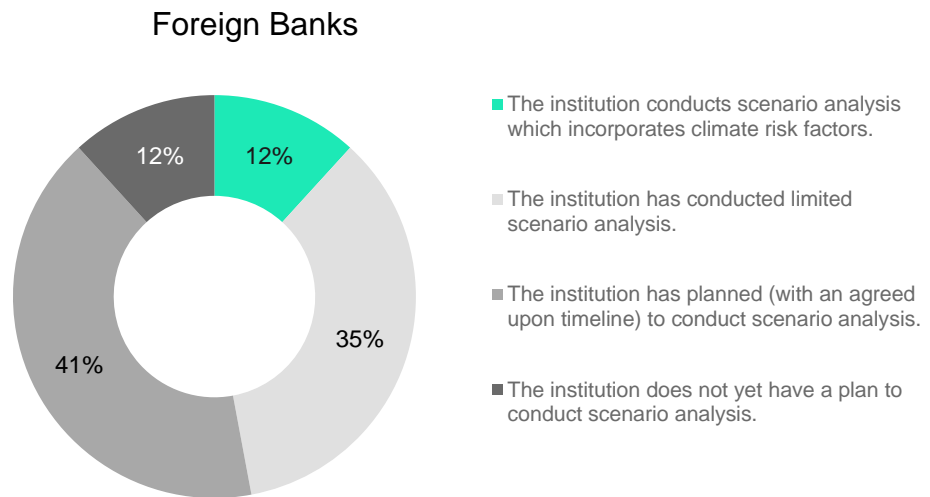


Risk & Technology

4. Does the institution conduct scenario analysis to assess the impact of climate risks and broader environmental risks?

Foreign Banks

47% foreign bank respondents conduct climate risk scenario analysis in full or to a limited extent. Additionally, 41% foreign bank are planning to conduct these assessments within their internal timelines. The relatively high rate of responses in comparison to other peer groups reflect the direction these firms are receiving from their home regulators and pilot exercises.

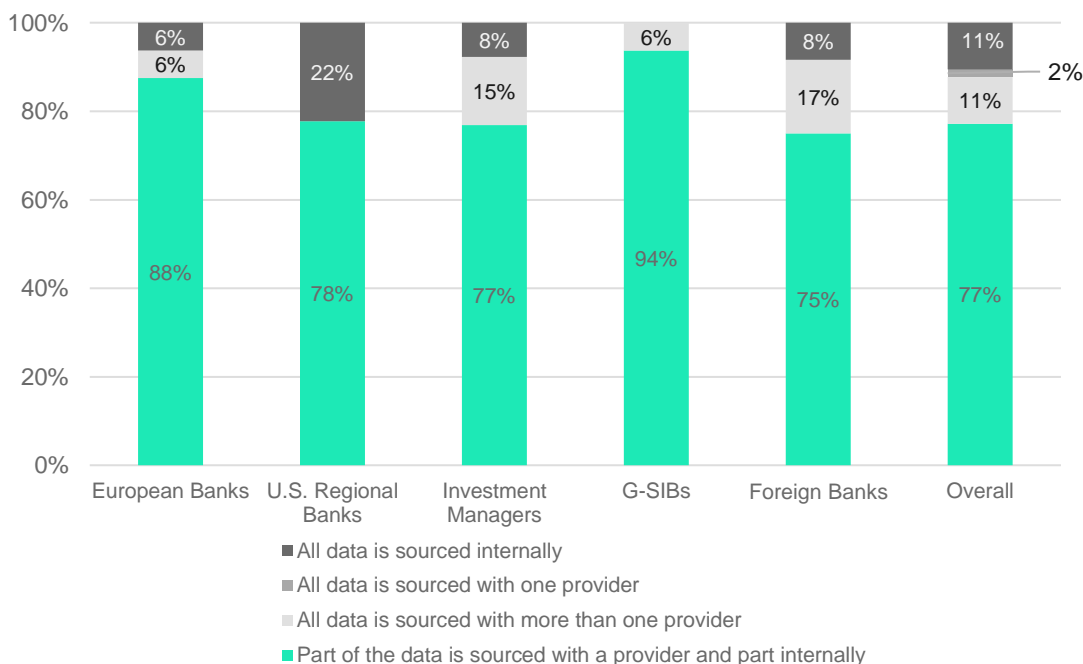


Investment Managers

Less than half of respondents are currently or are planning to conduct scenario analysis on their portfolio and there are no investment managers currently doing full capability scenario analysis. As we have addressed this is somewhat of a challenging topic for investors. For many of these firms structuring those stresses/scenarios within the risk team would still be under development. However, the approach for climate risk is consistent with prior practices these entities have followed with a different level of rigor and approach than their banking counterparts. There is also a separate regulatory structure of oversight for investment managers impacting their abilities in this space.

Risk & Technology

5. Which data strategy have you chosen to source data for climate change risk functions, between make or buy?



Data integrity remains one of the most significant challenges for participants as they develop climate risk strategies and frameworks. The industry is therefore heavily reliant on hybrid data strategies leveraging both internal and external data sources for climate risk management. Presently, 88% of respondents source data both internally and externally.

Source, quality, and validity of data are core to the participants' ability to generate accurate climate risk figures for decision making. The survey findings revealed many firms are engaging third-party vendors in order to attain the desired quality of data; however, few believe their data strategy is in a target state. The G-SIB peer group have designed the most advanced data strategies through investments dating back decades while smaller and mid-size companies are still in the midst of developing their data capacities. Other participants have hired a sustainability SME to build robust in-house capabilities revamping their ESG data quality strategies and integrating bespoke disclosure metrics into the asset's life cycle.

Participants identified significant data quality dependencies impacting fundamental risk management activities. Participants are hesitant to establish risk mitigating limits on clients, industries and jurisdictions due to poor data quality. The results of the study also illustrate challenges participants are facing in capturing financed emission data. Key risk indicators along with stress testing are a few of the activities that remain crude given their relying on financed emission data. Firms also noted the risks associated with using data to meet potential regulatory requirements if the integrity could be questioned during the examination process.

The largest banks reflected the best data was sourced from the energy and gas sector.

Risk & Technology

5. Which data strategy have you chosen to source data for climate change risk functions, between make or buy?

Participants identified various vendor challenges. Firms note there were a large number of data providers—some of them of exceptionally high quality and a recognition of a lack of completeness in the vendor offerings and not enough to model and understand the asset and portfolio impacts. Some institutions were purchasing data from many providers in order to supplement their internal data sets, notably for participants with large fixed income portfolios. This process was not only expensive but clearly inefficient and required an unhealthy amount of oversight and quality control. However, there has been considerable consolidation amongst climate data providers in the recent months, mainly with the very large firms acquiring small firms which could ease the operational burden of working with multiple vendors.

Regional banks noted that their data strategy was core to their meeting climate risk mitigation requirements and is currently one of their primary obstacles to success. Almost 80% of the regional bank participants reported their data was split between internal data sources and external vendors, and while the ability to mine the data internally was highlighted as major challenge, some of the smaller financial market participants did not think the cost was worth the value add.

One regional bank commented:

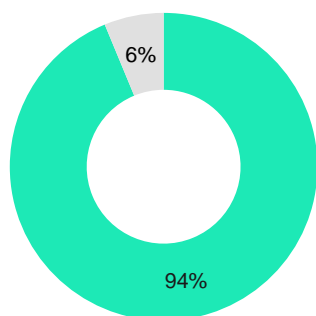
“Everyone will tell us that data gaps are the #1 impediment to appropriate risk and opportunities and the ability to sort influence your appetite.”

The issues of third-party data arose frequently as noted by one regional bank:

“We purchased data for third party physical risk model, for our transition model from a third-party vendor a year ago or close to it.”

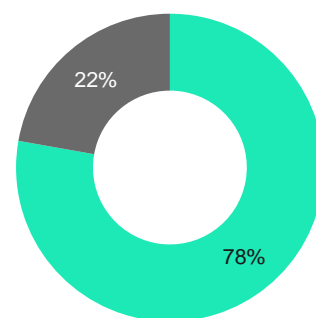
G-SIBs

- Part of the data is sourced with a provider and part internally
- All data is sourced with more than one provider
- All data is sourced with one provider
- All data is sourced internally



U.S. Regional Banks

- Part of the data is sourced with a provider and part internally
- All data is sourced with more than one provider
- All data is sourced with one provider
- All data is sourced internally

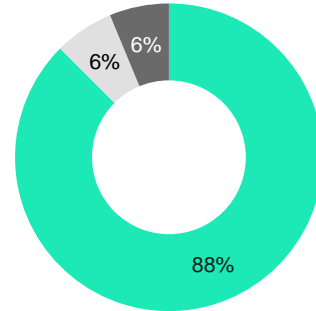


Risk & Technology

5. Which data strategy have you chosen to source data for climate change risk functions, between make or buy?

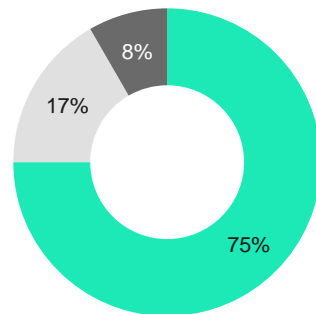
European Banks

- Part of the data is sourced with a provider and part internally
- All data is sourced with more than one provider
- All data is sourced with one provider
- All data is sourced internally



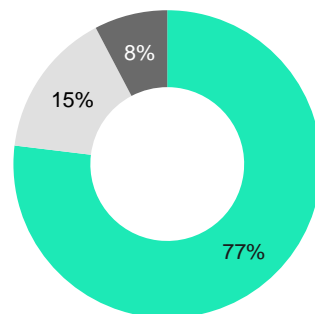
Foreign Banks

- Part of the data is sourced with a provider and part internally
- All data is sourced with more than one provider
- All data is sourced with one provider
- All data is sourced internally



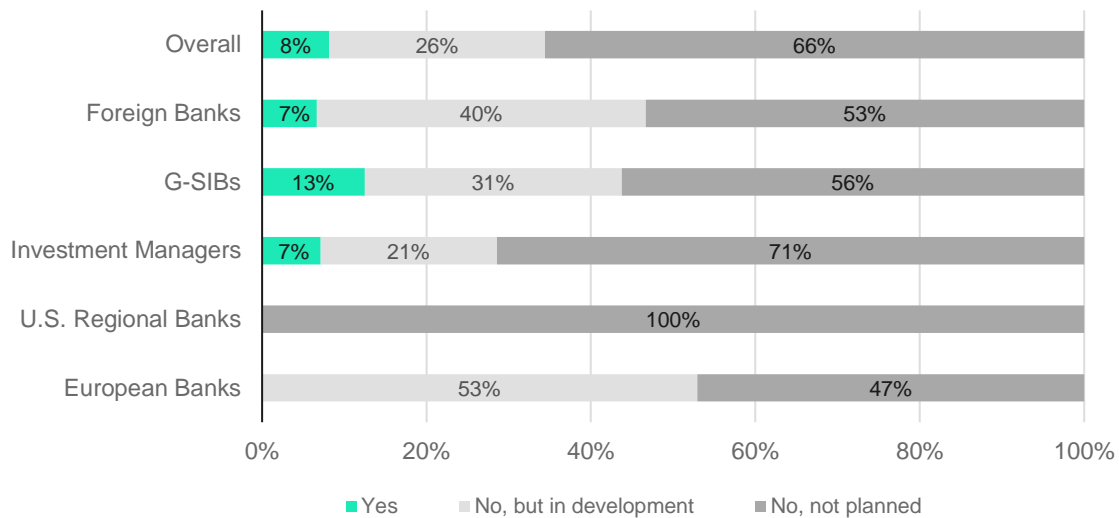
Investment Managers

- Part of the data is sourced with a provider and part internally
- All data is sourced with more than one provider
- All data is sourced with one provider
- All data is sourced internally



Risk & Technology

6. Have you incorporated AI, ML etc. to gather and process climate risk data?



There is little usage (8%) of AI or Machine Learning to augment climate data analysis across all current respondents. 66% of respondents are neither utilizing these technologies nor currently have plans to while 26% of respondents are developing advanced data capabilities. As data for climate risk analysis becomes more available either by capturing internally or via third-party sources, it is expected that a selective group of firms will utilize AI/Machine Learning to better understand and process climate risk data. There is little mention or feedback from the results suggesting there are precursory steps required by the industry before progress can be made in this arena.



Risk and Technology

Best Practices

The best practices isolated here focused on participants ability to evaluate financial risks related to climate change and the ability to monitor and manage those risks in an ongoing manner.

Key criteria outlined in each guiding document:

Topic	TCFD	BCBS
<p>Status of climate risk within an overall risk management framework <i>see slide 82</i></p>	<p>Recommended Disclosure for Risk Management: b) Describe the organization's processes for managing climate-related risks.</p>	<p>Principle 4: Banks should incorporate climate-related financial risks into their internal control frameworks across the three lines of defense to ensure sound, comprehensive and effective identification, measurement and mitigation of material climate-related financial risks.</p> <p>Principle 5: Banks should identify and quantify climate-related financial risks and incorporate those assessed as material over relevant time horizons into their internal capital and liquidity adequacy assessment processes. [</p>
	ECB	OCC
	<p>Supervisory Expectation #2: When determining and implementing their business strategy, institutions are expected to integrate climate-related and environmental risks that have an impact on their business environment in the short, medium or long term.</p>	<p>Risk Management: A bank should employ a comprehensive process to identify emerging and material risks stemming from the bank's business activities and associated exposures. The risk identification process should include input from stakeholders across the organization with relevant expertise (e.g., business units, independent risk management, and legal). Risk identification includes assessment of climate-related financial risks across a range of plausible scenarios and under various time horizons.</p>

Risk and Technology

Best Practices

We identified best practices for impact analysis on institutional frameworks; assessing materiality and building out a risk appetite, limits and controls for a climate risk mitigation effort.

Best Practice – Status of climate risk within an overall risk management framework

The public policy/regulatory frameworks we examined recommended that firms include:

- a) A **comprehensive view** of the impact of climate risk on existing risk categories/frameworks,
- b) An **assessment of the materiality** of climate-related risks in the short, medium and long-term,
- c) Incorporation of climate risks in their **risk appetite statement**, and
- d) The development of an approach to **adapt policies, procedures, risk limits and risk controls** to their climate risk strategy.

	TCFD	BCBS	ECB	OCC
Institution #1	Meets all criteria	Meets some criteria	Meets all criteria	Meets some criteria
Institution #2	Meets all criteria	Meets some criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #5	Meets all criteria	Meets some criteria	Meets some criteria	Meets all criteria
Institution #6	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #7	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #10	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #11	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #12	Meets all criteria	Meets some criteria	Meets all criteria	Meets all criteria

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

Risk and Technology

Best Practices

The best practices isolated here focused on participants ability to evaluate financial risks related to climate change and the ability to monitor and manage those risks in an ongoing manner.

Key criteria outlined in each guiding document:

Topic	TCFD	BCBS
<p>Use of scenario analyses see slide 84</p>	<p>Recommended Disclosure for Strategy: c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario</p>	<p>Principle 12: Where appropriate, banks should make use of scenario analysis, including stress testing, to assess the resilience of their business models and strategies to a range of plausible climate-related pathways and determine the impact of climate-related risk drivers on their overall risk profile. These analyses should consider physical and transition risks as drivers of credit, market, operational and liquidity risks over a range of relevant time horizons.</p>
	ECB	OCC
	<p>Supervisory Expectation #4: Institutions are expected to explicitly include climate-related and environmental risks in their risk appetite framework</p> <p>Supervisory Expectation #7: Institutions are expected to incorporate climate-related and environmental risks as drivers of existing risk categories into their existing risk management framework, with a view to managing and monitoring these drivers over a sufficiently long-term horizon, and to review their arrangements on a regular basis. Institutions are expected to identify and quantify these risks within their overall process of ensuring capital adequacy.</p>	<p>Risk Management: Tools and approaches for measuring and monitoring exposure to climate-related risks include, among others, exposure analysis, heat maps, climate risk dashboards, and scenario analysis. These tools can be leveraged to assess a bank's exposure to both physical and transition risks in both the shorter and longer term. Outputs should inform the risk identification process and the short- and long-term financial risks to a bank's business model from climate change.</p>

Risk and Technology

Best Practices

These practices focused on new risks (product/geographic) to consider and evaluating size, scope and impact on your institutions business units.

Best Practice – Use of scenario analyses

The four public policy/regulatory frameworks we examined recommended that firms include: a

- a) The identification of **material and emerging risks arising from climate change** and at the level of key sectors, geographic areas and related to products and services they are active in or are considering becoming active in,
- b) The **potential size and scope** of risk of climate risks,
- c) An understanding of how climate-related risks affect their **business environment in the short, medium and long term**, and
- d) Definitions of **risk terminology used**.

	TCFD	BCBS	ECB	OCC
Institution #1	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #2	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #5	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #6	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #7	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #10	Meets all criteria	No considerations	Meets some criteria	Meets some criteria
Institution #11	Meets all criteria	Meets some criteria	Meets all criteria	Meets all criteria
Institution #12	Meets all criteria	Meets some criteria	Meets all criteria	Meets all criteria

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

Risk and Technology

Best Practices

The best practices isolated here focused on participants ability to evaluate financial risks related to climate change and the ability to monitor and manage those risks in an ongoing manner.

