GARP
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SECOND ANNUAL GLOBAL SURVEY OF CLIMATE RISK MANAGEMENT AT FINANCIAL FIRMS

Mapping out the Continuing Journey, 2020

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Executive Summary

The focus on the potential financial risks from climate change has intensified since the GARP Risk Institute's (GRI) inaugural global, cross-sectoral survey of climate risk management in 2019. Regulators are increasingly looking to understand financial firms' practices in this area, with some setting formal expectations and establishing stress-testing exercises. Simultaneously, investors are looking for improved climate-related disclosures from firms to help them better understand the nature of these risks and price them accordingly.

Against this backdrop, GRI's 2020 survey of climate risk management practices covered a significantly larger sample of firms than in 2019, with 71 (versus 27 in 2019) financial institutions participating: 43 banks and 28 other financial institutions, comprising asset managers, insurers and financial market infrastructure companies. These firms have a global footprint, cutting across all regions. Collectively, they have around $42 trillion of assets on their balance sheets, have assets under management of $36 trillion, annually process more than $1,800 trillion of securities and account for about $3.8 trillion in market capitalization.

As in 2019, the GRI survey was structured around the main themes for climate risk reporting that have been developed through the Financial Stability Board's Taskforce on Climate-related Financial Disclosures. The topics covered include the governance and strategy to deal with actual and potential climate risk; firms' approach to risk management; metrics, targets and limits used to assess and manage climate risk and opportunities; the use of scenario analysis to understand the risks; and climate risk disclosures.

Climate risk will affect different types of firms in different ways, reflecting the diverse nature of the firms' business models and the geographies in which they operate. The range of practices reported cover the spectrum from firms that are at the forefront of climate risk assessment to those that are just starting on the journey.

This year, we were able to build a more detailed maturity model for climate risk management, diving into some topics in more depth. Using this maturity model, we scored and rank the participating firms on their current climate risk management capabilities across six dimensions: (1) governance; (2) strategy; (3) risk management; (4) metrics, targets and limits; (5) scenario analysis; and (6) disclosure.

This model provides a useful snapshot of current climate risk management practices across the financial services industry and should help firms prioritize future improvement areas. It also provides a map to those firms that are just starting along the path to identifying and managing climate-related risks to their businesses.

KEY TAKEAWAYS

Firms noted several barriers and challenges to addressing climate risks. They are consistently most concerned about the availability of reliable models and regulatory uncertainty, especially in the short term. And regardless of the firms' own climate risk maturity, most state that getting internal alignment on climate risk strategy is a challenge in the short term.

The relative importance of physical and transition risks differs across the types of firms. Almost all banks consider that physical and transition risk will have an equal impact on their organization. Asset managers, insurers and other types of firms are more evenly split between whether both transition and physical risks are equally impactful or transition risks (on their own) are more important.

Firms recognize that there are risks and opportunities arising from climate change. Both are expected to rise over time, but climate-related opportunities are expected to have a more significant impact on strategy in the next five years than the risks.

Self-assessment is more consistent. Last year, there was a significant disconnect between firms' perception of their climate risk capabilities and their actual capabilities. This year, as in 2019, just over half of firms said they are currently taking a strategic (comprehensive) approach to climate risk. But a far smaller proportion of the less advanced firms have classed themselves as 'strategic' in this year's survey.

Most firms do not have a dedicated team for managing climate risk. The most common approach to staffing is to embed specialist staff within existing risk functions or other teams, rather than create a separate, standalone climate risk team. This is at least partly because the majority of firms view climate risk as a transverse risk that cuts across risk types such as credit, market and operational, as opposed to a principal risk.

Firms are particularly concerned about their long-term resilience. While more than 80% of firms believe their strategy is resilient to climate change over the next five years, only 10% of firms are confident in their resilience beyond 15 years.

Board-level governance exists at 90% of firms, and engagement is increasing. Three-quarters of board members have seen papers or been involved in discussions about climate risk, although some board members who are responsible have not yet seen papers or discussed it. C-suite members are generally responsible for climate risk, with the chief risk officer the individual most commonly named as the senior responsible executive. In the majority of organizations, that responsibility is shared with others.

Climate risk is widely seen as improperly priced. The overwhelming majority of respondents think that climate risk has been either partially priced or totally omitted from the market's pricing of products. Pricing difficulties cited include the complexity of climate-change forecasting and the lack of robust and reliable climate risk data.

Climate risk measurement approaches are immature. Only a handful of firms use scenario analysis regularly, and just under half use it on an ad-hoc basis. But even when firms are doing scenario analysis, it doesn't feed into their day-to-day processes, and only about half of the firms have taken any action as a result of the analysis.

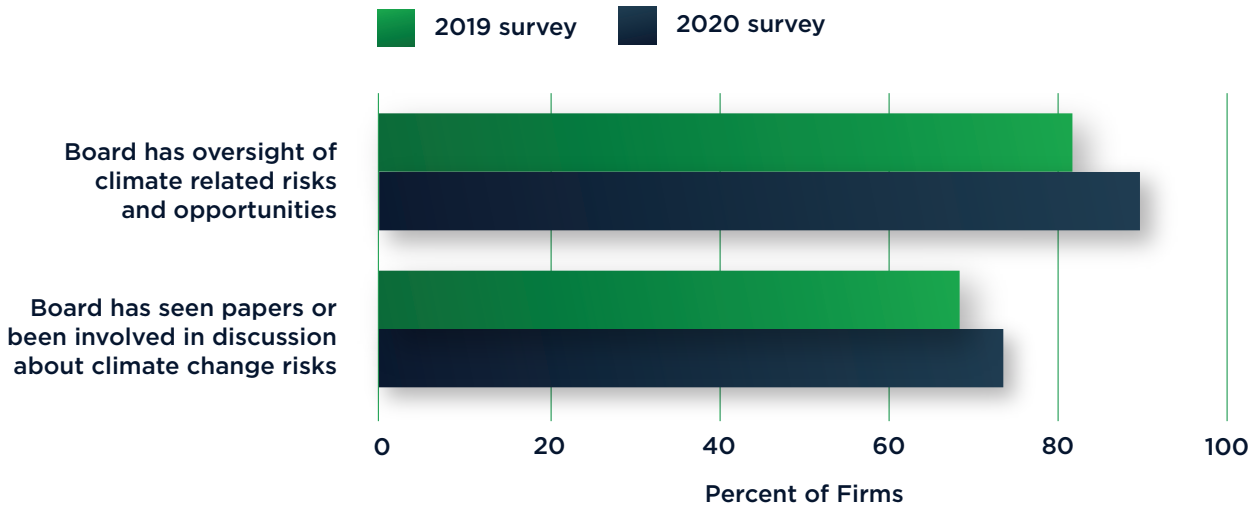
Governance

Effective risk management in any domain begins with engagement at the highest level of an organization – namely, the board and senior management. Assessing how mature an organization is in managing climate risk requires understanding the role the board plays in overseeing climate-related issues, as well as how senior management measures and manage those issues.

To assess a firm's governance of climate risk, participants were asked about the oversight of climate risk by the board. Questions about the climate risk material provided to and reviewed by the board, and the responsibilities of C-Level executives for climate risk management, were included.

As we found in last year's survey, board oversight of climate-related risk exists at most firms, and the majority of boards have indeed seen papers on climate risk.

Figure 1: Board Involvement



As Figure 1 (above) shows, board engagement has strengthened further this year, with several firms noting a variety of different ways that their board has engaged with climate risk. These include:

- Holding a board strategy offsite that featured a keynote speaker on climate change.
- Presenting an updated enterprise risk management (ERM) framework to recognize climate risk as a
- new cross-cutting risk type.
- Considering climate risk in their annual Internal Capital Adequacy Assessment Process (ICAAP).
- Reviewing disclosures related to greenhouse gas (GHG) emissions and climate risk.
- Discussing the status of the firm's TCFD reporting capability.
- Approving the firm's approach to financing emissions-intensive sectors.

However, some of the firms that said that their board has oversight of climate risk and opportunities also reported that the board had not actually seen papers about it or even discussed it, indicating a lack of true engagement.

The chief risk officer (CRO) is the individual most commonly named as the senior responsible executive for climate risk management. In the majority of organizations, that responsibility is shared with other C-suite members. The chief executive officer (CEO) is the next most common responsible person, followed by the chief sustainability officer (CSO), chief financial officer (CFO), chief operating officer (COO), and chief investment officer (CIO). Most firms, moreover, have more than one member of senior management responsible for climate risk.

Strategy

To manage climate risk well, a firm must understand how climate-related issues impact their business strategy over the short, medium and long term. This demands assessment of the impacts of climate risk and opportunities on the organization's businesses, strategy and financial planning. Participants were therefore asked about the identification and time horizon of climate risk, opportunities and challenges, and the impacts on their business.

Using terminology borrowed from the Bank of England, we asked firms to specify whether their approach to climate risk management was 'responsible,' 'responsive' or 'strategic,' with each category corresponding to different levels of maturity.

