Task Force on Climate-related Financial Disclosures (TCFD) Recommendations Global Progress Report for the Banking Sector December 2022

accenture



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Foreword

The global effects of climate change are undeniable. Not only from the 'code red' scientific findings of the Sixth Assessment IPCC reports, but also the numerous extreme weather events that we have seen in the last year alone such as devastating floods in Pakistan, wildfires in Europe and record breaking 40° heat in the UK to name a few.

Despite these events, physical risk is not as high a priority as transition risk for many financial firms, probably because they expect transition risk to have a more direct and immediate financial impact. However, as historic emissions will cause much of the global warming for the next few decades, it must be embedded into the risk assessments of any planning and investments.

As temperatures rise, the frequency and intensity of these extreme events will also increase. Preventing global warming of more than 1.5°C requires immediate and determined action. However, progress since COP26 has been slow. This year's summit in Sharm El-Sheikh made little progress on limiting temperature rises to within the bounds set by the Paris agreement in 2015. Indeed current emissions reductions pledges put us on course for a temperature rise of approximately 2.5°C above historic levels. But this is not an opportunity for banks to reduce efforts to support emissions reductions, but rather, it makes their role even more important. They need to continue to strive to limiting warming to 1.5°C, whilst preparing for outcomes that higher temperature increases might entail.

Clear and consistent climate disclosures are an invaluable tool for the banking sector to develop and frame their response to climate change, as well as demonstrating to stakeholders and the broader economy that they fully understand and are taking account of climate change in business decisions—or not.

The TCFD is becoming the cornerstone of many existing and upcoming disclosure frameworks and regulations such as the SEC climate disclosure, European Sustainable Reporting Standards and the TCFD's sibling, the Task Force on Nature-related Financial Disclosures. Therefore, getting to grips with the TCFD sooner rather than later will put banks in good stead to fulfil the rising expectations regarding the quality of climate disclosures. This is not a quick win and requires time to gather reliable and measurable information to be used in decision making. Moreover, especially as occurrences of greenwashing are ever more apparent in the market, being clear, accurate and accountable in disclosure should be at the forefront of banks' minds. A

The analysis presented in this report illustrates specific examples of emerging leading practice across industry. But although progress is being made, there is still room for improvement in how climate risks and opportunities are quantified over different time horizons and integrated into strategic planning. Banks can also show more significant commitment to delivering on transition plans and net zero goals with not only strong emission reductions in own operations, but by engaging with companies to support real world decarbonization. This is an urgent action required of banks to help prevent the accumulation of devastating systemic risks over coming decades.

I hope that banks take the findings of this report to heart and fully embed the recommendations of the TCFD into their business-as-usual reporting, to tackle climate issues head-on and drive forward to a low carbon future.

Jo Paisley President, GARP Risk Institute

Joanna faisley

Authors' Note

This report is the third annual detailed assessment of individual banks' disclosures by our Financial Services Sustainability team. Our ambition in undertaking this research is to create further transparency across the industry and, through year-on-year comparisons of our analysis, objectively establish the progress that is being made towards a low-carbon economy. Furthermore, we want to highlight the key areas where more work is still to be done and provide our view on how to approach this.

Since the TCFD first published its framework and recommendations in 2017, each year has seen an increasing number of companies disclosing climaterelated financial information in line with the TCFD recommendations. Endorsement across all industries now represents a combined market capitalization of ~USD 25 trillion¹, showing a true desire to better understand the financial risks posed by climate change and embed meaningful actions into business models to support and drive forward the response to the climate crisis and its devasting impacts. Internationally, over the last few years, climate change issues have gained more focus and policy momentum within the financial services industry and are increasingly aligned with the TCFD, for example the US SEC's Climate Disclosure regulation and the UK's climaterelated reporting regulations. COP26 in Glasgow was seen as a unique opportunity for many large banks to make headline-grabbing commitments around climate action and many of the world's leading countries are now adopting mandatory climate disclosures.

As companies begin to focus on the mandatory disclosure requirements, there is a heightened emphasis on the need for corporate climate transition plans², with an anticipation that these will provide an enhanced layer of transparency into companies' actions and ambitions towards managing the impact of climate change. A climate transition plan outlines a company's business strategy with regard to how it will adapt to and mitigate the challenges posed by climate change and move towards a low carbon economy, with a focus on reduction targets, milestones, actionable initiatives and effective governance processes. As part of our 2022 TCFD maturity assessment, we found that over a third of TCFD-disclosing banks have incorporated some form of a transition plan into their reporting, ranging from a brief mention of transition targets to fully scoped-out transition plans. Several banks mentioned their ambition to become net zero by 2050 in their annual reports, whilst others included sections on their transition plans in separate TCFD reports. Whilst the level of detail in the plans varies, it is evident that transition planning is an area of increased focus for many financial institutions, with room for far more developed reporting and detailed underlying of granular targets in future.

We hope you find this report to be a valuable resource in your own organization's TCFD journey.

Signed, The Authors

Hannah Peter, James Fitzgerald, Alana Robinson, Harriet Lloyd, Luca Iovino, Mehmet Hikmet, Paul Jennings, Yuli Jiang

Executive Summary

Five years have passed since the Task Force on Climate-related Financial Disclosures (TCFD) released its final recommendations report. Throughout this timeframe, we have seen an increase in the global uptake of the framework and the transparency of banks' reporting. However, further progress is still needed to provide more standardization on the disclosure of the costs, opportunities and risks of climate change for organizations across the world.

The purpose of this report is to provide a progress assessment on banking sector disclosures since the previous <u>Global Progress Report</u>, released in Q1 2021. It specifically considers the critical role that banks need to play as enablers of capital to help mitigate the impact of climate change and build the infrastructure required for a future lower-carbon economy.

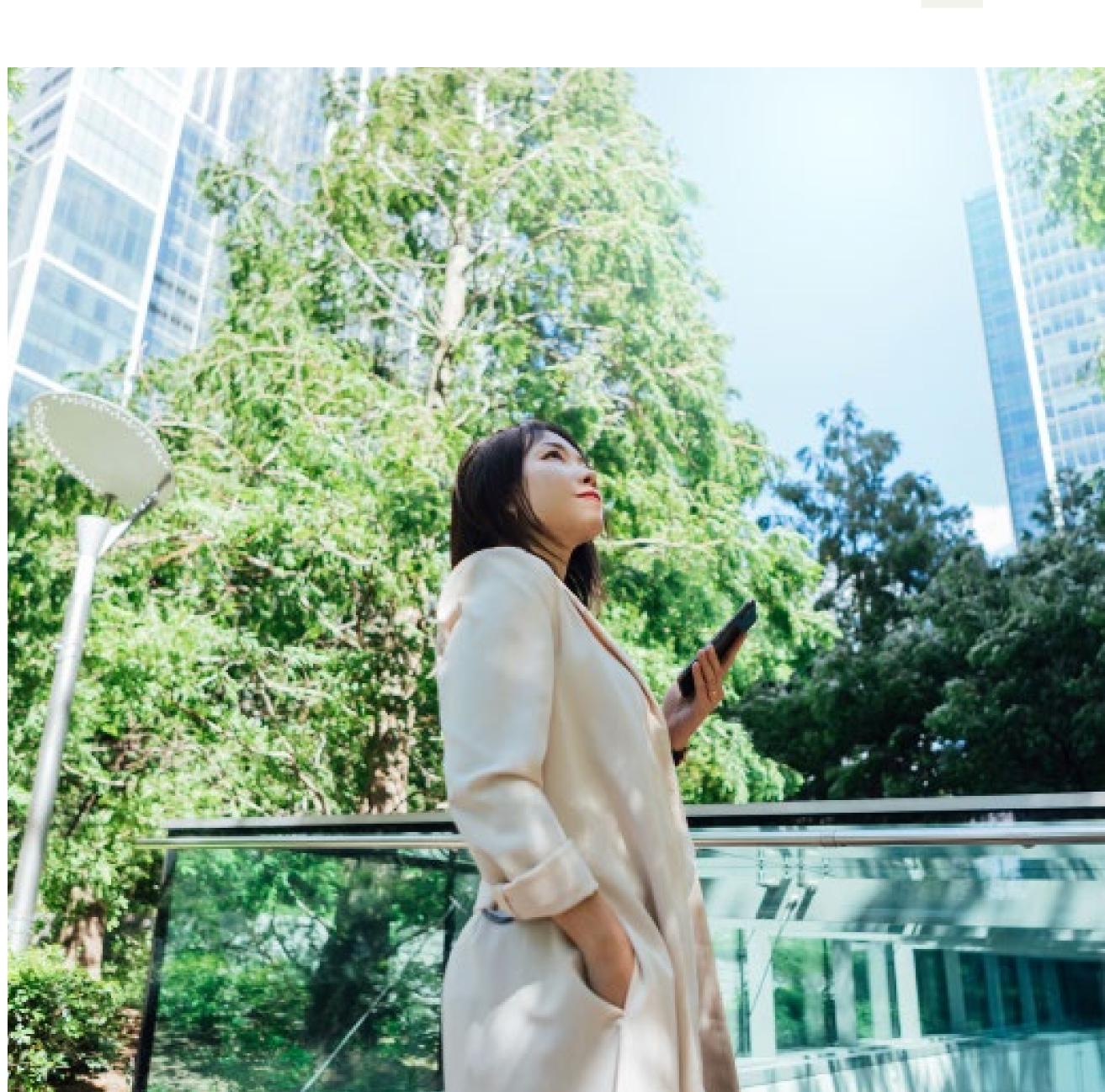
Our analysis of progress has focused on three areas:

Industry coverage: What proportion of the banking market is endorsing and disclosing in line with the TCFD framework?

Maturity assessment: How mature are the disclosures based on the recommendations of the framework?

Best practice: What do "Advanced" disclosures in the sector currently look like?





Results Summary



257 banks have **endorsed** the TCFD's recommendations

WHICH ACCOUNTS FOR

60%

of global banking assets

PROGRESS SINCE Q2 2020

+131% increase in the number of banks

+18pp

increase in global banking assets represented



Region with largest growth potential: Latam, Middle East and Africa 16 banks endorsing TCFD

7% of regional banking assets



Leading region: Asia Pacific 140 banks endorsing TCFD

MATURITY ASSESSMENT

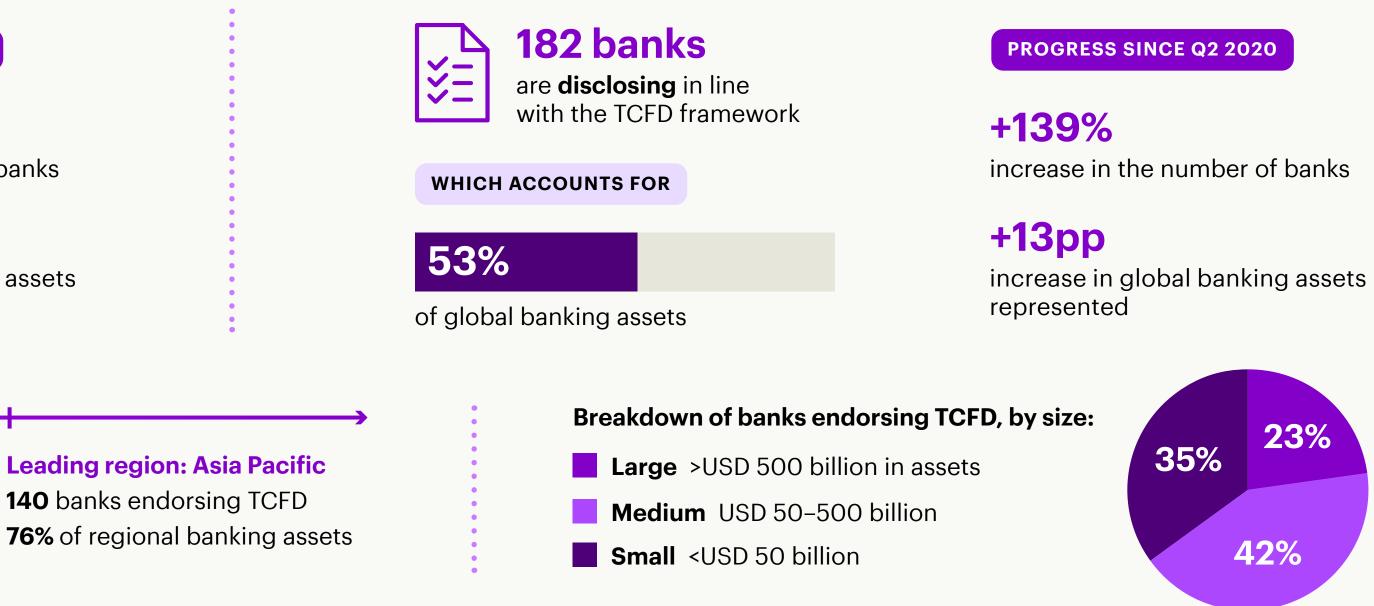
DISCLOSURE QUALITY

Banks that have previously produced TCFD reports show improved clarity and structure in their disclosures, as well as further progression in the implementation of key initiatives.

GHG EMISSIONS

Scope 1 and 2 GHG emissions and operational footprint management is well understood and presented, however disclosure of Scope 3 financed emissions could be better improved; with some firms disclosing partial information or nothing at all.

INDUSTRY COVERAGE

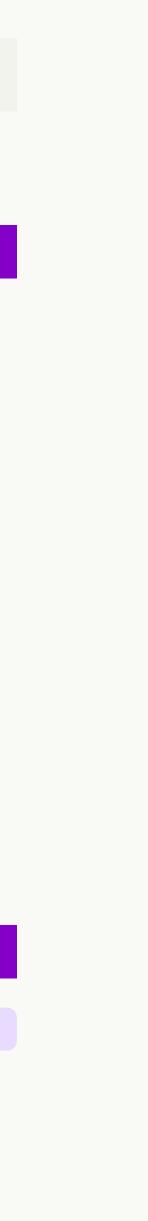


	QUANTITATIVE EVIDENCE
I	The most challenging remains the strategy
1	pillar, particularly in the disclosure of how climate issues have been integrated into
;	strategic planning and the quantitative

evidence used to assess the potential impact of the risks and opportunities identified over different time horizons.

TRANSITION PLANS

Over a third of disclosing banks have incorporated some form of a transition plan into their reporting. Setting net-zero targets is a first step, but in general further development is needed to validate and quantify progress towards targets.



Industry Coverage

There are 257 banks³ that have endorsed the TCFD framework, which accounts for ~60% (USD 108.3 trillion) of global banking assets:

- There are an additional 146 banks that have endorsed the framework since the publication of our 2021 report⁴, mainly small and medium banks, which represent over 90% of the entire New Disclosers on the TCFD Endorsers list. This demonstrates the growing priority of the climate agenda across the sector.
- The leading region for TCFD adoption is Asia Pacific, with 140 banks now endorsing the framework. Asia Pacific is also the largest net contributor to banks newly endorsing the TCFD since our previous report (99 banks).
- There is limited market coverage in "Other" banking regions (7%), with only 16 banks endorsing in Latin America, the Middle East and Africa combined. There is still a lot of progress to be made in terms of TCFD disclosures and endorsements within these regions.
- Focusing on buy-in from larger banks still holds significant potential for increasing the market penetration of TCFD endorsement. Currently, 20 of the world's top 100 banks have not yet endorsed the TCFD. If this group were to support the framework, global market share would increase from 60% to 68%.

Banks that have started disclosing in line with the TCFD framework are defined as those that already include such disclosures within their public reports (e.g. annual reports, ESG reports, corporate social responsibility reports, etc.).

assets (USD 96.1 trillion).





• There are currently 182 banks disclosing against the framework, accounting for ~53% of global banking





Maturity Assessment

Public disclosures released before 15th June 2022. the cut-off date for this report, were assessed for each bank which endorses the TCFD framework and rated in terms of its progress in each of the four TCFD Pillars.

To complete this, the TCFD recommendations have been segmented into 12 themes. Each bank is given a rating for each of these themes: "Not Started", "Beginner", "Intermediate" or "Advanced" (see alongside), in line with the maturity methodology developed by our Financial Services Sustainability team⁵.

Overall, the average maturity of disclosures has remained consistent since our 2021 report⁶ (~66% disclosures were scored "Intermediate" or "Advanced").

This can primarily be attributed to the significant increase in the number of New Disclosers releasing TCFD reports for the first time in 2022, which offset, to some extent, the year-on-year increase in maturity in those banks that have previously disclosed against the TCFD framework:

- to 85%.
- or "Advanced" stages.

• When looking only at banks that have previously disclosed against the TCFD framework, the percentage of "Intermediate" or "Advanced" disclosures increases

• "Metrics and targets for greenhouse gas (GHG) emissions and related risk" ("environmental operational metrics") is the most mature recommendation, with 78% of disclosing banks in the "Intermediate"

• "Resilience of the organization's strategy, taking into consideration different climate-related scenarios" is the least mature recommendation, with only 56% of disclosing banks in the "Intermediate" or "Advanced" stages. However, this disclosure has seen the largest uplift in maturity of disclosures, despite the increase in the number of New Disclosers. This is possibly due to the increase in guidance and attention in this area.

Accenture Methodology

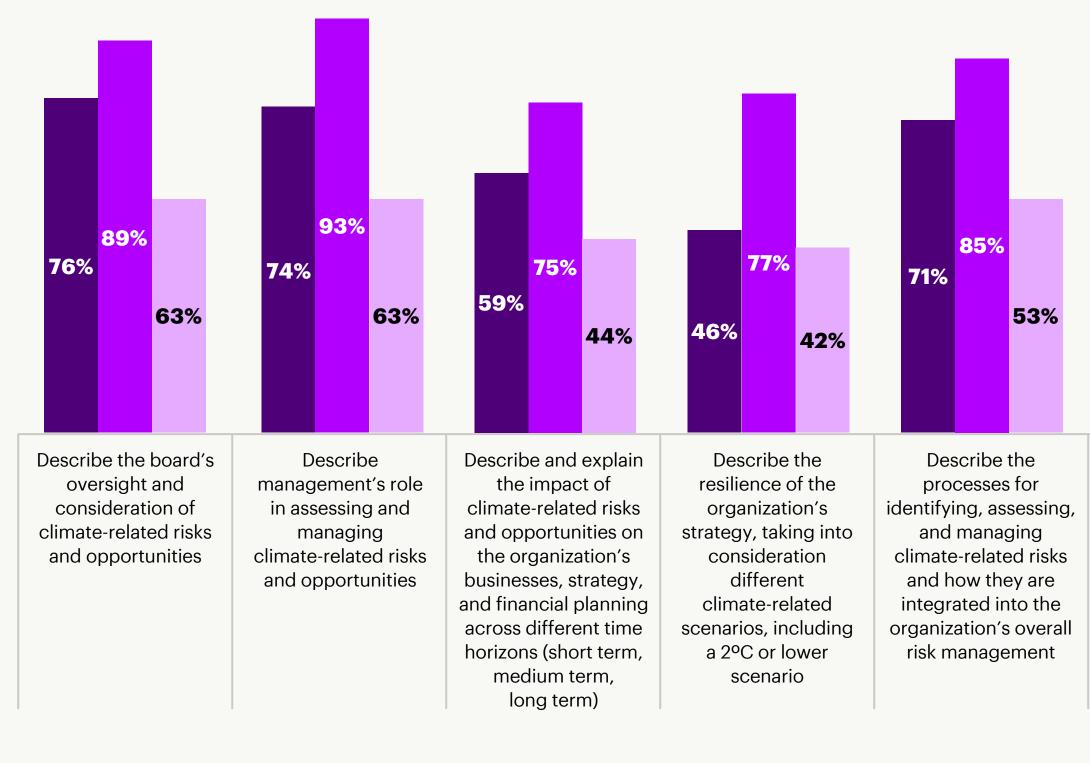
"Not Started": a bank that fails to provide any evidence against a theme, e.g., fails to mention or showcase a high-level plan towards progress in a theme.

"Beginner": a bank in the vision and conception stages, whereby it provides evidence of a plan or commitment to progress, e.g., endorsing global initiatives.

"Intermediate": a bank in the design or early stages of implementation. It is starting to evidence and talk competently about its progress. It is beginning to embed these processes into its business strategy and setting targets to showcase its commitment.

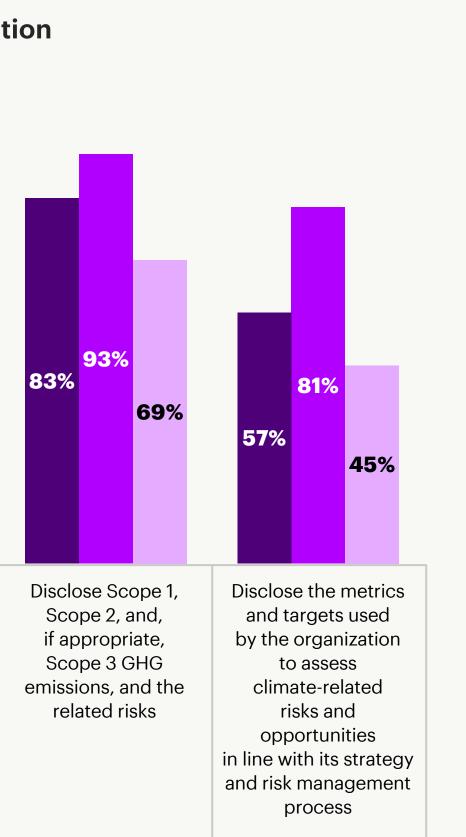
"Advanced": a bank that showcases its implementation, discloses progression through tracking metrics, and plans for further expansion and target setting. It can provide tangible evidence of progress against the theme, e.g., quantifiable impacts, highlighting resultant positive changes and identifying areas for further improvement.