Key criteria outlined in each guiding document:

Topic	TCFD	BCBS
Impact of climate risks on the institution's activities <i>see slide 86</i>	<p>Recommended Disclosure for Risk Management: b) Describe the organization's processes for managing climate-related risks.</p>	<p>Principle 4: Banks should incorporate climate-related financial risks into their internal control frameworks across the three lines of defense to ensure sound, comprehensive and effective identification, measurement and mitigation of material climate-related financial risks.</p> <p>Principle 5: Banks should identify and quantify climate-related financial risks and incorporate those assessed as material over relevant time horizons into their internal capital and liquidity adequacy assessment processes. [</p>
	ECB	OCC
	<p>Supervisory Expectation #11: Institutions with climate-related and environmental risks are expected to evaluate the appropriateness of their stress testing, with a view to incorporate them into their baseline and adverse scenarios.</p>	<p>Scenario Analysis: Climate-related scenario analysis is emerging as an important approach for identifying, measuring, and managing climate-related risks. For the purposes of this guidance, climate-related scenario analysis refers to exercises used to conduct a forward-looking assessment of the potential impact on a bank of changes in the economy, financial system, or the distribution of physical hazards resulting from climate-related risks. An effective climate-related scenario analysis framework provides a comprehensive and forward-looking perspective that banks can apply alongside existing risk management practices to evaluate the resiliency of a bank's strategy and risk management to the structural changes arising from climate-related risks</p>

Risk and Technology

Best Practices

These practices considered firms' ability to design scenarios based on business & strategy and evaluating those impacts on physical and transition risks for climate change on current risks (credit, market) that firms' model.

Best Practice – Impact of climate risks on the institution's activities

The public policy/regulatory frameworks we examined recommended that firms include:

- a) **Scenario analysis**, including stress testing, to assess the **resilience of their business models** and strategies to a range of plausible climate-related pathways and determine the impact of climate-related risk drivers on their overall risk profile,
- b) These analyses **should consider physical and transition risks** as drivers of credit, market, operational and liquidity risks over a range of **relevant time horizons**,
- c) **Evaluations of the appropriateness of their stress testing**, with a view to incorporate them into their baseline and adverse scenarios,
- d) A comprehensive and forward-looking perspective.

	TCFD	BCBS	ECB	OCC
Institution #1	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #2	Meets some criteria	Meets all criteria	Meets some criteria	Meets some criteria
Institution #3	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #4	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #5	Meets all criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #6	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #7	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #10	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #11	Meets some criteria	Meets some criteria	Meets some criteria	Meets some criteria
Institution #12	Meets all criteria	Meets all criteria	Meets all criteria	Meets all criteria

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

“Greenwashing”

While there were differing views expressed across our interviews, many participants recognized that greenwashing has occurred across markets and in some cases by the public sector. In early January 2022, the EU faced backlash after plans were announced to label gas and nuclear energy as green investments in the EU’s taxonomy list. This announcement prompted Austria to threaten to sue the European Commission, and Germany’s Robert Habeck, the country’s economy and climate action minister, said the EU’s plans “water down the good label for sustainability.” This might well be hyperbole, given the genuine efforts by the EU and regulators to be part of a constructive set of solutions in the EC but it reflects the sensitivity on the issue.

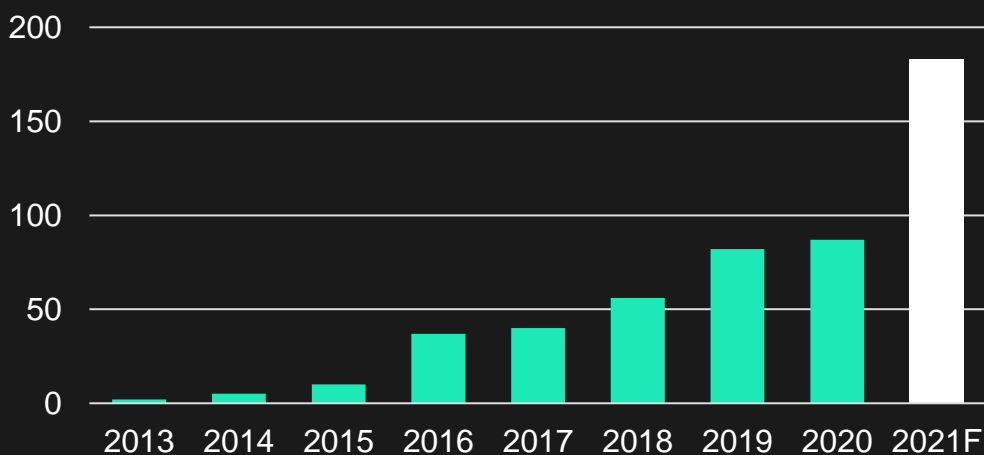
Greenwashing statements can also be made in good faith by entities who make statements and commitments without firm plans for their commitments. When participants provided their perspective on greenwashing in the investor community, and what they are hearing about greenwashing from clients, many unsurprisingly said it is top of mind to avoid. The majority of those we discussed the topic with said they are intentionally conservative in their messaging around the topic to avoid adding the greenwashing label to their brand. Some said they do not want to be caught assuming anything, with another bluntly saying, “We need to be humble, and it is not easy.”

Participant feedback did vary, however, on how widespread it is, with some organizations saying they do not think it is a big deal in the industry, and others saying it is pervasive. This was noted especially in the U.S. where there is less standardization around metrics and taxonomy than in Europe. This gap is something that is being actively watched across the industry.

When asked how greenwashing is impacting the future of product growth, participants were clear that many are further along in preventing greenwashing on the asset management side compared to banking and finance, as that is where most of the pressure has been. It was also noted by multiple organizations that asset managers have always engaged with the companies they own, so they all have a proprietary bell and whistle that they can use for better or worse. Litigation risk was also mentioned as being built into frameworks because of this. It will take several years to have an impact in the market, but it is clear this is what is necessary to both significantly reduce greenwashing as well as improve the quality and progression of climate commitments.

There are also specific corners of the market where greenwashing is more problematic than others. For example, there is concern with sustainability loans that a high proportion of them do not have mutual commitment. And mutual funds labels can be “skimpy,” which helps drive this perception.

Green bond sales volume, 2013-2021F [\$ billions]



<https://www.bloomberg.com/news/articles/2021-12-22/a-180-billion-green-debt-boom-is-growing-faster-than-its-impact>

Many interviewees agree that the biggest way to help eliminate greenwashing is more action from regulatory forces to increase standardization. Some even indicated the lack of standardization as the biggest challenge faced in the green financial space. The fair amount of confusion on the lack of standardization, both in terms of products themselves and marketing those products, can lead to unintentional greenwashing in the industry.

05 /

Regulation, Compliance and Legal

Regulation, Compliance and Legal



When we initiated the research for this effort, the level of regulatory oversight was materially included compared to the time of publishing in Q1 2022. We focused on the global regulatory initiatives through our 30+ interviews in December 2021 and January 2022 to ensure that we received feedback. Disclosure practices drove some of our initial inquiries and we found significant number (overall as well as in each peer group) of respondents make public climate risk disclosures. The depth of these disclosures differed, and we reviewed dozens of participating firms' public disclosure reports, often associated with their initial or follow up TCFD filings. Firms noted that drivers for enhancements to their reporting included:

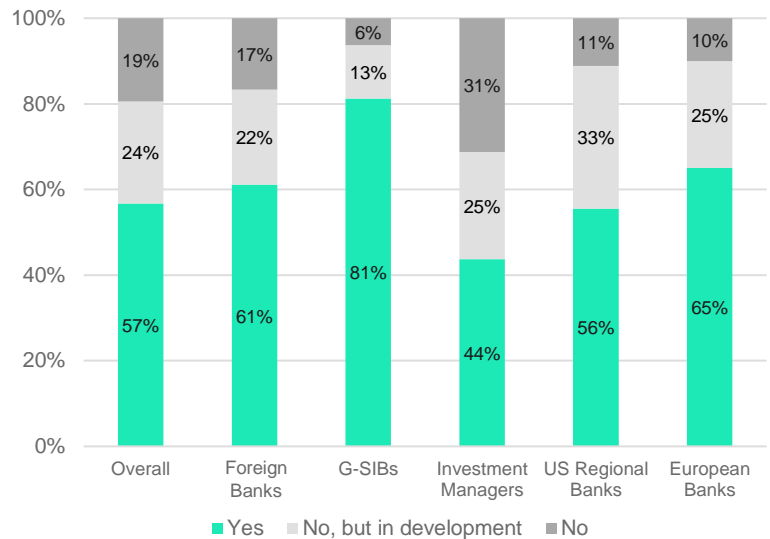
- Preparing for forthcoming public sector oversight by developing disclosures/policies beforehand.
- For institutional investors, using enhanced climate disclosure reporting metrics to attract additional capital as 2021 demonstrated a meaningful growth in the popularity of ESG funds.
- Attempts to refute claims of greenwashing.

Respondents of all types prioritized clarity and direction from the public sector, requesting efforts to provide standardization for disclosure reporting. Many participants continue to rely on the TCFD guidance while other initiatives are being released. A considerable majority of our participants that have disclosure approaches in place did not believe that their reports were sufficiently fulsome or aligned with established standards/benchmarks.

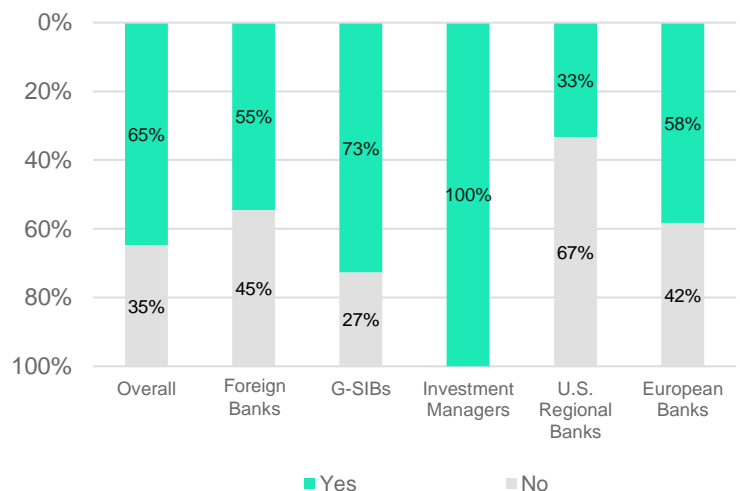
The range of responses on our questions was dictated foremost by when a firm had initiated its efforts. Many firms in the U.K./EMEA/APAC initiated their efforts a half dozen years ago and were aligned with the Paris Accords. Others, primarily in the U.S., had been less engaged, which was reflected in their investments in climate risk disclosure and mitigation efforts.

Regulation, Compliance and Legal

1a. Does your organization make public disclosures as to your climate risks?



1b. If yes, do you believe that your current disclosures are sufficient to satisfy investor demand?



81% of respondents had, or were in the process of developing public disclosures as to their climate risks. Apart from a few geographic locations, most of our respondents are not required to make public disclosures as to climate risks, but most have chosen to do so voluntarily, initially following the TCFD guidelines. Current regions such as the EU are bound by recent legislation such as the Sustainable Finance Disclosure regulation that mandate climate reporting for institutional investors along with other mandatory EU sustainability reporting standards. Institutions defined anticipated regulatory pressure, investor or shareholder pressure and aggressive peer efforts among the reasons they are moving forward at varying speeds.

Respondents are working cooperatively with both regulators and the private sector to achieve some levels of standardization for their efforts. U.S. respondents are awaiting anticipated guidelines from the SEC. Other global participants have seen very detailed guidelines from their regulatory bodies as well as numerous principles articulated by the BCBS late last year providing significant additional direction.

“A part of the problem is the multitude of existing frameworks currently used by firms and financial institutions. There are more than 200 frameworks, standards, and other forms of guidance on sustainability reporting and climate-related disclosures across 40 countries.”

Regulation, Compliance and Legal

1. Does your organization make public disclosures as to your climate risks? If yes, are your current disclosures sufficient to satisfy investor demand?

Participants highlighted a series of challenges institutions are facing across the globe. Firms noted the approaches will be driven by differing methodologies producing data that has not yet been standardized which undermines the accuracy of the reporting.

One larger global bank commented:

"Public disclosures are currently not particularly robust – they are estimations. Disclosures as compared to Pillar 3 documentation or filings are very different, particularly for data scrutiny. Right now, people are using internal methodologies to get a carbon footprint, which means that they lose the proxies, which changes the number. Pillar 3 estimates are stronger than firms' estimations because they are in the public domain, are similarly scrutinized. The different methodologies for disclosures and a lack of standardization affects the validity of disclosures."

Respondents noted for the time being they are still engaging in substantial dialogue with their shareholders and investors as to the level of detail they want in their ESG/Climate disclosures, which accounts for the split among our respondents. For institutional investors, this debate reflects dialogues about the balance between providing sufficient detail in their disclosures and continuing to draw capital for their ESG funds vs. providing too much and running the risk of overclaims, which would draw additional scrutiny. Investors are concerned with greenwashing, which we discuss in a separate section in this report, so getting the right balance in these disclosures is essential for all types of financial institutions.

A common refrain is that while these institutions might well understand how to quantify their own firms' climate exposures, being able to do the same for customers and portfolios is far more challenging.

Respondents have begun engaging non-profit organizations, internal stakeholders, and shareholders for feedback on climate risk policies and disclosures to garner very explicit feedback on how to improve those efforts and what would be seen as meaningful vs. wasteful investments in those efforts going forward.

A global G-SIB offered a different set of explanations for what they see on the horizon:

"Our disclosure efforts were initially nascent, and they accelerated very fast along with our interactions with stakeholders. Going into voting season, there is a lot coming up, particularly when it comes to engaging with them and understanding client commitments. We are still working to get the right answers at a very fast pace."

Another institution described the longer-term process involved in its disclosure efforts:

"A lot of people have been involved from the beginning with the TCFD report, including non-profit groups and investors. We have had sessions with many of them to review the process and identify what they think we should be doing. That process is ongoing and ramping up considerably. We are garnering significant amounts of shareholders providing input, so those dialogues are continuing at a steady pace."

Regulation, Compliance and Legal

1. Does your organization make public disclosures as to your climate risks? If yes, are your current disclosures sufficient to satisfy investor demand?

G-SIBs

G-SIBs, by and large, are much further along with their climate risk related disclosures, policies and procedures, and overall preparedness than any other group of respondents in the study. They are more likely to make public climate risk disclosures, as well as have policies and procedures in place surrounding climate risk and climate risk reporting. As they are G-SIBs, they operate in multiple regulatory environments, meaning these developments have been mandated rather than simply being market/client driven or a desire for firm preparedness. In addition to regulatory pressures, these institutions are trying to forecast where investment flows are going in the future, and ESG focus is starting to become an important factor.

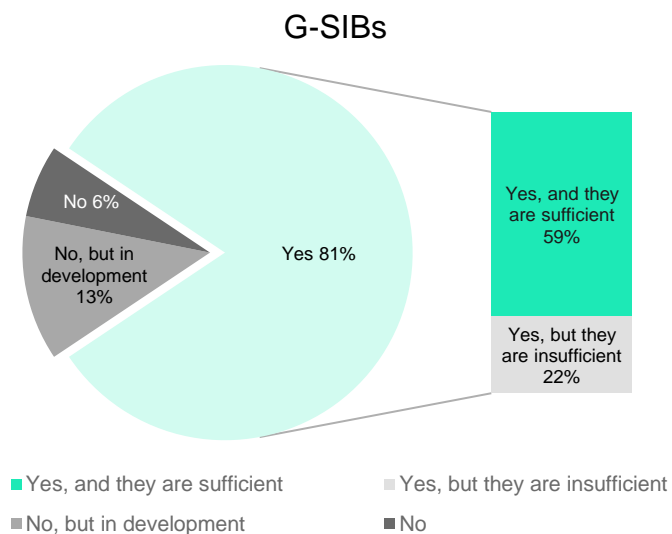
One respondent noted the changes evolving from their investors:

“Investor demand and pressure is changing; valuation multiples and cash is chasing the supply and all of it moving towards ESG... We candidly started in 2005 and have evolved since.”

While other responders identified the regulators as one of the main reasons for change:

“The U.S. regulators are taking more into account and there are more political aspects in play. Indications from the OCC and Fed that they are trying to put the European policies in place.”

94% of respondents stated that they either had, or were in the process of developing, public disclosures as to their climate risks.



G-SIBs, due to their international presence, are subject to multiple jurisdictions and the regulations that they impose. As the vast majority of these institutions operate in regulatory environments in which climate risk disclosure is required, we see a higher number of these respondents with public disclosures than the average of all study participants.

Regulation, Compliance and Legal

1. Does your organization make public disclosures as to your climate risks? If yes, are your current disclosures sufficient to satisfy investor demand?

Along with this we see more top-heavy regulation starting to appear targeting these large institutions such as from the OCC which recently set forth six general principals regarding the management of climate-related financial risks for banks to focus on, specifically targeting those banks with over \$100b in consolidated assets.

Of the respondents that answered “yes” to having public disclosures as to their climate risks, 61% believe that their disclosures are sufficient to satisfy investor demand.

Each year the “line” has moved on what is considered “sufficient” both by regulators and investors. Because of this, respondents are split on whether their disclosures satisfy investor demand. These findings are in line with the larger group of respondents and are unlikely to change dramatically in the short term as the regulatory and market environments evolve.

One G-SIB noted their current reports have already increased despite the current lack of regulation in some regions:

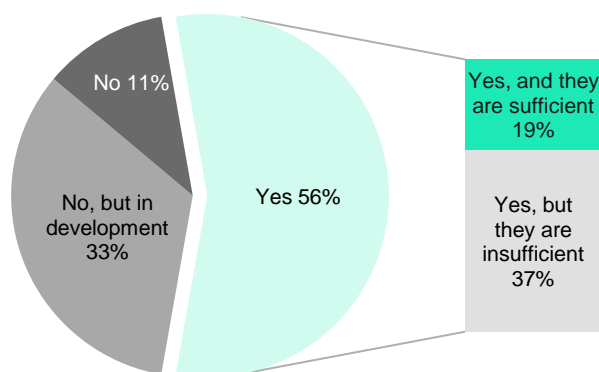
“We had a sustainability report in 2020 issued, and it was triple the size of the prior report. Ours is very comprehensive report and we don’t think it is finished- always have an eye open.”

U.S. Regional Banks

89% of respondents stated that they either had or were in the process of developing public disclosures as to their climate risks. U.S. regional banks, while currently under no obligations to disclose climate risk from a regulatory standpoint, disclose their climate risks at a rate higher than the average of all respondents to the survey.