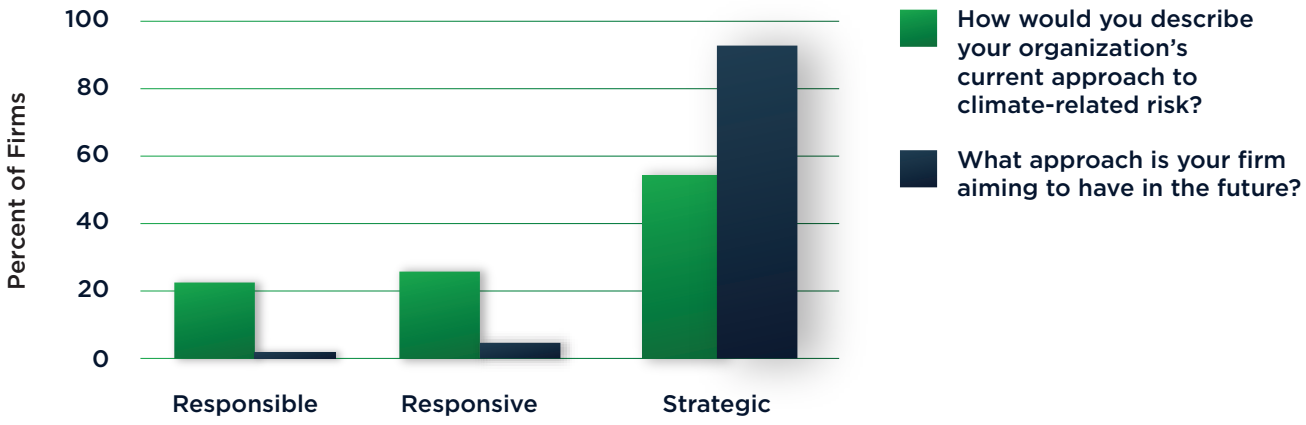
'Responsible' is an approach driven primarily by corporate social responsibility (CSR), focusing on reputational risks.

'Responsive' means that climate change is viewed as a financial risk, albeit from a relatively narrow, short-term perspective.

'Strategic' implies a more comprehensive approach, taking a long-term view of the financial risks, with board engagement.

Just over half of respondents described their approach to climate risk as 'strategic,' while more than 90% of the firms aim to have a strategic approach in the next five years (see Figure 2).

Figure 2: Current and Aspirational Approach to Climate Risk Management

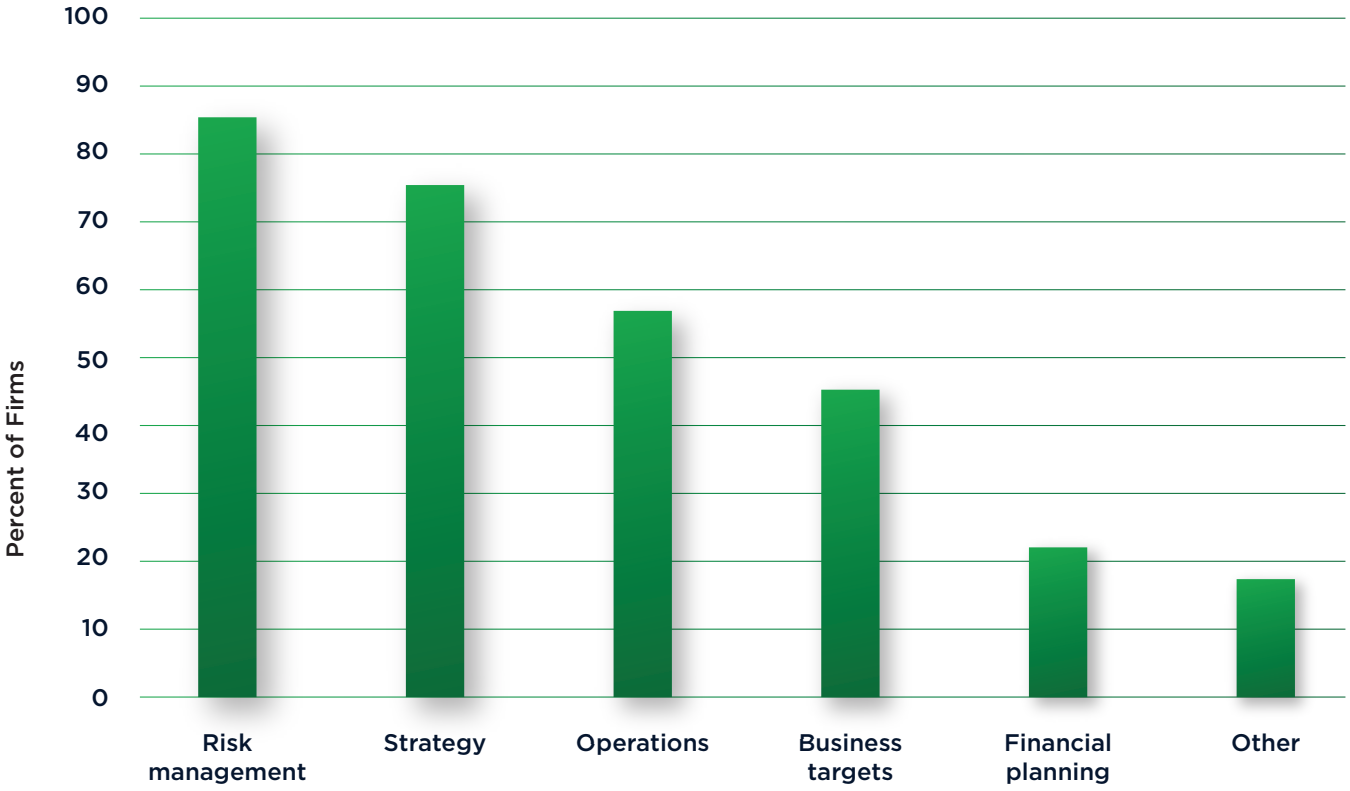


In last year's survey, we noted a disconnect between how firms perceived their climate risk management capabilities and what they actually did. Half of the firms in the 2019 survey with little or no governance or climate risk management described themselves as taking a 'strategic' approach, while a few of the strongest firms described themselves as less advanced.

In contrast, firms in this year's survey appear to be more self-aware, with none of the less advanced firms describing their approach as strategic, and only one of the more advanced firms describing their approach as non-strategic. This increase in self-awareness is to be expected: as firms undertake more work, their knowledge base will increase, they will become more aware of what they don't know and, correspondingly, more realistic in how they describe their capabilities.

Firms have reviewed the impact of climate risks and opportunities on many aspects of their business, with the majority of firms assessing the effect on their risk management, strategy and operations, as shown in Figure 3.

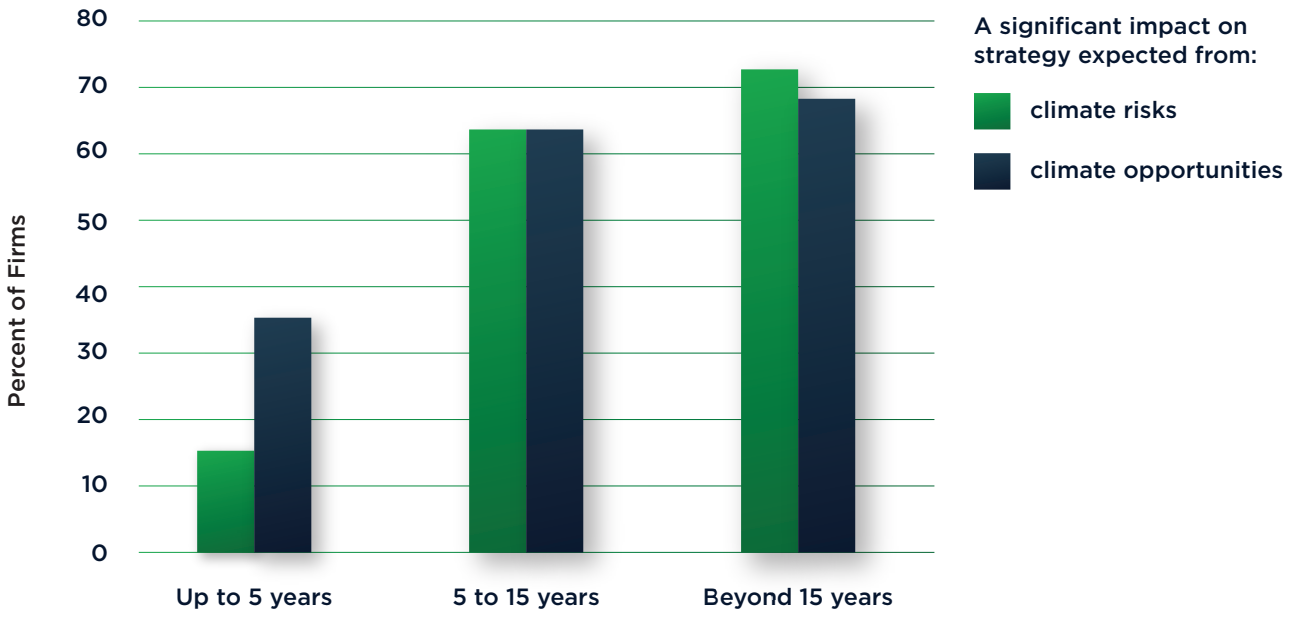
Figure 3: Aspects of Business Reviewed for Climate Risks and Opportunities



To further dive into the strategic impacts, firms were asked how they expected climate risk and opportunities to impact their strategy over the next five years and beyond. Figure 4 shows that relatively few firms anticipate a significant impact on their strategy from the risks associated with climate change over the next five years, but the effects from the risks are expected to increase significantly beyond that period.

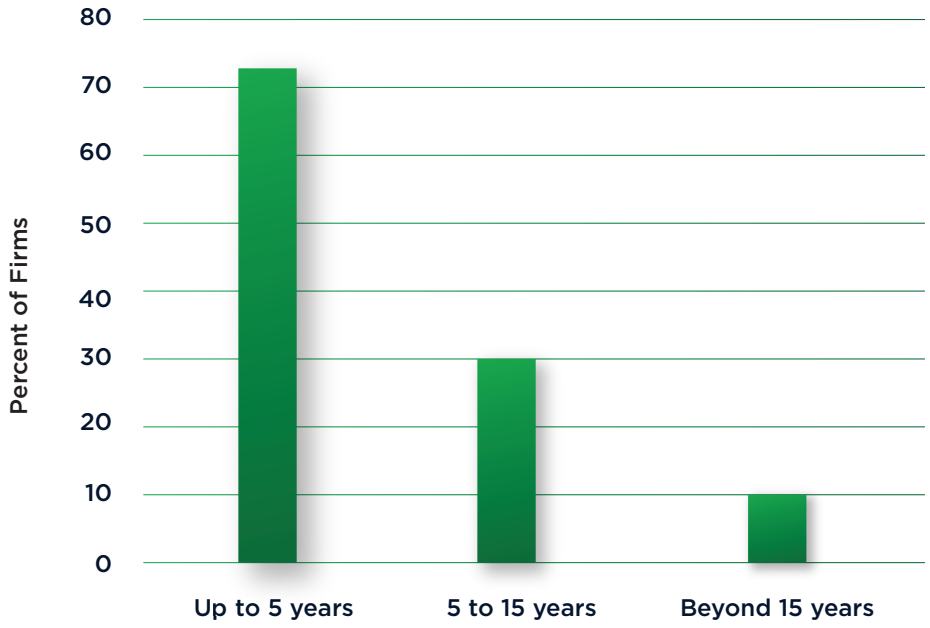
It is a similar story for opportunities, (such as providing sustainable finance or financing and insuring low carbon solutions), which are expected to be become increasingly significant over time.