Figure A: Share of "Intermediate" or "Advanced" disclosures by TCFD recommendation



2020 2022 (Existing Disclosers only) 2022 (New Disclosers only)

Figure A shows that "Existing Disclosers" (banks that have previously disclosed against the TCFD framework) have achieved a higher proportion of "Intermediate or "Advanced" disclosures than assessed in 2020. Banks that are reporting against the framework for the first time - "New Disclosers" - are shown to have less mature disclosures.





Best Practice and Recommendations

Through our Financial Services Sustainability team's assessment of over 480 sources, this report provides a review of emerging best practices and recommendations for banks to manage climate-related risks and opportunities more effectively and to enhance their TCFD disclosures:

Governance

- Providing clear illustrations of governance structures related to climate, flowing up and down the organization all the way to the board.
- Establishing cross-division forums with a specific mandate to increase the consistency of climate adoption across the organization.
- Linking executive compensation to sustainability metrics and outcomes, with more ambitious firms linking sustainable financing and investment metrics.

Strategy

- Identifying key climate risk drivers for the bank across different time horizons and the rationale underpinning the prioritization of these.
- Demonstrating a framework or policy on client engagement to support client transition and inform climate risk analysis.
- Disclosing the results of scenario analysis, including quantitative results and financial impacts under industry-recognized climate scenarios.

Risk Management

- integration of climate risk.

Metrics & Targets

• Disclosing a sector and geographical-level portfolio analysis of transition and physical risks, going beyond traditional high transition risk sectors and linking the analysis to client engagement activities.

• Evidencing how climate risk has been adopted into the enterprise risk management framework and providing practical examples of how existing risk management processes have been adjusted for the

• Demonstrating an increasing maturity in the technology solutions used to monitor and manage climate risk.

• Presenting a clear breakdown of the key drivers of operational GHG emissions, alongside a feasible low-carbon transition plan and a summary of the decarbonization levers at the bank's disposal.

• Establishing an internal carbon pricing program.

• Displaying dashboard insights of sector-level portfolio pathway analysis, including alignment to the firm-wide commitments and governmental objectives

Banks should look to consolidate TCFD disclosures and include them in annual reports—or provide a link to the relevant document-to support investor reviews. Where disclosures are integrated into existing reporting structures or other frameworks such as the Global Reporting Initiative (GRI), it is useful to provide a map of relevant sections against the TCFD framework to assist in reviews of information.

Closing Remarks

Despite global challenges, such as extreme weather events, COVID-19, and the war in Ukraine, the results, as detailed in this report, show a clear increase in the number of banks endorsing the TCFD from previous years: a positive outlook.

The banking industry has made significant progress over the last five years in developing its climate disclosures alongside the global ambition to tackle climate change. In general, we have seen the maturity of a bank's TCFD disclosure improve with each report released. This shows the importance of transparent sharing of information to help drive international standard setting and the sharing of best practice, and will also put banks in good stead to prepare for and respond to the growing need to address the impact that financial and business decisions have on nature through the Task Force on Nature-related Financial Disclosures (TNFD), whose final recommendations are due to be published in early 2023.

However, further progress is needed, particularly in terms of developing quantitative disclosures. Despite increased information on climate management, there is still a demand for more significant commitment to transition plans from the public, investors and governments. Declaring net zero goals is the first step, but a more concrete, established plan to transition to a lowcarbon economy, translating Paris Agreement targets and other climate objectives, needs to be matured, clearly established and developed into tangible portfolio alignment plans.

To support the transition to a low-carbon economy, more standardized disclosure is needed to facilitate comparisons and benefit from lessons learnt. Prescriptive industry guidance, partnered with more stringent regulatory guidance, would lead more organizations to declare their progress towards net zero as well as support banks through the transition. The standards set out by the TCFD are the industry benchmark for climate-related reporting and are increasingly being aligned with policy momentum within the financial services industry, as well as being used as the foundation for further reporting frameworks.

The International Sustainability Standards Board (ISSB) established at COP26, for example, is building upon the TCFD framework to meet the demand for comparable, high quality and consistent sustainability reporting. This is an exciting development for reporting in terms of connecting sustainability with financial performance and will help to provide further quantitative evidence to



support banks' climate commitments and demonstrate implementation. It will require banks to disclose more granular information as well as introduce additional specific disclosures such as industry-based metrics and Scope 3 emissions. We expect it to become a key part of analysis over the next few years following the expected issue of the final standards in 2023.





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Industry Coverage

The focus of this section is to assess the current state of TCFD coverage in banks globally. Mehmet Hikmet reviews:

- Banks that are endorsing TCFD, by size and global market share
- Key insights and themes on TCFD Disclosers and Endorsers
- Progress and market penetration in the adoption of TCFD reporting across regions



Mehmet Hikmet FS Sustainability Analyst Understanding the global trends in TCFD gives us valuable insight into the status of the industry, enabling us to identify regions of potential growth and expansion for the framework.

Currently, 257 banks endorse the TCFD framework, accounting for ~60% of global banking assets (USD 108.3 trillion). Year on year, this equates to an 18 percentage point increase in market share and an additional 146 bank endorsements since our previous <u>Global Progress Report</u> (when 111 banks had endorsed the framework) and a 20 percentage point increase since our first Global Progress Report in 2019.

This remarkable increase in endorsement over the last two years has bucked the trend of stagnation in growth for TCFD global market penetration. Previously, the strongest year for TCFD endorsement was 2017 (the year in which the final recommendations were published). This emphasises the current level of focus on climate change factors more broadly within the banking sector. Of all endorsing banks, the percentage of those classified as large (those with assets of over USD 500 billion) dropped from 46% in 2020 to 23% in 2022, driven by a significant increase in medium / small bank endorsements over the assessment period. This fits the current theme of increased investment and attention towards climate-related disclosures for all size segments of the financial services industry, rather than only large banks.

Of the 257 endorsing banks, 182 are disclosing under the TCFD framework. This accounts for 53% of global banking assets. Interestingly, the majority of banks that are already disclosing against the framework are medium-sized (44%) or large (30%), whereas small banks make up the largest proportion of banks that are endorsing the framework only and are yet to release their first TCFD report.

Figure 1: Endorsement trends by bank size

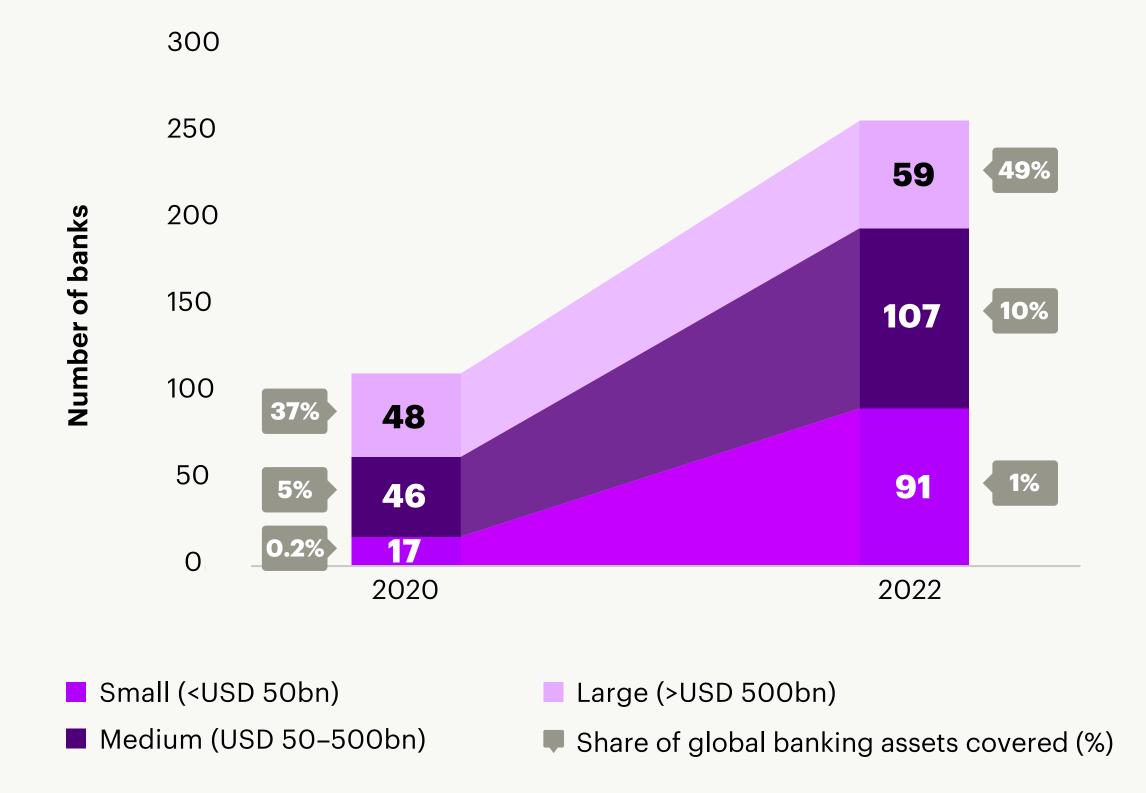


Figure 1 shows that the number of participating banks has more than doubled in the last two years. The percentage of global assets covered has increased by less than 50% as small and medium sized banks make up the bulk of new disclosers. Currently, 20 of the S&P100 banks have not yet endorsed the TCFD. Global market share could reach 68% if all top 100 endorsed the TCFD.

Of the additional 146 banks that have endorsed the framework since 2020, 42% are medium-sized banks (between USD 50 billion and USD 500 billion in assets), and 50% are small banks. This reiterates that the climate agenda is becoming a priority beyond the larger banks.

As of 9th May 2022, 20 of the world's top 100 banks (S&P100)⁷ have not endorsed the TCFD. If this group were to support the framework, global market share would increase to 68%. Although there has been progress within this group—19 banks have stepped up to endorse the framework over the two years—focusing on buy-in from larger banks still holds significant potential for increasing the market penetration of TCFD Endorsers.

Thirteen of the 20 S&P100 banks that have yet to endorse the framework are domiciled in China. This is therefore a crucial country of focus for future engagement efforts.

Regional Coverage

Figure 2: Endorsement and market penetration of TCFD in the banking industry

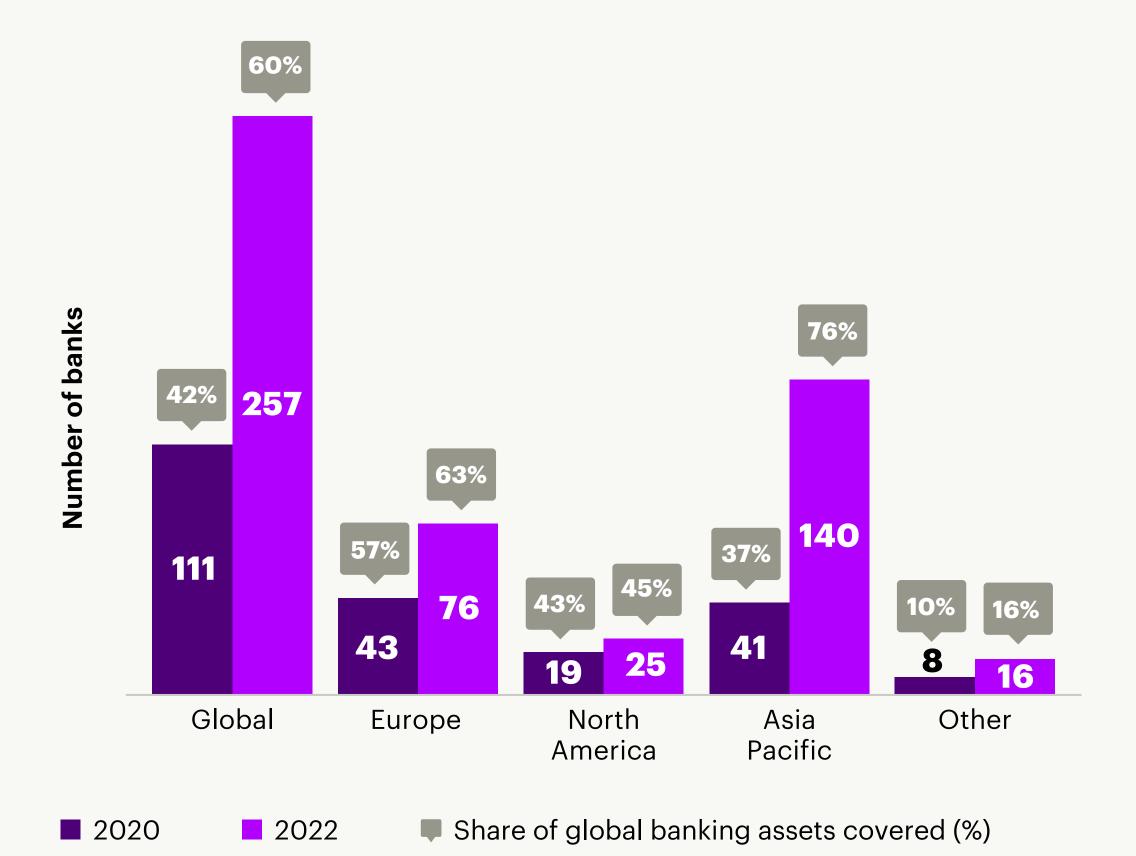


Figure 2 shows that Asia Pacific has now overtaken Europe and North America to become the leading region in market coverage, with 99 new endorsing banks taking the share of assets covered up to 76%.

There has been promising growth in market coverage across all regions. This is particularly evident in Asia Pacific, where the uptake has more than doubled.

This is driven by the increased regulation of Asian banks and industry support in the form of working groups, networks and forums (for example the TCFD consortium).

Asia Pacific is now the region with the most banks endorsing the TCFD (140), having surpassed Europe (76 banks) by achieving the largest increase (99 newly endorsing banks) since our previous report. Japan deserves special recognition, having provided almost half of all new TCFD endorsements over the last two years.

There is limited market coverage in "Other" banking regions (16%), with only 16 banks endorsing in Latam, the Middle East and Africa combined. Although these are smaller banking regions (accounting for 7% of global banking assets⁸), there is still progress to be made in terms of TCFD disclosures and endorsements. Given the significant uptake in Asia Pacific over the last two years, particularly by smaller banks, we expect to see a similar trend across the "Other" banking regions in the future.

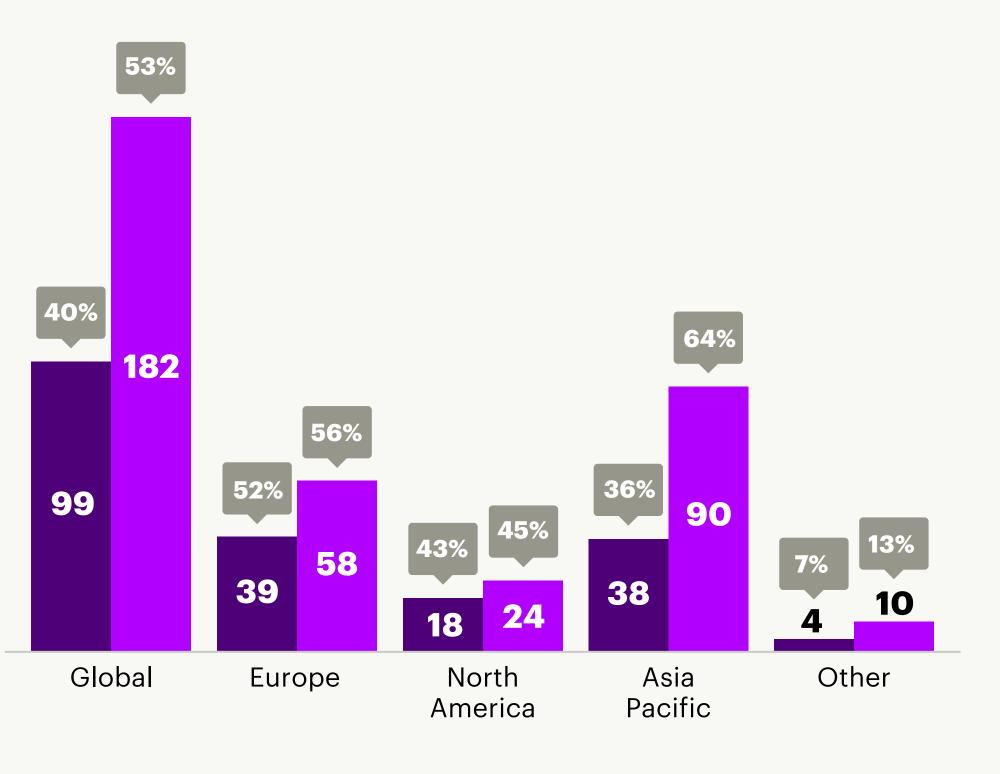
Figure 3 shows a similar trend to Figure 2, with Asia Pacific once again out-performing Europe and North America in terms of market coverage. However, North America shows the most reliability with only one bank (4%) of those endorsing not disclosing, compared to 36% in Asia Pacific (up from 7% in 2020).

Mirroring the global update in TCFD endorsements, we have also seen a rise in the number and market coverage of banks disclosing against the framework. Since our previous report, an additional 52 banks from Asia Pacific have produced TCFD reports, followed by Europe (+19) and North America (+6). Amongst the 182 banks disclosing overall, the countries that provide the largest contribution of disclosing banks are Japan (28%) and the US (8%).

2020

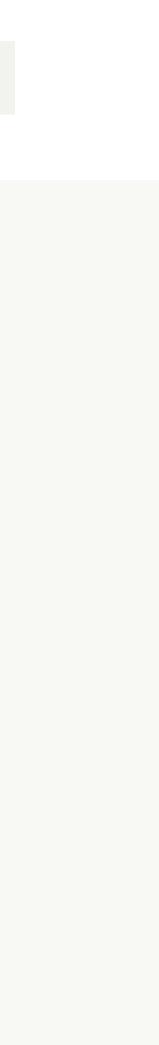


Figure 3: Disclosure and market penetration of TCFD in the banking sector

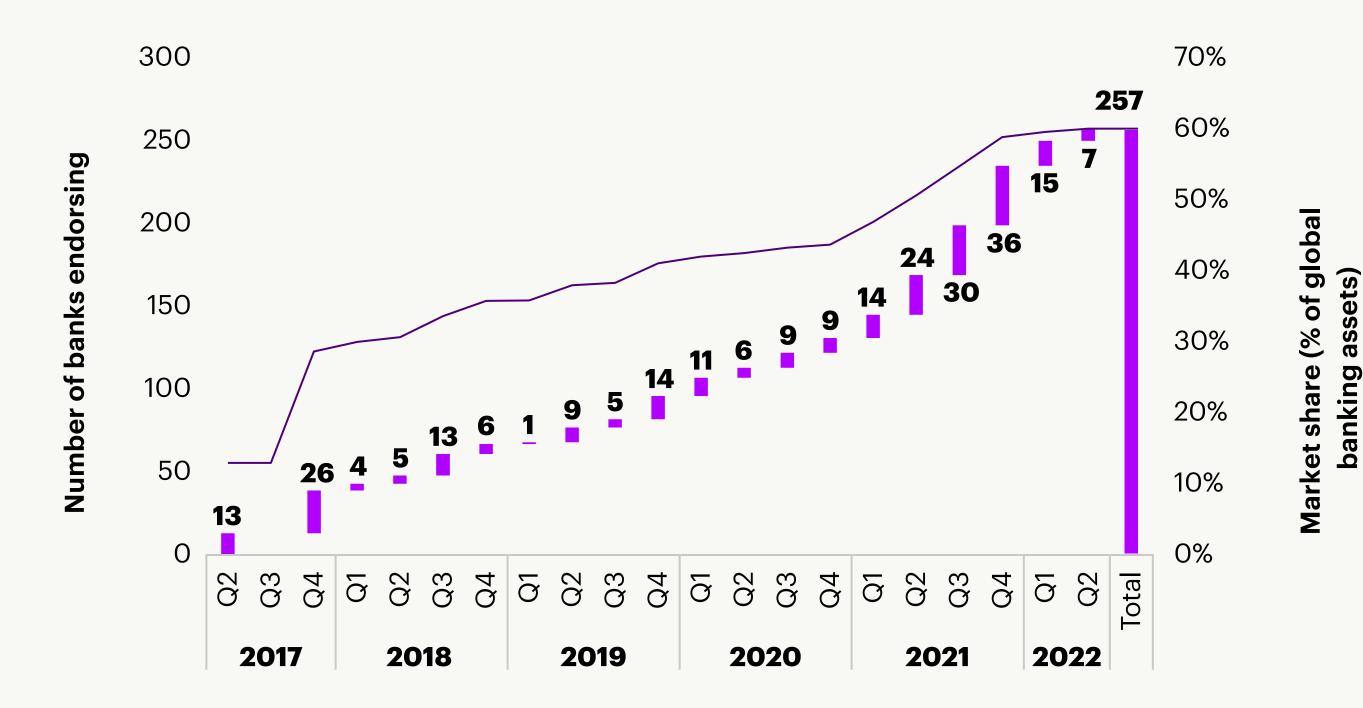


2022

Share of global banking assets covered (%)







Number of banks newly endorsing

Market share (right-hand side vertical axis)

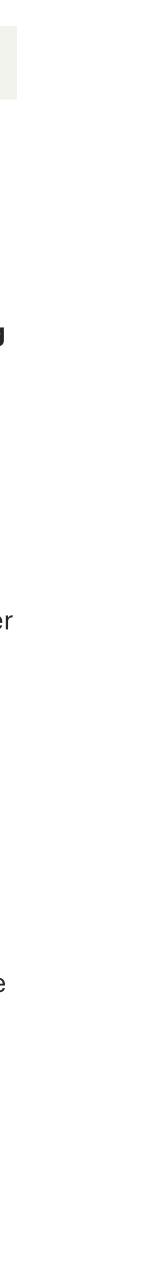
Figure 4 shows that since Q2 2020 (the cut-off date for our previous, 2021 report), global endorsement of the **TCFD** has shown growing momentum in global market penetration (in terms of the percentage of total banking assets) up to 2022, breaking its trend of stagnation.