Regionals appear to be more concerned than other peer groups with developing disclosures and policies. This could be because they know that with the relatively small number of resources at their disposal it would be impossible to stand up a climate risk framework in a short period of time and are trying to get ahead of the curve. It could also be because there is an opportunity to capture some of the investment flows into ESG products by acting faster than their larger counterparts that get bogged down in bureaucracy when developing new frameworks and policies.

U.S. Regional Banks



Regulation, Compliance and Legal

1. Does your organization make public disclosures as to your climate risks? If yes, are your current disclosures sufficient to satisfy investor demand?

Foreign Banks

Foreign banks, like G-SIBs, operate in regulatory environments which necessitate the greater levels of investment and preparedness in their disclosure practices and policies/procedures. Respondents spoke extensively about the regulatory environments in their home countries as compared to the lack of regulation in the U.S. Due to this accelerated regulatory environment, these institutions are well prepared to implement any regulation that comes from the U.S.

The foreign bank respondents highlighted the multiple regions they are active in and the accelerated regulatory environments:

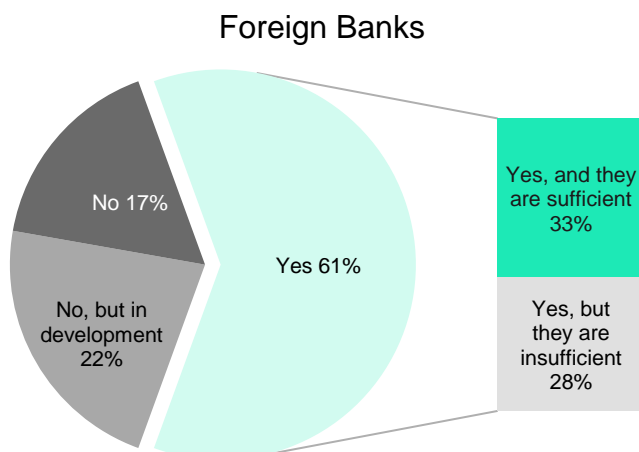
“Europe is introducing more scientific approaches like taxonomy and metrics and the SFDR mandatory objectives will have to compromise where those land.”

“IFRS are looking for a central authority for wider sustainability disclosure and get standardized. UK government has pointed as a likely approach for companies.”

“We are Canadian HQ; but have Europe and APAC and US footprint; climate/ESG is enterprise wide and is global; certain regions are more mature for regulatory requirements (APAC and EMEA) and awaiting US and Canada.”

83% of respondents stated that they either had, or were in the process of developing, public disclosures as to their climate risks.

Of the respondents that answered “yes” to having public disclosures as to their climate risks, 33% believe that their disclosures are sufficient to satisfy investor demand.



Respondents in this group were in line with the overall trend shown by the larger group in that they are split on whether their disclosures satisfy investor demand. Most have engaged internal stakeholders and regulators to build their disclosures and policies/procedures.

“Significant internal stakeholders; risk team speaks to front line functions and operational functions to get agreement and that will naturally continue; multi-stakeholder approach; and outsiders with NGO’s with ESG investors; and we have issued green bonds issued.”

Regulation, Compliance and Legal

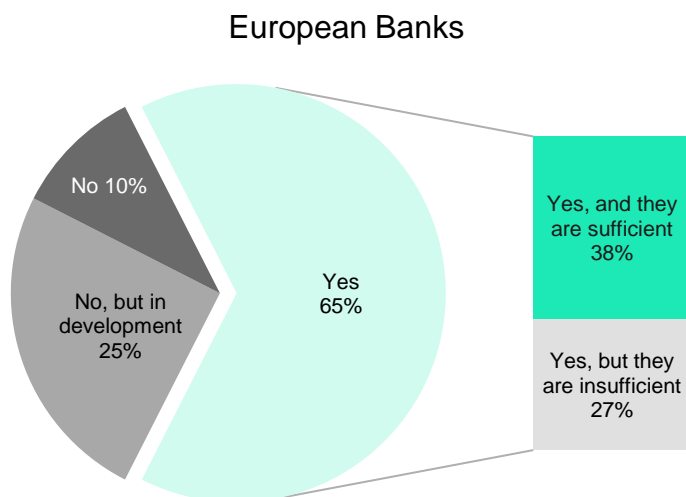
1. Does your organization make public disclosures as to your climate risks? If yes, are your current disclosures sufficient to satisfy investor demand?

European Banks

SFDR's Regulatory Technical Standards (RTS) could face further delays if the Commission does not act swiftly to endorse them, according to a regulatory expert. SFDR legally came into force in March 2021 with the intention of increasing transparency and decreasing greenwashing. However, the implementation of the RTS was delayed from January 2022 to July 2022.

Additionally, the EBA announced on January 25th templates for the top 150 banks which will require for 2023 disclosure to their carbon intensive activities and assets that run the risks for floods and fires as a consequence of climate changes. These template will also ask banks for exposure to fossil fuel clients on the greenhouse gas emissions they finance and alignment with the 2050 net zero targets. The EBA announcement formalizes the on-going European and UK efforts to expand disclosure requirements for their member banks creating further gaps with what is currently required from U.S. institutions.

For the purposes of their regulatory disclosures, institutions are expected to publish meaningful information and key metrics on climate-related and environmental risks that they deem to be material, with due regard to the European Commission's guidelines on non-financial reporting: Supplement on reporting climate-related information. The EBA is working on disclosure standards for banks and investment companies.



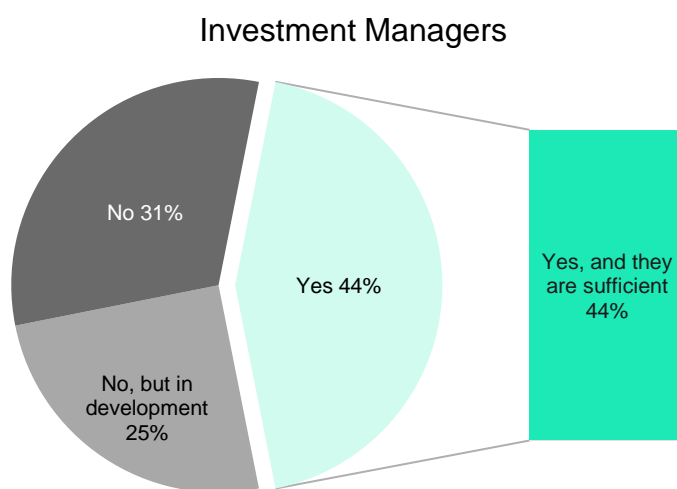
Regulation, Compliance and Legal

1. Does your organization make public disclosures as to your climate risks? If yes, are your current disclosures sufficient to satisfy investor demand?

Investment Managers

Investment Managers had less respondents either already making public climate risk disclosures or in the process of developing them. This could be due to the lack of regulatory bodies/pressure that US-domiciled money managers are expecting, as they primarily only report to the SEC. Additionally, this finding does not line up with the findings from other groups that believe disclosure is important to generate client interest and investment.

Of the respondents that answered “yes” to having public disclosures, 100% believe their disclosures are sufficient to satisfy investor demand, the only peer group with a unanimous response.



Insurance

Insurance respondents report internal reporting capabilities and public disclosures are still in development but do align with TCFD recommendations and guidelines on disclosures. Almost all insurance participants agreed regulators should adopt more standardized or detailed disclosure rules.

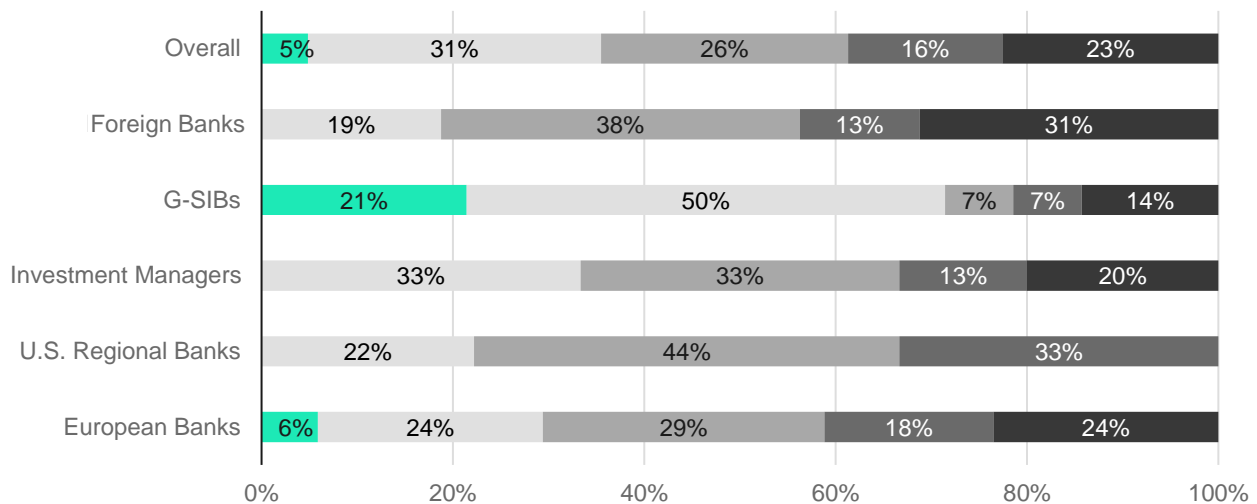
An insurance company comments in their disclosure:

“Our disclosure advisory services assess how climate risks impact business models and strategies; establish reporting frameworks in line with the TCFD or other schemes; draft submissions; and benchmark against peers and global best practice.”

Regulation, Compliance and Legal

2. Does the institution disclose information following guidance published by the FSB’s Task Force on Climate-related Financial Disclosure (“TCFD”)?

77% of respondents have either implemented or are either working on, planning to, or in the process of implementing disclosures of information following the recommendations and supplementary guidance published by the TCFD.



- The institution has implemented all applicable TCFD recommendations and made relevant disclosures.
- The institution has implemented certain TCFD recommendations and made for at least two annual disclosures accordingly.
- The institution is taking steps to implement certain TCFD recommendations and has made relevant disclosures accordingly.
- The institution has planned (with concrete timeline) to become a supporter of TCFD or to disclose information in accordance with TCFD recommendations.
- The institution does not yet have a plan to disclose information in accordance with TCFD recommendations.

Participants believe, having reviewed Q4 2021 regulatory proposals, the disclosure guidelines will likely be TCFD-based. Both banks and investors in the study confirmed the view, while agreeing higher levels of detail could be required from the upcoming SEC guidelines and forthcoming U.K. and EC efforts, including those from the IFRS that will be followed up from COP26.

Various groups have commented on the successes and drawbacks of the TCFD guidelines, as well as the extent to which firms are adhering to them:

“So far the voluntary adherence to the TCFD has been remarkably successful. The TCFD wrote that ‘83 out of the world’s 100 largest companies now support or report in line with its recommendations, and more than 50 per cent of companies now disclose their climate-related risks and opportunities.’”

Compared to the U.S., Europe has seen a greater increase in reporting requirements for almost all firms. Guidelines for climate reporting on the corporate side has indeed stepped up in Europe where firms in April of this year will have increased requirements.

Regulation, Compliance and Legal

2. Does the institution disclose information following guidance published by the FSB’s Task Force on Climate-related Financial Disclosure (“TCFD”)?

G-SIBs

86% of respondents are either working on, planning to, or in the process of implementing disclosure of information following the recommendations and supplementary guidance published by the TCFD.

Most respondents believe that the TCFD recommendations and guidance are the best disclosure framework available, as well as the most likely basis for disclosure requirements from regulatory bodies. Because of this, a majority of G-SIBs have adopted them or are working on adopting them already.

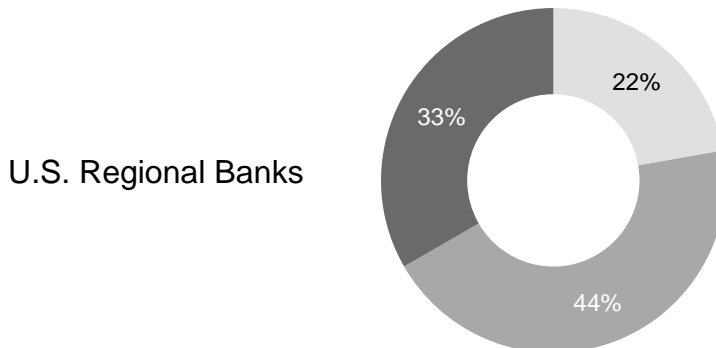
Two G-SIBs respondents noted their adherence with TCFD recommendations:

“TCFD is primary; keep an eye on IFRS ; looking at them; FCA in the UK turning around their sustainable exposure report—discussion report—what standards should we look for—we think they want TCFD and there is no one else of sufficient breadth and credibility.”

“We are lining up with TCFD. Different regulatory entities in UK vs. Europe and US. US regulators are not aligned with European regulators and hence the TCFD framework is and makes more sense. As a custody bank we don’t have the exposure, and that is reflected with peers, regulators, and others.”

U.S. Regional Banks

All of the respondents are either working on, planning to, or in the process of implementing disclosure of information following the recommendations and supplementary guidance published by the TCFD.



- The institution has implemented all applicable TCFD recommendations and made relevant disclosures.
- The institution has implemented certain TCFD recommendations and made for at least two annual disclosures accordingly.
- The institution is taking steps to implement certain TCFD recommendations and has made relevant disclosures accordingly.
- The institution has planned (with concrete timeline) to become a supporter of TCFD or to disclose information in accordance with TCFD recommendations.
- The institution does not yet have a plan to disclose information in accordance with TCFD recommendations.

As TCFD is the most comprehensive and easily digestible framework, it makes sense that it is also the most widely adopted, especially within regional banks who most likely lack the resources and expertise to derive their own disclosure frameworks.

Regulation, Compliance and Legal

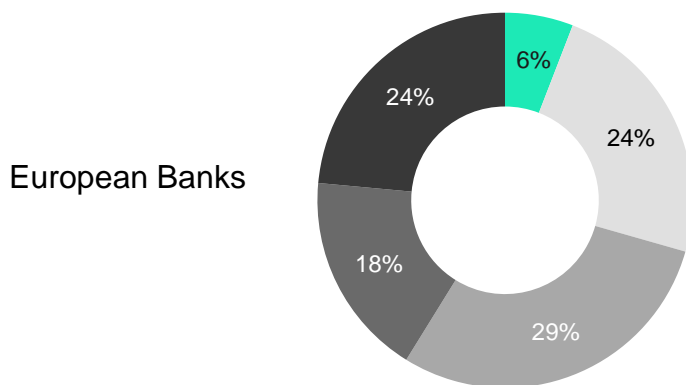
2. Does the institution disclose information following guidance published by the FSB’s Task Force on Climate-related Financial Disclosure (“TCFD”)?

European Banks

TCFD, is one of the most used guidance documents for financial institutions globally. Many of the participants, European or not, have confirmed the reliance on the TCFD guidance for their disclosure processes. Most respondents have indicated that they have fully implemented or are in the process of fully implementing climate disclosures based on the TCFD. In January 2019, the European Commission published new climate reporting guidelines for companies within the framework of the European Green deal. These are non-binding and integrate the recommendations of the TCFD. The guidance outlines standards for reporting upstream and downstream climate change impact as a result of participant’s business models

The U.K. is also adhering to TCFD disclosures. They are setting out a strategy towards mandatory TCFD-aligned disclosures by 2025. In 2021, the U.K. Financial Conduct Authority extended the application for the TCFD aligned Listing Rule and introduced TCFD-aligned disclosure requirements for asset managers, also including life insurers and FCA-regulated pension providers.

The TCFD is cooperating with other organizations e.g., the PCAF. TCFD recommended PCAF as the standard for calculating financed emissions. The PCAF is a cooperation of financial institutions to help them in assessing and disclosing GHG emissions of loans and investments.



- The institution has implemented all applicable TCFD recommendations and made relevant disclosures.
- The institution has implemented certain TCFD recommendations and made for at least two annual disclosures accordingly.
- The institution is taking steps to implement certain TCFD recommendations and has made relevant disclosures accordingly.
- The institution has planned (with concrete timeline) to become a supporter of TCFD or to disclose information in accordance with TCFD recommendations.
- The institution does not yet have a plan to disclose information in accordance with TCFD recommendations.

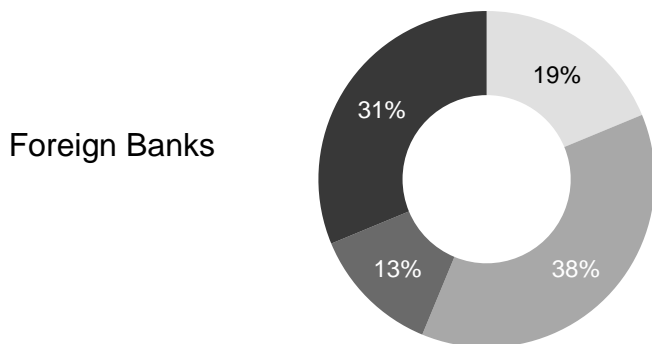
Regulation, Compliance and Legal

2. Does the institution disclose information following guidance published by the FSB’s Task Force on Climate-related Financial Disclosure (“TCFD”)?

Foreign Banks

69% of respondents are either working on, planning to, or in the process of implementing disclosure of information following the recommendations and supplementary guidance published by the TCFD.

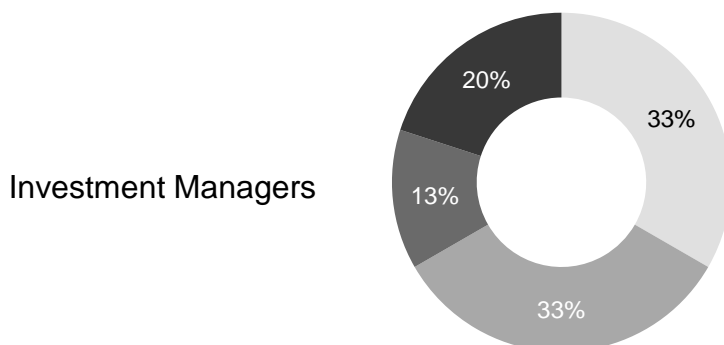
The majority of respondents are on board with moving forward with the TCFD recommendations/guidance, but not by a significant margin. Of those who have implemented or are working on implementation, the reasons were the quality and rigor of the reporting framework.