Figure 4: Strategic Risks and Opportunities



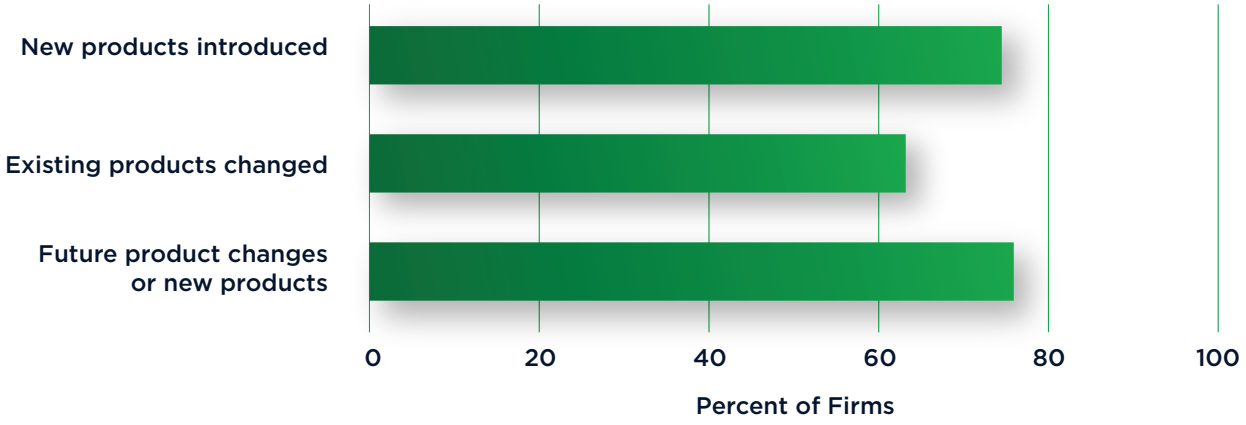
The perception that significant impacts from climate change are expected to be felt in the longer term is further illustrated in Figure 5, which shows that the perceived resilience of firms' strategies diminishes as one looks further into the future. While over 70% of firms believe their strategy is resilient to climate change over the next five years, only 10% of firms believe it is resilient beyond 15 years.

Figure 5: Future Strategic Resilience



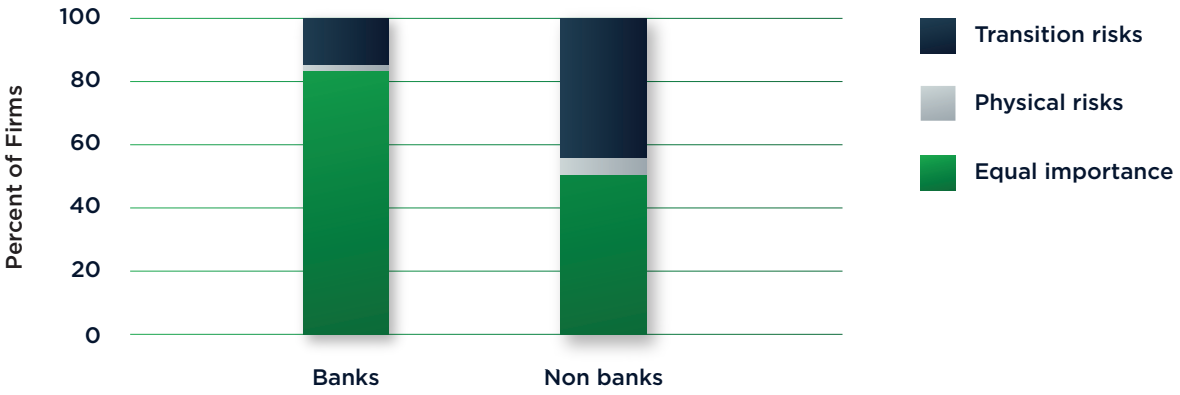
In preparation for changing risks and opportunities, nearly two thirds of firms have either altered existing products (e.g, converting funds into ESG funds, assessing products against green criteria, ceasing to finance coal-fired power stations) or created new products – including green or sustainability bonds, sustainability-linked loans, ESG funds and crop insurance. Many firms have increased financing of renewable energy and green buildings, while a few have introduced green deposits and other products positioned to facilitate the transition to a low-carbon economy.

Figure 6: Products or Services Changed due to Climate Risk



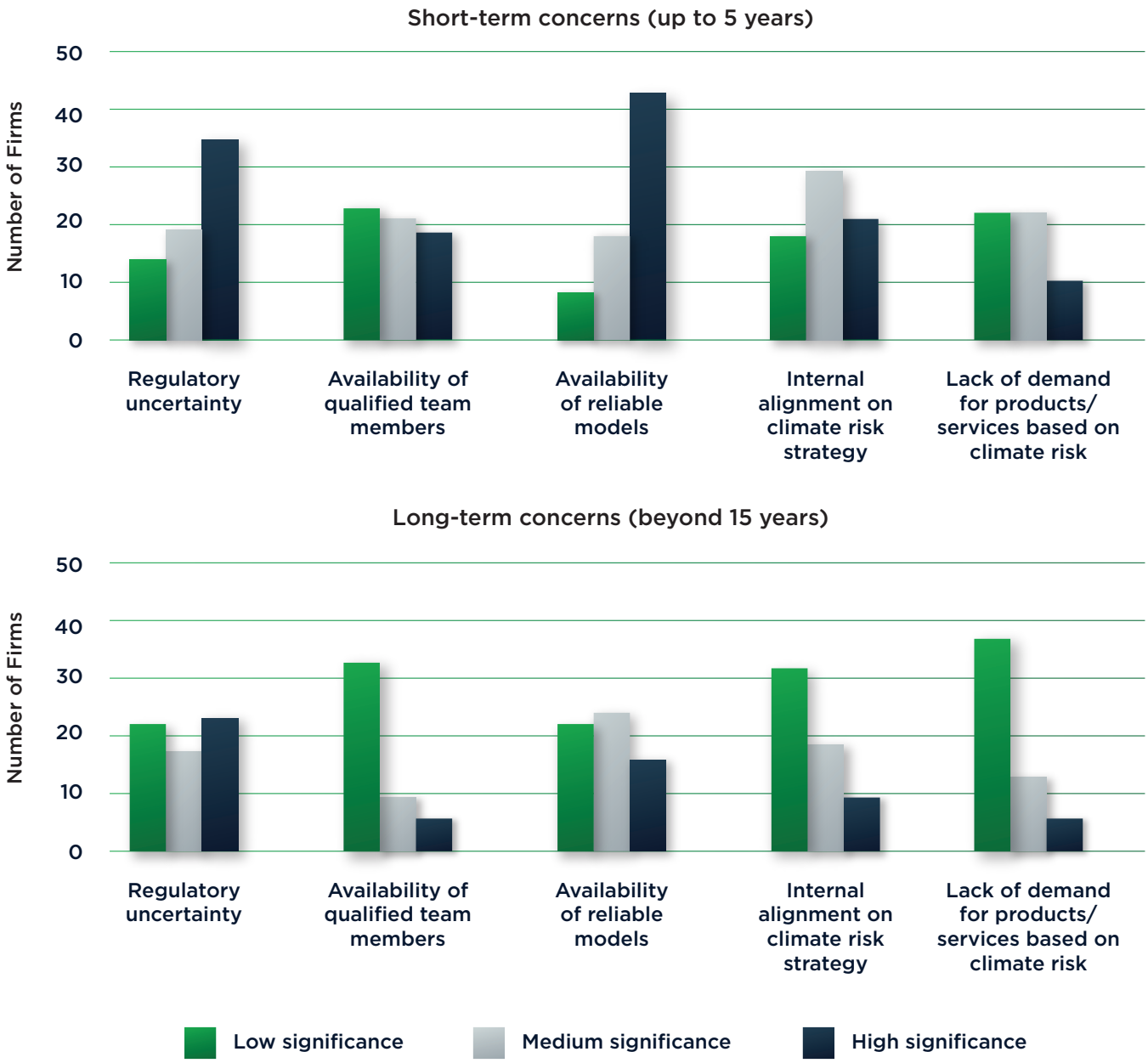
As shown in Figure 7, almost all banks consider that physical and transition risk will have an equal impact on their organization. However, asset managers, insurers and other types of firms are more evenly split between whether transition risks separately or both transition and physical risks are more important.

Figure 7: Physical and Transition Risk – Potential Future Impact



Firms face many challenges as they look to respond to climate risk. Figure 8 shows the significance firms currently place on several challenges over the short and long term.