In both our 2019 and 2021 reports we revealed a slowing in the growth of the market share of TCFD Endorsers across the banking industry. This year the story is different. We can see that there is an increase in the rate of change, with more than 50% of the banks that currently support the TCFD having become Endorser in the period since Q2 2020 (the cut-off date for our previous, 2021 report). The final quarter of 2021 has become the strongest quarter for TCFD endorsement to date.

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This shows the success of continued regulatory, investor and customer focus on climate action. Whilst there are still many large banks that have not yet endorsed the TCFD, a significant number are now adopting the globally recognized framework in response to increased compliance, financial and reputational pressure, and are articulating their stance on climate change.



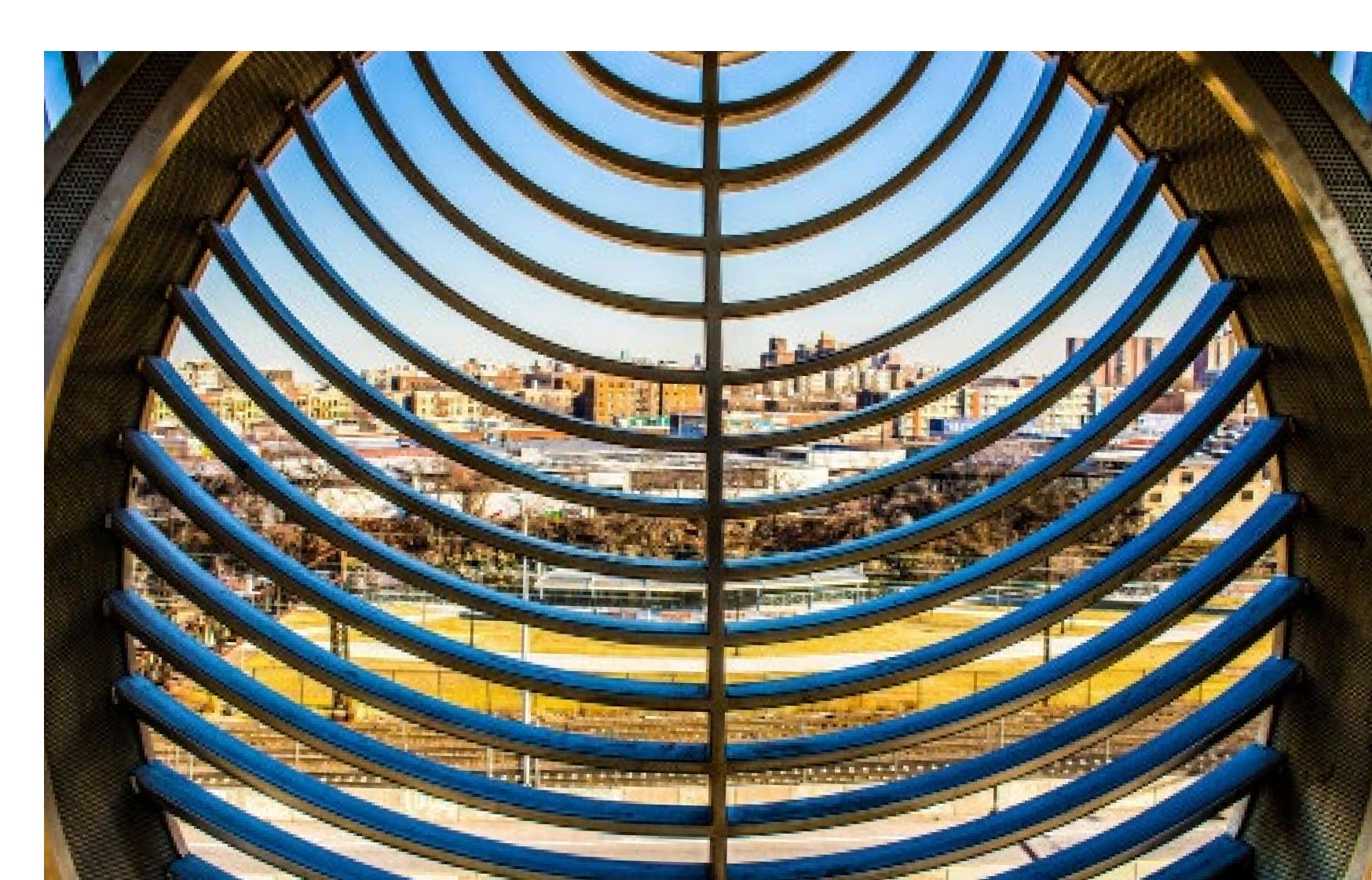
Maturity Assessment

Section Overview

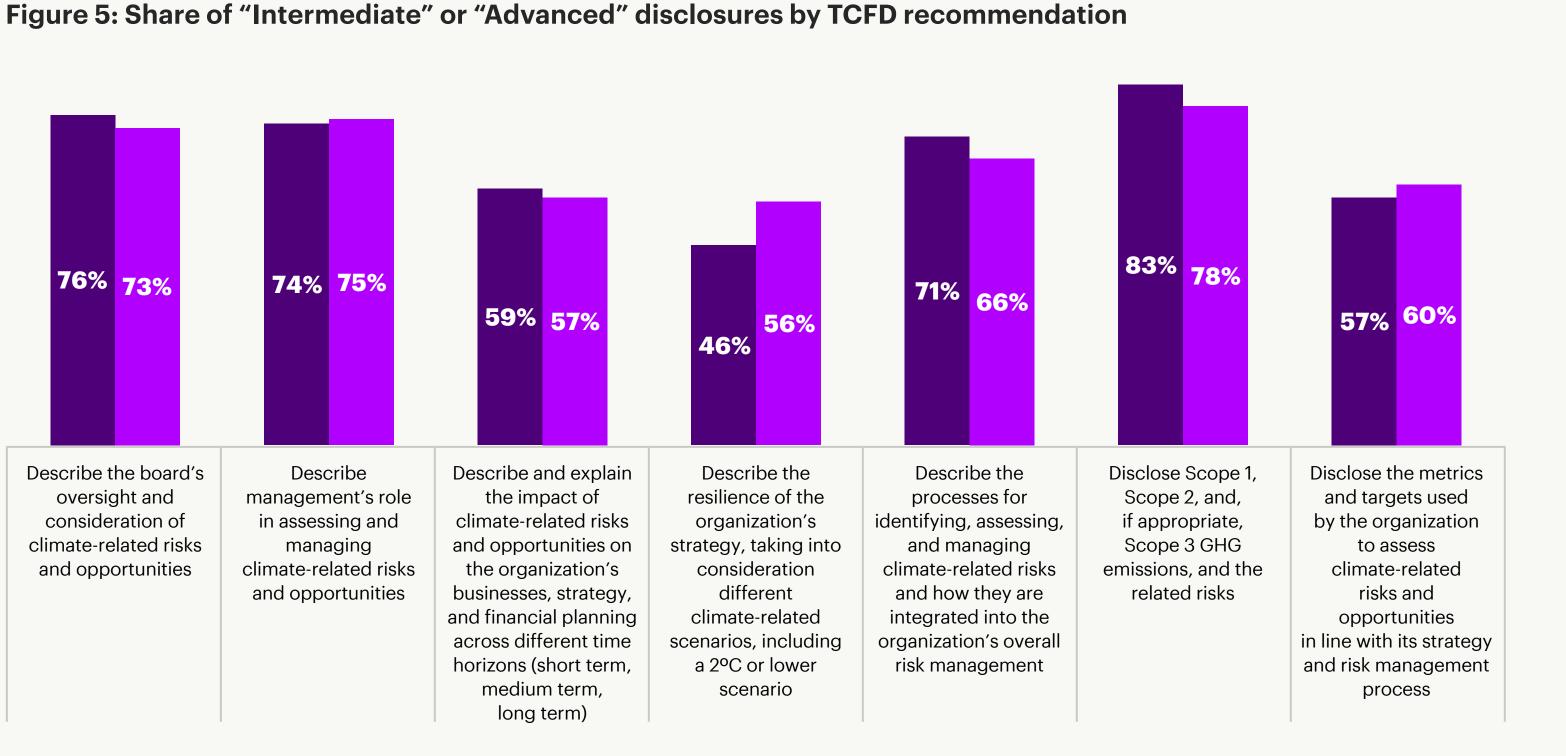
The purpose of this section is to analyse the maturity of banking TCFD disclosures. Here, Hannah Peter compares the results of last year's TCFD report against those of the current year to examine disclosure trends among the 182 banks that are currently disclosing under the TCFD framework. This section is further supported by the data tables provided in <u>Annex C</u>, which detail the progress that Existing Disclosers have made year on year.



Hannah Peter Editorial Lead; Manager, FS Sustainability



Global Results by TCFD Recommendation



2020

2022



Figure 5 reflects the impact the influx of new Disclosers has had on each recommendation. Whilst remaining the most mature, "Environmental Operational Metrics" and other high-percentage maturity recommendations have been brought down by immature assessments. Although remaining the least mature, "Scenario Analysis" has managed to show a marked increase, with 56% of all banks achieving "Intermediate" or "Advanced" ratings.

Overall, the average maturity of disclosures has remained consistent between 2020 and 2022: 66% "Intermediate" or "Advanced".

This can primarily be attributed to the vast increase in the number of New Disclosers releasing TCFD reports for the first time in 2022, counteracting the year-on-year increase in maturity seen for those banks that have previously disclosed against the TCFD framework.

Despite this general static trend, "consideration of climate-related scenarios", the reporting of "management's role" and "metrics & targets to assess climate-related risks and opportunities" have all seen encouraging increases in maturity. This is due to a number of banks now disclosing the scenarios considered for stress testing, committees across business lines and geographies, and environmental financing dashboards.

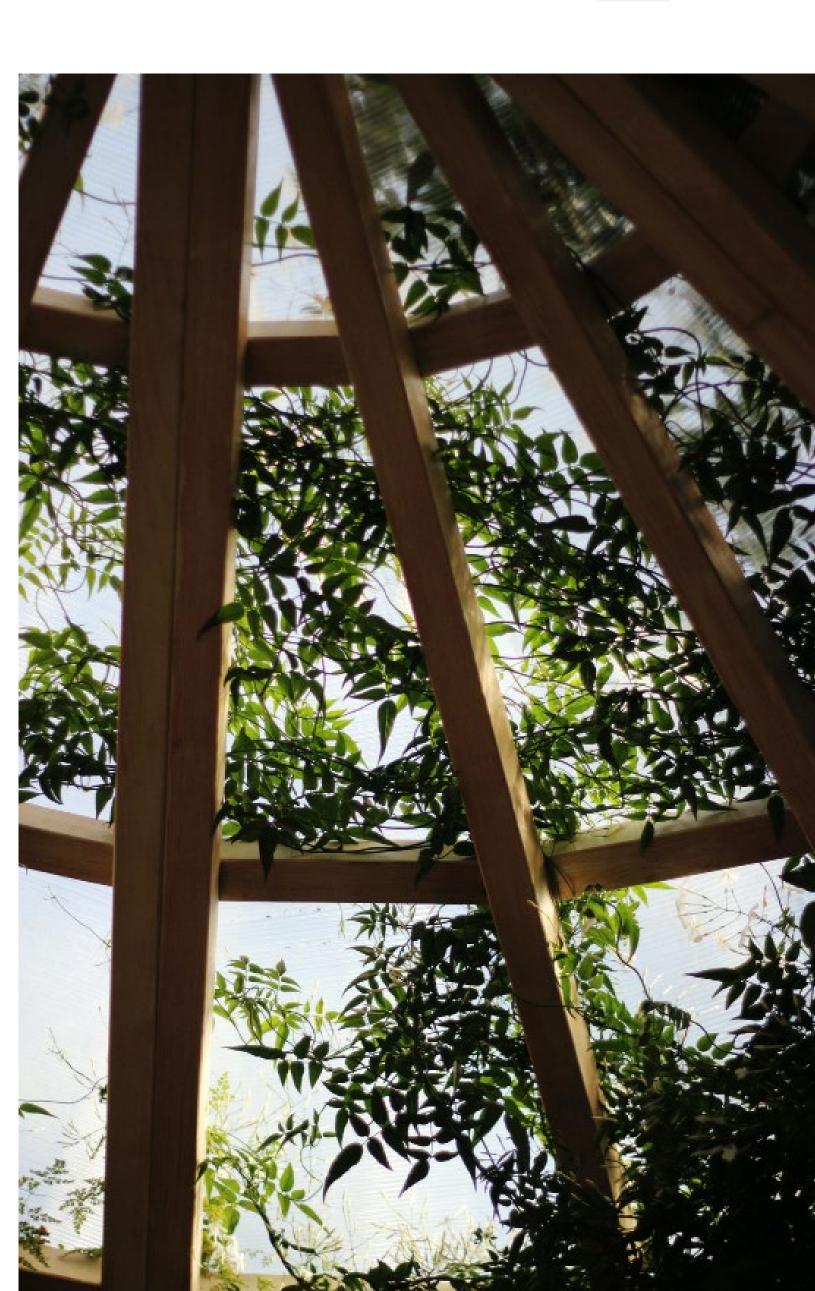
"Resilience of the organization's strategy, taking into consideration different climate-related scenarios" has seen the largest uplift in maturity of disclosures. However, it is also (once again) the least mature recommendation, with only 56% of disclosing banks in the "Intermediate" or "Advanced" stages. The relative increase in the maturity of this disclosure can be linked to the increase in guidance and attention in this area, particularly in the form of the introduction of regulatory climate stress tests around the world⁹.

As in our 2019 and 2021 reports, information concerning GHGs and operational footprint management is the most mature recommendation, with 78% of disclosing firms in the "Advanced" and "Intermediate" stages. The majority of disclosing banks are reporting their CO₂ operational emissions following the greenhouse gas protocol and are disclosing their operational targets. Some of the more "Advanced" banks are introducing automated machine learning for energy saving as a progressive means to help banks monitor and achieve operational (energy and environmental) targets.

"Board oversight" is another example of a high maturity disclosure. This demonstrates two things: the recognition that success starts at the top, and an increased understanding that companies' boards should not only provide oversight but also set the direction of climate-risk and sustainability management within their bank through periodic reviews.

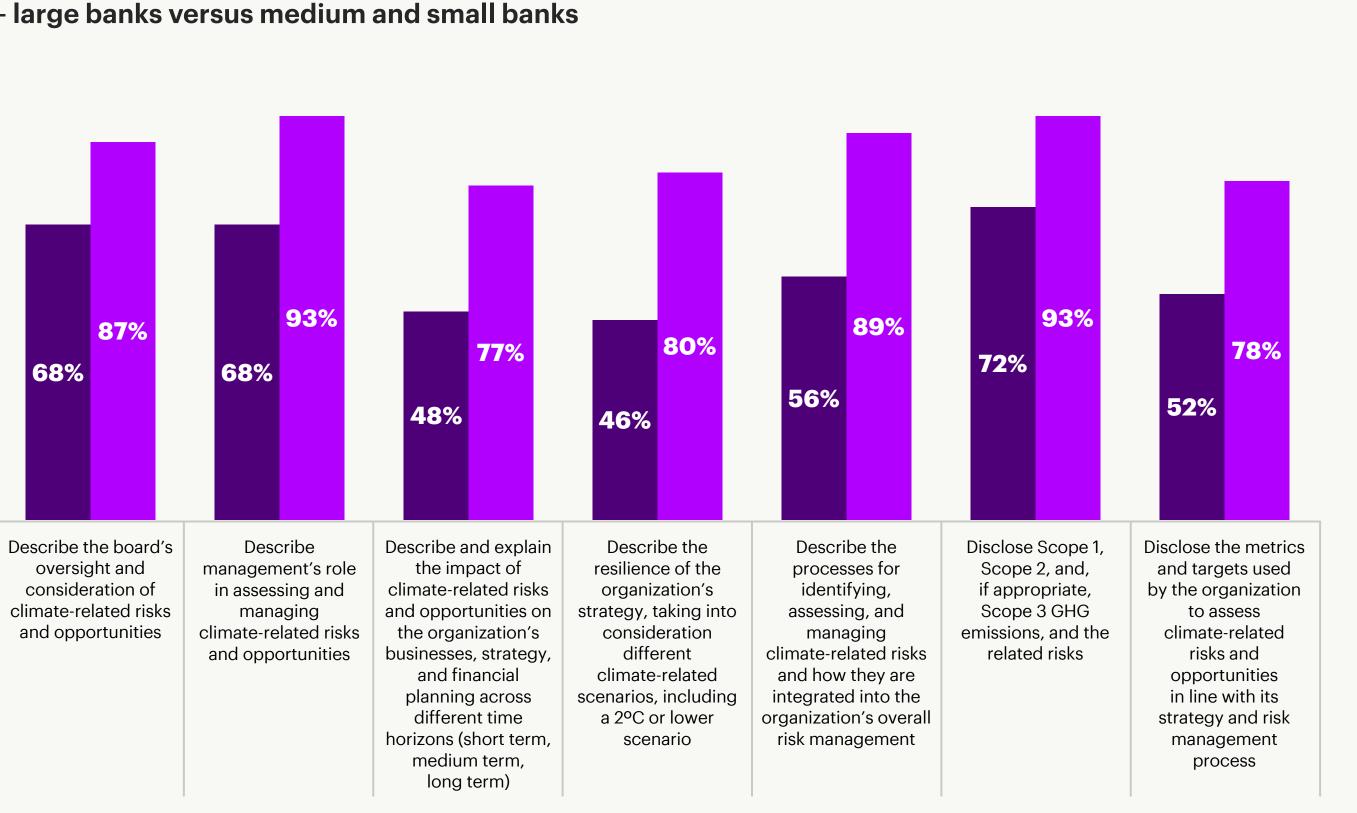
Describing the "processes for managing climate-related risks" has seen one of the biggest declines in maturity over the last year and a half. Firms that are beginning their TCFD journey should focus on building a robust and centralized climate risk framework by developing internal risk management assessments, roadmaps and taxonomies. Not only does this help manage exposures to climate-related risks, but it also bolsters the strategic direction, and disclosures, of a firm by providing a mechanism for monitoring the "impacts" of climate-related risks and opportunities on strategy" over both the short and longer term. With only 57% of banks achieving an "Intermediate" or "Advanced" rating in this area, there is still room for improvement in the development of a strong climate plan that is based on quantitative evidence and summarizes key achievements and next steps towards the TCFD guidance.





Disclosure Maturity by Bank Size

Figure 6: Share of "Intermediate" or "Advanced" disclosures by TCFD theme - large banks versus medium and small banks



<USD 500 billion assets</p>

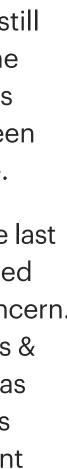
>USD 500 billion assets

Figure 6 shows that in general, large banks are the most mature across the board. However, this is likely impacted by the large number of new small and medium banks disclosing for the first time.

Looking at the maturity by bank size, the gap between large banks (>USD 500 billion in assets) and medium and small banks (<USD 500 billion in assets) remains; in fact, on average, it has increased by 3 percentage points to 27%.