- The institution has implemented all applicable TCFD recommendations and made relevant disclosures.
- The institution has implemented certain TCFD recommendations and made for at least two annual disclosures accordingly.
- The institution is taking steps to implement certain TCFD recommendations and has made relevant disclosures accordingly.
- The institution has planned (with concrete timeline) to become a supporter of TCFD or to disclose information in accordance with TCFD recommendations.
- The institution does not yet have a plan to disclose information in accordance with TCFD recommendations.

Investment Managers

80% of respondents are either working on, planning to, or in the process of implementing disclosure of information following the recommendations and supplementary guidance published by the TCFD.

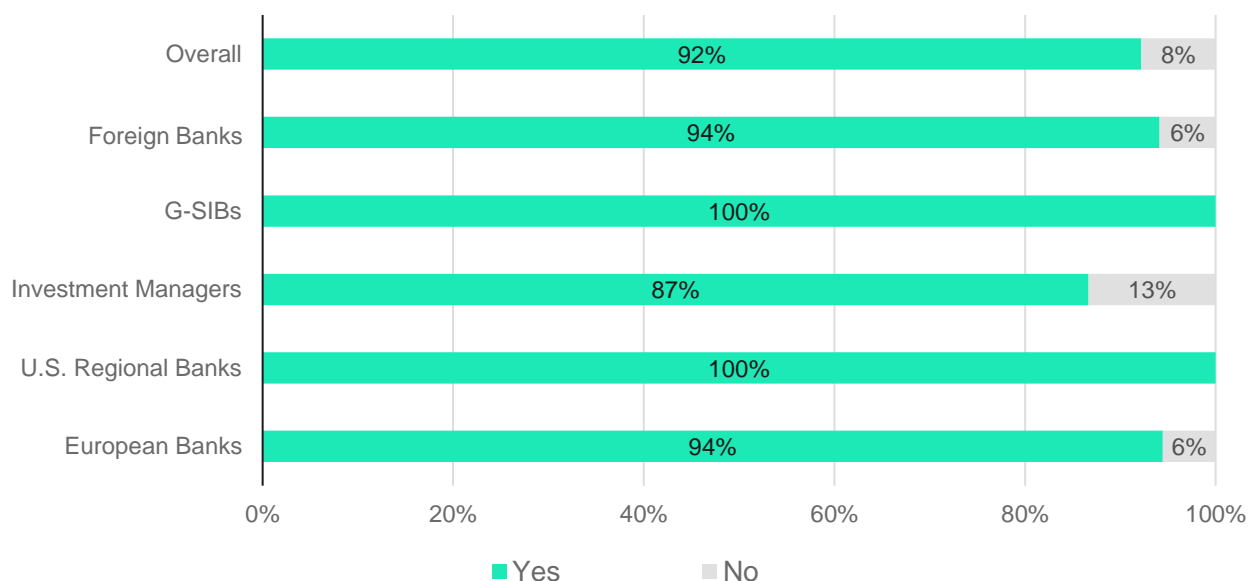


- The institution has implemented all applicable TCFD recommendations and made relevant disclosures.
- The institution has implemented certain TCFD recommendations and made for at least two annual disclosures accordingly.
- The institution is taking steps to implement certain TCFD recommendations and has made relevant disclosures accordingly.
- The institution has planned (with concrete timeline) to become a supporter of TCFD or to disclose information in accordance with TCFD recommendations.
- The institution does not yet have a plan to disclose information in accordance with TCFD recommendations.

Regulation, Compliance and Legal

3. Do you believe regulators should adopt more standardized disclosure rules?

92% of our respondents believe that regulators should adopt more standardized or detailed disclosure rules.



In addition to the existing disclosure requirements, there are other public and private sector efforts being undertaken beyond those of the TCFD to bring standardization to the market. The most recent efforts out for commentary include those from the SEC, MSRB, and the NYDFS. These efforts are recent and the likelihood for standardization is likely a few years away. The CFA has also unveiled its own standards in the past year.

Other participants were appropriately concerned that more detailed requirements would surpass firms' abilities to effectively respond in a balanced manner.

One investment manager noted:

“Regulators need to be careful to avoid creating something that distracts from the economic reality. We think that the industry should continue to lead with their initiatives and collaborate with regulatory bodies -- that would be a sensible way forward.”

G-SIBs

100% respondents believe that regulators should adopt more standardized or detailed disclosure rules.

Respondents not only believe that regulators should adopt more standardized/detailed disclosure rules, but they also expect it. As they are subject to disclosure rules in different jurisdictions, they are well-prepared for when the U.S. determines its own path forward. However, these respondents are concerned that the regulations may distract from economic reality and/or the wishes of clients and investors.

Regulation, Compliance and Legal

3. Do you believe regulators should adopt more standardized disclosure rules?

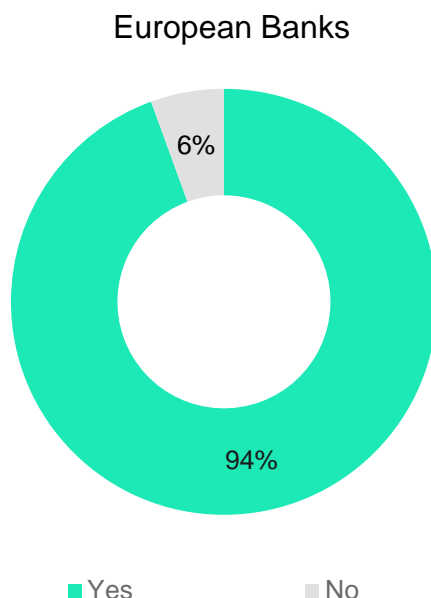
U.S. Regional Banks

All regional bank respondents believe the regulators need to adopt disclosure rules and/or provide guidance to the market. These findings are similar to the rest of the peer groups.

As all regional banks are U.S. domiciled (and operate primarily in the US), they have a group of state and federal regulators that are likely to produce regulations they need to follow. These regulators include the SEC, the OCC, and the NYDFS, all of which have requested comments from institutions to craft their positions and rules for climate risk.

European Banks

Participants believe European regulators should adopt more standardized and detailed disclosure rules. As we have seen throughout the research many institutions are still struggling to identify methodologies, metrics and are having difficulties in gathering the right data, despite many attempts and efforts from the European union to support the use of ESG indicators and to help companies in identifying sustainable investments.



Foreign Banks

94% respondents believe that regulators should adopt more standardized or detailed disclosure rules.

Responses were in line with the larger group of respondents in that they are looking to regulators for standardization in regulation. Additionally, respondents compared the lack of action in the U.S. to their experiences in other jurisdictions.

Regulation, Compliance and Legal

3. Do you believe regulators should adopt more standardized disclosure rules?

Investment Managers

87% respondents believe that regulators should adopt more standardized or detailed disclosure rules.

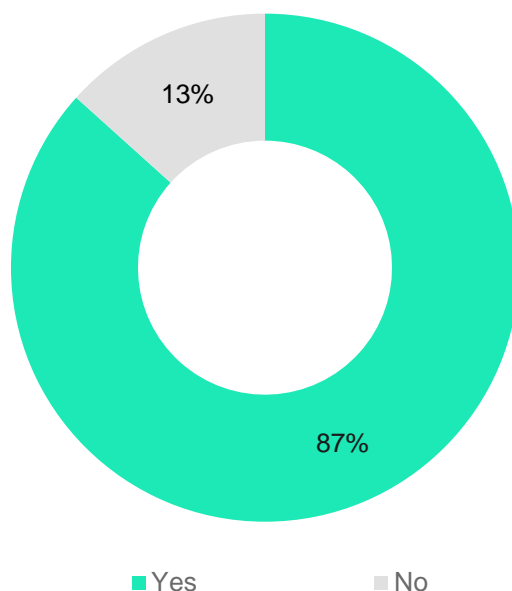
Some institutions are not convinced there will be only one taxonomy for all global participants, but rather a multitude of regional frameworks. Additionally, when speaking on U.S. regulation, numerous respondents noted the gap and disparities between the U.S. and Europe, specifically, in how they have so far gone about adopting policies, procedures, and rules.

Pending legislation changes and additions are coming for investment managers with SEC Chair Gary Gensler reporting recently that he directed SEC staff to develop a rule proposal on mandatory climate risk disclosures. He also asked staff to consider whether fund managers that label themselves as “green” or “sustainable” should disclose supporting criteria and data.

Our respondents noted the differences between regions and how regional focus will be needed on this issue:

“Regulations will be regional and do not see a global unified framework; somewhat of a family resemblance with different legal structures; there will not be one global standard. Already seeing in Europe with SFDR in greater disclosure around the components and the tools and how you are coming to decisions. People are looking for clarity. Impact fund is different from an integrated fund. Want to protect; increase transparency and understanding. Will look different in the US than in parts of Europe what is mandated and level of disclosure.”

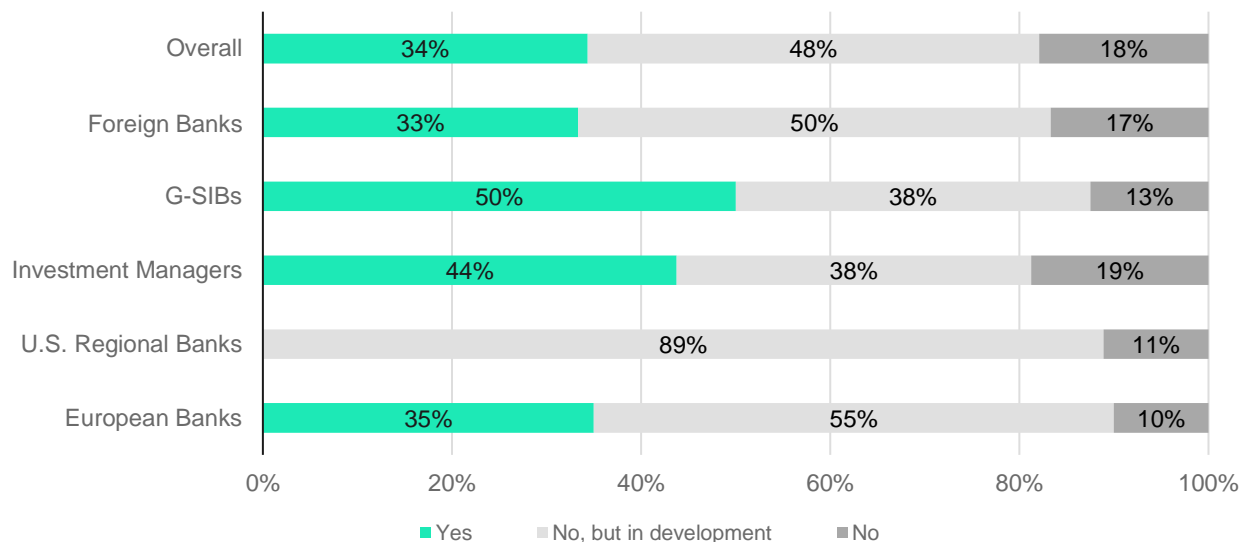
Investment Managers



Regulation, Compliance and Legal

4. Are controls to monitor climate risk exposure and performance defined in a policy / procedure?

82% of respondents either have, or are developing, controls to monitor climate risk exposure and performance defined in a policy / procedure.



Only 34% of respondents have already put these policies/procedures in place, and surprising given the fact that there has been pressure to reduce climate impacts for quite some time now (Paris Climate Agreement in 2016, for example).

Respondents seem split on the level of effort to offer to the climate transition. Some have been exploring the topic and developing policies for years and some are in the beginning stages. Additionally, there is a minority of approximately 18% of respondents who are not even planning to develop controls and/or policies/procedures.

Respondents noted how while they have started working on the regulatory approaches there is still a ways to go and there remains uncertainty as to what lies ahead:

“We are at the start of the journey and made a lot of progress; top structure being put in place and senior management risk committee and talking to Board level comm this week. Imbedding into charters, reporting and where we are for progress for resilience and financial risk. Establishing risk appetite and granular are likely for 2022 and other firm wide process, risk identification and all in development.”

G-SIBs

88% of respondents either have, or are developing, controls to monitor climate risk exposure and performance defined in a policy / procedure.

Regulation, Compliance and Legal

4. Are controls to monitor climate risk exposure and performance defined in a policy / procedure?

U.S. Regional Banks

89% of respondents either have, or are developing, controls to monitor climate risk exposure and performance defined in a policy / procedure.

Regionals appear to be ahead of the average when it comes to developing policies and procedures. This could be due to the lack of resources and the need to start early. A common theme was in addition to education within the organization on climate risk, the process is going to take a while for climate change to be fully understood and implemented.

This was confirmed through our respondents who noted:

“Why Climate is different? It’s new and not established to some degree and we need to learn and grow together.”

“Looking at education and impact by line of business; there is a smattering of who understands it and others who do not.”

“We are still from a climate perspective on the early side of that conversation, still in brainstorming. First are identification what is in the library and what the risks are. And next year will be the measurements and then the thresholds. We have yet to fully define.”

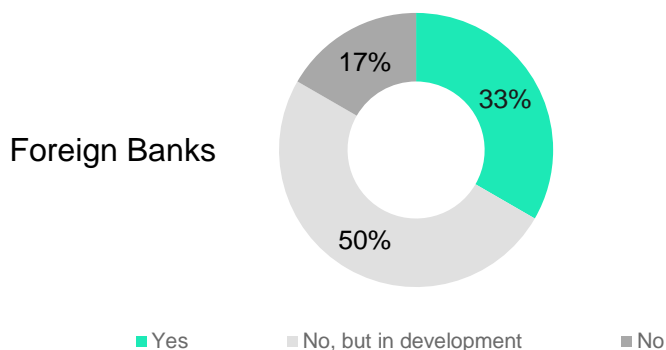
Regulation, Compliance and Legal

4. Are controls to monitor climate risk exposure and performance defined in a policy / procedure?

Foreign Banks

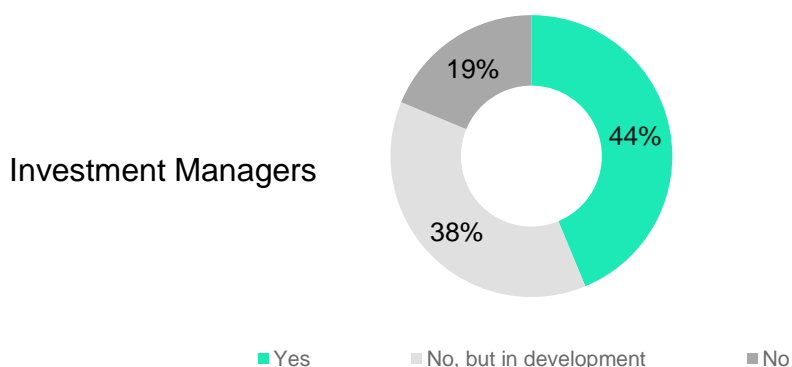
83% of respondents either have, or are developing, controls to monitor climate risk exposure and performance defined in a policy / procedure.

Again, due to the regulatory environments in which foreign banks operate, most already have required policies and procedures in place. However, as mentioned previously, regulations and the market are constantly evolving and thus so are policies and procedures. Finally, as climate risk is measured on a longer time horizon than other risks (such as liquidity risk), institutions are having to develop these policies and procedures from scratch without experience to lean on.



Investment Managers

81% of respondents either have, or are developing, controls to monitor climate risk exposure and performance defined in a policy / procedure.



There was an even split between firms that already have policies and procedures and those that are developing them. This can be attributed to the locations in which the firm operates in conjunction with the developing state of regulation in the United States, among other countries.

“We think we are probably further away vs. closer in the US. We are nascently global and more learning to do on the European front.”

Regulation, Compliance and Legal

U.S. Regulators

As with so many public policy issues, the regulatory approaches between the U.S. and Europe often differ. Climate Risk is not an exception. The official sector in Europe and the U.K. started many years ago considering the proper role for oversight of their regulated entities which included banks, investors and corporations while identifying their commitment to meeting net zero goals and targets set in the Paris Climate Accords. The U.S. regulatory bodies initially undertook joint discussions in 2015 but the change of administrations meant a halt to those efforts beginning in January 2017 which lasted four years. The U.S. not only withdrew from the Paris Climate Treaty but also cutback on environmental initiatives and regulatory efforts at the federal level. In the spring of 2021, new initiatives under the direction of Secretary of Treasury Yellen and the lead regulatory bodies at the Federal Reserve, OCC, SEC and other agencies have begun to set out their own plans and approaches for climate risk oversight. Participants have made it clear there was and continues to be no sense of the U.S. official sector playing “catch-up” with Europe. Indeed, in many cases the U.S. regulatory bodies have expressed some skepticism about the efforts undertaken in the U.K./Europe and the pace of implementing those guidelines, especially related to imposing regulatory capital costs for climate risks and accompanying stress tests to help validate those potential charges. However, there are aggressive efforts underway to ensure that U.S. banks, corporations and investors have appropriate oversight.

Initial efforts in the U.S. for oversight is being coordinated by the Financial Stability Oversight Counsel (FSOC) who noted “climate change is an emerging threat to U.S. financial stability” in the first joint report on the topic. The FSOC also noted the U.S. efforts “will support the Administration’s urgent, whole-of-government effort on climate change and help the financial system support an orderly, economy-wide transition toward the goal of net-zero emissions.”

To kick-start those initiatives, U.S. regulators began discussions with those whom they have oversight on climate risk in Q1 of 2021 and have issued a series of preliminary documents setting out guidelines for comment and feedback with the goal of implementing those first set of dicta this year. Common to these initial set of guidelines include: 1) evaluating the impacts of climate risk on financial stability (and the potential use of scenario analysis to do so); 2) assessing whether new or updated supervisory guidance on climate risk may be necessary; and 3) enhancing climate-related disclosures and data. Further, several regulators, including the OCC and the Federal Reserve, noted that at least initially their focus is on the largest U.S. financial institutions and not on smaller regional banks which has provided some political re-assurance to Congressional representatives who have held hearings on some of these recommendations.