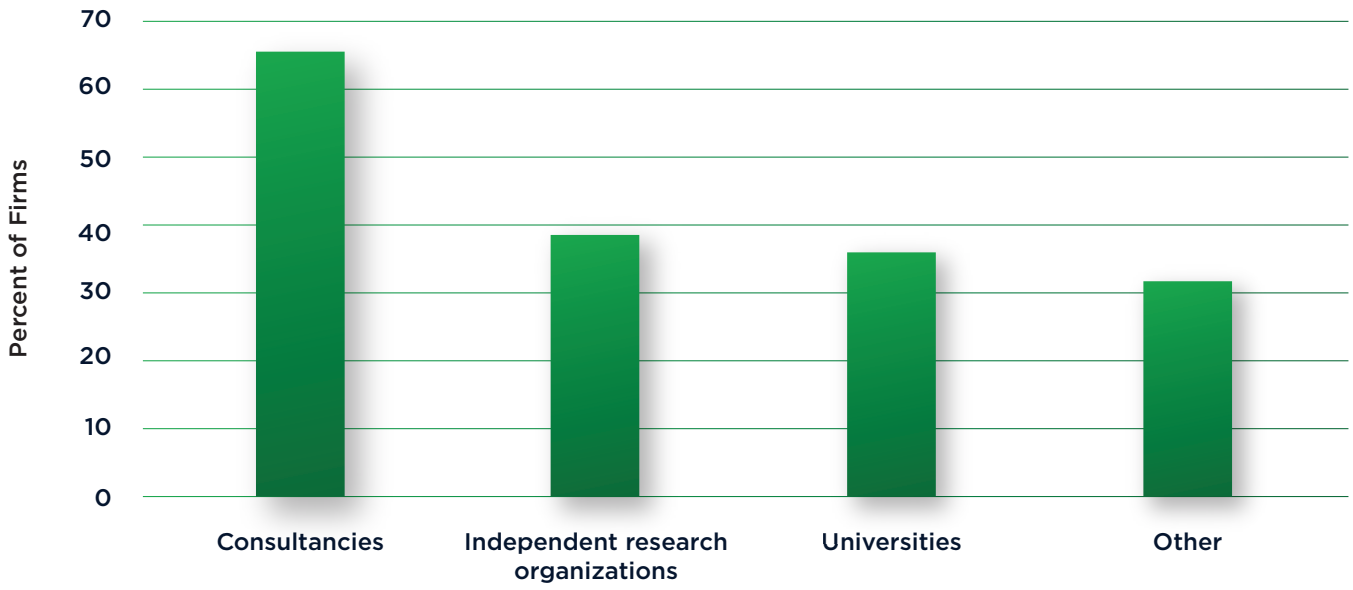
Figure 8: Future Barriers and Challenges



As the figures above depict, traditional risk management tools have not been designed for the longer-term nature of climate risk. Indeed, over the short term, availability of reliable models is a significant concern for the greatest number of firms. However, this worry decreases in the long term, demonstrating optimism that new approaches will be developed and more reliable data will become available.

Firms also rated regulatory uncertainty as a concern of high significance in the short term, as regulatory bodies globally have taken initial steps to integrate climate risk into their monitoring of financial stability. Interestingly, only a third of respondents reported that their regulator evaluated their climate-related risks. All the challenges are expected to diminish over time.

Figure 9: Partnering with External Organizations



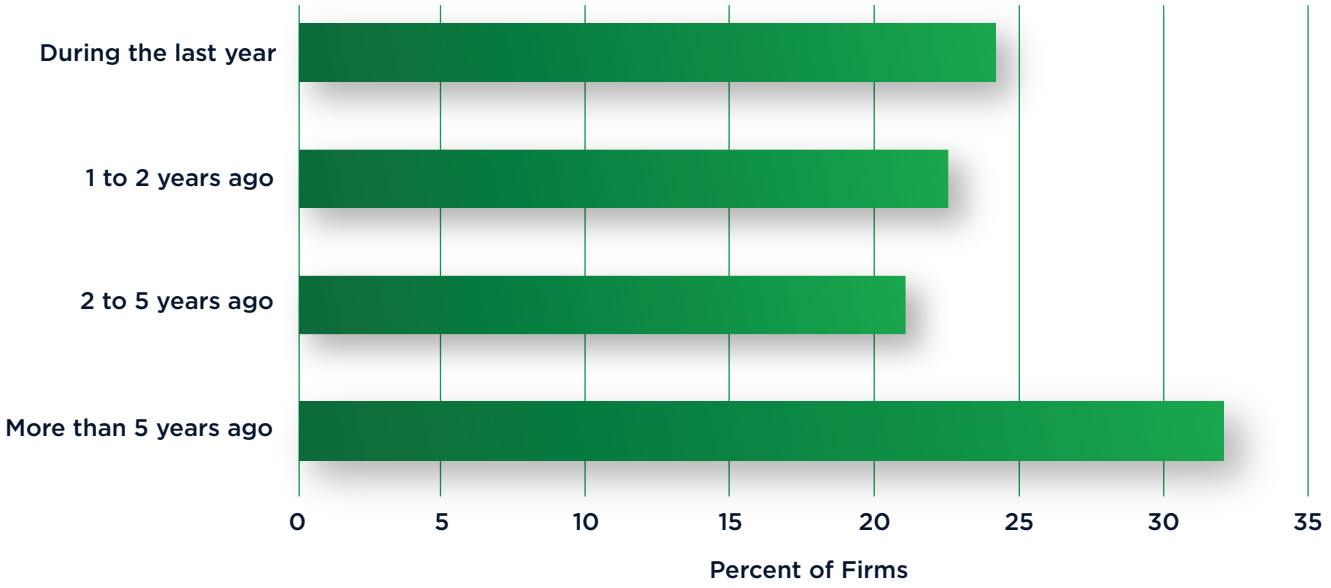
To further embed climate risk management into their business, firms are planning on expanding their capabilities, working with external resources from a range of organizations from universities to consulting companies, as seen in Figure 9.

Risk Management

Next, we examine how firms identify, assess and manage climate risk, and how these processes are being integrated into their overall risk management framework. Firms were asked about their staffing, assessment processes for physical and transition risk and use of models for climate risk.

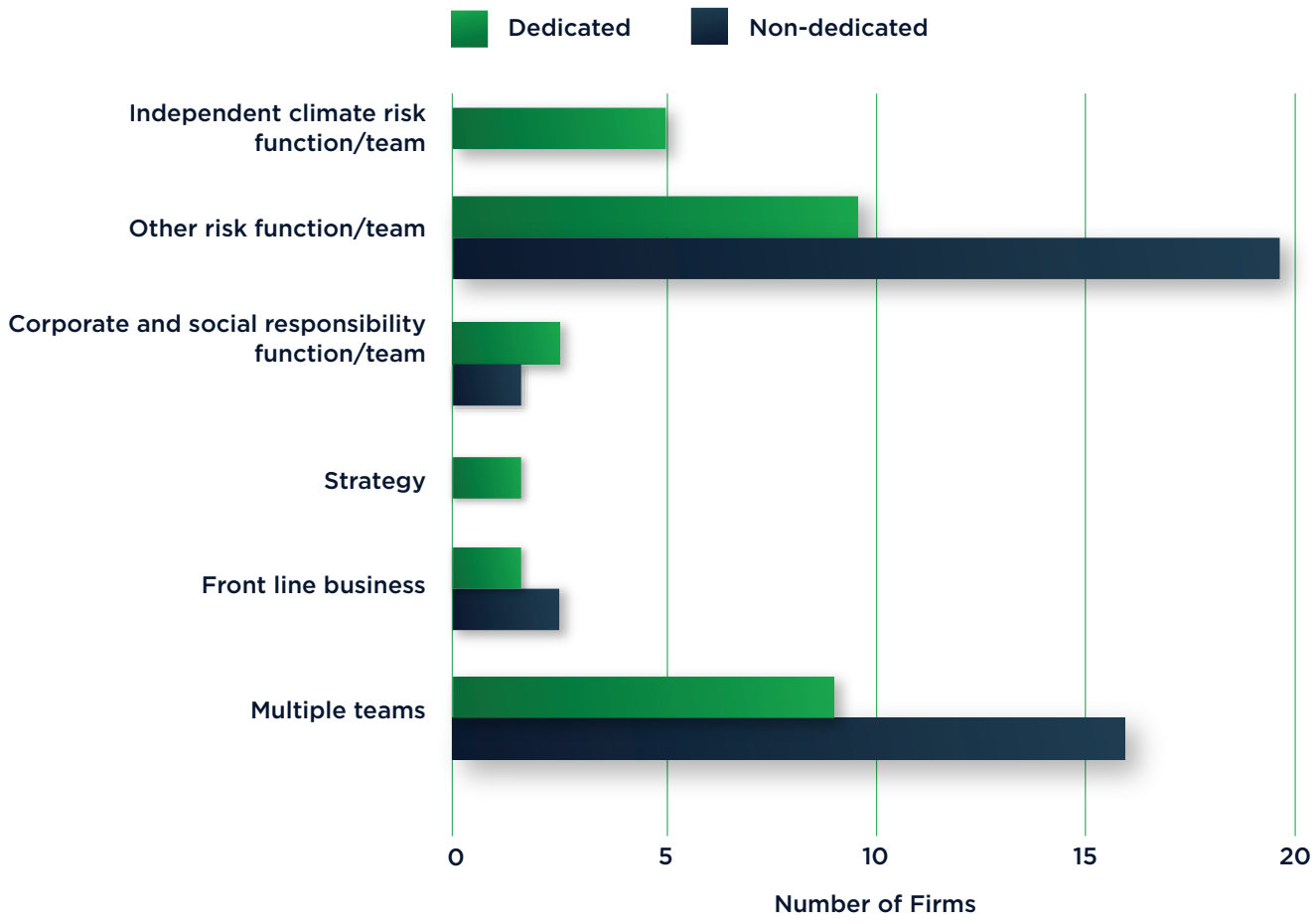
We asked firms when climate risk was first introduced to get a sense of how long they had been managing the risk. A third of firms identified it is a risk that started to be addressed more than five years ago, while a quarter introduced it within the last year. Those firms that have been addressing climate risk over a longer period of time generally have better climate risk management, as it takes time to build up the expertise, internal alignment and business processes.