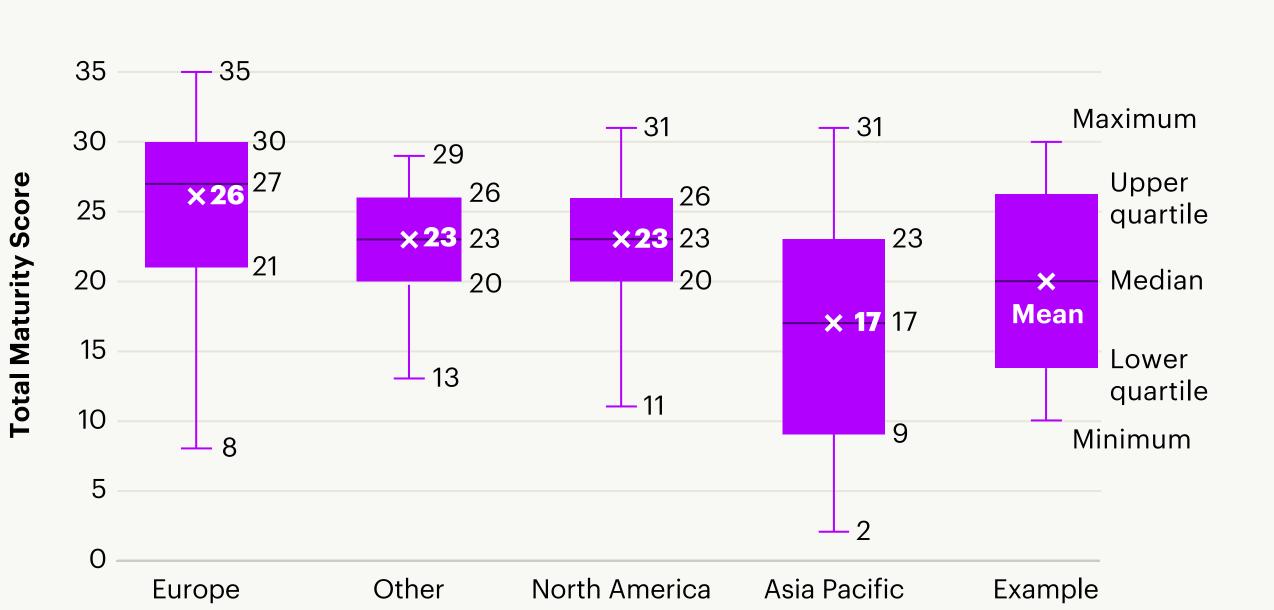
Clearly, larger banks have greater resources to invest in the implementation of TCFD in the face of other competing business priorities (especially as many of the aspects are still voluntary in many regions). However, we cannot ignore the fact that the majority of large banks are Existing Disclosers as opposed to New Disclosers, which means they have been reporting on TCFD for longer and tend to be more mature.

Given the vast increase in the number of Disclosers over the last year and a half, particularly among small and medium-sized banks, the small 3 percentage point rise is no cause for concern. Indeed, the gap for both "management's role" and "metrics & targets to assess climate-related risks and opportunities" has decreased, again showing universal progress in these areas despite the requirement for significant capability investment and technical expertise. This is particularly true in the case of developing meaningful climate financing metrics.



Disclosure Maturity by Region

Figure 7: Box and whisker plot of regional total maturity scores





In Figure 7, maturity scores are calculated for each bank by summing the scores of each disclosure theme to give a maximum score of 36. Europe is ahead of the rest of the globe in terms of average and maximum scores. North America and Other are quite similar in performance, with Asia Pacific lagging behind.

Each disclosure was graded between 0 and 3 based on the assessed level of maturity, from "Not Started" to "Advanced". Scoring disclosures in this way has enabled us to build a view of a bank's position in the industry relative to its peers globally, and within its region.

Asia Pacific has the largest range and the lowest average score. This is unsurprising, given that this region has experienced the greatest uplift in the number of new Endorsers over the assessment period (99 banks), over half of which (52 banks) have already released their first report. Through our experience of analysing climate disclosures, we can clearly see that banks make progress over time, releasing more information in more detail. Asia Pacific is therefore in an exciting position of potential growth, particularly when considering the leading market share that TCFD Endorsers already account for in the region (64% of banking assets).

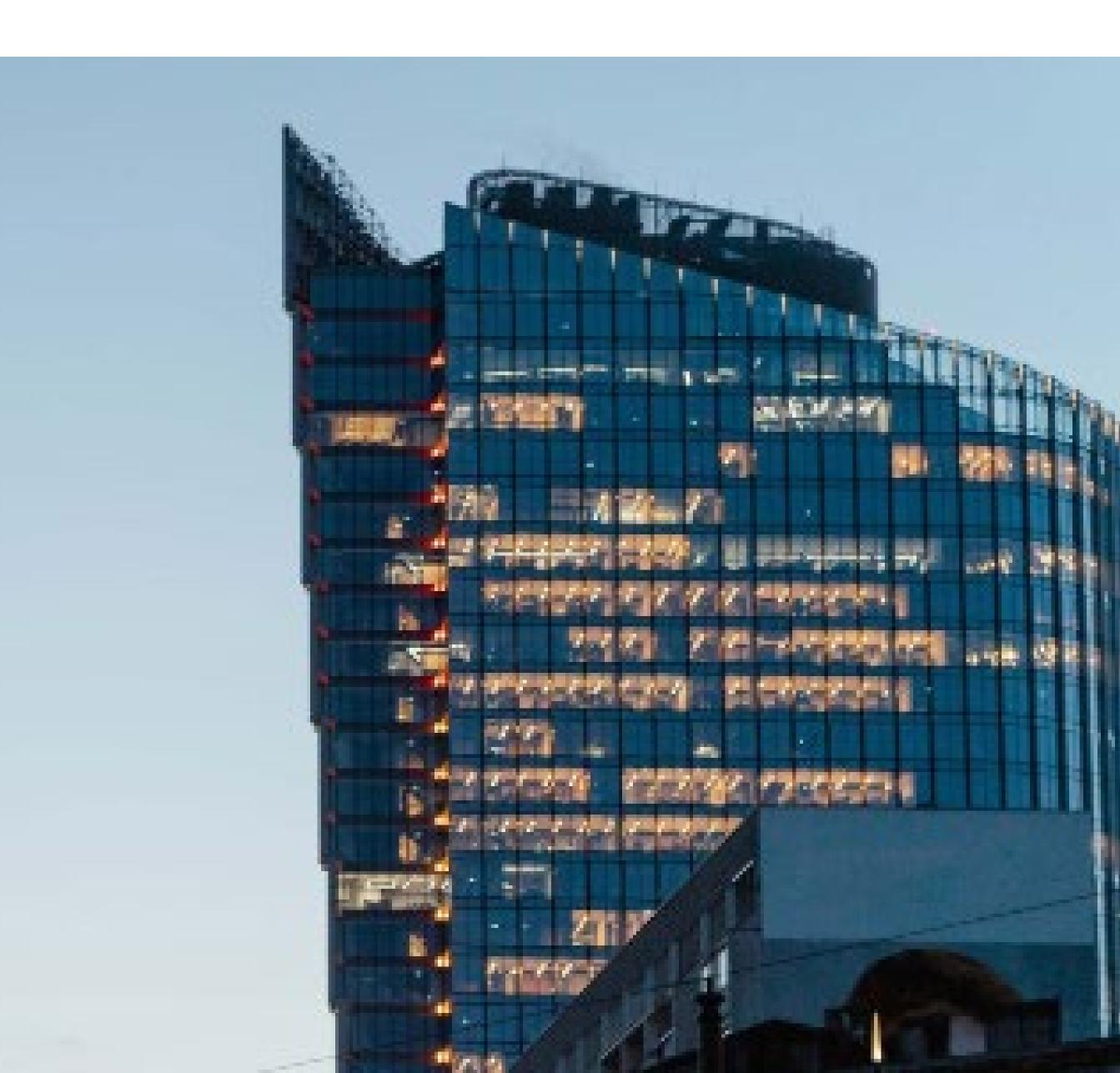
Europe has the highest average maturity score, evidence of the influence of several early initiatives and regulations across the region, aiming to minimize the impact of climate change.

Within the region, we can clearly see a high level of maturity in bank disclosures in countries such as the UK (the highest average maturity score globally at 31), Norway and France. Outside of Europe, Korea, China and Australia have the highest average maturity scores.

Five years after the release of the final TCFD recommendations in 2017, we are still witnessing on-going development and growth of TCFD disclosures. New Disclosers are, in general, entering at the lower end of the maturity scale (in terms of both the form and content of disclosures) despite increased guidance on, and time for, implementation. Additionally, we still see several banks endorsing the framework but not disclosing against it for prolonged periods of time—**at the cut-off time of the report, 12% of banks endorsing the framework had not released their first TCFD report, despite supporting the framework for a year or more.**

It would therefore be interesting to see the impact that a mandatory disclosure timeline would have as a condition of endorsement, similar to that of the Stewardship Code to further embed climate accountability and action.





Disclosure Maturity by Theme

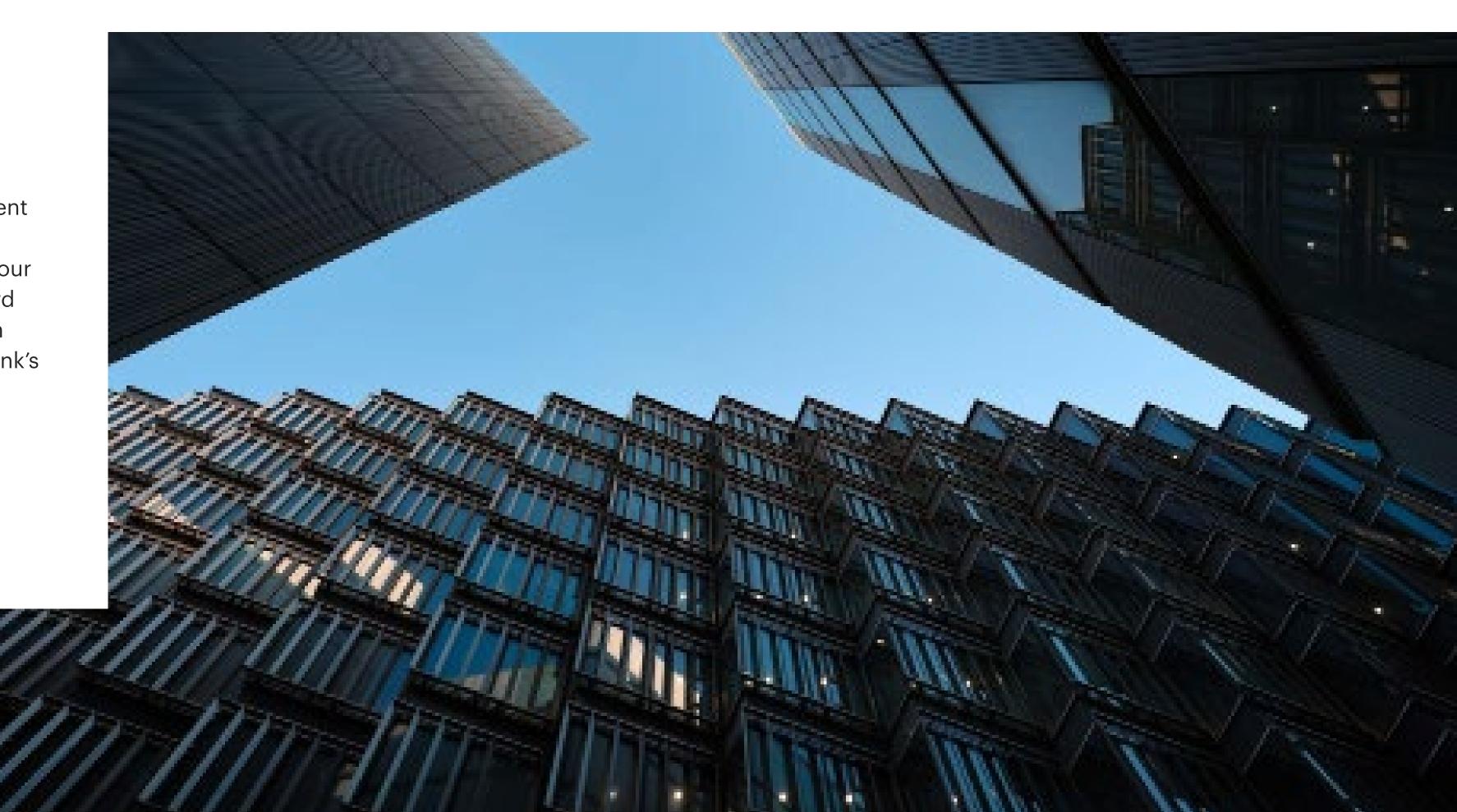
The following section analyses the maturity of banking disclosures at a more granular level (theme level) in relation to the core components of the TCFD framework: Governance, Strategy, Risk Management and Metrics & Targets.

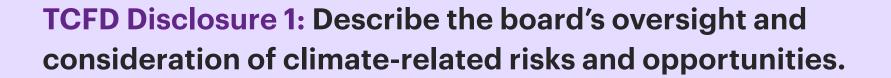
Governance

Governance is the first pillar within the TCFD framework. It advocates for the consideration of climate-related issues at the bank's board and executive levels in guiding strategy, risk management policies, budgets and performance objectives. Considering disclosure recommendations 1 and 2, our assessment splits the pillar into two themes—"Board Engagement" and "Executive Engagement"—which Luca lovino explores to provide an insight into a bank's governance oversight of climate-related issues.



Luca lovino FS Sustainability Analyst





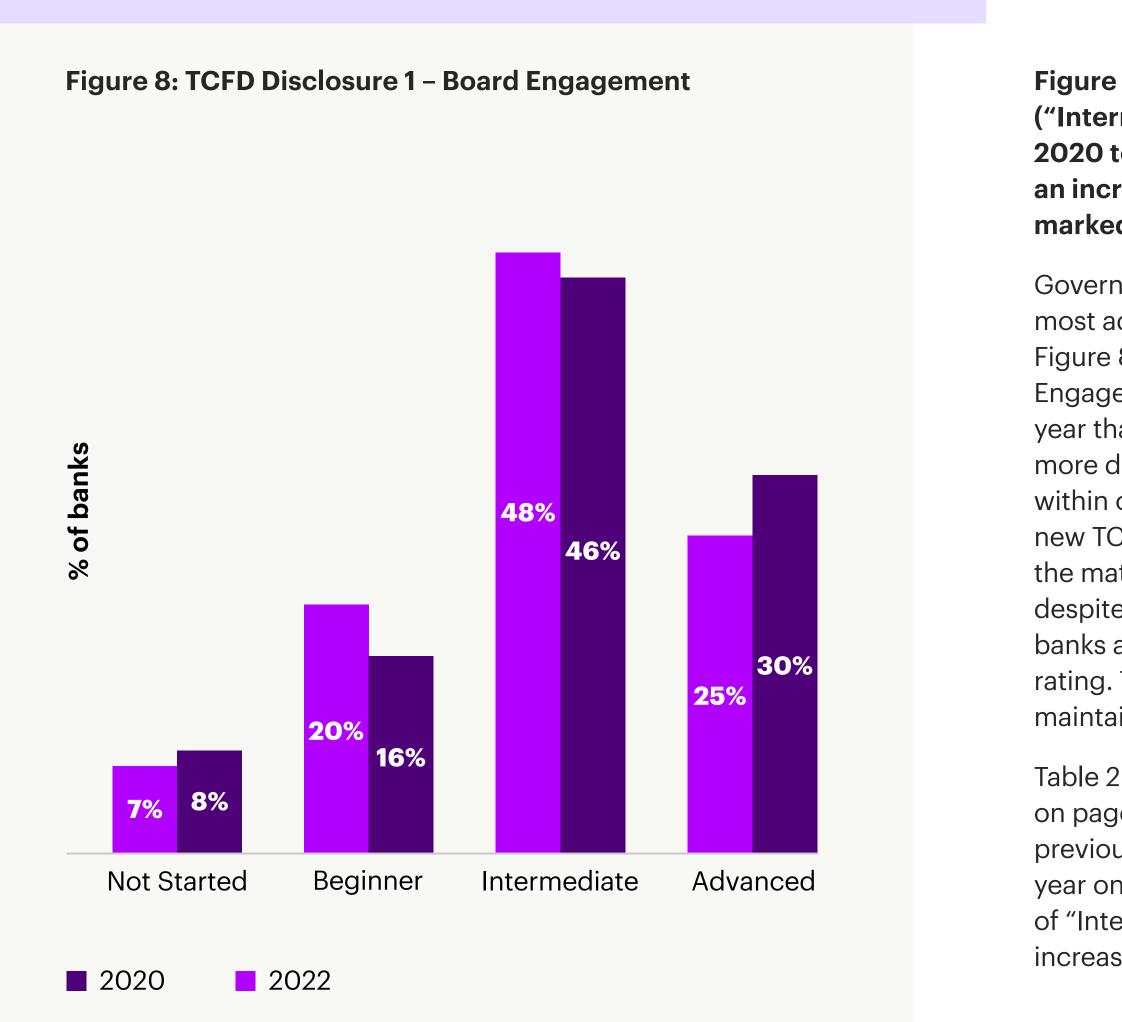


Figure 8 shows a similar level of mature ("Intermediate" and "Advanced") ratings from 2020 to 2022 with a drop of only 3% despite an increase in new disclosers, suggesting a marked improvement for Existing Disclosers.

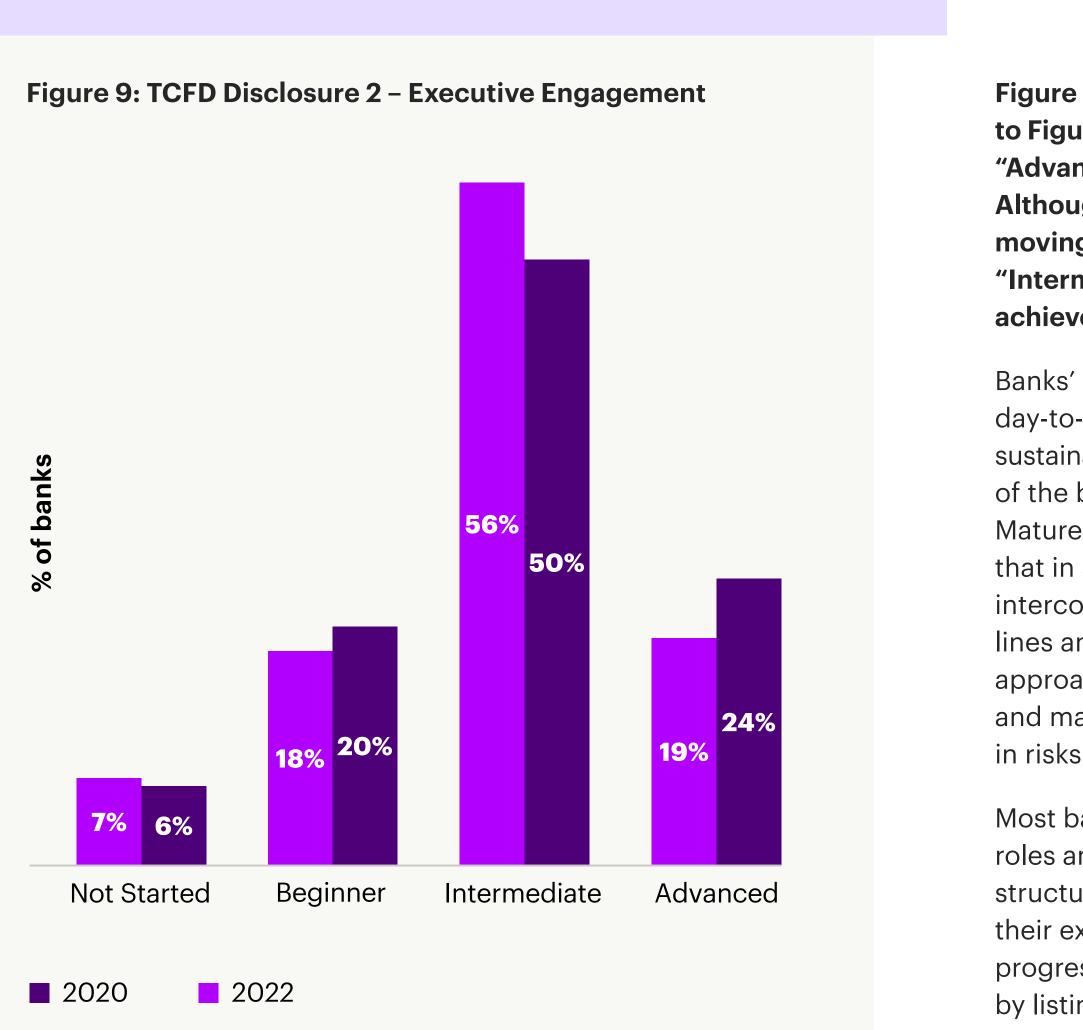
Governance maintains its position as one of the most advanced themes. While at first glance Figure 8 suggests that the maturity of "Board Engagement" disclosures is less "Advanced" this year than in 2020, the true narrative could not be more different. Rather, as previously mentioned within our report, 2022 saw a large number of new TCFD Endorsers (146), which slightly skewed the maturity results in a negative direction. And, despite this large increase, 73% of 2022's disclosing banks achieved an "Intermediate" or "Advanced" rating. This showed positively that New Endorsers maintain mature governance environments.