To date, amongst all the regulators, the OCC has published the most detailed guidelines through its draft principles issued late last year. As required, the OCC is awaiting feedback on the high-level draft principles, which are designed to identify and manage climate-related financial risks at financial institutions with more than \$100B in consolidated assets. The overarching key principles in the OCC’s guidelines include: governance; policies; procedures; potential exposure limits; strategic planning; risk management; data enhancements; risk measurement; reporting; and scenario analysis.

The New York Department of Financial Services has also created a set of expectations for New York-regulated banks and insurers to integrate climate risk into their governance, business strategies, and risk management frameworks. The most recent set of proposed regulations released in December 2021 asks insurers to “take a strategic approach to managing climate risks that considers both current and forward-looking risks and identifies actions required to manage those risks in a manner proportionate to the nature, scale, and complexity of insurers’ businesses.” The document includes guidelines on materiality, time horizons, data management, risk culture and governance, business models and strategies, risk management, scenario analysis and public disclosures. The enforcement of these expectations is set to begin mid-2022.

For many U.S. financial institutions, the most potent oversight may well end up being the efforts by the SEC. Early in 2021, the SEC noted the increased importance of both ESG disclosures and the mitigation of climate risk.

Regulation, Compliance and Legal



As a reflection of that effort, the SEC has been sending letters to several large firms asking them to increase transparency with their original 2010 guidance. Recipients of such letters include Morgan Stanley, Ford, Nissan, Toyota, and Verizon among other firms. SEC Chair Gary Gensler has discussed more detailed guidance on climate risk from the SEC and there are expectations that those requirements will most likely be released in early 2022. These requirements seemingly will require companies to disclose their exposures to greenhouse gas emissions in addition to including details on the financial impact of climate change and companies' progress in managing climate risk. These anticipated requirements are consistent with similar disclosure recommendations from other global regulator bodies, including IOSCO, which has released guidance that ties in closely with the TCFD.

Finally, there is the role of the Federal Reserve Board which has responsibility for the “safety and soundness” of U.S. Banks and will join their FSOC colleagues as part of the oversight for regulated entities as it applies to climate risk mitigation. Lael Brainard, Vice Chairman of the Federal Reserve’s Board of Governors, noted in October 2021 that the Federal Reserve will be formally providing supervisory guidance for large U.S. banks to help them manage and mitigate risks arising from climate change. The guidance will focus on helping large financial institutions “measure, monitor, and manage material climate-related risks”, including the use of “consistent, comparable, and, ultimately mandatory disclosure.” Vice Chairman Brainard continued in her Senate testimony in January of 2022, that the Fed’s focus is on “helping banks measure, monitor and manage their own vulnerabilities” in the face of climate change, even if the chances of a devastating event are not significant. Finally, as we separately tackled in the prior section on Risk and Technology, the Federal Reserve along with other prudential regulators will be considering the development of scenario analysis and stress tests to better understand the resilience of the U.S.’s financial system, to withstand a climate related risk. These would be somewhat similar to efforts from several other jurisdictions, including the EU, U.K. and Canada.

Regulation, Compliance, and Legal

Best Practices

The disclosure best practices were focused on forward looking metrics those institutions had captured to disclose climate mitigation targets, necessary KRIs & KPIs and matching those to meet strategic initiatives.

Key criteria outlined in each guiding document:

Topic	TCFD	IFRS
Disclosure of historical metrics <i>see slide 110</i>	<p>Recommended Disclosure for Metrics and Targets: a) Metrics should be provided for historical periods to allow for trend analysis.</p> <p>Recommended Disclosure for Metrics and Targets: b) GHG emissions and associated metrics should be provided for historical periods to allow for trend analysis.</p>	<p>Recommendation #15: The entity shall disclose its climate-related targets, and: f) the base year from which progress is measured.</p>
	ECB	
	N/A	

Regulation, Compliance, and Legal

Best Practices

This best practice reviews institutions' ability to provide historical periods for trend analysis across various emission calibrations.

Best Practice – Disclosure of historical metrics

The public policy/regulatory framework we examined recommended that firms provide:

- a) metrics for historical periods to allow for **trend analysis**
- b) metrics for historical periods for **GHG emissions** and associated metrics should be provided for trend analysis
- c) metrics from the **base year** from which progress is measured.

	TCFD	IFRS	ECB
Institution #1	Meets all criteria	Meets all criteria	N/A
Institution #2	Meets all criteria	Meets all criteria	N/A
Institution #3	Meets all criteria	Meets all criteria	N/A
Institution #4	Meets some criteria	Meets some criteria	N/A
Institution #5	Meets all criteria	Meets all criteria	N/A
Institution #6	Meets all criteria	Meets all criteria	N/A
Institution #7	Meets all criteria	Meets all criteria	N/A
Institution #8	Meets all criteria	Meets all criteria	N/A
Institution #9	Meets all criteria	Meets all criteria	N/A
Institution #10	Meets all criteria	Meets all criteria	N/A
Institution #11	Meets all criteria	Meets all criteria	N/A
Institution #12	Meets all criteria	Meets all criteria	N/A

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

Regulation, Compliance, and Legal

Best Practices

The disclosure best practices were focused on forward looking metrics those institutions had captured to disclose climate mitigation targets, necessary KRIs & KPIs and matching those to meet strategic initiatives.

Key criteria outlined in each guiding document:

Topic	TCFD	IFRS
Disclosure of forward-looking metrics <i>see slide 112</i>	<p>Recommended Disclosure for Metrics and Targets: a) Where appropriate, organizations should consider providing forward-looking metrics for the cross-industry, climate-related metric categories described in Table A2.1, consistent with their business or strategic planning time horizon.</p>	<p>Recommendation #15: The entity shall disclose its climate-related targets, and: e) the timeframe over which the target applies; g) any milestones or interim targets; and h) metrics used to assess progress towards reaching targets and achieving strategic goals.</p>
	ECB	
	<p>Supervisory Expectation #13.6: Institutions are expected to disclose the KPIs and KRIs used for the purposes of their strategy-setting and risk management, as well as their current performance against these metrics. In line with the European Commission's Supplement and the EBA's key policy messages, institutions are expected to disclose the metrics used, including relevant targets and the current performance of the institution against those targets. Using the metrics, the institution is expected to describe the short, medium and long-term resilience of its strategy in the light of different climate-related scenarios.</p>	

Regulation, Compliance, and Legal

Best Practices

These best practices recommended disclosure of forward-looking metrics including interim targets, time frames and an ability to assess progress in meeting strategic commitments.

Best Practice – Disclosure of forward-looking metrics

The public policy/regulatory framework we examined recommended that firms provide:

- a) Metrics for historical periods to allow for **trend analysis**;
- b) Metrics for historical periods for **GHG emissions** and associated metrics should be provided for trend analysis; and
- c) Metrics from the **base year** from which progress is measured.

	TCFD	IRFS	ECB
Institution #1	Meets all criteria	Meets all criteria	Meets all criteria
Institution #2	Meets all criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets some criteria	Meets some criteria	Meets some criteria
Institution #5	Meets all criteria	Meets all criteria	Meets all criteria
Institution #6	Meets some criteria	Meets some criteria	Meets some criteria
Institution #7	Meets all criteria	Meets some criteria	Meets some criteria
Institution #8	Meets all criteria	Meets all criteria	Meets all criteria
Institution #9	Meets some criteria	Meets some criteria	Meets some criteria
Institution #10	Meets all criteria	Meets all criteria	Meets all criteria
Institution #11	Meets all criteria	Meets some criteria	Meets all criteria
Institution #12	Meets all criteria	Meets some criteria	Meets all criteria

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

Regulation, Compliance, and Legal

Best Practices

The disclosure best practices were focused on forward looking metrics those institutions had captured to disclose climate mitigation targets, necessary KRIs & KPIs and matching those to meet strategic initiatives.

Key criteria outlined in each guiding document:

Topic	TCFD	IFRS
<p>Disclosure of historical metrics <i>see slide 114</i></p>	<p>Recommended Disclosure for Metrics and Targets: a) Organizations should provide a description of the methodologies used to calculate or estimate climate-related metrics.</p> <p>Recommended Disclosure for Metrics and Targets: b) GHG emissions should be calculated in line with the GHG Protocol methodology to allow for aggregation and comparability across organizations and jurisdictions.</p>	<p>Recommendation #14: For Scope 3 greenhouse gas emissions, the entity shall provide an explanation of the activities included within the disclosed metric.</p> <p>Recommendation #15: The entity shall disclose its climate-related targets, and: (a) the objective of the targets; (b) whether the target is absolute or intensity-based; (c) whether the target is science-based, and if so, whether it has been validated by a third party; (d) whether the target was derived using a sectoral decarbonization approach.</p>
	<h3>ECB</h3>	
	<p>Supervisory Expectation #13.3: When institutions disclose figures, metrics and targets as material, they are expected to disclose or reference the methodologies, definitions and criteria associated with them.</p>	

Regulation, Compliance, and Legal

Best Practices

These best practices reviewed the firms' ability to disclose methodologies and activities for the GHG Protocol, Scope 3 Emissions and sector based de-carbonization efforts.

Best Practice – Disclosure of historical metrics

The public policy/regulatory frameworks we examined recommended that firms include:

- a) a **description of the methodologies**, definitions and criteria used to calculate or estimate climate-related metrics
- b) evidence that GHG emissions are calculated in line with the **GHG Protocol methodology**
- c) an explanation of the activities included within the disclosed for **Scope 3 greenhouse gas emissions**
- d) methodological analysis for targets can include the **objective of the targets**, whether the target is **absolute or intensity-based**, whether the target is science-based, and if so, whether it has been validated by a third party, and whether the target was derived using a **sectoral de-carbonization approach**.

	TCFD	IFRS	ECB
Institution #1	Meets some criteria	Meets some criteria	Meets some criteria
Institution #2	Meets all criteria	Meets all criteria	Meets all criteria
Institution #3	Meets all criteria	Meets all criteria	Meets all criteria
Institution #4	Meets some criteria	No considerations	Meets some criteria
Institution #5	Meets some criteria	Meets all criteria	Meets all criteria
Institution #6	Meets all criteria	Meets some criteria	Meets all criteria
Institution #7	Meets all criteria	Meets all criteria	Meets all criteria
Institution #8	Meets some criteria	Meets some criteria	Meets some criteria
Institution #9	Meets some criteria	Meets some criteria	Meets some criteria
Institution #10	Meets all criteria	Meets some criteria	Meets all criteria
Institution #11	Meets some criteria	Meets some criteria	Meets some criteria
Institution #12	Meets all criteria	Meets some criteria	Meets all criteria

Legend ■ Meets all criteria ■ Meets some criteria ■ No considerations

Regulation, Compliance, and Legal

Best Practices

The benchmarking of participating firms in the Regulation section was exclusively focused on the issues of disclosure in our questionnaire and the same issues are covered in this review. The decision to compare the TCFD, BCBS, ECB and OCC guidelines in the previous sections is to ensure a holistic and multi-jurisdiction perspective on climate-risk related principles. The benchmarking in the Regulation section of the study focuses specifically on the disclosure of climate risk-related metrics, analyzed into three broad categories: historical data, forward-looking data, and methodologies.

We examined organizations as diverse as the OCC, BCBS, Bank of England, PRA, FSB, IOSCO and the SEC, however they did not allow us to examine participant disclosure requirements with similar rigor. The Bank of England explicitly aligns with the TCFD framework, utilizing similar terminology which has been covered. The PRA is planning on expanding their supervisory strategy for climate risk in 2022 and is in part relying on the Climate Financial Risk Forum to produce guidelines and share best practices. The FCA, another UK-based regulator, is also looking to create disclosure requirements and released a discussion paper on the topic in November of 2021. The discussion paper is fairly comprehensive; however, it does not contain definitive guidelines. The objective of the FCA release is consultative and therefore regulation is expected to follow.

The FSB issued a document in July 2021 detailing a planned roadmap to tackle climate risk over the next few years. However, the FSB is not creating disclosure guidelines, and instead sees itself as a facilitator for coordination between international bodies, some of which are working to create disclosure standards. The FSB and IOSCO acknowledges the IFRS's disclosure requirements and are expected to promote those guidelines once finalized. Therefore, participating firms were benchmarked against these disclosure guidelines.

Defining Net Zero

While not included in the formal COP26 negotiations, there is an increasing global call for standardized net zero definitions and reporting frameworks. As mentioned earlier, the recent development of the IFRS International Sustainability Standards Board (ISSB) is one step towards a more integrated and universal reporting standard. The SBTi Corporate Net Zero Standard brings some clarity to net zero for the business community – but there's still a long way to go. What is less clear is who owns the responsibility for the development of these definitions and frameworks. Should it be regulators? Or is this something for the business community to develop for itself?

As the countries, industries, and companies begin publicly committing to “net zero,” it is worth digging into the phrase. Net zero commitments may be presented without relevant and valuable information around emissions, such as how much carbon dioxide was released, or what kind of offset programs are in place. The findings of our study concluded there is no clear definition of net zero, and it is still in the process of being determined at the company and industry level:

While only a handful of organizations that we interviewed brought up the potential carbon market to offset emissions to help them reach net zero, it was clear that a truly functioning carbon market is still moderately far out. Ana Haurie, co-founder and chief executive of carbon market maker Respira International, told ESGSpecialist.com in December 2021: “The voluntary carbon market has made huge strides forward this year, establishing itself as an effective means to reduce net carbon emissions by driving finance to projects that deliver independently verified carbon credits.” Haurie credits the finalization of Article 6 of the Paris Agreement – the set of rules for how the agreement would be implemented – at COP26 with driving a step change in attitudes towards carbon trading. “One of the big challenges for this next year will be getting in place some core principles – a big role for the VCMi [Voluntary Carbon Markets Integrity Initiative] and the newly named Integrity Council – which will help resolve some of the uncertainty that surrounds this relatively new market,” she says.

Climate commitments must have genuine influence on the real economy and actual emissions. For organizations to create and make good on their net zero commitments, and help reduce global carbon emissions meaningfully, we know the broader incentive systems driving global business activities need to be realigned in numerous ways. We also need clearer definitions to guide organizations to that end, including quantifying emissions and qualifying those offsets. The net zero future won't come about without a more coherent global approach to climate policy, and we need regulators and governments to create the correct financial incentives, metrics, and policies to do so.

“Fleshing out net zero is important and will be an iterative process to get it right. There are concerns about realistic targets, and countries have made those commitments and they are not sure they are doing the right thing in the time frame they have set out. What we caution against is that we all need to make sure do our best to get things right—rulemaking, definitions and work the first time around.” – G-SIB

06 /

Sales and Distribution

Sales and Distribution

The questions in this section broadly addresses topics covering: (a) the roles of the investment team/relationship managers and their outreach on climate risk related issues; (b) efforts in internal research for new climate mitigation related products and, (c) the processes in place to reduce client servicing related to climate risk. A few conclusions drove the findings in this section:

First, institutions who have developed an initial or advanced governance structures, had assembled sales efforts for the distribution of climate products across their client targets. These efforts would have prioritized more climate savvy institutional providers and sovereigns who had the capacity to properly evaluate a product that was customized for them. This would include having a knowledgeable sales team on their side for that discussion; a research team to evaluate the proposal and advanced data capabilities to consider the risk impacts on their portfolio. On the sales side, those who tended to align well in those efforts would have been the larger European institutions who have been active in this space for many years and G-SIBs who would have built out the necessary sales infrastructure to offer those products globally.

The precursor to valuable research would have generally linked to a well-developed sales effort where valuable climate research could be utilized. This would mean the capacity to evaluate investments in firms across asset classes (equities, rates, credit, and energy/commodities) and generate ideas from the sales team where the research would be valuable. It would also include the ability to customize the research for different sales teams to distribute out to clients covering both shorter and longer-term product investments. Finally, it would involve research supporting more straight-forward lending products to a structured or securitized product which would require more advanced risk management characteristics.

The process of discerning the distribution of climate mitigation products and the reduction servicing by sector—by client or geography was also analyzed. To note, if participants had not built out distribution efforts as of yet—then risk management teams had likely not initiated efforts to cut off product offerings based on more likely weather disruptions (hurricanes, tornadoes or floods), as an example. Insurance company participants would have been an exception to this since it has for a long period of time been core to their business model. Second, many firms noted they were not likely to move in the direction of “restricting services” but building out a more ‘climate-positive’ approach where they would emphasize the “sell” —to what type of clients—where more investments would be valuable as opposed to isolating where they should cut back on services.

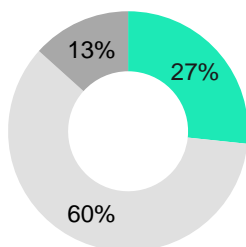
Sales and Distribution

1. Are relationship managers and/or sales staff equipped to identify climate risk-related business opportunities?

While the data provided by respondents indicates there has been limited training of sales staff there has been significant dialogue on the development revenue of generating opportunities related to climate risk. Demand for products to offset physical risks is not new, and the Investment Manager group has been selling sustainable products for years. The insurance industry has been marketing CAT bonds for some time now, with the risk and yield sought out by hedge funds. There is sentiment from participants they must partner with their clients in order to avoid a disorderly transition and this will drive organizations to roll out training programs for sales staff to seek out those opportunities.

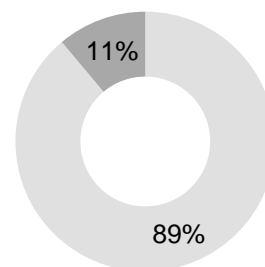
Investment Managers led participant responses with 50% having a sales staff which is well versed in marketing climate risk products. G-SIBs also responded with affirmative responses for developing the front-office with some participants approaching Climate Risk strictly through an opportunistic lens to develop new streams of revenue. The U.S. Regional Banks did not have any respondents who had been offering training programs to their sales staff but many stated a priority for 2022 is preparing for the demand from clients.