Figure 10: Time Period for Introduction of Climate Risk



In terms of the way that firms are choosing to organize themselves, it is currently far less common to have a dedicated climate-related risk management function than to have staff in existing functions managing climate risk. ('Dedicated' refers to staff that spend the majority of their time on climate risk.) Most commonly, staff in existing risk functions or across multiple teams are responsible for managing climate risk.

Figure 11: Functions/Teams that Manage Climate Risk

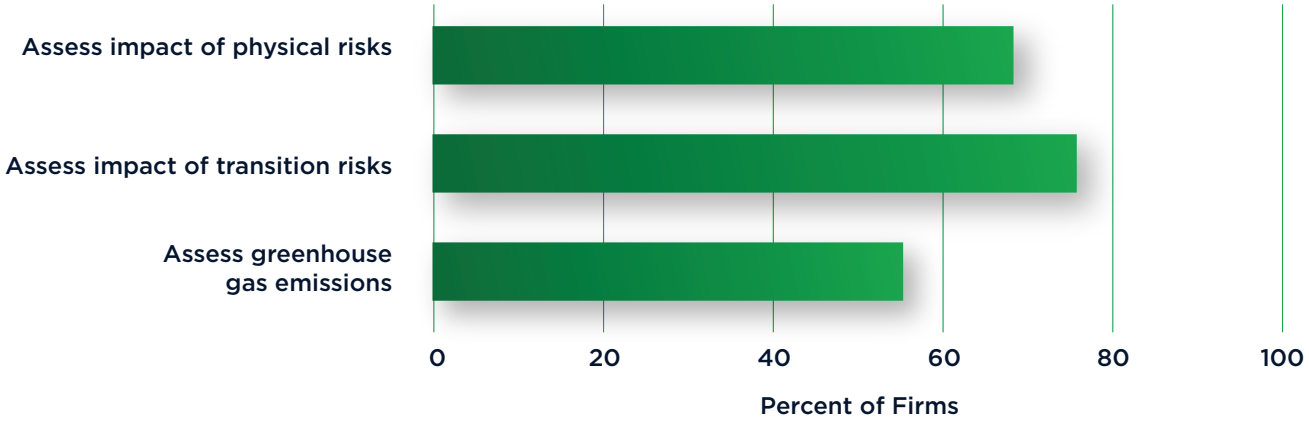


Most climate risk teams are led by senior staff located in the head office. In fact, almost half of the firms in our survey had no junior staff working on climate risk. Most firms noted that they expect the number of employees working on climate risk management within their firm to increase over the next two years, and several believe the increase will be significant.

Assessing the climate risk of their portfolios and their counterparties is an area of focus for climate risk teams. Figure 12 shows that more than two-thirds of respondents assess the impact that physical risks will have on their counterparties/firms they invest in, while more than three-quarters assess the impact of transition risk.

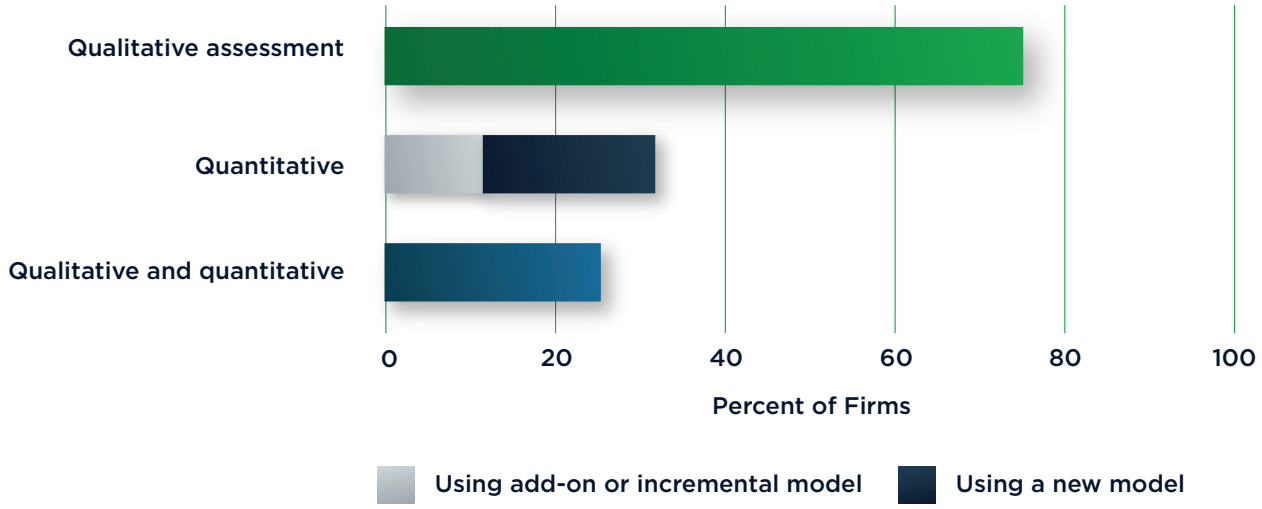
But not all of the firms that assess transition risk are also measuring the greenhouse gas emissions of their counterparties or the firms they invest in (or themselves, for that matter), despite this being an indicator of transition risk. This may be because of data constraints: some counterparties/firms do not measure their greenhouse gas emissions.

Figure 12: Due Diligence of Counterparties' Climate Risk Coverage



At this stage, the vast majority of firms currently use qualitative analysis to assess their counterparties, while approximately one-third of respondents use quantitative analysis, and only a quarter use both approaches, as shown in Figure 13.

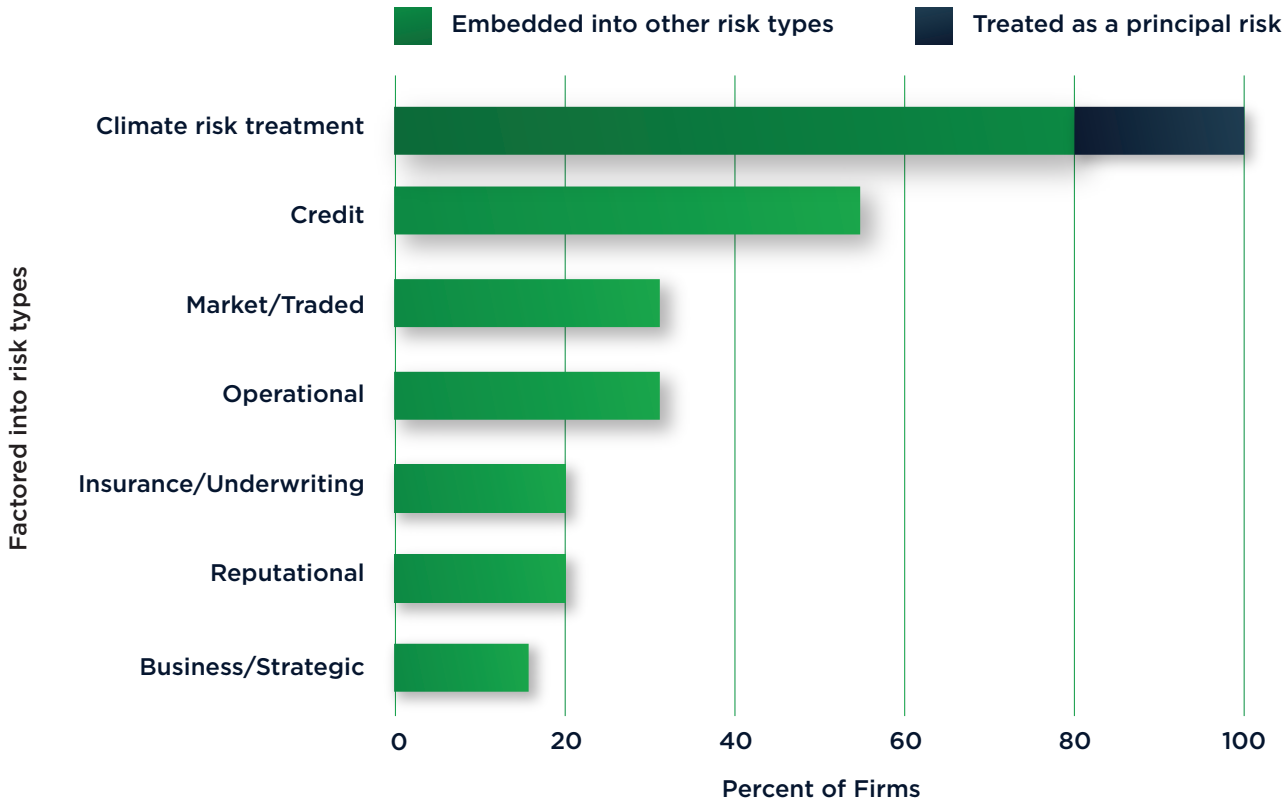
Figure 13: How Counterparties are Risk Assessed



Firms need to decide how they wish to embed climate risk within their risk management framework. There are two main approaches. They can either treat climate risk as a standalone ('principal') risk type or view it as a cross-cutting ('transverse') risk that should be embedded within other existing risk types.

Only a minority of respondents consider climate financial risk as a principal risk. The majority of respondents consider it as a factor in other risk types, principally credit, market and operational risk.