Table 2 (see *Maturity Assessment Data Tables* on page 89) shows how banks that have previously disclosed are in fact more mature, year on year, as the overall percentage of "Intermediate" or "Advanced" ratings increased to 89% in 2022 from 76% in 2020. Likewise, no Existing Disclosers had failed to start their "Board Engagement" disclosure in 2022, further confirming that banks' disclosures mature over time.

Looking toward the future, we hope to see this encouraging trend continue.

Typically, climate change and sustainability are key areas of focus at the board level. Mature banks have created different governance structures at this level, such as sustainability risk committees, to support consideration of climate risk and sustainability activities within the bank and its entities. Most banks clearly explained the oversight, roles, and responsibilities of these board-level structures.

There has been increased acceptance that boards should not only provide oversight but also set the direction of climate-risk and sustainability management within their bank through periodic reviews. A common theme across the more advanced disclosures was a rise in the number of boards that, throughout the year within these reviews, set their bank's sustainability strategies and itemized key decisions made by their respective governance groups.



TCFD Disclosure 2: Describe management's role in assessing and managing climate-related risks and opportunities.

26

Figure 9 shows similar levels of maturity to Figure 8, with ~75% "Intermediate" or "Advanced" ratings for 2020 and 2022. Although Executive Engagement has improved moving into 2022, most of the banks sit within "Intermediate", with a smaller portion having achieved "Advanced".

Banks' executives are responsible for the day-to-day management of climate risk and sustainability, supporting the board's governance of the bank and acting upon its direction. Mature banks have set up group-level governance, that in some cases is further supported by interconnecting committees across business lines and geographies to ensure a unified approach across the firm that also considers and manages the nuances that may occur in risks and opportunities.

Most banks have clearly explained the oversight, roles and responsibilities of all executive-level structures. "Advanced" disclosures show how their executive-level committees are monitoring progress towards the goals set by their boards by listing relevant topics and key decisions made throughout the year. "Executive Engagement" follows a virtually identical storyline to "Board Engagement", with the large number of new TCFD Endorsers negatively skewing the maturity results in Figure 9. The year-on-year maturity of Existing Disclosers increased to 93% "Intermediate" or "Advanced"' ratings (see Table 3 in *Maturity Assessment Data Tables* on page 89).

In keeping with this trend, no Existing Disclosers in 2022 were seen to have "Not Started" on their "Board Engagement" disclosure. This is unsurprising, given that for banks to implement an efficient and sustainable response to the climate emergency (shaping strategy, strengthening risk management, setting smart metrics and targets), the board and senior management need to be bought in and should lead the charge.

Recommendation

Link performance against climate-related objectives to the variable remuneration of executives and board. Disclose how performance objectives account for climate.



Strategy

Strategy is the biggest pillar within the TCFD framework. It encourages banks to show their understanding of climate-related risks through the disclosure of their current position, the opportunities they have identified, the steps they are taking to develop their understanding, and their plans for the future. Covering disclosure points 3, 4 and 5, Paul Jennings assesses the pillar across six themes: "Green Products", "Training", "Policy & Commitments", "Engagement & Collaboration", "Strategic Planning" and "Scenario Analysis". Together, these provide an encompassing view of a bank's present and desired positions.



Paul Jennings FS Sustainability Analyst







TCFD Disclosures 3 & 4: Describe and explain the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning across different time horizons: short, medium and long term.

Figure 10: TCFD Disclosures 3 & 4 – Training, Strategic Planning, Policy & Commitments, Green Products, and Engagement & Collaboration

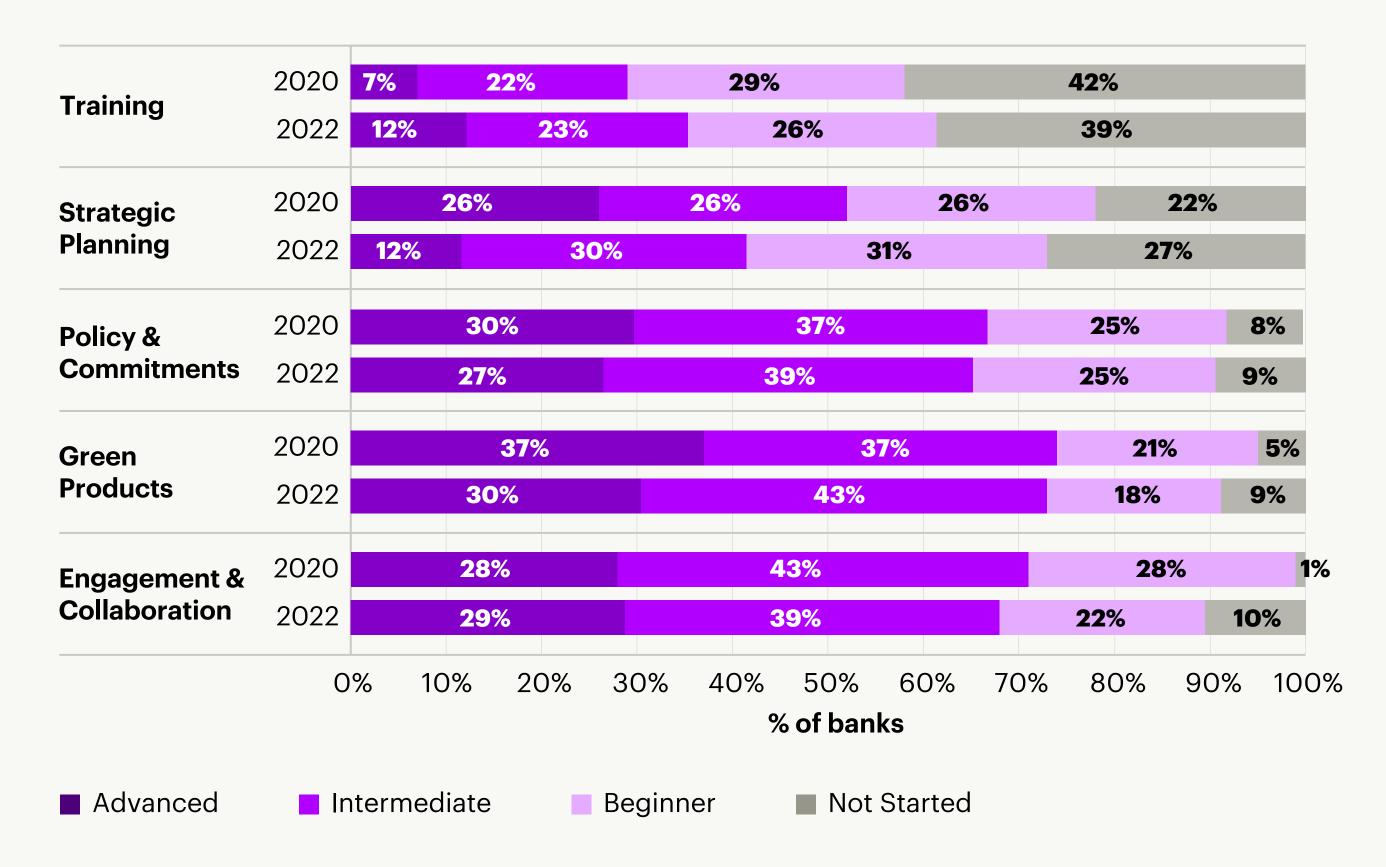


Figure 10 shows that there is still a long way to go for banks in terms of "Training", with nearly 40% still "Not Started". "Green Products" is the highest achieving theme in the Strategy pillar, with 37% of Disclosers achieving an advanced rating—an increase from last year's report.

Training

"Training" remains the least mature theme in TCFD disclosures, and in 2022 we continue to observe that 50% of New Disclosers and 22% of Existing Disclosers do not refer to training in their TCFD disclosures (see Table 4 in *Maturity Assessment Data Tables* on page 89).

Awareness of climate risks and opportunities is crucial to achieving a company culture that includes a concern for sustainability. Placing greater attention and effort on training is a worthwhile investment.

The most commonly observed training approach was the introduction of mandatory self-directed e-learning modules that showed how to embed environmental and climate-change issues into the bank's culture. More advanced banks have partnered with local universities and created multiple separate streams of training catering to different employee groups. They have disclosed the number of employees trained and detailed the specific topics that training programs cover, ranging from climate-related risks and opportunities to ways of embedding climate awareness across the organization. Workshops have been held on green finance, carbon neutrality, green bonds, climate risks and inclusive finance. Several banks also reported board and senior-management-level training on climate-related issues.

Recommendation

Create a curriculum for all three lines of defense (including relationship managers) on climate risk management.





Strategic Planning

As a theme, "Strategic Planning" evaluates a bank's forward thinking beyond the setting of goals. In recent years banks have made efforts to reduce their own climate impact while also providing finance and services for those that rely on them. But have these actions been proactive or reactive, and how can we trust these banks to meet their net zero emissions or green lending targets? In essence, the disclosure of a bank's strategy and planning takes the step beyond "good" and shows whether firms are actively committed to contributing to the world's green transition or are simply following along.

In our 2021 report, our analysis of the levels of banks' strategic planning revealed a remarkably even spread. "Advanced", "Intermediate", and "Beginner" each accounted for 26% of our sample, with the remaining 21% having "Not Started". In our 2022 analysis, however, the percentage of those achieving an "Advanced" rating has significantly dropped, down to a mere 12%. As with other themes, this swing seems to be largely due to the increase in the number of banks disclosing. Looking at 2022 in isolation, the figures for Existing Disclosers are far more positive, with 59% achieving "Intermediate" or "Advanced" ratings (see Table 5 in *Maturity Assessment Data Tables* on page 89). In our analysis we hoped to see a clear understanding of climate risks and opportunities, with evidence of strategies over different time horizons. This does seem to have become a common theme—although not the standard, many banks have adopted a short, medium, and long-term framework. An easy way for banks to expand this, ties into their understanding of risk. Although a separate pillar under the TCFD framework, climate change risks are often framed or categorized against time horizons. This gives firms timelines to work with as they implement their mitigation and prioritize and set goals.

Some of the best-presented strategic planning we found in our research included detailed examples of climate transition and physical risks for each time horizon, with details on mitigation and strategy to support the transition to a low carbon economy.

Recommendation

Conduct climate sector analysis to identify, measure and quantify material climate risk exposure in the portfolio.

Identify key climate risk drivers for the bank across different time horizons and the rationale underpinning the selection of these.

Policy & Commitments

Even as the number of banks only just beginning to disclose against the TCFD framework grows, it is promising to see that the percentage of those rated "Not Started" has remained remarkable low for "Policy & Commitments": a mere 9% of banks. Even the percentage of those rated "Beginner" has dropped significantly from our last report, and it is encouraging to see that, overall, roughly 66% of total disclosures are rated as "Intermediate" or "Advanced". Isolating those that disclosed previously, this percentage jumps to 85% (see Table 6 in *Maturity Assessment Data Tables* on page 89).

To achieve the highest rating, banks must be able to demonstrate clear embedding of policies across the firm and accountability through quantified targets and goals.

A growing trend among the best firms has been the development of clear "green lending" targets or timeframes for phasing out carbon intensive industries, compared to others that merely allude to future reductions. Similarly, many big banks have pledged to align themselves with the Paris Agreement. This may not result in the immediate action that would push them into the forerunners of the transition, but it is certainly a strong and progressive step. At the operational level, we have seen a marked improvement in commitments which are baselined against previous levels; for example, reducing GHG emissions by 50% in comparison with their 2013 levels. While this may be very new to some banks, and daunting in terms of the commitment and accountability it entails, defining a core suite of policies in relation to climate change is the minimum level of action expected in the industry. This is an area of increased scrutiny which, if tackled sooner, becomes easier in the long run.



Green Products

Among those banks which have disclosed previously, a promising 47% have been rated "Advanced" (see Table 7 in *Maturity Assessment Data Tables* on page 89) and are not only developing or marketing green products and services but also disclosing detailed metrics about their offerings. Those new to disclosing have also made a strong start, with 66% already in the process of marketing services.

The most mature disclosures included data for current and (recent) past offerings, and clear targets for future green products or lending. This level of goal setting supports a bank's overall strategy and can be used to show how it plans to progress further. This in turn helps it to further develop its "Strategic Planning" and "Policy & Commitments" along the way. 'n

Engagement & Collaboration

Collaboration to tackle climate risk is well established across the banking sector, with the list of industry forums continuing to grow year on year. This year's results are consistent with the findings of previous TCFD reports: 53% of New Disclosers are in the "Intermediate" or "Advanced" stages of "Engagement & Collaboration" compared with 91% of Existing Disclosers (see Table 8 in *Maturity Assessment Data Tables* on page 90).

Banks' approach to this theme varies significantly, reflecting the wide range of external and internal initiatives now in flight to manage the impacts of climate change. In some cases, banks have also disclosed their engagement with environmental, social and governance (ESG) initiatives more broadly, recognizing that climate change can impact all three ESG categories. The UN Sustainable Development Goals, the Equator Principles and the Principles for Responsible Banking remain the most widely endorsed initiatives. Externally, banks have engaged in government policy consultations, collaborated with local universities and presented their joint research to industry bodies. They have partnered with climate initiatives on various pilot programs and / or steering committees to drive thought leadership, advancing the low-carbon transition and enhancing resilience. Internally, we have seen growth in the number of banks operating their own research teams in addition to cross-functional working groups, although notably, this aspect of "Engagement & Collaboration" remains the least developed across the banking sector. 1



TCFD Disclosure 5: Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

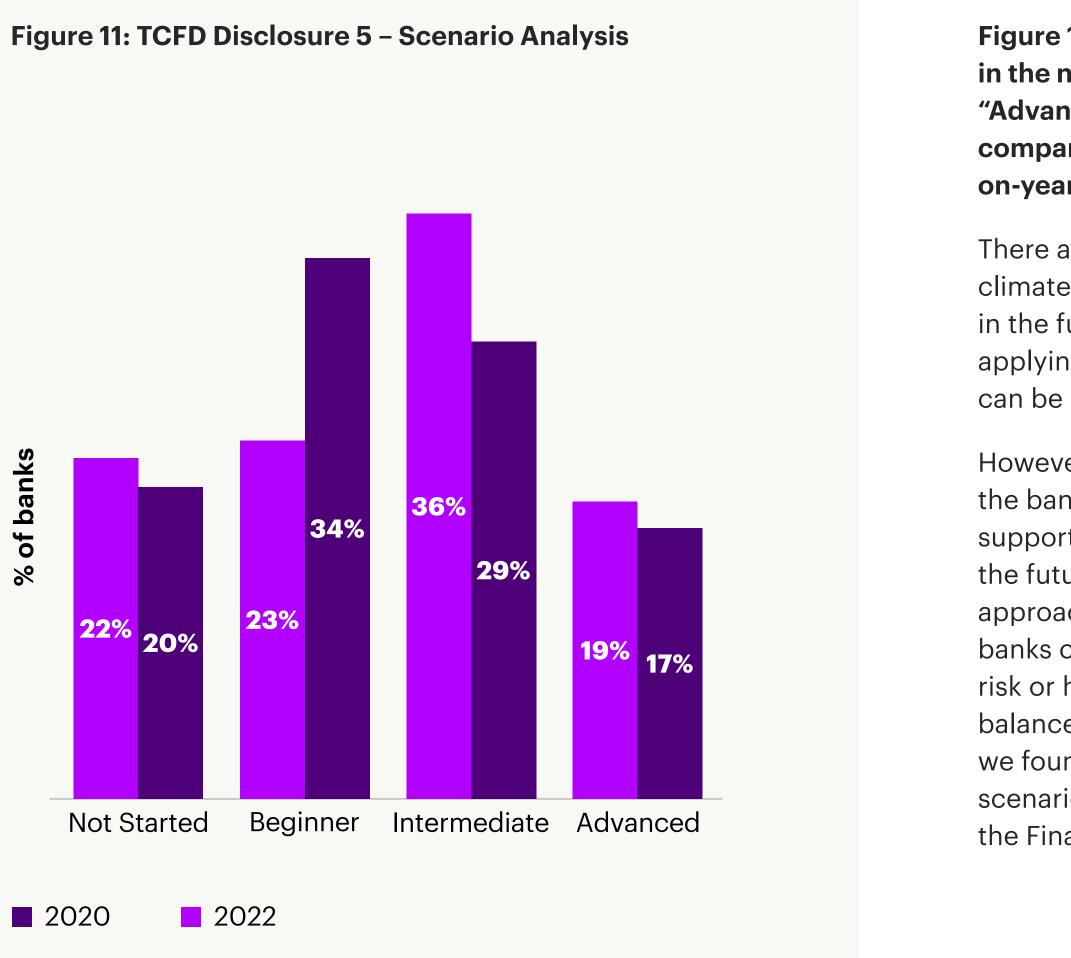


Figure 11 shows a significant increase in the number of disclosing banks in the "Advanced" and "Intermediate" stages compared to 2020-the highest yearon-year increase of all the themes.

There are many models and predictions for how climate change may impact the global economy in the future. Selecting relevant scenarios and applying these to a bank's operating environment can be a daunting and complex task.

However, it provides invaluable insight into the bank's current state of being and also supports better-informed decision making for the future. In our analysis we found a variety of approaches to "Scenario Analysis", with many banks choosing to focus on particularly highrisk or high-exposure areas, rather than on the balance sheet as a whole. Another approach we found was the adoption of pre-set climate scenarios, for example the Network for Greening the Financial System (NGFS) climate scenarios.

Impressively, 77% of Existing Disclosers have been rated as "Advanced" or "Intermediate" (see Table 9 in *Maturity Assessment Data Tables* on page 90), with a further 42% of newly disclosing banks achieving these ratings. For these to progress, we believe banks should develop their accountability by disclosing quantitative outputs, which can then be used to help develop their targets and goals.

Recommendation

Disclose severe scenario results, impact on financials and any resulting changes to strategy.

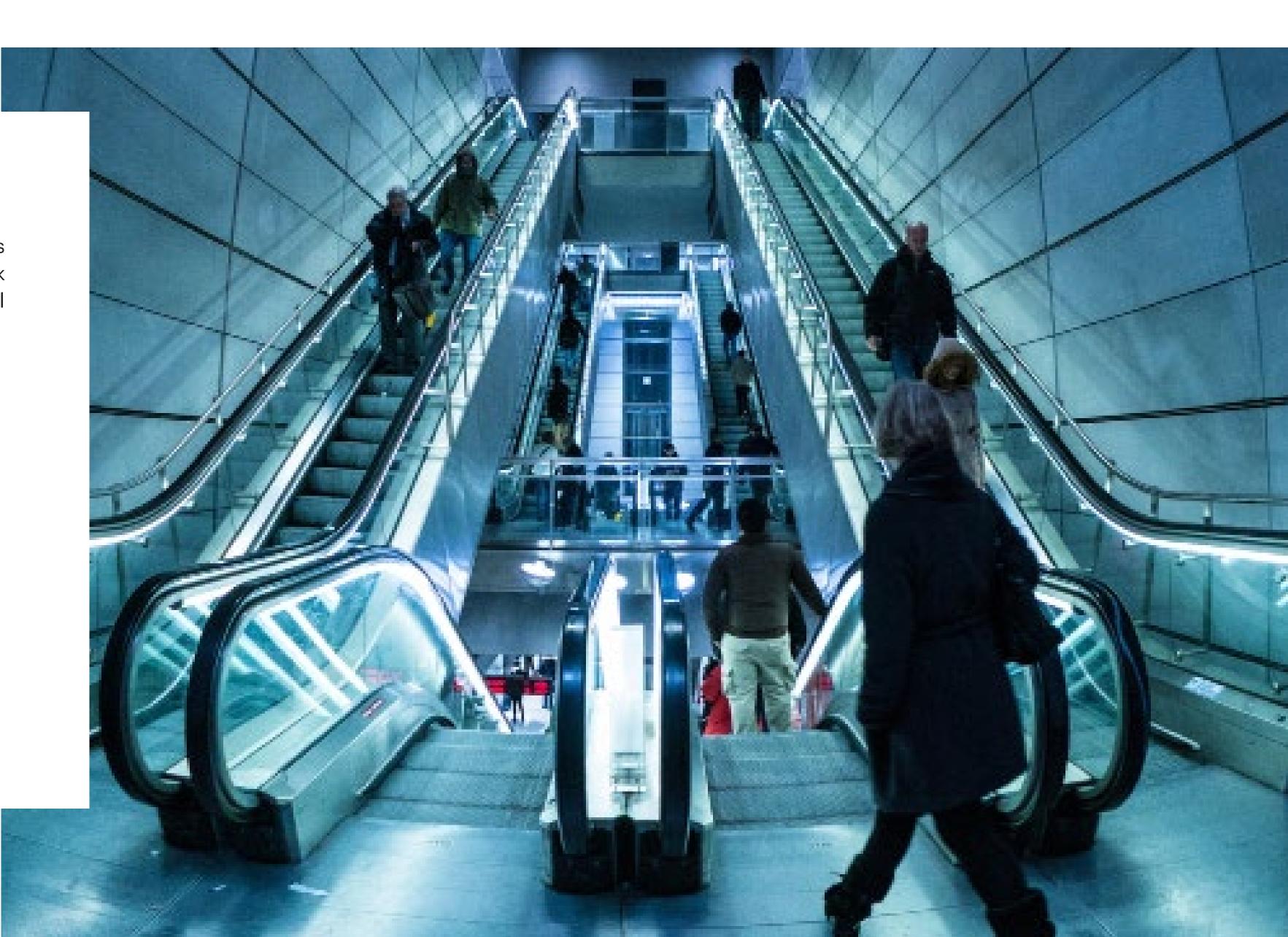
Define and disclose relevant management actions under various scenarios as with standard stress tests.