G-SIBs



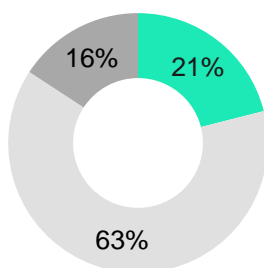
■ Yes ■ No, but in development ■ No

U.S. Regional Banks



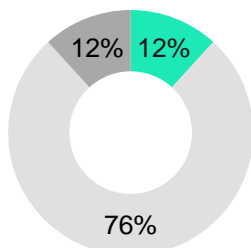
■ Yes ■ No, but in development ■ No

European Banks



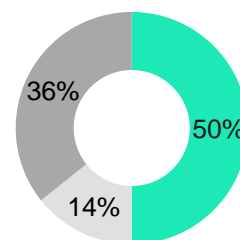
■ Yes ■ No, but in development ■ No

Foreign Banks



■ Yes ■ No, but in development ■ No

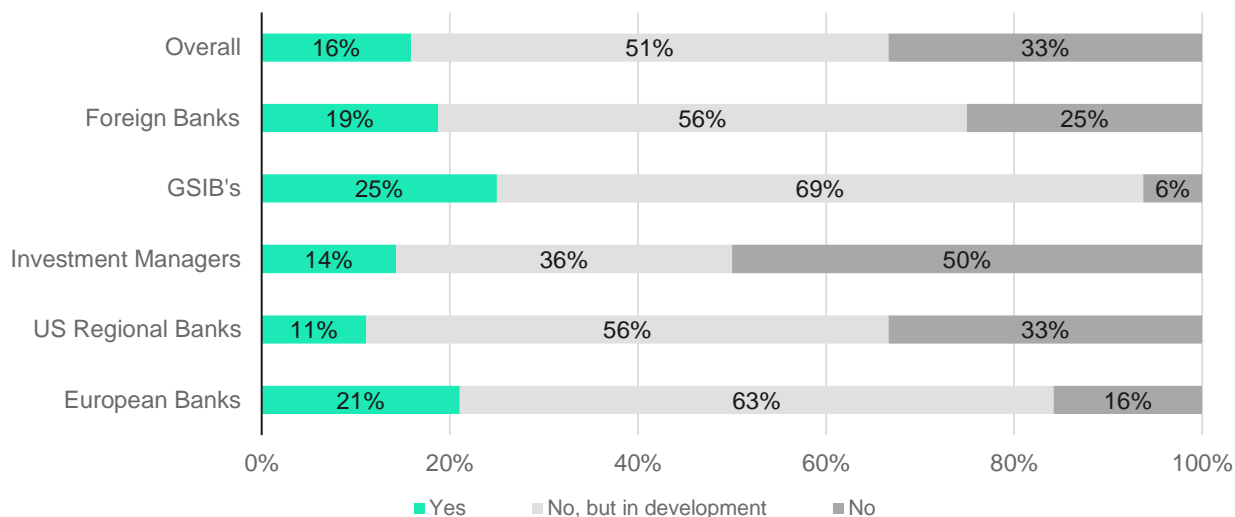
Investment Managers



■ Yes ■ No, but in development ■ No

Sales and Distribution

2. Is climate risk assessment integrated in the client onboarding process?



The study found few participants have fully integrated climate risk into their client onboarding process. In primitive stages, the availability of quantitative data may concern onboarding staff as qualitative information may expose their process to disputes. Participants are lobbying for regulatory guidance and the limited adoption of disclosure reporting across the industry could result in participants critically relying on data captured during onboarding to assess climate risk. Integrating climate risk into the onboarding process presents other challenges such as how the process is designed to monitor and update client data throughout the lifespan of a client relationship. The official sector has yet to provide the required transparency into potential requirements for those efforts and given the existing discrepancies with data and the greenwashing effect it will be challenging to make business decisions impacting revenue generation. However, client onboarding will likely become a priority as firms expand on the robustness of KRI/KPI development development.

A G-SIB provided global recognition of challenges related to onboarding:

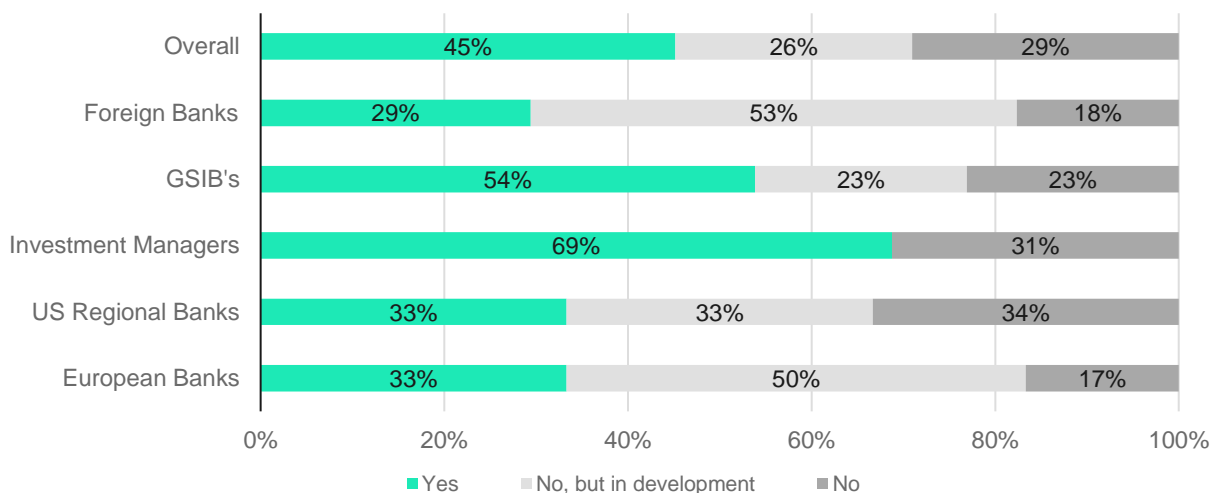
“When looking at OCC guidance as well as from the ECB and PRA in the UK and recently from the CBI, one realizes that there is not a focus on onboarding clients—and reporting is an output. We need to expand our risk identification efforts; which is material, and we are on the tail end of that. We need to think about what to do with it. In addition, we will build out a risk appetite with limits which we have not done yet. We are still kicking around what to do with Net Zero. I do not see business coalescing around business level decisions quickly. It is very hard to set up strategy; hard to set limits on targets given fluctuation from regulators.”

More than half of the regional bank participants noted that they are developing climate risk assessments for their client onboarding process. A small segment indicated that they were already taking into account of climate risk during onboarding. This skewed towards the larger, more advanced institutions who had built out those efforts.

It is clear to these institutions the importance of integrating a climate risk assessment into the client onboarding process. The lagging progress today reflects capability limitations across talent, financial resources, governance and technology. The expected clarity that regulators will provide in the coming months of 2022 may lessen the burden on smaller budgets and climate risk teams to define onboarding approaches in an uncertain regulatory environment (i.e., reduce the fear of throwing away work and processes). However, the industry must balance a wait and see approach with ensuring they are not caught flat footed by the expected regulations.

Sales and Distribution

3. Does the Investment team engage with investee companies on their climate risk risks and data?



Globally for all institutions, just 45% of respondents confirmed they have engagement plans with their investee client companies, however, unsurprisingly the Investment Manager peer group had the highest response rate for those progressing their engagement models. A distinctive peer group for investor engagement, Investment Manager's have established engagements models given their interaction with their investments through shareholder proposals.

One of our investors explained its approach in engaging clients when it commented

“Our assessment of and response to the risks posed by climate change spans our asset and portfolio level analysis; our corporate and public policy engagement activities; and our operational risk management. We analyse physical risks at asset level through use of open-source data and detailed asset level exposure analysis. Transition risks are assessed on a qualitative and quantitative basis using a pragmatic approach that acknowledges that there are issues with the amount and quality of data that is available

The stewardship model has become an increasingly popular method for investors to use in developing insight and providing transparency monitoring, engagement, voting recommendations, and public policy best practices. With the help of key service providers, asset owners are able to hire ESG stewardship specialists who coordinate with investee companies not only to monitor disclosures but also to partner with the company to help them define goals and reach climate change commitments.

Foreign Banks and European Banks reported a high percentage of participants responses who had begun the planning for engaging with their client companies. This is likely due to a “Engage 1st, Divest 2nd” model that exists in Europe- whereas in the U.S. market most investors are still “Divest 1st”. We expect the stewardship services business to continue to grow globally as it provides for another tool to leverage in supporting net zero goals.

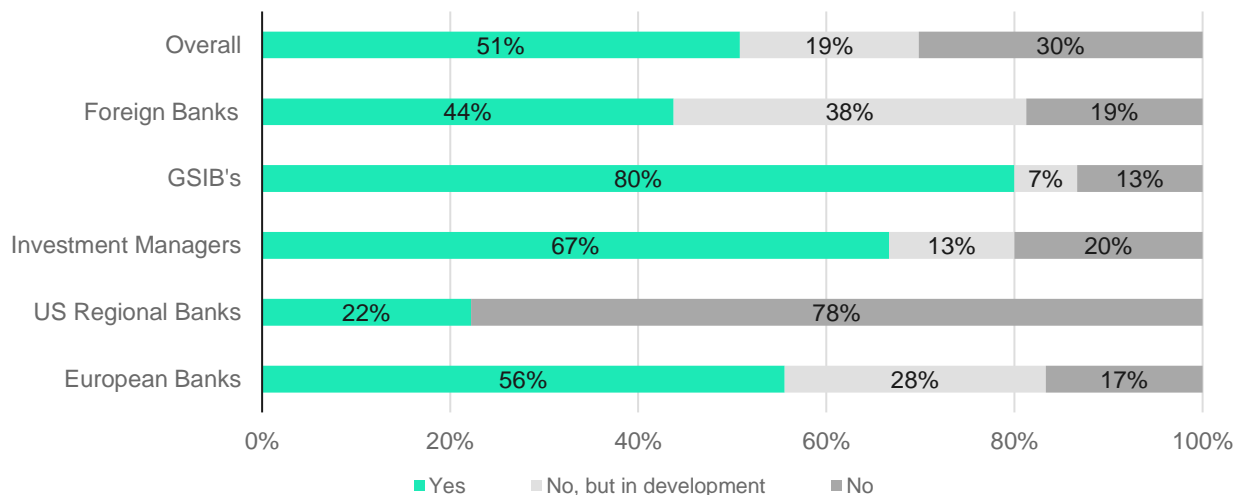
Additionally, proxy voting has become an increasingly popular way for investors to engage with investee companies to influence climate risk goals. Harvard Law School conducted a study demonstrating that shareholders are suggesting new types of proposals requesting regular review and opportunities to vote on a company's climate plans.

“The number of climate-related shareholder proposals has grown over the past 3 years and the 2021 season saw the advent of Say-On-Climate proposals, an attempt to secure a dedicated ballot item that would enable investors to express views on a company's management of climate-related risks on a recurring basis.”

–Harvard Law School

Sales and Distribution

4. Do you conduct in-house climate risk research to inform the development of new climate risk products?



The majority of participants (51%) are conducting internal research to develop new climate risk products. Organizations with greater maturity in terms of climate risk governance should be better positioned to identify and develop new climate risk products that are complementary to traditional financial services products. Participants recognized the opportunity and reliance clients will have on sustainability-linked debt, weather derivatives, insurance products and CAT bonds for their own net zero transition. There are a select group of participants who are aggressively looking to capitalize on this transition and innovating traditional financial products like deposits with sustainable terms.

A larger financial institution noted the complexity of building out these efforts:

“Every product area is developing a sustainable finance product—lending, finance, transaction of all products; design of those products with market principles linked to those areas; from a climate risk perspective understanding the risk part to that client; needs to be on a path that is credible. Clients need to demonstrate that they can make this transition.”

Participants also identified development for non-traditional products as another opportunity to complement their existing product suite. Notably, COP26 produced an agreement on Article 6 from the Paris agreement paving the way for both voluntary and compliance carbon markets. While the compliance markets will likely need a push from regulators to develop significant volume, participants will likely consider hiring staff to build out carbon trading desks. In voluntary markets, the financial services will look to build capacity and facilitate risk transfer in highly illiquid market today.

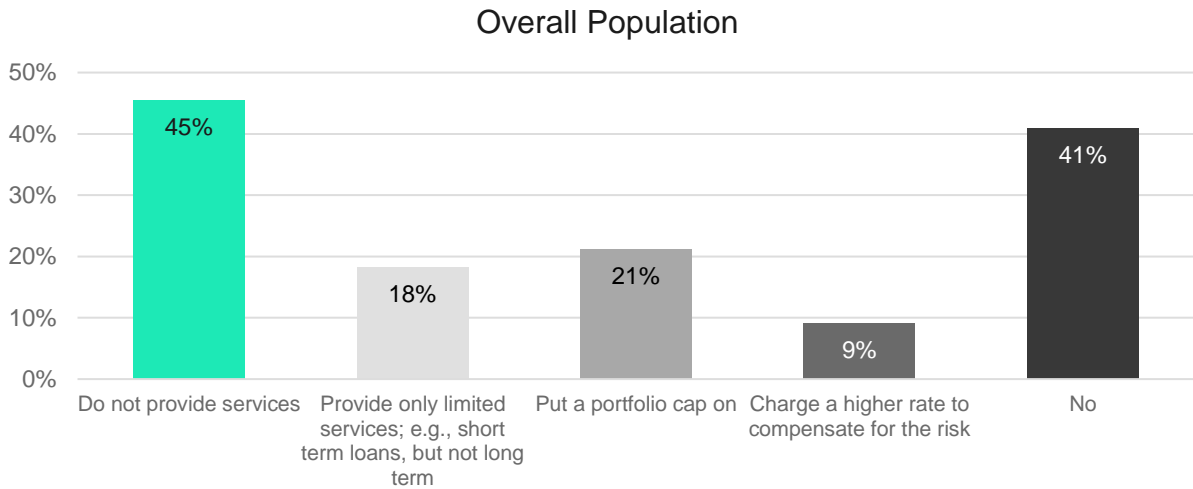
G-SIBs had the highest percentage of respondents (80%) actively pursuing the development of sustainable products. 61% of investment managers also have in-house research groups developing sustaining products, notably with greenwashing in mind. Other areas of the industry are also bringing new climate products to the market for functions such as VaR tools which are expected to be leveraged as balance sheets grow with green assets.

A G-SIB noted:

“We are in the process of developing products for clients that focus on regulatory or voluntary frameworks that they would have exposure to our portfolios or assets that are under development.”

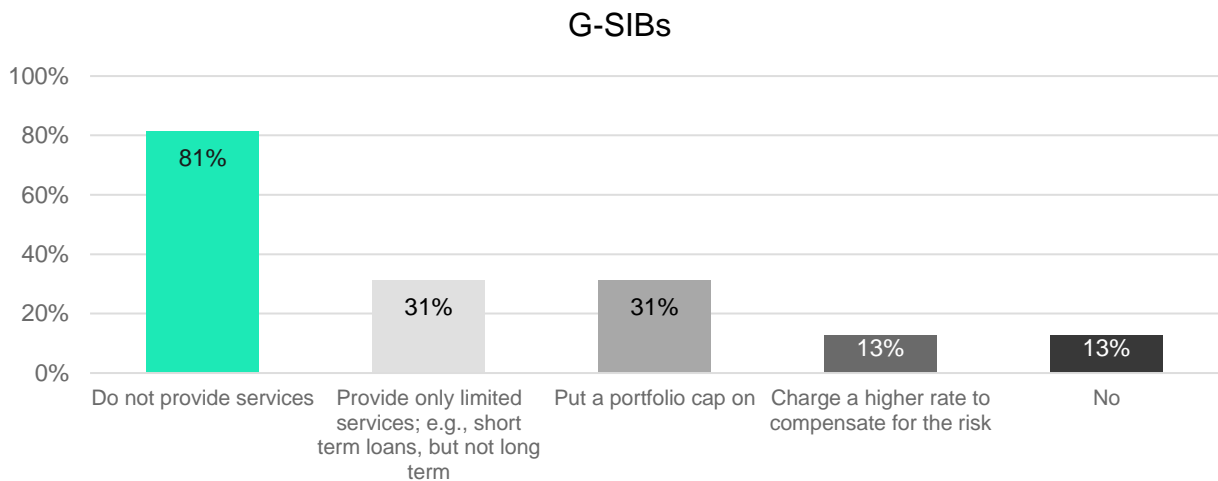
Sales and Distribution

5. In light of climate risks, are there industries to which you have modified services?



While many participants have begun modifying services by exiting the thermal coal and hydraulic fracturing industries, others conveyed a sentiment which is hesitant to set limits impacting performance at the business unit level. Commonly, participants across all peer groups leave exclusionary decisions to the discretion of their client. This conflicts with some participant sentiment for achieving net zero goals which will require firms working together with their clients to reduce their carbon or financed emissions. Some firms anticipate there will be more oversight and have moved ahead with limiting business with firms that do not adhere to climate risk guidelines.

G-SIBs



A G-SIB discussed their approach to

“We are not looking at the exclusionary approach to clients and the transition. We might ultimately decide to see if we have concentrations, and we think that is not what we want; our model is engagement versus exclusionary and this is well-reflected on the asset management side as well.”