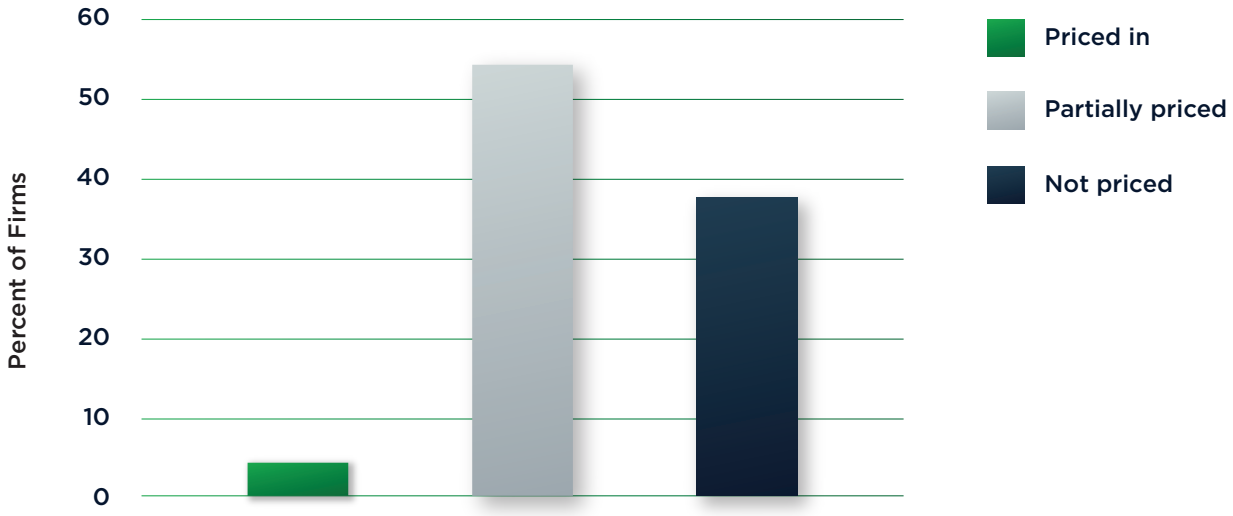
Figure 14: Where Does Climate Risk Fit in the Risk Framework?



While all respondents are considering climate risk for their own business, firms were also asked about the wider market's understanding of climate risk and, in particular, whether these risks are properly priced. Figure 15 shows that only 4% of respondents thought that climate risk has been priced correctly, with the vast majority thinking that it was either not included in the market's pricing of products, or, if it was included, only partially.

Participants noted the challenges of pricing climate risk: namely, the complexity of climate change and forecasting its impacts, the lack of robust and reliable data on climate risk and the difficulty of combining the short-term focus of pricing models with the long-term nature of climate risk.

Figure 15: Market Pricing of Climate Financial Risk



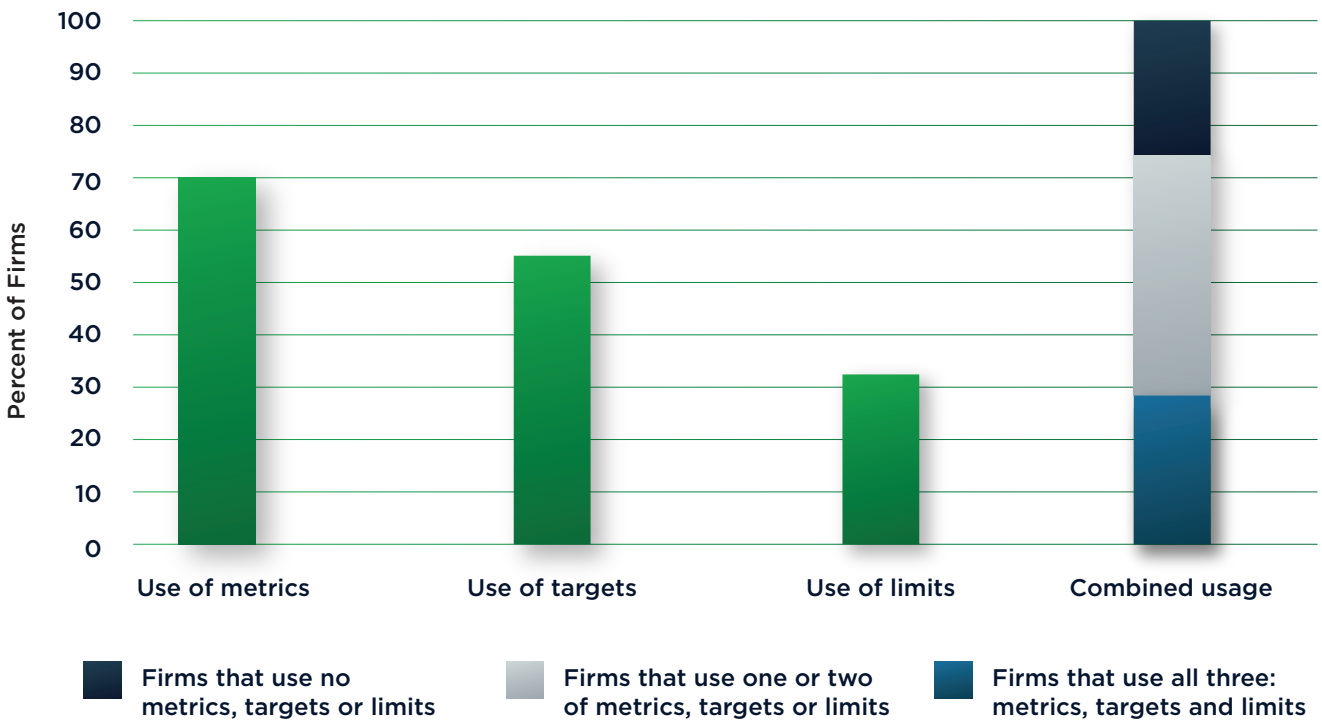
Metrics, Targets and Limits

Participants were asked about the use of metrics, targets and limits within their climate-related risk management processes. For the survey, these terms were defined as follows:

- A metric is a measure used to assess climate risk.
- A target is the outcome the organization aims to achieve.
- Limits represent the worst outcome the organization is prepared to accept without taking corrective action.

Setting metrics, targets and limits for climate risk enables firms to understand these risks and incorporate them into their risk appetite statements. We wanted to understand how many firms are exercising these good practices.

Figure 16: Use of Metrics, Targets and Limits across Respondents



Around two-thirds of firms in our sample use metrics, around half use targets, but only around a third use limits (see Figure 16). Interestingly, there is a large divergence of practice: a quarter of firms are not measuring their climate risk at all, while a similar percentage are using all of metrics, targets and limits.

As Figure 17 shows, each are used for different purposes. Metrics and limits are more commonly used for managing asset risks, whereas targets are more commonly used for managing the firms' own operations – e.g., measuring carbon emissions. Only a small number of respondents are measuring their liability risks, but this practice tends to be more common among insurers – which is not surprising, given this sector's focus on its liabilities.

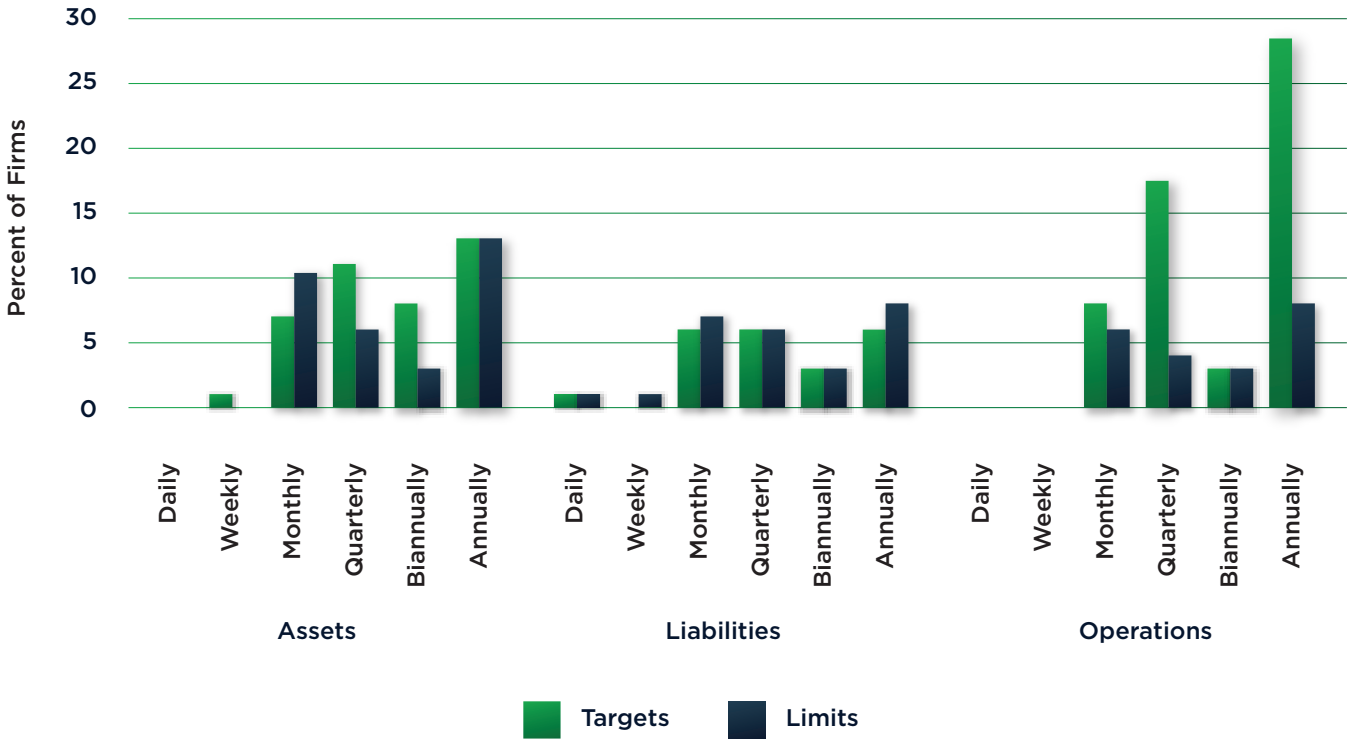
Figure 17: Use of Climate Risk Metrics, Targets and Limits

In the cases where firms are using metrics and limits for managing asset and liability risks, these are generally part of the firm's risk management framework and are aligned with the firm's strategy. Where targets are used for managing asset and liability risks, they are always aligned with the firm's strategy; however, they are not always aligned with the risk management framework.