Risk Management

The Risk Management pillar covers disclosure points 6 to 8 within the TCFD framework. Yuli Jiang's assessment of this pillar looks at the themes of "Risk Management Framework" and "Transition & Physical Risk", which together provide a comprehensive view of how climate-related risks are identified, assessed, managed and integrated into the overall risk management framework. This will support an evaluation of the overall risk profile and risk management activities, as well as of the climate risk assessment processes and monitoring tools used to mitigate climate risks. Other relevant factors being analysed are the prioritization of climate risks within the existing processes or risk classifications, and the consideration of these risks in relation to other traditional risk types.



Yuli Jiang FS Sustainability Analyst



TCFD Disclosures 6–8: Describe the processes for identifying, assessing, and managing climate-related risks and how they are integrated into the organization's overall risk.

Figure 12: TCFD Disclosures 6, 7 and 8 – Risk Management Framework and Transition & Physical Risk

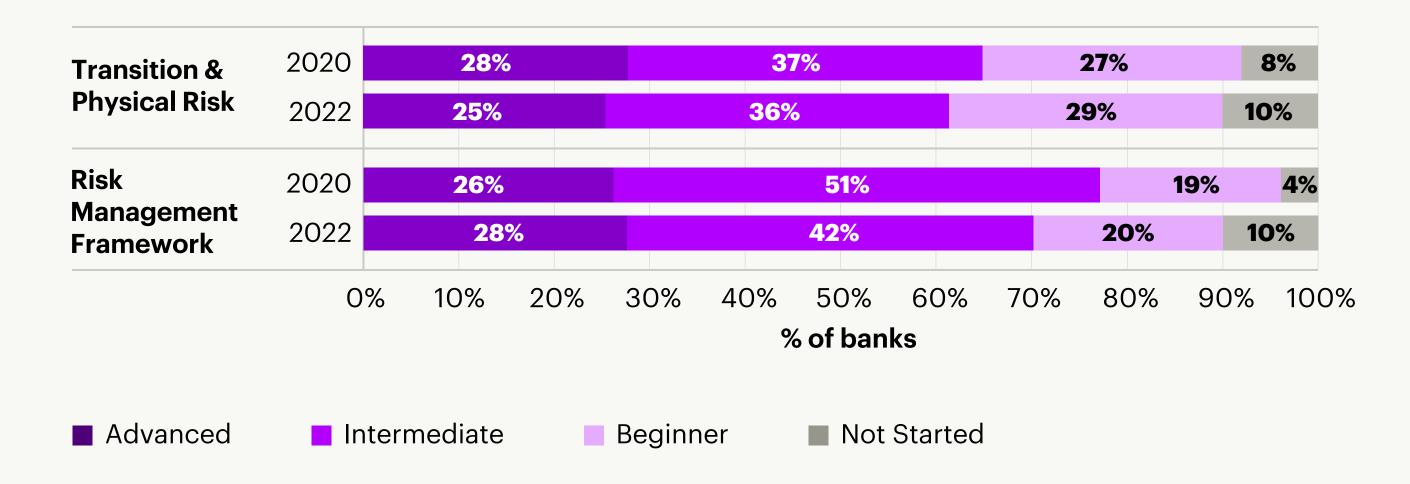


Figure 12 shows that on average, there has been an increase in the percentage of banks rated "Not Started" and "Beginner", with "Risk Management Framework" being most hit by this change. Promisingly, however, the percentage of those rated "Advanced" increased slightly despite the 108 new banks disclosing.

Most disclosing banks are within the "Intermediate" or "Advanced" range for the "Risk Management Framework" theme, with 86% of Existing Disclosers and 59% of New Disclosers (see Table 10 in Maturity Assessment Data Tables on page 90) evidencing a robust and centralized climate risk framework. This includes, for example, internal risk management assessments, roadmaps and taxonomies, and crosssector lending policies to assess climate-related risks and impacts on decision making processes.

More mature banks are also using monitoring tools and technology solutions such as in-house scoring methodologies, climate rating tools or external service providers. Advanced solutions also include the use of data analytics to monitor and evaluate climate and environmental risks as well as risk dashboards to report the overall risk appetite of the bank. As mentioned, banks have also disclosed analysis of climate risks across different sectors, particularly those deemed to be more sensitive, to determine mitigation measures and provide insights for new opportunities in the climate space.

While the percentage of banks achieving "Intermediate" or "Advanced" ratings for this theme has decreased slightly since 2020, the maturity of Existing Disclosers (mostly large banks) has increased. Once again, this demonstrates that most of the New Disclosers are still at the early stages of the integration, with less mature ratings. Most "Advanced" banks have integrated climate risks into their business-as-usual capabilities through borrower credit assessments, environmental due diligence of counterparties and ESG screenings of investment opportunities. In some cases, banks have also considered climate as a principal risk, whereas in others it is seen as a driver amongst multiple risk types within the firmwide risk management framework. Although the risk management practices of most banks have improved, disclosure of more quantitative analysis and future commitments is needed to measure and fully understand the financial impacts of climate change.

For "Transition & Physical Risk", the majority of Existing Disclosers are within the "Intermediate" or "Advanced" range as they outlined well-established measurement capabilities (e.g., risk heatmaps and rating processes), whereas more than 50% of New Disclosers are still at the early stage of developing appropriate methodologies (see Table 11 in *Maturity Assessment Data Tables* on page 90).

Several banks have already disclosed detailed analysis of "Transition & Physical Risk" drivers across different time horizons, drivers and transmission channels. They have also analysed the outcomes of climate risk mapping exercises and stress testing; however, they disclose these to varying degrees. In the case of more advanced banks, they are committed to supporting clients in mitigating physical and transition risks as part of their lending processes, with assessments focused on emission-intensive sectors and high-carbon industries. There is also a clear adoption of climate risk considerations across loan and investment lifecycles, including origination and review processes, which have become an integral part of climate risk assessments that could help better understand the impacts of credit exposures.

While progress has been made with respect to embedding "Transition & Physical Risk" into the wider risk management enterprise, banks still tend to prioritize one of the two risk types. To improve the maturity of their disclosures, banks should ensure that they consider, or have a plan in place to assess and monitor both physical and transition risk.

Recommendation

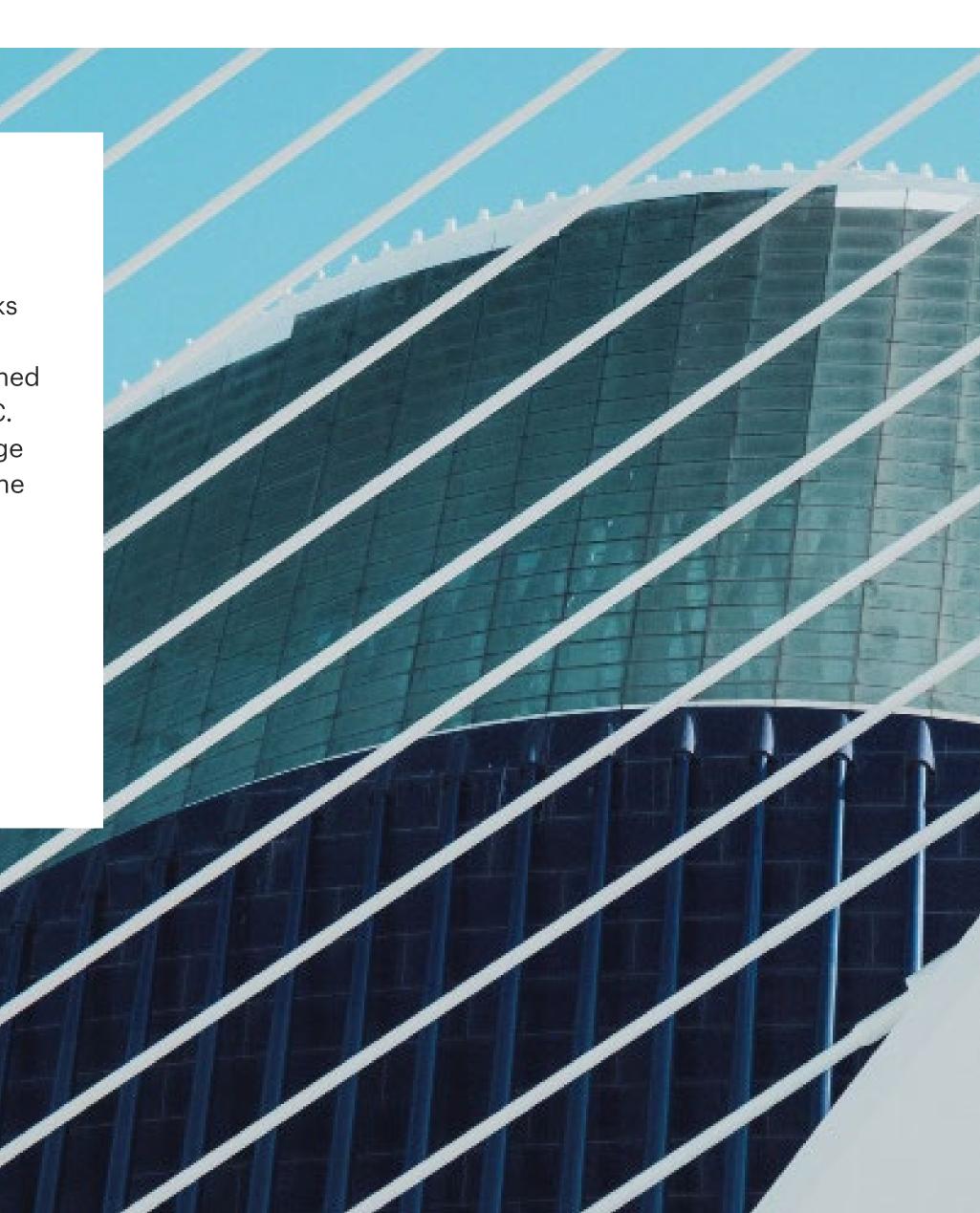
Integrate climate considerations in client-level, sector-level, and third-party risk assessments, including early-warning indicators, rating models, covenant management, risk and control selfassessments (RCSAs), and event management.

Metrics & Targets

"Metrics & Targets" is the final pillar within the TCFD framework and is explored here by Harriet Lloyd. It encourages banks to consider their "environmental operational metrics" by assessing and managing climate-related risks (transition and physical) relating to any financial intermediary business activities across all time horizons: short, medium and long-term. Additionally, banks are asked to disclose their Scope 1 & 2 GHG emissions and, if appropriate and where data and methodologies allow, their Scope 3 emissions. All GHG emissions calculations must be conducted in line with the Global GHG Accounting and Reporting Standard for the Financial Industry. "Metrics & Targets" also includes the disclosure of "environmental financing metrics", where banks are asked to describe the degree to which their financial intermediary business activities are aligned to and well below a 2°C scenario, preferably 1.5°C. Banks are encouraged to disclose their percentage of carbon-related assets relative to total assets, the amount of climate-related opportunistic lending, any associated targets, and a clearly defined transition plan.



Harriet Lloyd FS Sustainability Analyst A



TCFD Disclosure 9: Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks.

Figure 13: TCFD Disclosure 9 -**Environmental Operational Metrics** % of banks 55% 46% 33% 28% 16% 13% 8% 1% Beginner Intermediate Advanced Not Started 2022 2020

Figure 13 shows that "Environmental Operational Metrics" continues to be the most advanced theme, with 79% of banks in the "Intermediate" or "Advanced" stages.

"Environmental Operational Metrics" remains the most advanced theme, year on year, of all the TCFD disclosures. Even in 2022, with many new TCFD Disclosers (108 banks), it is encouraging to see a significant number of banks developing their own measuring tools, with many also already disclosing Scope 1, 2, & 3 GHG emissions. Only 8% of disclosing banks this year were considered to have "Not Started" on their "Environmental Operational Metrics" journey.

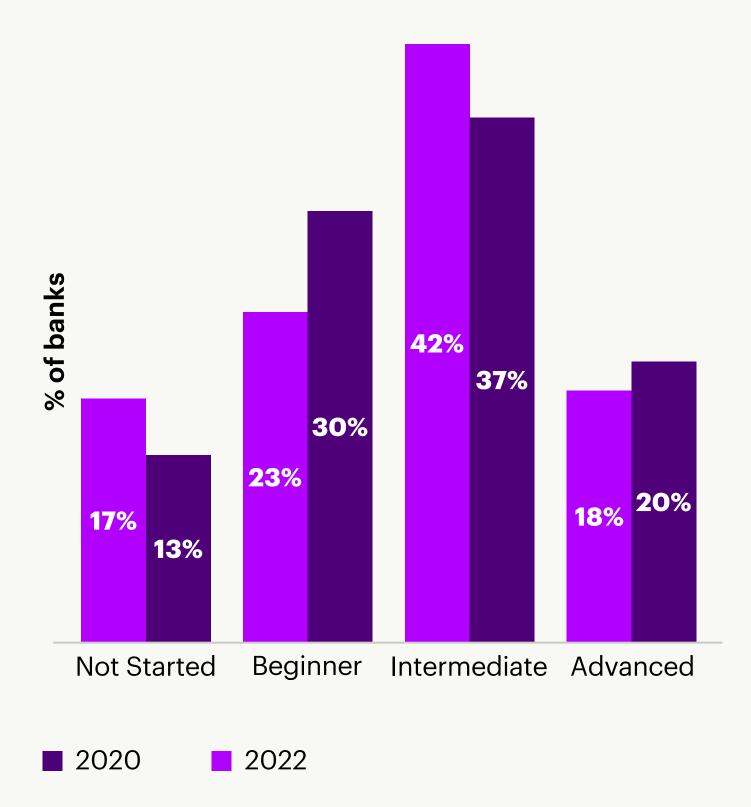
Scope 1 is direct emissions driven by a bank's operations, e.g., fuel combustion in vehicles that the bank controls or owns. Scope 2 is driven by indirect emissions from energy consumption e.g., electricity used by the bank. Scope 3 is driven by an array of indirect emissions that the bank neither owns nor controls, but which occur in the value chain, e.g., its lending and financing activity and corporate travel.

There has been an increase in awareness of the key drivers of banks' own operational footprint, yet few banks have made material progress toward their net zero targets. It is important to note that the degree of disclosure varied massively within each band of maturity. Some banks merely stated their process in calculating metrics—for example, utilizing metrics such as tonnes of CO_2 equivalent per employee—but offered little evidence to validate, nor means to quantify, their progress towards the relevant net zero targets. In contrast, some of the more mature disclosures were more granular, with detailed breakdowns of key drivers of GHG emissions, the associated risks, and plans to transition to a low-carbon economy.

However, despite this variance, a positive theme amongst the more mature banks is the growing number of disclosures that use external parties to verify the underlying data and calculations of GHG emissions. This provides a greater level of assurance and consistency across the sector.

Disclosures 10 & 11: Disclose the metrics and targets used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

Figure 14: TCFD Disclosures 10 & 11 – Environmental Financing Metrics



The emergence of machine learning in some of the more "Advanced" banks, as a means of monitoring and meeting energy and environmental targets, is a promising development. There is evidence of banks utilizing advances in technology, such as automated machine learning, in new Energy and Environmental Management portals. This tool allows banks to monitor and achieve operational targets. It also allows banks to identify any branches that are presenting abnormal consumption rates, meaning they can rectify the over-consumption at source. Further, the analysis of the data managed within the Energy and Environmental Management portals allows banks to constantly monitor, refine and modify their energy management guidelines.

A common theme across more "Advanced" disclosures is the impact that Covid-19 has had on operational emissions, specifically across Scope 3 where there has been a shift away from employee transportation and towards energy consumed by remote-working employees. It will be interesting to see if, and how, banks sustain the reduced operational emissions within Scope 3 as the world returns to a new "normal" and hybrid ways of working.

A

Figure 14 shows a high maturity in 2022 despite a slight drop in "Advanced" disclosures. Although there is a rise in "Not Started", the decrease in "Beginner" ratings suggests that when banks do disclose it is generally more comprehensive than it has been in previous years.

Similarly to last year's assessment, the 2022 TCFD disclosures have a clear divide in the level of maturity between New and Existing Disclosers (see Table 13 in *Maturity Assessment Data Tables* on page 90). Eight out of 10 banks which disclosed in previous years reached the "Intermediate" or "Advanced" level, meaning that, to some degree, they disclosed targets or plans for risk metrics and sustainable financing metrics. Meanwhile, over 50% of the New Disclosers in 2022 were ranked as "Not Started" or "Beginner", meaning that they provided no evidence of "Environmental Financing Metrics" or have only begun to develop measurement tools in this field.

Despite "Environmental Financing Metrics" being one of the most complex issues faced by firms across the TCFD themes, 6% of New Disclosers provided enough evidence of environmental risk measurements, sustainable financing metrics and progress against the transition plan to be ranked as "Advanced". This is an impressive leap for those firms embarking on their first TCFD report.

Having said this, there is a variation in the quality, quantity, and approach taken for the disclosure of metrics and targets. This makes it trickier to make comparisons between banks and to assess progress within particular sectors. In order to progress, we need a higher degree of standardization in the types of disclosure, as well as industry guidance. Together, these would serve as a catalyst for deeper environmental financial sector alignment.

It is increasingly common for banks to disclose their sustainable financing metrics by means of an environmental financing dashboard. This is used to clearly define their targets and associated metrics—a positive step, which highlights how banks are making efforts to understand and clearly disclose their progress against targets.

There is evidence of numerous ways of calculating sustainable financing metrics. However, it is promising to see an increasing number of banks utilizing and streamlining the same methodologies for their calculations e.g., PACTA. This year, more banks began to provide evidence of the percentage of their portfolio that is related to renewable energy. And for those that previously disclosed this, it is pleasing to see that this figure has increased. Also, banks are beginning to disclose the percentage of their portfolio that comprises carbon-related assets, as well as their progress towards a 2050 net zero target.

It is great to see a larger pool of disclosures and solid attempts at declaring sustainable financing metrics for example, a measure of balance-sheet and credit-risk weighted assets across fossil fuel sectors. But there is still a huge amount of work that needs to be done by banks to put the plans into action. Most critically, there needs to be more evidence of how banks are driving tangible change to align with the 1.5°C scenario.

Recommendation

Initiate a metrics review and optimization project to ensure climate-related targets are defined and integrated in governance reviews.

Develop a plan for metric enhancements and automation based on the priorities of the organization and current data sourcing limitations.

Best Practice & Recommendations





Section Overview

This section highlights examples of emerging best practice across the banking industry for the four main pillars of the TCFD framework. Based on the findings outlined in this report, James Fitzgerald has also identified recommendations for banks to manage climate-related risks and opportunities more effectively and enhance their TCFD disclosures.