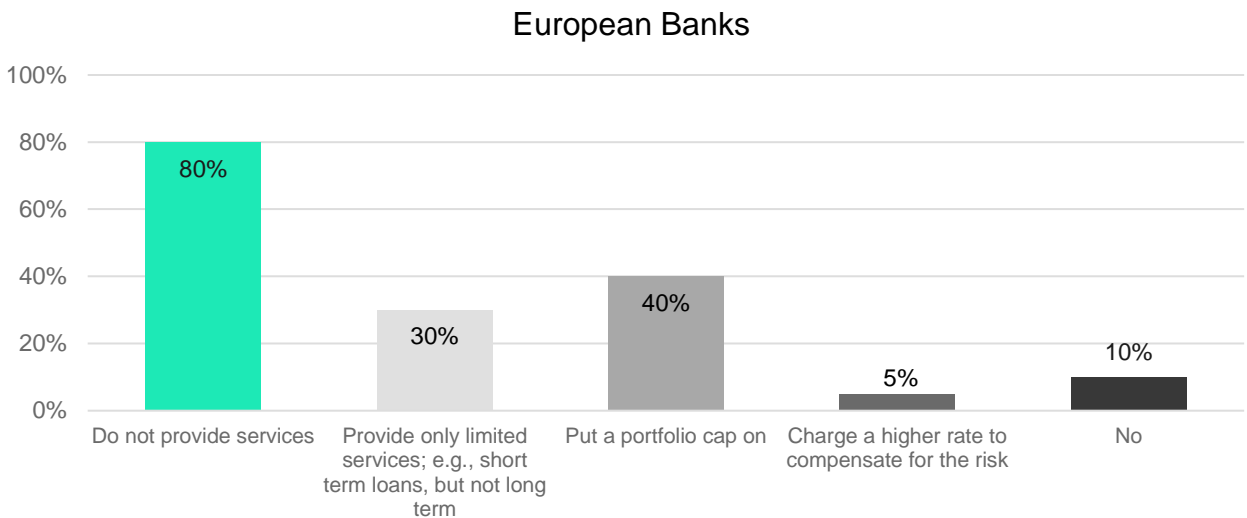
Sales and Distribution

5. In light of climate risks, are there industries to which you have modified services?

U.S. Regional Banks



European Banks



80% of European Bank respondents do not service certain industries in light of climate risk and almost half of them have implemented portfolio caps preventing the excessive exposure to climate risks in certain industries. Although almost all companies have implemented some rules on the exclusion of certain industries, the position of the institutions included towards risks differs from institution to institution.

Sales and Distribution

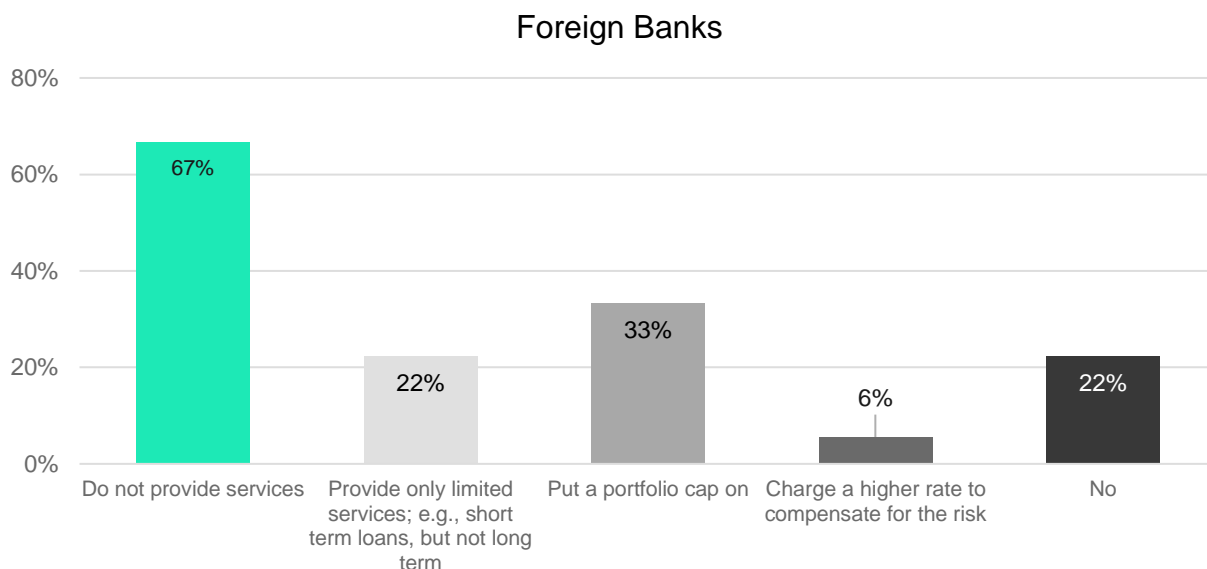
5. In light of climate risks, are there industries to which you have modified services?

Some prefer to fully exclude the climate risk out of the portfolio out of fear of higher capital requirements. Other institutions are opting for a cooperation approach by trying to improve the climate risk exposure of the companies believing the investments will serve as transitional projects contributing to a more sustainable business model in sectors such as coal, automotive and derivatives of these industries.

Although Europe is aiming to drastically lower investments in industries that have a negative impact on the transition to a net zero climate approach, we see that Europe's biggest banks are failing to end coal financing.

Many participants are still debating the best approach for these high-risk industries, although likely strict monitoring of activities will be crucial. In many cases it is not as simple to just exclude a certain industry. Exclusion is often a last resort when further engagement with the company is not possible anymore.

Foreign Banks



Approximately 67% of Foreign Banks state there are industries they will no longer service, and 55% state in many industries they will limit services or institute portfolio caps. Overall, foreign banks are looking for ways to mitigate their exposure to industries that are not adhering to climate risk standards.

Sales and Distribution

5. In light of climate risks, are there industries to which you have modified services?

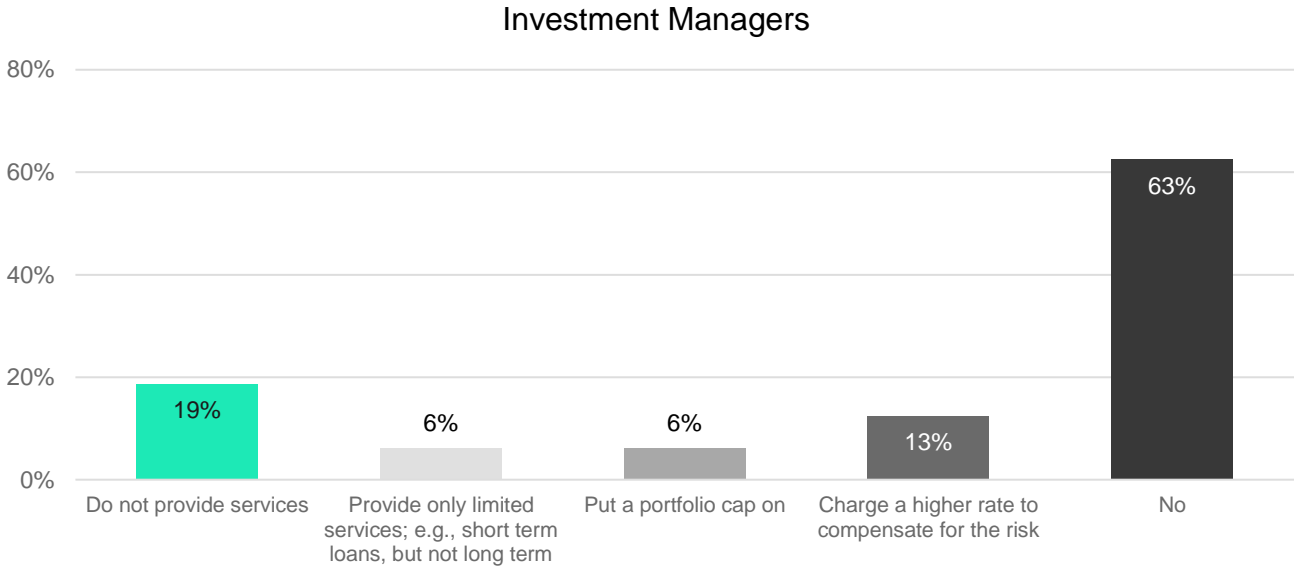
A foreign bank's statement in a public disclosure:

"We plan to stop lending and underwriting to companies with more than 15% of activities related to thermal and lignite coal; unless they have a credible transition plan in line with the 2015 Paris Agreement in place by end of 2021. We plan a full phase-out from coal by 2030. Also, to stop lending and underwriting to major oil and gas producers unless they have a credible transition plan aligned with the 2015 Paris Agreement in place by the end of 2021."

Sales and Distribution

5. In light of climate risks, are there industries to which you have modified services?

Investment Managers



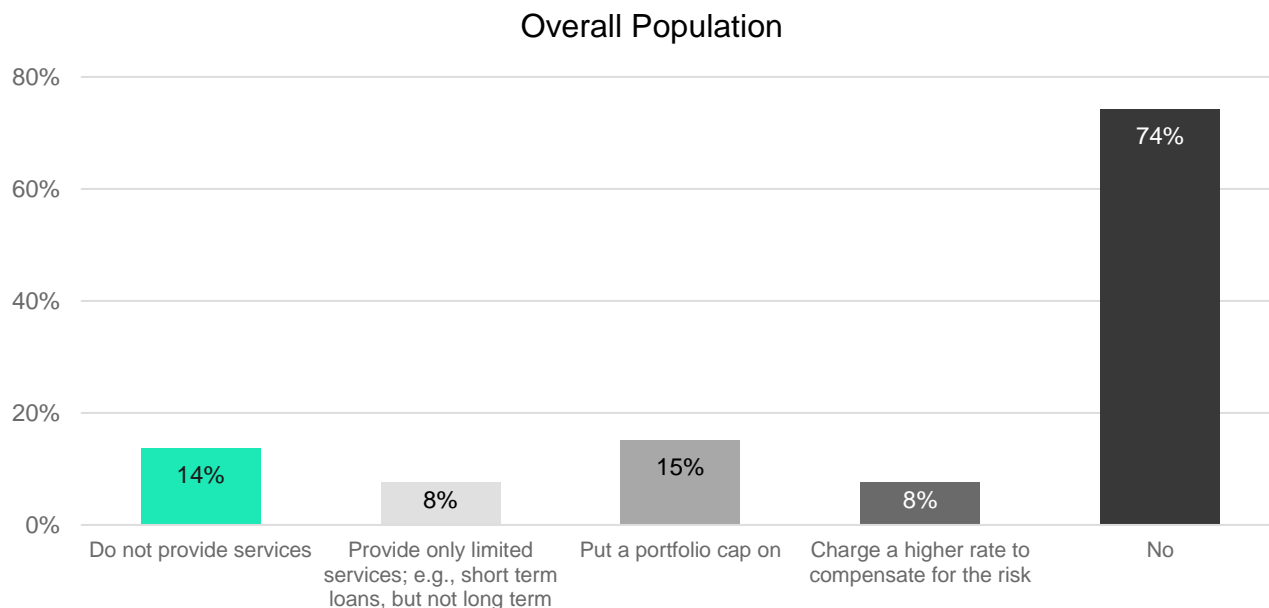
Specific to our investment firm participants, most of them noted no difference in service when it comes to specific industries, and some participants believe the responsibility is with their client decide as to whether the industry is appropriate for investing.

Many firms are leaving it up to the investors, such as the one interviewed below :

"We give investor tools to decide what they want to do to constrain;

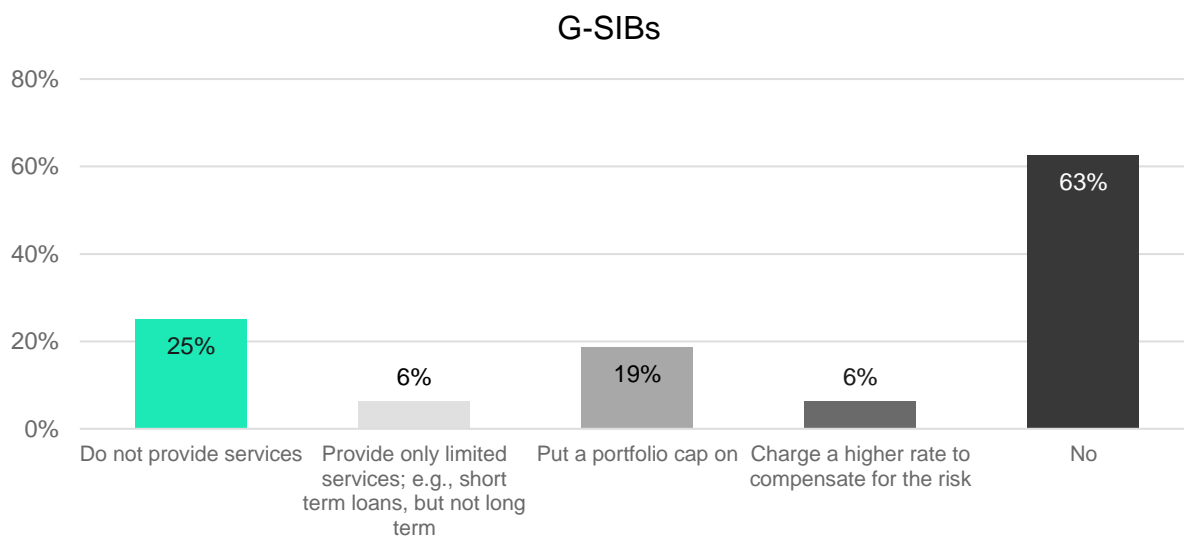
Sales and Distribution

6. In light of climate risks, are there geographies to which you have modified services?



The majority of participants have not modified services to specific geographies. Developed countries will likely emerge as leaders in the race to net zero with strong resilience strategies while other countries, potentially less developed could be more exposed to acute or chronic physical risks. As strategies for risk frameworks mature, climate risk could become a major factor in Country Risk, thereby impacting the level of business offered to a specific country or jurisdiction. Alternatively, there will be opportunities to offer more services given that these areas pose a higher risk and therefore have more demand for climate risk mitigation products.

G-SIBs

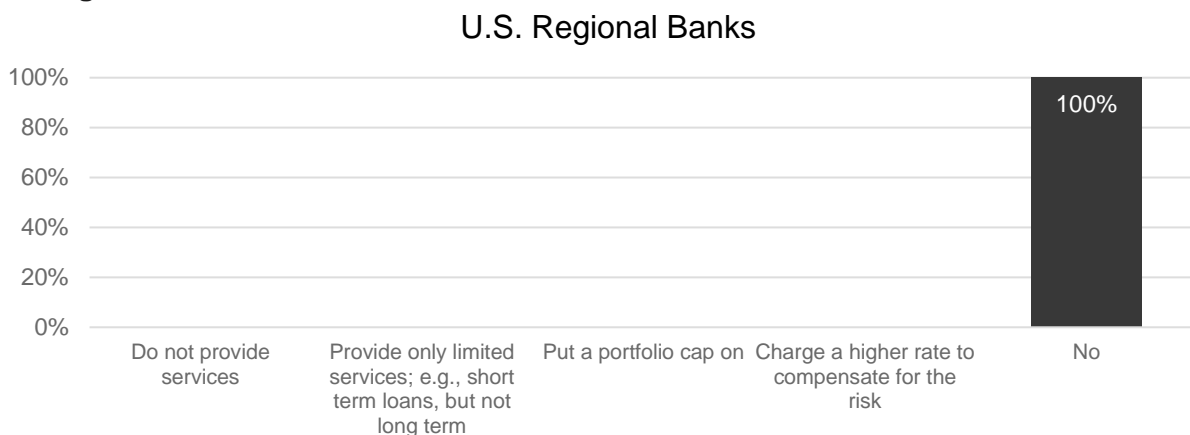


The majority of G-SIB participants did not identify for geographic restrictions in light of climate risks. Many G-SIBs in fact see this as an opportunity for banks to offer more services given these areas pose a higher risk and therefore have more demand for sustainable products.

Sales and Distribution

6. In light of climate risks, are there geographies to which you have modified services?

U.S. Regional Banks

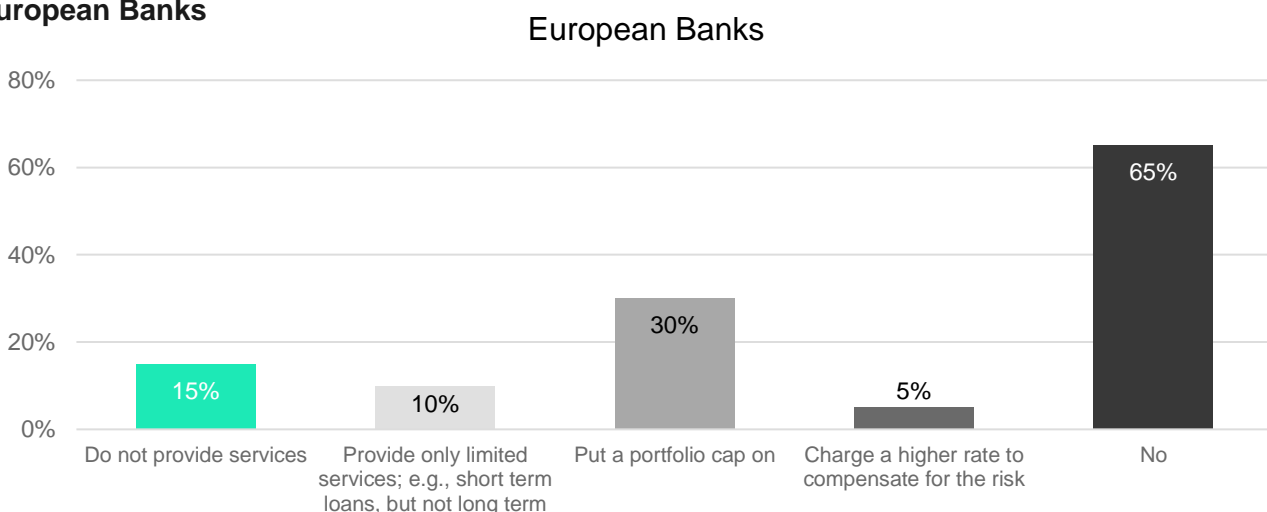


At the time of our survey, all of the regional bank respondents reported geography/location of clients did not impact their current services. However, there were regional bank who have plans to review geographies although more likely to set limits by industry.

One of our regional banks noted:

“2022 progress setting limits in geographies with certain entities will be more common in the industries. Things that worry me are (a) Data reliability, (b) Our vendors do not seem to have figured this all out yet and we are applying a very quantification driven approach that requires that data, and (c) We are concerned that the industry might be moving too far on the quantification side vs. quality and thinking about other areas of client risk.”