Operational targets are also always aligned with the firm's strategy, but are generally not aligned with the risk management framework; given that these targets are concerned with firms' own operations, this is perhaps not a surprise.

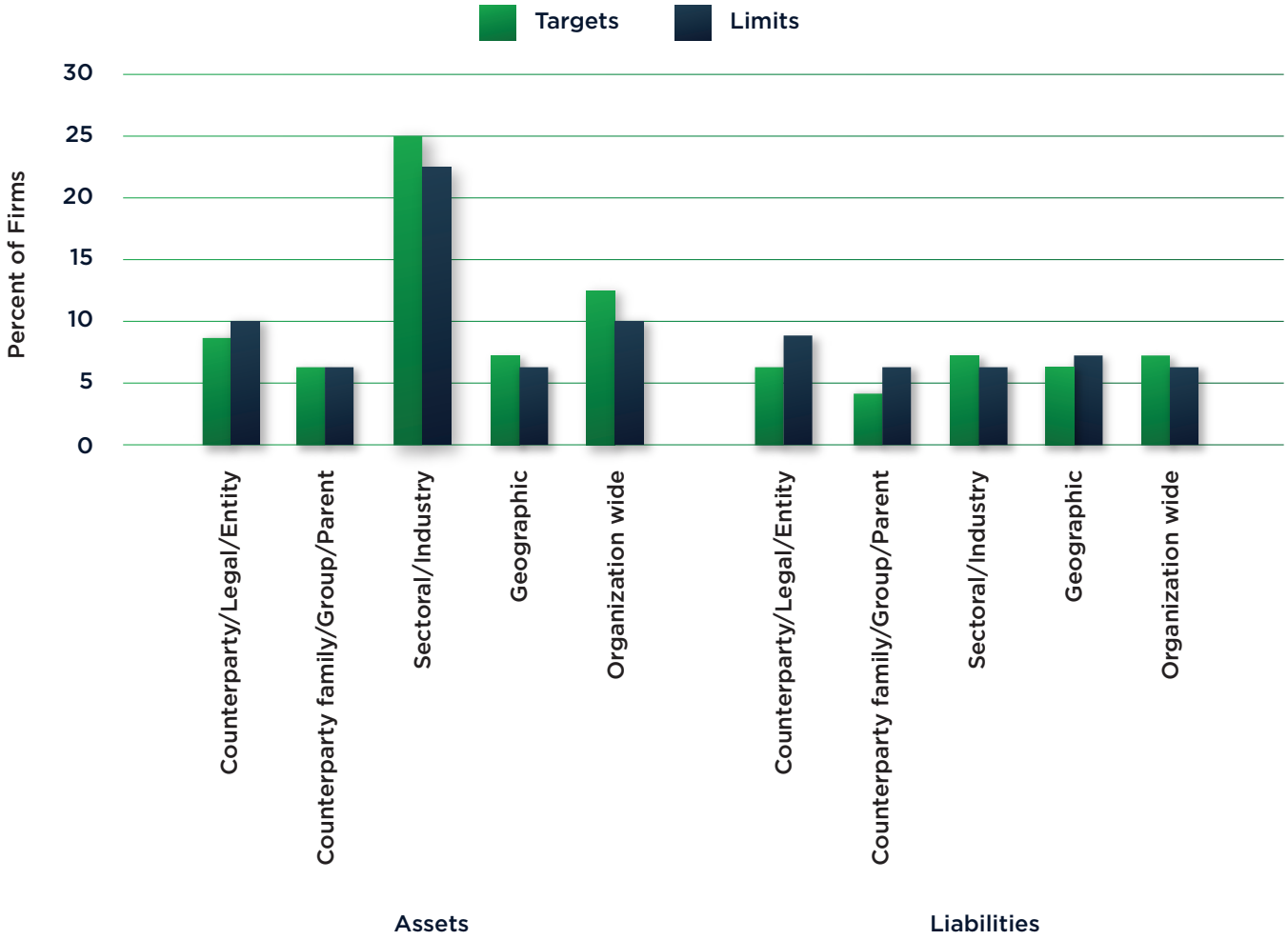
As Figure 18 shows, operational targets are most commonly monitored at an annual or quarterly frequency, which probably aligns with reporting cycles. However, asset and liability targets are commonly monitored annually, quarterly and monthly, with a few firms even monitoring them weekly or even daily, which probably aligns with established portfolio monitoring cycles.

Figure 18: Frequency of Monitoring Targets and Limits



Digging into target and limit setting a little further, Figure 19 shows that respondents set targets and limits more often to manage assets than liabilities. Asset targets and limits are set most commonly at the sectoral/industry level, whereas liability targets and limits are set across a range of levels, from counterparty to organization-wide.

Figure 19: Levels for Setting Targets and Limits for Assets and Liabilities

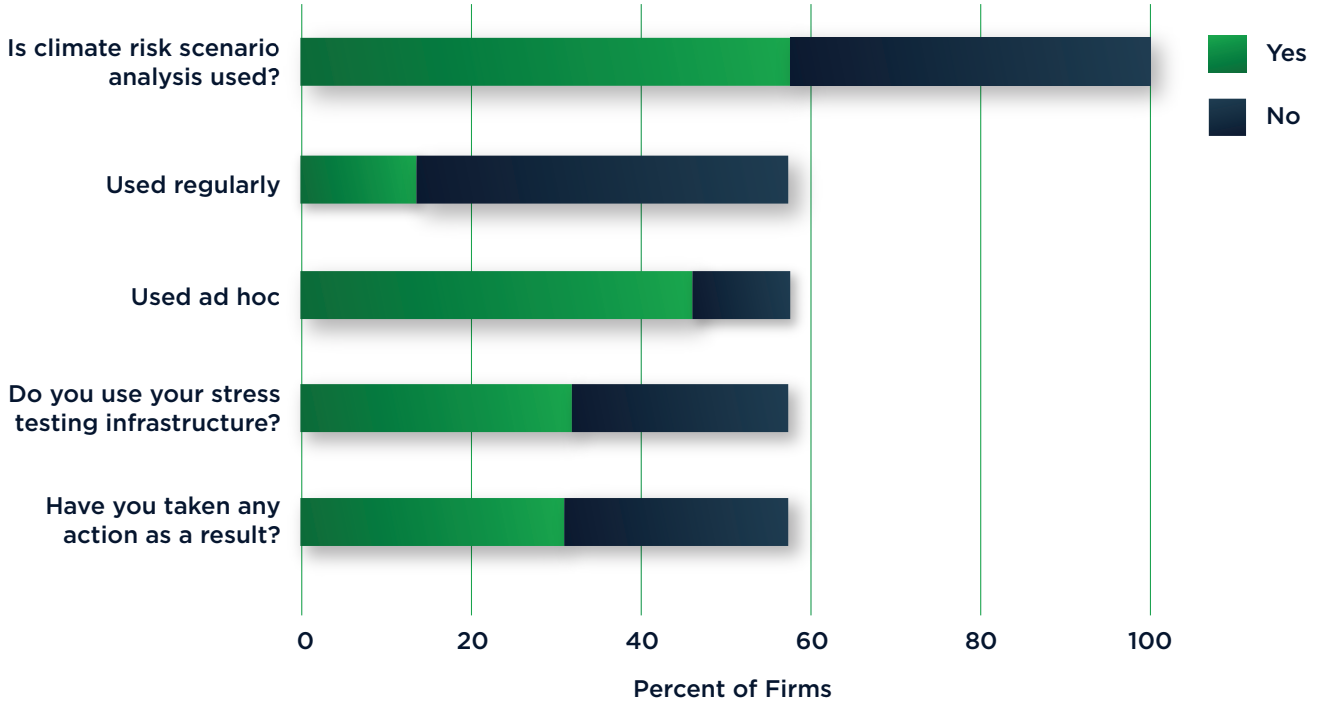


Scenario Analysis

Given the range and timing of possible climate-related impacts, scenario analysis is an important and valuable tool firms may utilize in developing climate-change strategies.

Participants were asked about their current use of scenario analysis for assessing climate risk and the actions taken as a result of these analyses.

Figure 20 : Use of Scenario Analysis



As Figure 20 (above) shows, just under 60 percent of respondents stated that they use scenario analysis. These firms, moreover, tend to use it more on an ad-hoc basis than as a regular part of risk assessment, and about half of those performing climate scenario analysis employ their main stress testing infrastructure.

More than half of the firms using scenario analysis have taken action – an increase from last year. Primarily, those that did take action improved disclosures, but a few firms also changed portfolio composition, strategy, lending practices, underwriting and products or services.

Most of the firms currently not using scenario analysis plan to use it within the next two years.

Of the firms using scenario analysis, as per the 2019 survey, the most common scenario horizons are one to five years and 10 to 30 years (see Figure 21), which enables firms to understand both the short-term and the longer-term impacts.