James Fitzgerald FS Sustainability Manager

Governance

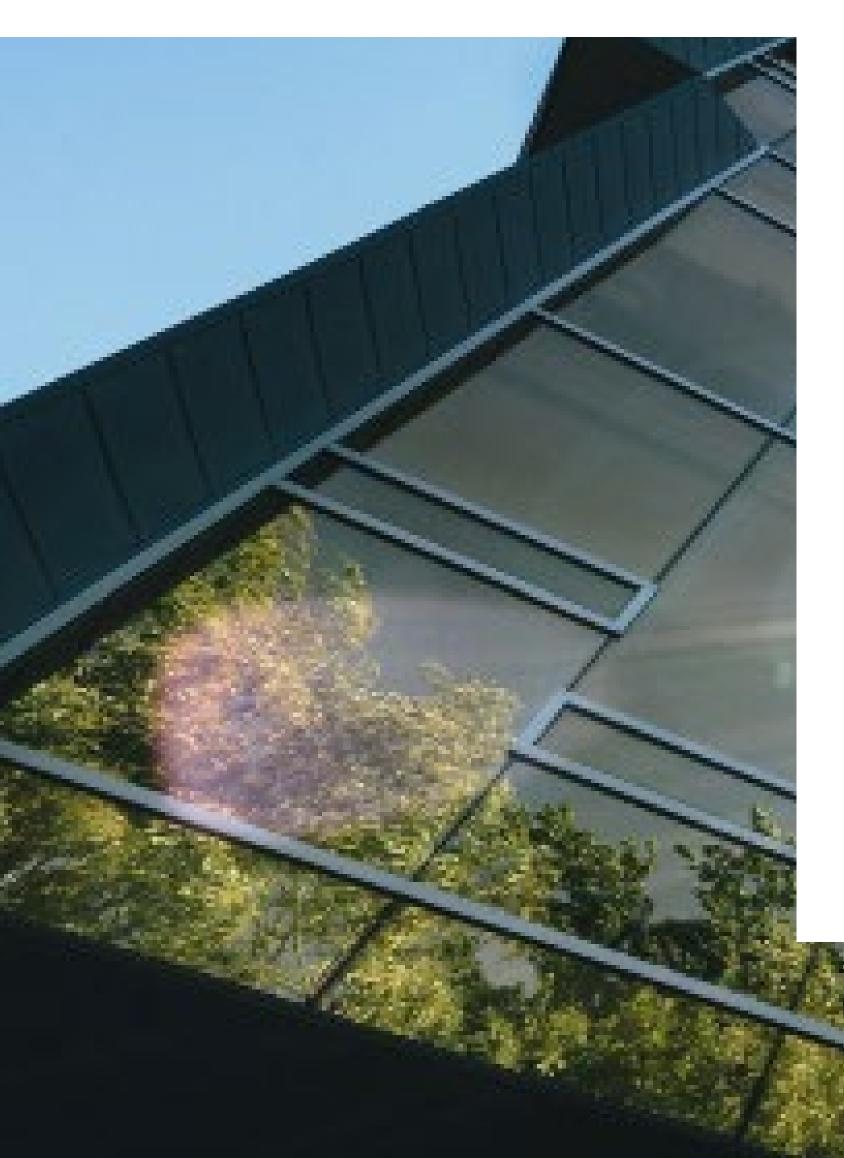
- Disclosing committee-level responsibilities and key decisions made by committees during the year.
- Increasing board engagement by developing focused board sub-committees related to climate, as opposed to packaging climate into incumbent forums.
- Establishing cross-division forums with a specific mandate to increase the consistency of climate adoption across the organization.
- Linking executive compensation to sustainability metrics and outcomes, with more ambitious firms also linking it to sustainable financing and investment metrics.

• Providing clear illustrations of governance structures related to climate, flowing up and down the organization all the way to the board.

Strategy

- Disclosing a comprehensive product strategy that services a range of customers and their green product needs.
- Designing products that meet specific climate and ESG outcomes and align to the bank's strategy to maximize their impact.
- Performing climate-related capability analysis at all levels of the organization and developing targeted training in collaboration with thought leaders.
- Evidencing policies rolled out across the business to support headline climate commitments.
- Demonstrating a framework or policy on client engagement to support customers' transitions and inform climate risk analysis.
- Disclosing the results of scenario analysis, including quantitative results and financial impacts under industry-recognized climate scenarios.





Risk Management

- Disclosing sector- and geographical-level portfolio analysis of transition and physical risks, going beyond traditional high transition risk sectors and linking the analysis to customer engagement activities.
- Demonstrating an awareness of the impacts and interdependencies climate risk has with established risk taxonomies.
- Evidencing how climate risk has been adopted into the enterprise risk management framework and providing practical examples of how existing risk management processes have been adjusted for its integration.
- Demonstrating an increasing maturity in the technology solutions used to monitor and manage climate risk.



Metrics & Targets

- Clearly presenting a breakdown of the key drivers of operational GHG emissions, alongside a feasible low-carbon transition plan and a summary of the decarbonization levers at the bank's disposal.
- Evidencing the use of technology and automation to calculate environmental metrics and insights gained to support transition planning.
- Providing a clear articulation of how operational and financial environment planning aligns to the latest climate science.
- Displaying dashboard insights of sector-level portfolio pathway analysis, including alignment to the firm-wide commitments and governmental objectives.
- Establishing an internal carbon pricing program.





Governance

Board Engagement

An increasing number of banks are demonstrating mature governance practices around climate. Many firms are now offering clear illustrations of their governance structures to explain the decision-making flow up and down the organization, all the way up to the board of directors.

Some firms have also prudently provided committee-level responsibilities and associated initiatives. Whilst this design effectiveness is critical for effective decision making, the most diligent firms have gone one step further in their disclosures to demonstrate the effectiveness of their governance practices in action. Evidencing ad-hoc decisions made by board committees is a sure-fire way of showing external stakeholders that climate change governance is successfully up and running within the bank.

Board-level committees with responsibility for climate and sustainability oversight have a wide variety of titles and mandates. In many instances, the committees' responsibilities are broad and combined with areas such as strategy, social responsibility and corporate governance. Board risk committees remain a pivotal forum for the assessment of climate risk within an effective governance structure. However, we have also noted a small number of firms which have established specialized board-level committees with a narrower, targeted focus on sustainability.





Credit Suisse has established a Sustainability Advisory Committee with a mandate to "assist the board, in an advisory capacity, in fulfilling its oversight duties with respect to the group's sustainability strategy and program effectiveness." Activities and an example decision validated by the forum (review and validation of key pillars of the Credit Suisse sustainability strategy) have been disclosed in the TCFD report. Outside of this forum, all board-level committees have an explicit sustainability responsibility, including the compensation committee which has aligned the nonfinancial performance assessment to clearly defined ESG metrics.

	Board of Directors Approves and monit
Board of Directors	Risk Committee Oversees and review Group's risk manage function in the conte of sustainability
	Sustainability Advis Assists the Board, in the Group's sustaina
ard	Executive Board Responsible for the osignificant initiatives
Executive Bo	Executive Board Ris Management Comm Oversight function with respect to mark credit, reputational and sustainability risk-related matters

Source: Credit Suisse, Sustainability Report 2021 – p15



Sustainability Governance Framework

onitors the sustainability strategy

iews the agement ontext

Audit Committee Oversees and reviews Group ESG disclosures **Compensation Committee Determines compensation** incentives in the context of sustainability

Conduct and Financial Crime Control Committee

Oversees the Group's exposure to financial crime risk in the context of sustainability

visory Committee

in an advisory capacity, in fulfilling its oversight duties with respect to ainability strategy, ambitions and program effectiveness

the day-to-day operational management while reviewing and co-ordinating ives, projects and business developments in the context of sustainability

Risk ommittee on narket, nal

Reporting Steering Committee Provides oversight and approval for Group ESG disclosures

ESG Disclosure and

Purpose, Values and **Culture Council** Oversees the implementation and embedding of the culture across the Group

Group Conduct Board

Oversees how conduct matters are handled and ensures consistency and the alignment of practices across the Group

Executive Engagement

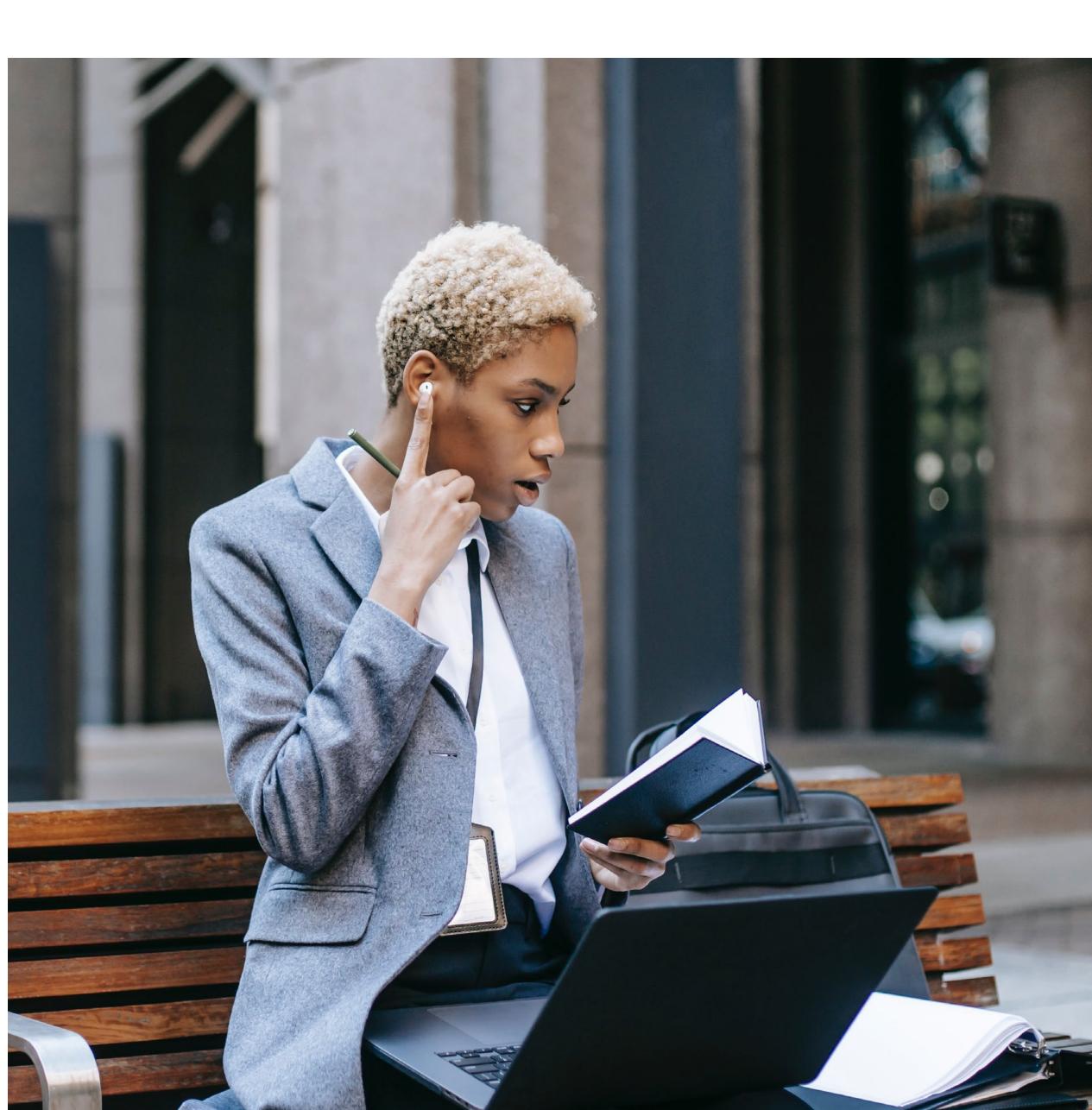
Whilst "Board Engagement" is crucial to ensure climate decision making is mandated at the highest levels of the bank, day-to-day decisions on climate are made by executives and their delegates. Hence, "Executive Engagement" is equally crucial to ensure climate issues are factored into decision making at all levels of the organization.

Keeping these executives successfully engaged and focused can be achieved through different means. The most fundamental way is, unsurprisingly, having an effective governance structure for executive oversight of climate risks and opportunities. Similarly, with "Board Engagement", best practice for TCFD disclosures will involve a governance structure diagram, descriptions of roles and responsibilities of the executive committees, and explicit evidence of climate risk reviews or decisions made by executives during the year.

A common issue experienced by many large banks is a lack of coordination by the different parts of the organization in their efforts to address ESG and climate issues. As a result, we have noticed a trend among some leading organizations to establish forums with specific mandates to ensure ESG and climate considerations are being consistently adopted by executives across different areas of the bank.

There has also been a continuation of the trend to link executive compensation to sustainability metrics and outcomes. Scorecards for executive renumeration often included measures related to the firms' operational carbon emissions, whereas more ambitious firms attempted to adopt performance metrics related to sustainable financing and investment.





Lloyds Banking Group has divided the governance of sustainability into two themes: environmental sustainability strategy and climate risk. Board- and executive-level committees have been created with these two themes in mind, and have evidenced focused discussion of sustainability themes in both of these forums. Topics discussed and key decisions made have been disclosed to demonstrate the effective operation of these forums.

Lloyds has also placed an emphasis on divisional and entity-level governance. Existing governance structures and committees are leveraged to manage sustainability and climate risk decision making. The group environmental sustainability team is supported by divisional sustainability teams to ensure a coordinated approach across the group.

In addition, the bank updated its group balanced scorecard during the year to add a new measure on sustainable financing and investment, and committed to continue reviewing the scorecard in line with group strategy.

Key discussions and decisions in 2021

The following diagram illustrates some examples of the key discussions and decisions taken across the Group's governance structure in relation to the Group's environmental sustainability strategy, targets and approach to managing climate risk.

Responsible **Group Ne**

Topics discussed

- Climate-related impact
- Portfolio alignment ad the Group's net zero a commitments throug
- Progress in relation to plans, including key a in achieving outcomes
- Climate-related GEC
- Enhancements recom structure and approa
- Skills and capabilities

Key decisions

- Approval of sector an
- Approval to join the I Powering Past Coal A



Lloyds Bankin	g Group Board
e Business Committee (RBC) et Zero Committee (GNZC)	Board Risk Committee (BRC) Group Risk Committee (GRC)
act and insights across our key sectors activity required to achieve ambitions and external gh NZBA and IIGCC o our Helping Britain Recover achievements across divisions es agreed for 2021 balanced scorecard performance measures mmended to Group governance ach to Net-Zero activities es required to achieve our ambitions mbitions and external sector statements Net-Zero Banking Alliance and Alliance (GNZC only)	 Topics discussed Progress against meeting regulatory and TCFD expectations Updates on bank and insurance CBES submissions Climate-related impact and insight across key sectors, and portfolio alignment activity in line with the Group's Net-Zero goals Introduction of Climate Risk Policy (GRC only) Development of Management Information and approach to developing appropriate risk appetite Key decisions Scope of activity to meet regulatory expectations by end 2021 (GRC only) Approval of Risk Appetite Statement and initial metric climate risk (BRC only) Risk mitigation strategy for proposed transition to electric
	vehicles in UK Motor Finance portfolio (BRC only)

Strategy

Green Products

The global market for green products has continued to grow at a promising rate and was estimated to be worth USD 540 billion¹⁰ in 2021. Whilst in recent years the offer of a "token" green bond would have been considered market leading, the market has developed to such an extent that leading firms are able to address a full range of green product needs for different customers. These leading firms have also stated their intention to place green products at the heart of their product strategy. A complete suite of green products would likely contain a number of the following products:

- Green bonds and sustainability bonds
- Project-based lending (commitments and monitoring to support a green transition)
- Sustainability-linked loans (general-purpose lending where the customer commits to ESG objectives and monitoring)
- Launching green funds for investors
- Green mortgages
- Consulting / M&A advisory
- Research

For banks to achieve their net zero targets, the coming decades will undoubtedly see a continued shift towards sustainability-linked loans. As firms develop their understanding of financed emissions and seek to reduce their exposure, what today is referred to as a sustainability-linked loan will likely become the norm.

Firms that acknowledge this coming trend, and begin to alter their standard loan agreements, are likely to position themselves as market leaders.

Banks have also been busy designing products to tackle specific ESG outcomes. A select number of banks have integrated their ESG and climate ambitions into product strategy and exhibited this by investing heavily in new product markets aiming to tackle issues of the future. These vary in nature, from small iterations of existing financial products repackaged through a sustainability-linked lens (e.g. sustainability-linked trade guarantees) to more ambitious product conception.



Nomura has recognized the financing opportunity that the transition to a decarbonized economy presents, and is aspiring to "achieve sustainable growth by solving social issues." The bank has exhibited this ambition by developing a comprehensive product suite aimed to meet the needs of a wide variety of stakeholders, from individual and institutional investors to financial sponsors and government entities. Conceptualizing products with ESG outcomes in mind has proved an effective design strategy for the Japanese bank.



Source: Nomura, TCFD Report 2021 – p6

Nomura's Sustainability Services and Initiatives

(•: Climate-change-related businesses)

			· · · · · · · · · · · · · · · · · · ·			
Companie	C C	viduals/ ployees	Institutional investors/pension	Public se organiza		Society
	$\leq >$		$\leq >$		$\leq \leq$	>
He	elp enrich socie	ety through o	ur expertise in the ca	apital marke	ets	
	Nomura's	s Sustainabili	ty Services and Initia	atives		
	Fina	nce				cial Literacy program
ond inked Bond		(Financing a	ure & Power Financing and solutions for solar, w vable energy assets)	vind and	 Financial & Education Continued Education 	Education
Consulting & Advisory				Our	community	
for s ing on hnology ure itech) entech	ESG/Sustainable Finance: Research & Consulting		 Food & Agri. Medical & Nursing Care Regional Revitalization Sustainability Disclosure Service 		 Disaster Relief Efforts Community Contribution Support for Next Generation Drive Sustainability 	
Asset M	lanagement/N	ew Product &	& Solution			Drive
vestment	New ESG/SDC	Products	Index Developme	nt	Sus	stainability
Our approach to support sustainability development						
ainability ality	 Risk managen framework 	nent	 Participation in th related initiatives ESG related training 		Reduction environme	of the ent burden

Training

As climate-related risks and issues move further up the list of organizational priorities, banks have continued to develop the maturity of their training programs. Leading firms have moved on from simply delivering board education sessions and have begun to roll out generic climate change training to all levels of the organization.

Many firms are also conducting regular analysis to identify the roles in their organization that require climate-specific knowledge and capabilities and have delivered targeted training to these individuals. In terms of TCFD disclosures, firms demonstrating best practice will have disclosed all the above, alongside metrics and targets for each category of training (board, role-specific, firm-wide). Finally, we have seen many examples of firms disclosing the key topics covered in the training sessions, or partners they have collaborated with to deliver the sessions.

Industry Spotlight

NatWest Group has taken a comprehensive approach towards climate education for its colleagues and customers. It has gone a step further than most firms by including external stakeholders in its training plans to support customers, communities and youth education. It has provided metrics on the number of colleagues upskilled through its various firm-wide and targeted training initiatives, as well as detailing its collaboration partners e.g., the Cambridge Institute of Sustainable Leadership (CISL).

Climate-related education

Colleague and customer education has been a key focus in 2021 to further embed climate into our culture.

1. Provide easily accessible climate awareness content for colleagues, customers and communities through our NatWest Learning academies.

The evolving Climate Education model is based on four key groups: Core, Common, Specialist and External learning, driving a One Bank approach to identify and assess capability needs, determine the best approach and deliver the most relevant learning to serve the needs of colleagues, customers and communities.

Core

Scalable learning to drive awarene across all colleag

Source: NatWest Group plc, Climate-related Disclosures Report, 2021 – p34

We have focused on three key education priorities throughout 2021 to support the achievement of our climate ambition:

2. Equip colleagues in priority and customer facing roles with the necessary climate capability to do their job, support customers' transition and meet regulatory requirements.

3. Inspire climate action and innovation through learning, thought leadership and global outreach.

	Common	Specialist	External
ig	Cohort approach	Priority areas supported	Supporting customers,
ess	addressing common needs	through bespoke learning	communities and youth education
igues	across multiple populations		

Policy & Commitments

Leading banks are strategically devising a combination of short- and long-term commitments, underpinned by robust policies to set themselves apart.

Market-leading firms have now moved beyond the "low-hanging fruit" such as coal financing, and are turning their attention to more complex issues such as commitments and policies to increase the transparency of financing in certain sectors, e.g., international shipping.

Despite the focus of this report being on climate-related disclosures, leading firms are also likely to be mentioning their commitment to the impending Task Force on Nature-related Financial Disclosures (TNFD) framework.

Engagement & Collaboration

Internal collaboration is a critical and often overlooked aspect of engagement strategy—climate and ESG activities frequently happen in silos across large organizations. Several banks have established internal forums with titles such as ESG center of excellence and ESG council, with the aim of driving collaboration and consistent standards across divisions of the organization. Internal research divisions are also excellent at fostering engagement with internal and external parties, by promoting discussion through the conception of original insights.

Banks seeking to demonstrate best practice in this area are also engaging with their customers to support their journey towards a 1.5°C transition pathway. The "divest vs. engage" conversation has continued to rage within investment offices; ambitious institutions have been vocal in their intentions to engage customers on climate-related issues and establish a client engagement framework.