European Banks



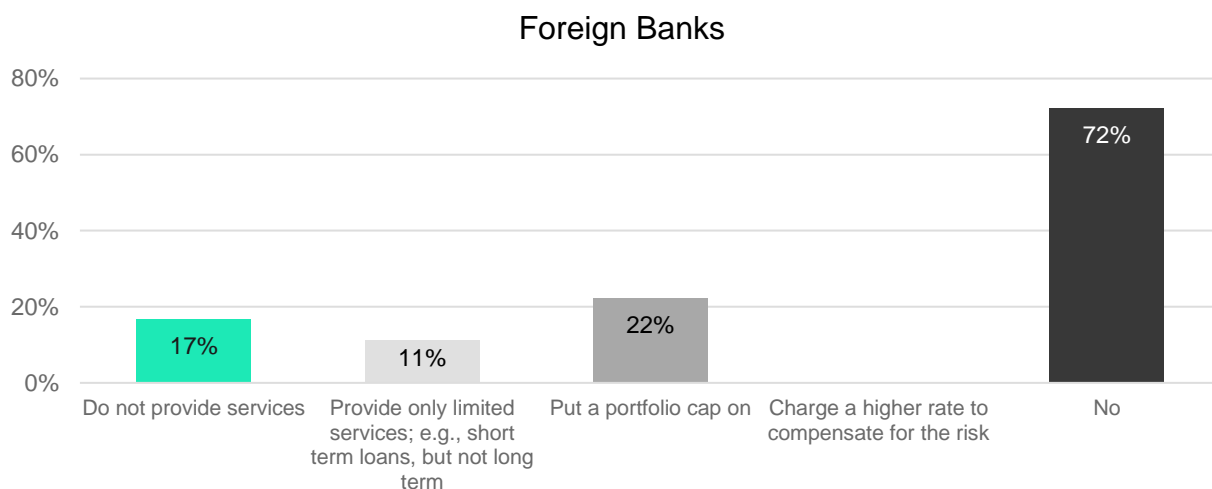
There is limited discrimination within European banks in terms of geography. Still geography will play an increasingly important role going into the future for financial institutions located, or with assets in, high climate risk areas. Southern European banks could face higher loan losses due to physical risks associated with climate change as climate change is expected to have a higher physical impact in these areas. The European Central Bank's climate stress tests showed that more than 60% of bank loans in Greece, Portugal and Spain are exposed to high physical risk, which is defined as more than 1% probability of a firm suffering from the effects of a wildfire or a river or coastal flood in a year.

Sales and Distribution

6. In light of climate risks, are there geographies to which you have modified services?

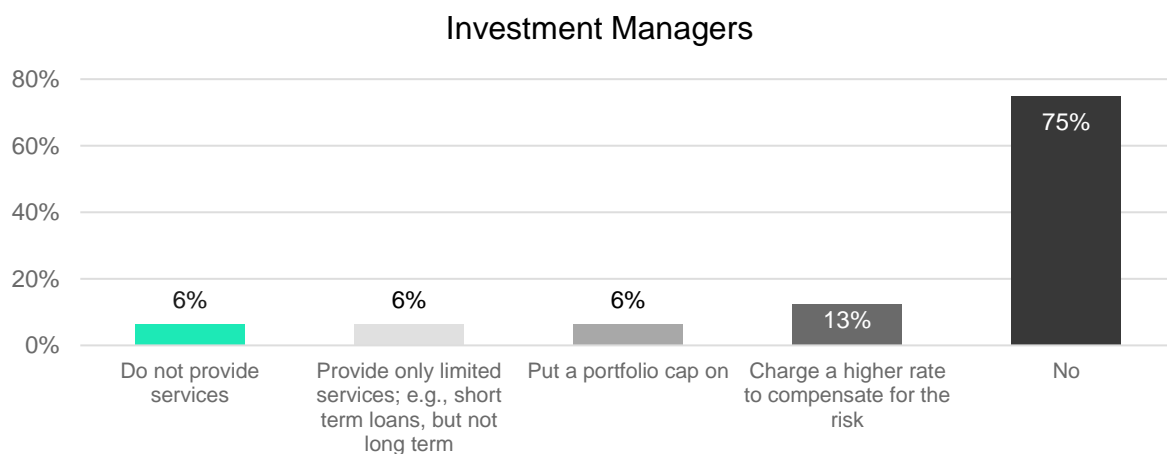
Greece topped the list with more than 90% of bank loans exposed to high physical risk compared to the European average of 20%. These institutions are in many cases still processing and liquidating non-performing loans and other bad assets from the financial previous crisis and are now coming under additional pressure because of climate risks as loans in their areas and in certain industries can lose value and lead to a further depreciation of the banks' assets. In general, geographical exclusion is not yet an active topic among the respondents in all peer groups.

Foreign Banks



Most of the foreign bank participants (75%) noted they show no difference in service due to geography, however some (25%) identified reductions in the form of no service, limiting service, and portfolio caps.

Investment Manger



07 /

APAC Overview

APAC Overview

Strategy Development & Implementation

APAC as a region has been falling behind other geographies in developing climate risk frameworks. The majority of the APAC banks have either no framework in place to address climate risks or only have recently begun development. A key reason for the lag is attributed to a delayed regional regulatory direction and guideline on the management of climate related risks. Only in the last 1.5 years regulatory authorities across APAC financial hubs such as Hong Kong, Singapore, Japan have introduced guidelines for banking sector to address climate risks.

- The Hong Kong Monetary Authority (“HKMA”) issued draft guidelines (the Draft Guidelines) on the management of climate-related risks by authorized institutions (AIs) in July 2021. The HKMA has drawn upon the work of the TCFD, the Network of Central Banks and Supervisors for Greening the Financial System (“NGFS”) and the Basel Committee on Banking Supervision to develop its approach to climate-related risks.
- Singapore’s Monetary Authority of Singapore (MAS) recently conducted their Financial Stability Review for 2021 to assess Singapore’s banking and insurance sector’s exposure to climate risk. They applied Battinson’s Climate Policy Relevant Sectors (CPRS) to analyze the banking and insurance sector’s exposure to climate transition risk, which has remained stable. The study has found that nearly a third of the country’s financial assets are vulnerable.

International frameworks (TCFD, CDSB, SASB etc.) are being predominantly used by APAC banks for climate risk disclosures, like other locations. Even with the development of regional frameworks for disclosures and climate risk management (e.g., in SG, HK etc.), a level of standardization can be expected considering they are being developed by drawing upon the existing frameworks.

1/3 of the survey participants from APAC have not yet defined measurable targets and Key Performance Indicators/ Key Risk Indicators (KPIs/KRIs), however are planning to develop metrics in the near future. Scope 3 GHG emissions, carbon intensity of client portfolio are a top priority for the banks. In regard to the challenges, a third of the participants noted that setting up the approach for climate risk stress tests was a major organization challenge.

Sales & Distribution

More than 80% of the surveyed participants acknowledged that the relationship managers and/or sales staff are not yet equipped to identify climate risk-related business opportunities. However, guidelines are being developed to solidify the sale and distribution of sustainable finance products. The same pattern is also observed in the client onboarding process whereby more than half of the participants have not yet developed a climate risk screening process for client onboarding. Only one third of the APAC banks have noted that their investment team engages with investee companies on their climate risk data. There is limited in-house climate risk research to develop new climate risk products.

Although the strategy to integrate climate risk in existing sales and distribution channels is not yet fully developed, organizations have defined plans to strengthen their strategy by allocating budget towards climate risk transformation projects and activities.

Regulatory authorities are also assisting institutions by defining clear requirements and guidelines to integrate climate risk into risk frameworks. For instance, in Singapore banks are required to conduct enhanced due diligence on customers with higher environmental risks in line with MAS’s Guidelines on Environmental risks. This will help operationalize risk metrics and reduce environmental risk exposures at both customer and portfolio levels.

APAC Overview

Data Strategy

2/3 of the participants noted that they use a hybrid model for sourcing climate risk data leveraging external data vendors as well as internally collected data. None of the participants have started to incorporate AI, Machine learning etc. to gather and process climate risk data.

In addition to external data providers, APAC regulators are developing product platforms to provide access and resources on sustainable finance information.

- In 2020, Hong Kong Exchange and Clearing Limited (“HKEX”) launched the **Sustainable and Green Exchange (STAGE)**, an online sustainable product repository.
- Singapore’s MAS announced on December 9, 2021, that it will pilot 4 digital platforms under **Project Greenprint** to promote a green finance ecosystem. This will enable the financial institutions to access high quality, consistent and granular sustainability data.
 1. Common Disclosure Portal, will be developed in partnership with the Singapore Exchange and will help to simplify the Environment, Social & Governance (ESG) disclosure process by converting data inputs in line with different reporting frameworks for jurisdictions and purposes.
 2. Data Orchestrator, will aggregate sustainability data from multiple data sources, including major ESG data providers, utilities providers, and the Common Disclosure Portal.
 3. The ESG Registry will record and maintain ESG certifications from certification bodies in different sectors as well as data and metrics that are verified by qualified third party auditors.
 4. The Marketplace, will connect green technology providers in Singapore and the region to a community of investors, venture capital firms, financial institutions

Corporate Governance / Finance and Budgeting

Climate leadership is emerging in the APAC finance sector. Regulatory guidance provided by Singapore's MAS for climate risk strategy and of governance has proven beneficial for the region. Approximately 1/3 of APAC participants confirmed Chief Risk Officers have assumed leadership roles for climate risk management with established internal reporting lines to the Board of Directors and oversight committees.

Risk Management and Definition

Institutions are expected to explicitly include climate-related and environmental risks in their risk framework. Almost all banks have developed plans to improve their practices. However, the quality of these plans vary considerably, and progress is slow. Reputational and Compliance risks are some of the major concerns organizations are considering when defining climate risk. Corporate banking, Capital Markets and Commercial banking organizations have embedded specific considerations for climate risk within lending and underwriting policy documents as well.

Financial institutions are using various climate change scenarios developed by the NGFS and IPCC for stress testing exercises. Though in nascent stage, several guidelines are being issued from local regulatory authorities to ensure climate risks are addressed and fully integrated in the existing risk framework of financial institutions.

- The HKMA expects the implementation of the recommendations of the TCFD in line with its Draft Guidelines. Authorized Institutions will be required to make their first TCFD-aligned annual disclosures by mid-2023 and no later than 2025.
- The Monetary Authority of Singapore will include climate-related scenarios in its annual stress test for the financial industry within the next two years.

APAC Overview

Regulation, Compliance and Legal

More than half of the APAC participants have already made public disclosures as to their climate risks, with others taking steps to implement a disclosure framework in line with either international disclosure recommendations or as advocated by local authorities. In APAC, regulators have started to move from a voluntary disclosure requirement for financial institutions to a more defined regulatory requirement that is mandated by local bodies or stock exchanges. Below are some of the guidelines across APAC:

Hong Kong has not enacted any specific ESG focused legislation, however Hong Kong Exchange Limited (HKEX) and Securities and Futures Commission (SFC) have mandated several requirements for listed companies to manage ESG risks and more specifically, climate risk. The following guidelines are also being considered:

- The SFC is implementing new climate-related risk management requirements for fund managers and will amend the Fund Manager Code of Conduct (FMCC) requiring them to take climate-related risks into consideration in their investment and risk management processes and make appropriate disclosures to investors.
- HKEX issued guidance on TCFD-aligned climate disclosures to help companies assess their response to climate risks.
- HKEX has also launched a Net-Zero guide to help companies develop net-zero strategies in 2021.
- HKMA Draft SPM Module GS-1 on “Climate Risk Management” has recently been issued.

Singapore’s exchange, SGX, also plans to phase in climate risk disclosures, which will require all publicly traded companies to disclose their climate risks across key sectors including finance, energy and transportation by 2023. MAS has also introduced guidelines on Environmental Risk Management (ERM) for Banks, Asset Managers and Insurers covering Governance and Strategy, Risk Management and Disclosure of environmental risk information.

Japan’s Financial Services Agency (FSA) is also planning to mandate new climate risk-related requirements. The 2021 revision to the Corporate Governance Code requires Japanese companies to further promote sustainability issues, including climate change.

Taiwan is in line to issue Climate Risk Disclosure Guidelines for Banks and Insurers by the end of 2023 covering governance, strategy, risk management and metrics and targets.

Australian Securities and Investments Commission (ASIC) has increased monitoring efforts on climate-related financial disclosures. Australia’s banking regulator, the Australian Prudential Regulation Authority (APRA) released its final guidance for managing climate risk in November 2021.

Malaysia’s JC3 (Joint Committee on Climate Change) plans to introduce mandatory TCFD-aligned disclosure requirements for financial institutions and provided additional guidance on climate risk management, scenario analysis, with an exposure draft issued in December 2021.

The TCFD recommendations are globally the most followed, however in APAC, a 1/3 of our survey participants have not yet planned to disclose information in accordance with TCFD. Some institutions have implemented TCFD recommendations and have already made relevant disclosures. Unanimously all participants agreed that regulators should adopt more standardized or detailed disclosure rules. As such, regulators have responded by focusing on Climate Risk legislation across the APAC region.

- Hong Kong enhanced its comply-or-explain ESG reporting requirements for listed companies by incorporating certain key elements of the TCFD recommendations last year and is now making progress towards mandating similar requirements across relevant sectors by 2025.

APAC Overview

- Hong Kong enhanced its comply-or-explain ESG reporting requirements for listed companies by incorporating certain key elements of the TCFD recommendations last year, and is now making progress towards mandating similar requirements across relevant sectors by 2025.
- Singapore, which initially required comply-or-explain sustainability disclosures from listed companies, is now expecting financial institutions to disclose by mid-2022 and proposing to mandate more sectors of listed issuers to report in alignment with the TCFD recommendations by 2025. Singapore's – Green Finance Industry Taskforce (GFIT) has also issued taxonomy for Singapore-based financial institutions to assist financial institutions in correctly assessing climate risk and avoid greenwashing.
- Japan is seeking to require TCFD-like sustainability disclosures from larger listed companies in 2022 and from all companies that submit an annual securities report after fiscal year 2023.
- New Zealand has become the first country to pass a law requiring financial firms to report on how they manage climate-related risks and opportunities. The disclosure requirements are in line with TCFD and will be mandatory from 2023 onward.
- In July 2020, China and EU started a working group to improve both regions taxonomy's comparability and interoperability. The Common Ground Taxonomy (CGT) aims to identify commonalities between EU and China's taxonomy and will serve as a source for other regions when developing their own taxonomies.

Currently, the progress made by APAC banks in defining controls to monitor climate risk exposure is not the same as advanced as the other regions. 1/3 of the surveyed participants have no controls to monitor climate risk exposure while others are in the process to develop some controls.

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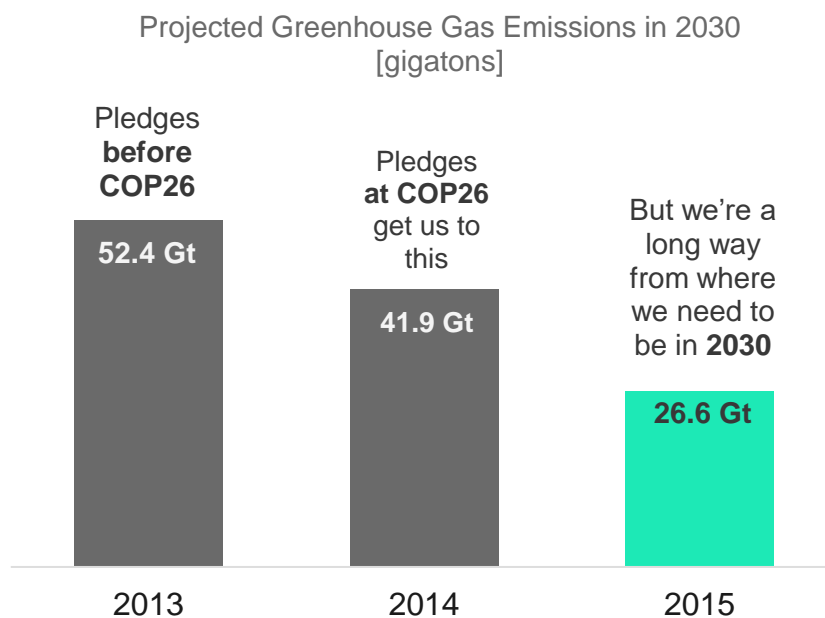
Conclusion

Conclusion

What Still Needs to Be Done

The business community had a far larger presence at this COP than any other – including Paris – and discussions of the role of these “non-state actors” were significant. But what impact do the pledges made, and the finalized GCP, actually have on business? Participants provided their assessments as to what has been accomplished and what still needs to be done. It was clear that while COP26 brought attention to the desire for climate actions, it did not deliver any significant impact on actionable steps to do so for the financial industry.

“The progress made does not and will not result in climate goals set forth; funding to the emerging markets continues to drag; there was no better definitions for green loans and green bonds. It underachieved. Progress happened but not where it needed to be. One of the areas that was reason for optimism is business moved into a more central role vs. NGO’s and governments and that was a positive development.”



The predominant theme for advancing the agenda, as noted throughout this paper, is better standardization by governments and regulators, particularly in the U.S. Many agreed the TCFD is a good step, and in the U.S., some states such as New York and California have net zero programs with milestones to track progress.

“We are waiting for U.S. regulators and what they make out of this. It would be hugely helpful and a backbone for the march forward; putting in place a program. The guidelines in APAC and EMEA are good but being a US-centric bank, we need a path forward with the comments around common requirements and methodologies, it would be hugely helpful to get there.”

After COP26, what the future holds and what is prioritized now have changed and are well-understood. There will be more scrutiny on balance sheets from clients and from the public eye. As one interviewee put it, “The momentum from COP was not in its policy, but in its awareness to the need for change.” Despite the many remaining hurdles, the momentum will open opportunities for more cohesion and symmetry with clients, and within the industry in general, to reach the net zero pledges put in place. Moving forward will require developing realistic targets with clear steps to achieve them, and helping clients meet those goals for themselves.

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