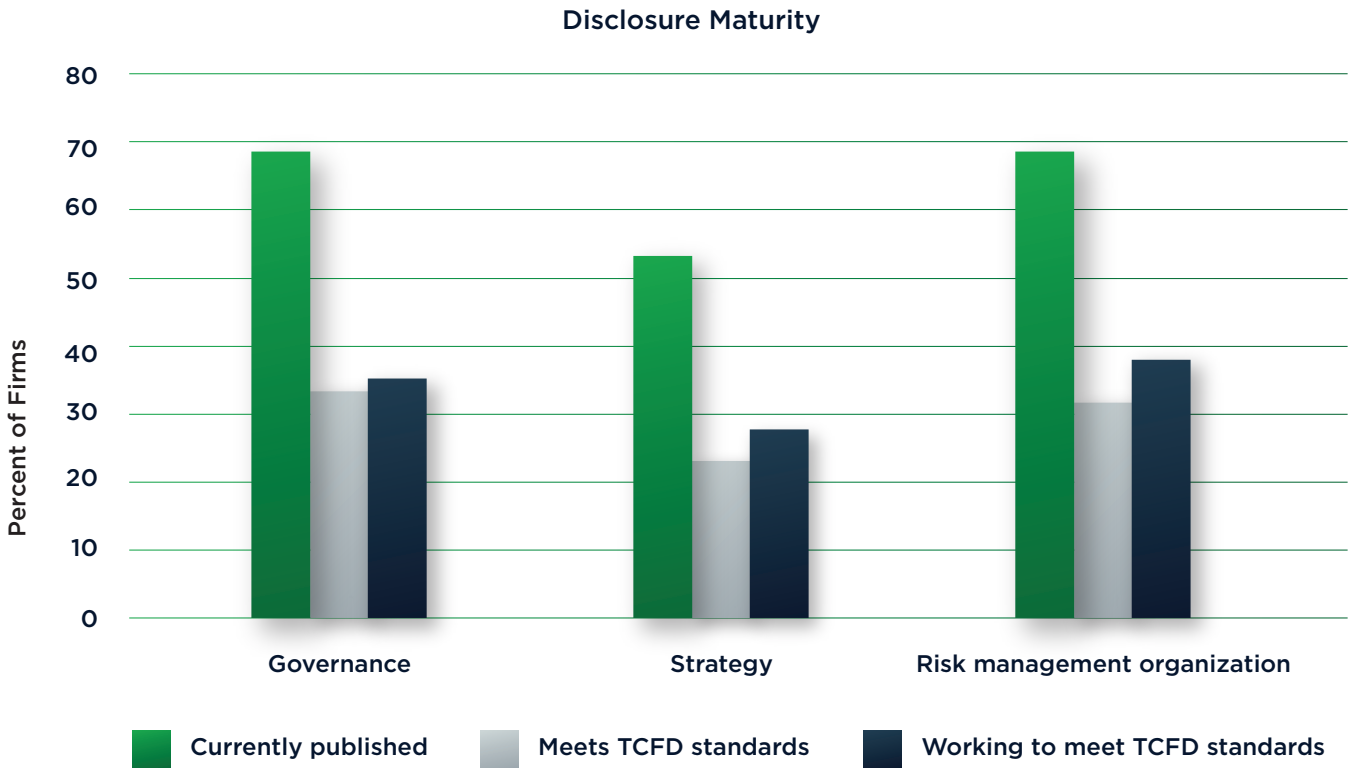
Figure 21: Time Horizon for Scenarios

Disclosures

Participants were asked about their disclosures concerning governance (board oversight, senior management involvement); strategy (how long the firm has been assessing climate risk, the time horizons over which risks and opportunities have been identified, the aspects of the business that were affected, and whether the strategy is resilient to further climate change); and risk management (the process for identifying, assessing and managing climate risk).

We wanted to understand how many firms disclosed this information, and the progress they are making to meet the TCFD recommendations. Figure 22 shows that firms' disclosure practices vary, with strategy lagging governance and risk management.

Figure 22: External Disclosures and TCFD requirements



Over two-thirds (49 respondents) disclosed the governance-related data, although only half of these disclosures met the TCFD standards. The same number of firms disclosed information on risk management, with slightly fewer firms considering it met TCFD recommendations. Strategy, meanwhile, is the area with the fewest disclosures.

Across all categories, many firms are working to meet the TCFD standards in the future.

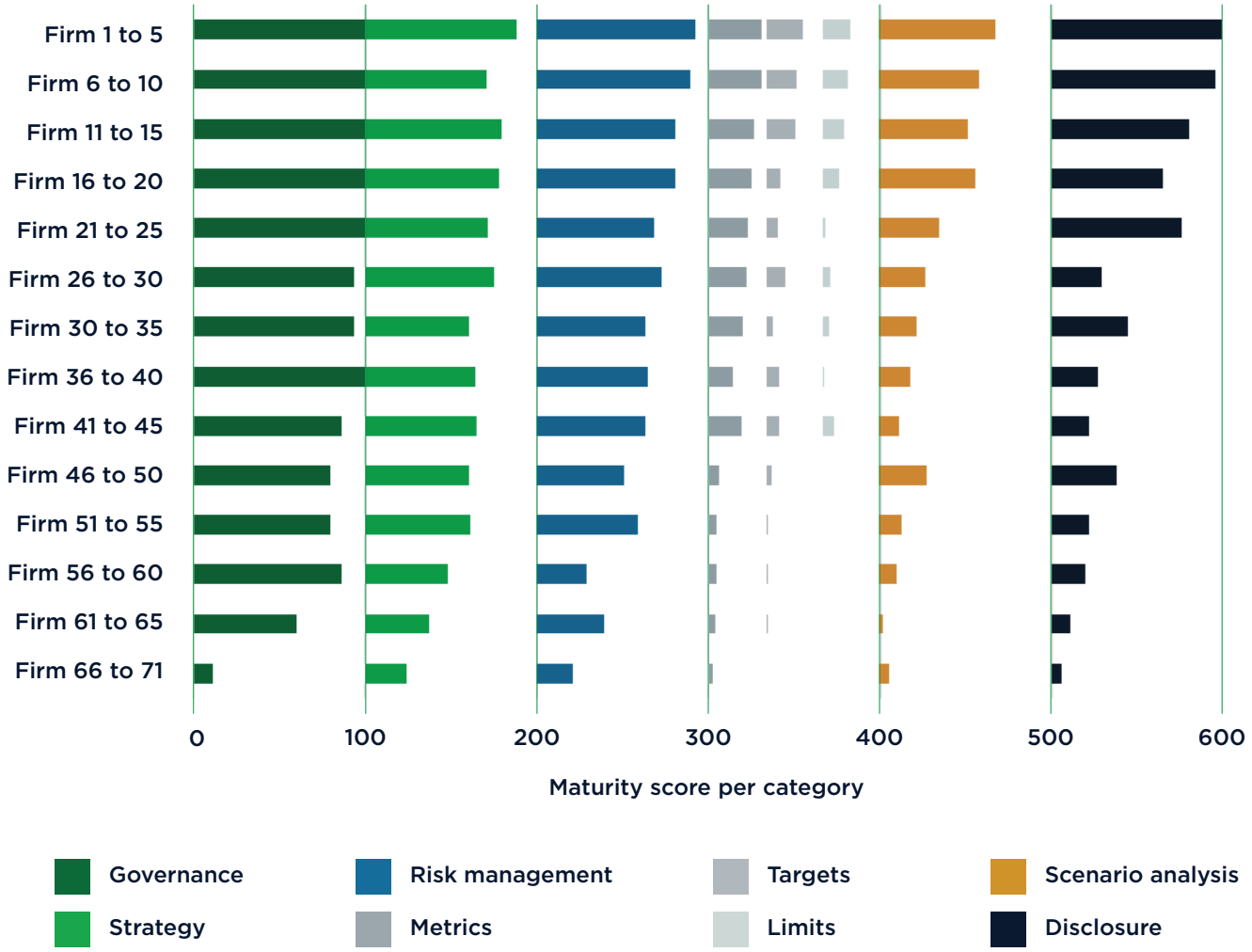
Putting It All Together: A Maturity Model for Climate Risk Management

A maturity model is a useful measure of progress in building a set of capabilities, and accordingly helps firms prioritize future improvement areas. We refined the maturity model for climate risk management developed for the 2019 survey, adding a risk management category and adding questions to strategy and scenario analysis categories.

Figure 23 shows the scores firms received for each dimension. The completeness of each color within its 100-point bar provides a quick snapshot of current capabilities within that dimension.

Firms 1 to 5, for example, score very well on governance and disclosure, and a little less well on strategy, risk management and metrics. Firms 66 to 71, in contrast, do not score anything or score low for most categories, and do not score at all for targets or limits.

Figure 23: Maturity Model of Climate Risk Management



Most firms scored well on governance, having board-level governance and C-level responsibility for climate risk. Firms also scored adequately on strategy and risk management. The majority of firms have metrics, more than half use targets and about a third use limits.

Just over half of the firms use scenario analysis to understand the effect of climate risk on their business. Generally, firms with less or no board/senior management responsibility for climate risk also are less advanced with their strategy, risk management, metrics, targets, limits, scenario analysis and disclosure.

Figure 24: Range of Practice Across Firms

Figure 24 (above) adds all the scores into a total, to give a better sense of the gap between the best in class (Firms 1 to 5, which score around 500 out of a theoretical maximum of 600) and the weakest in class (Firms 66 to 71, which score on average 70).

As we saw in 2019, the maturity model shows a wide distribution of progress in climate risk management, with some firms already having more advanced capabilities, and others having just getting started.

Conclusions

The governance of climate risk is evolving at financial institutions, with more and more boards and senior managers knowing they need to manage climate risk. While many are still at the early stages, interactions (e.g., approval of lending standards and disclosing in line with TCFD) are becoming more detailed and meaningful.

Most firms see climate risk impacting their business strategies beyond five years. The availability of reliable climate risk models is a significant worry in the short term, and the availability of relevant data is often cited as a challenge. However, concerns about the availability of reliable models decrease over time – a sign of optimism that innovation in climate risk modeling and procuring relevant data will have some breakthroughs.

For most firms, regulatory uncertainty is regarded as highly or moderately significant in both the short and medium term. Keeping all of the cited concerns in mind, the number of employees working on climate risk management is expected to rise over the next two years at most firms, with several expecting the increase to be significant.

At this stage, most firms are taking a qualitative approach to assessing climate risk. This aligns with the limited use of the other quantitative tools – namely, metrics, targets and limits, and scenario analysis.

The overall message from this year's survey is that more firms have started addressing climate risk qualitatively from the top, with increasing board-level engagement and responsibility. Firms are also starting to consider strategic implications.

The quantitative aspects of risk assessment, measurement and monitoring are the least developed areas, because they require more data and more precise definitions, which will take time to establish. Firms that started earlier are further along that journey.

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