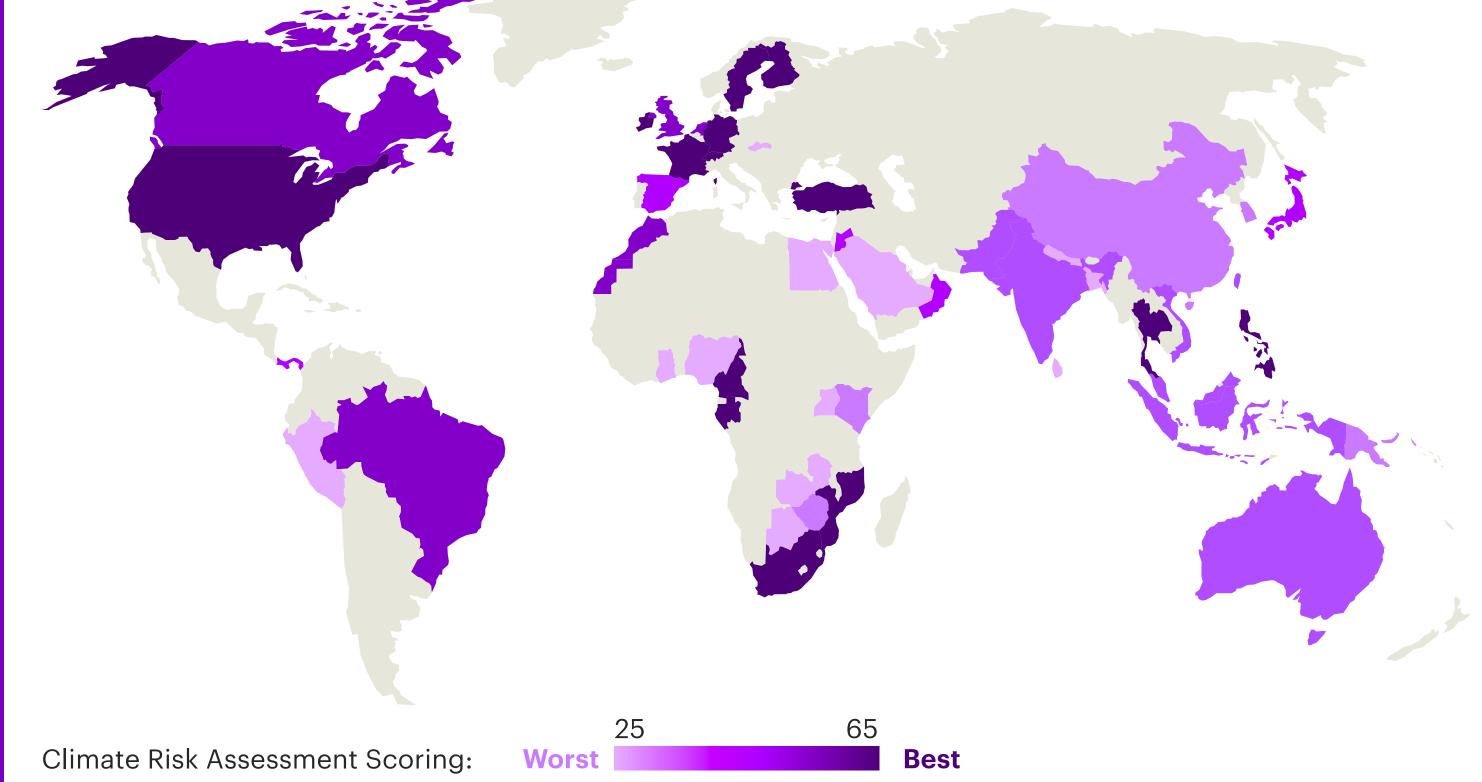
At a firm level, leading banks are taking a holistic approach to collaboration with a range of stakeholders in mind. These banks are not only considering which external initiatives to engage with, but are also looking closer to home.

> Finally, a select number of banks have also relished playing an active role in the sustainable finance policy debate, and have participated in formal consultations on local regulation- and regulator-led exercises such as the CBES exercise facilitated by the Bank of England. There may be a competitive advantage for large banks able to demonstrate leadership in supporting the emerging regulatory environment and engaging in broader debate and initiatives.



Standard Chartered has continued to demonstrate industry leadership in sustainable finance. The bank's leaders held a number of significant positions on cross-industry forums, such as the Equator Principles Association and the Taskforce for Scaling Voluntary Carbon Markets. Standard Chartered also disclosed results from its biggest ever climate-related client outreach exercise, providing a climate risk assessment to almost 2,000 of its customers. It is now utilizing the results of these customerlevel risk assessments and integrating them into its CCIB credit risk underwriting process.

How do different regions fare in their risk and preparedness?



Source: Standard Chartered plc, Climate-related Financial Disclosures Report, 2021 – p46



Scenario Analysis

Adoption of the baseline climate scenarios provided by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) has emerged as a common leading practice.

Banks aligning with NGFS have explored at least three scenarios in detail: Early action (orderly), late action (disorderly) and no additional action (hothouse world). These firms have shown leadership by disclosing not only the qualitative outcomes of these scenario exercises but, in the most advanced cases, quantitative results as well.

The initial focus of scenario analysis has been on banks' key or high-risk portfolios to understand physical and transition risk. Rarely-seen quantitative outputs from these scenarios include credit losses and P&L net impact which, when disclosed, demonstrate that banks have established meaningful insights to begin quantifying the financial impacts of their climate risk. Many banks have used scenario analysis to quantify the levels of physical risk, for example flood risk, to which their portfolio is currently exposed. The most forward-thinking organizations are creating meaningful feedback loops to feed the outputs of scenario analysis into their strategic planning process.

Industry Spotlight

Mizuho Group identified the targeted sectors and physical risk types which were the focus of its scenario analysis, and also disclosed those which it planned to include in future analyses. As well as including a heatmap of its sector-specific evaluation of climate risks and opportunities—an outcome of its scenario analysis—Mizuho's disclosure goes a step further than those of many other large banks by approximating the increased credit costs faced by the organization: those driven by transition risk are estimated to rise to ¥620 billion (USD 4.2 billion) by 2050, and those driven by physical risks to ¥4 billion (USD 27 million).





Scenario	1	Select critical risks and opportunities	Select the critical risks and opportunities that companies face in each sector, such as those related to demand, price, and tighter regulations	\checkmark
	2	Define parameters	Define parameters in order to quantitatively measure the impacts in step 1, using the IEA's scenario and publically available information from sample companies	\sim
Analysis method	3 Analyze the sample companies using BS/PL		Estimate the sample companies' future balance sheets/profit & loss statements and evaluate business continuity under the scenario	
	4	Evaluate the entire sector for the entire sector		\checkmark
Analysis results	Increase credit costs through 2050: approximately ¥620 billion			

Source: Mizuho Group, TCFD Report 2021 (p25)



Strategic Planning

As ESG and climate issues have moved from buzzwords to top strategic drivers, a key first step for banks is understanding where they want to make an impact.

Banks may have the best intention to address each and every issue facing their business and the wider world. However, the most effective strategic planning aligns with corporate priorities to maximize impact through the organization's products and services. More advanced firms are beginning to utilize the outputs of scenario analysis to inform strategic planning. As scenario analysis matures, this will be a key feedback loop that firms will need to develop.

One of the most notable variations in firms' strategic planning is in the time periods which they consider to be short, medium and long term. Whilst there is no correct answer, our analysis found mature organizations to be considering shorter time periods. For example, short-term strategic plans were set out over time horizons as a short as one year, to define tangible actions that help set the path for the successful delivery of longer-term strategic objectives.

Risk Management

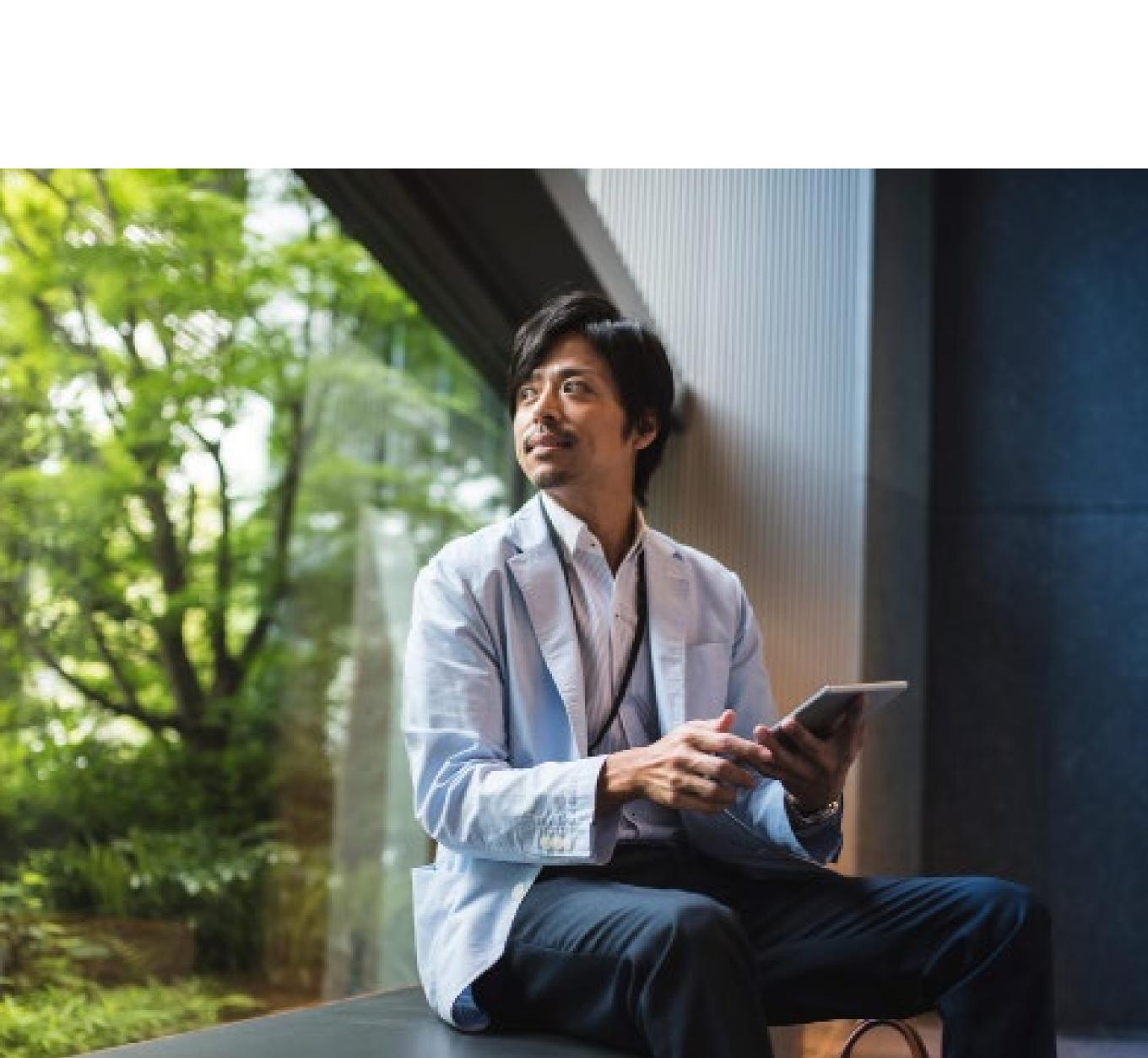
Transition & Physical Risk

Leading firms have acknowledged that to understand their physical and transition risk, they need to develop a better understanding of their customers' transition strategies and underlying climate risks.

While early efforts have rightly been focused on high-risk, carbon-intensive sectors, some firms are also beginning to develop a broader understanding of other industry sectors within their portfolio.

Banks that demonstrate best practice are disclosing quantitative sectoral analyses, displayed as heatmaps or similar, to provide transparency into the sectors of their portfolios which are most exposed to climate risk.





Natixis has disclosed its approach to the identification, measurement and management of both transition and physical risks. The French corporate and investment bank has broken down the risk factors relating to these risks; detailed the activities that are actively underway to identify them; and subsequently shared the risk management policies and strategies being used by the bank to manage them.

Overview of climate risk identification, measurement, and management processes

Climate Risk	Risk Factor	Scope Concerned	Identification and Measurement of Risks	Risk Management
	Counterparty credit quality and collateral valuationCorporate & Investment Banking		Assessment of transaction impact on climate as part of approval/review process; Climate sensitivity analysis (part of 2020 APCR pilot climate exercise)	Definition of sectoral ESR policies and exclusion lists (coal, oil & gas); Integration of climate impact exposure into internal capital allocation using the GWF; Definition of a climate transition risk appetite being considered (indicator based on monitored GWF)
	Financial assets valuation	Corporate & Investment Banking	Climate sensitivity analysis exercise (part of APCR pilot climate exercise)	Definition of sector ESR policies and exclusion lists (coal, oil & gas)
ı Risk		Natixis Assurances Natixis Investment Managers	Issuer ESG performance measure, Portfolio carbon footprint measure	Alignment policy of Natixis Assurances euro fund; ESG criteria integration into Seed Money Investment decisions
Fransition	Liquidity and structural balance sheet risks	Natixis	Regular investor surveys	ESG policy implementation for liquidity buffers; Natixis ESR strategy
Trans	Asset management funds Natixis Investment Managers relative performance		Issuer ESG performance measure	Climate challenge integration into strategy
	Strategic risks	Natixis	Client surveys; Competitive intelligence	Climate change stakes taken into account in strategic plan
	Changes to the regulatory and legal framework	Natixis	Regulatory watch	Sustainable finance integration into the regulatory framework and regulator discussions
	Reputational risk	Natixis	Regular stakeholders dialog; Controversies monitoring	ESR strategy at Natixis; Definition of sectoral ESR policies and exclusion lists (coal, oil & gas)
	Counterparty credit quality and collateral valuation	Corporate & Investment Banking	Due diligence on project/asset financing; Qualitative integration of ESG analysis of corporates; Ongoing discussions to define a quantitative assessment tool	Insurance coverage of projects/counterparties
~	Financial assets valuation	Corporate & Investment Banking	Ongoing discussions to define a quantitative assessment tool	Diversification strategy
Physical Risk		Natixis Assurances Natixis Investment Managers	Issuer ESG performance measure	General hedging policy; Diversification strategy
	Liquidity and structural balance sheet risks	Natixis	Ongoing discussions to define a quantitative assessment tool	Diversification strategy
	Asset management fund relative performance	Natixis Investment Managers	Issuer ESG performance measure	ESG criteria integration into investment and engagement processes
	Insurance claims and reinsurance access	Natixis Assurances	Integrated into contract origination	Reinsurance policy
	Operational risk	Natixis	Integration into operational risk management framework	Real estate roadmap review; Business continuity plan

Source: Natixis TCFD Report, 2021 – p40

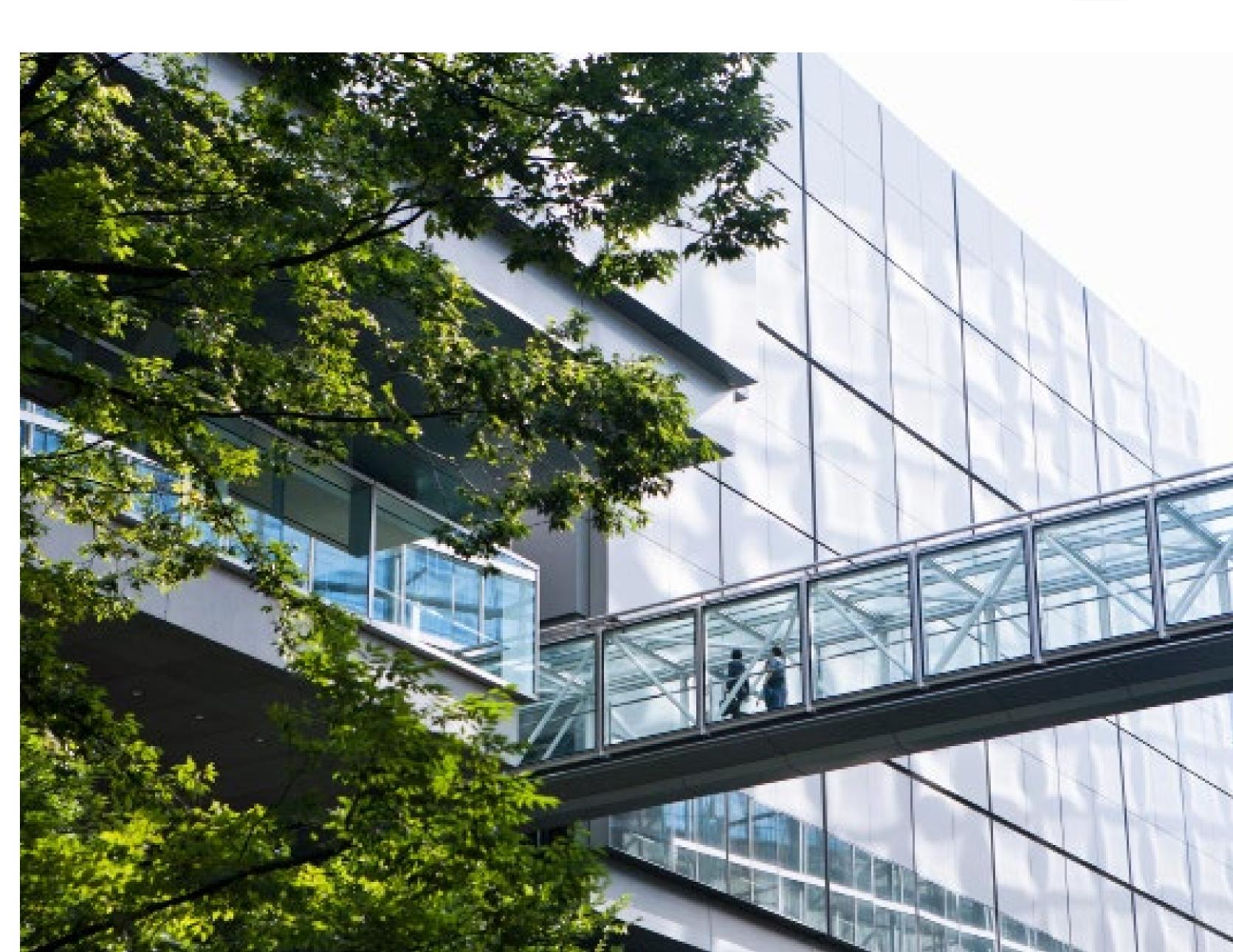


Risk Management Frameworks

"Advanced" banks have integrated climate risks into their business-as-usual risk management capabilities. We are now seeing evidence of specific risk management processes being adjusted for the integration of climate risk—examples include borrower credit assessments, environmental due diligence of counterparties, and ESG screening of investment opportunities.

In some cases, banks have also considered climate risks as a principal risk and as a factor among multiple risk types within the firm-wide risk management framework.

As risk management frameworks adapt to consider climate risk, so should the range of monitoring tools and technology solutions used to manage them. Numerous firms are disclosing the existence of in-house scoring methodologies, climate risk rating tools and third-party data analytics and risk dashboards.





Following the elevation of climate risk to a principal risk, **Barclays** has updated its group-wide enterprise risk management framework (ERMF), complemented by a range of frameworks, policies and standards. It has developed a climate risk framework informed by its strategy to support the ERMF. The bank has also articulated its understanding of connected risks and climate-related risk management processes.

Governance	Enterprise Risk Management Framework (ERMF)					
		Climate Risk Framework				
	Responsibilities		Climate Change Financial Ri	sk and Operational Risk Policy		Climate Change Standard
	Climate risk	Credit risk	Market risk	Treasury and capital risk	Operational risk	Reputation risk
	 Provide climate horizon scanning information and emerging trends to BRC and Principal Risk Leads Recommend risk appetite statement, constraints and exclusions to BRC Define areas of concern and recommend scenario analysis priorities Lead the development of climate-specific risk methodologies Interpret stress test results for relevance as drivers of risk Review and challenge risk type approaches and support consistency across risk types Aggregate and monitor a central climate risk view across in-scope risk types 	 Review individual obiligors' exposure using climate change lens Consider climate change risk appetite in relevant countries and portfolios Include in the internal Capital Adequacy Assessment Process (ICAAP) Oversight by Retail and Wholesale Risk Management Committees, and Board Risk Committee 	 Identify and assess climate-related risk factors Apply stress scenarios, assess stress losses and set risk limits Include in ICAAP Oversight by Market Risk Committee and Board Risk Committee 	 Identify exposure to climate risk Consider key indicators and limits to support risk management Include in ICAAP and Internal Liquidity Adequacy Assessment Process (ILAAP) Oversight by Treasury & Capital Risk Committee and Board Risk Committee 	 Integrate climate change across different risk categories, e.g. Resilience and Premises Include climate change within risk assessment process including Strategic Risk Assessment 	 Outline minimum requirements and controls for reputation risk management relating to client relationships or transactions Outline the expected business behaviours in relation to these issues Outline the approach to enhanced due diligence
Ownership	Climate Risk Accountable Officer	Credit Risk Accountable Officer	Market Risk Accountable Officer	Treasury & Capital Risk Accountable Officer	Operational Risk Accountable Officer	Group Head of Sustainability

Metrics & Targets

Environmental Operational Metrics

In line with our methodology, mature disclosures are showing a more granular view of banks' operational GHG emissions, with a detailed breakdown of key drivers and associated risks, as well as plans to transition to a low-carbon economy and evidence of progress made to date.

The most competent banks can demonstrate the feasibility of their plans, including how they align to climate science and government targets, and the decarbonization levers at their disposal.

The emergence of machine learning as a means of monitoring and meeting energy and environmental targets has captured the imagination of the more innovative banks. For example, there is evidence of banks utilizing advances in technology to identify branches with abnormal consumption rates, and building these insights into their net zero planning.

These technology advances will be crucial for banks as the range of climate and nature-related metrics collected by firms continues to expand over the coming years.

A

Environmental Financing Metrics

Despite the complexity faced by banks in developing a set of environmental financing metrics, motivated organizations have taken strides to understand and disclose their financed emissions.

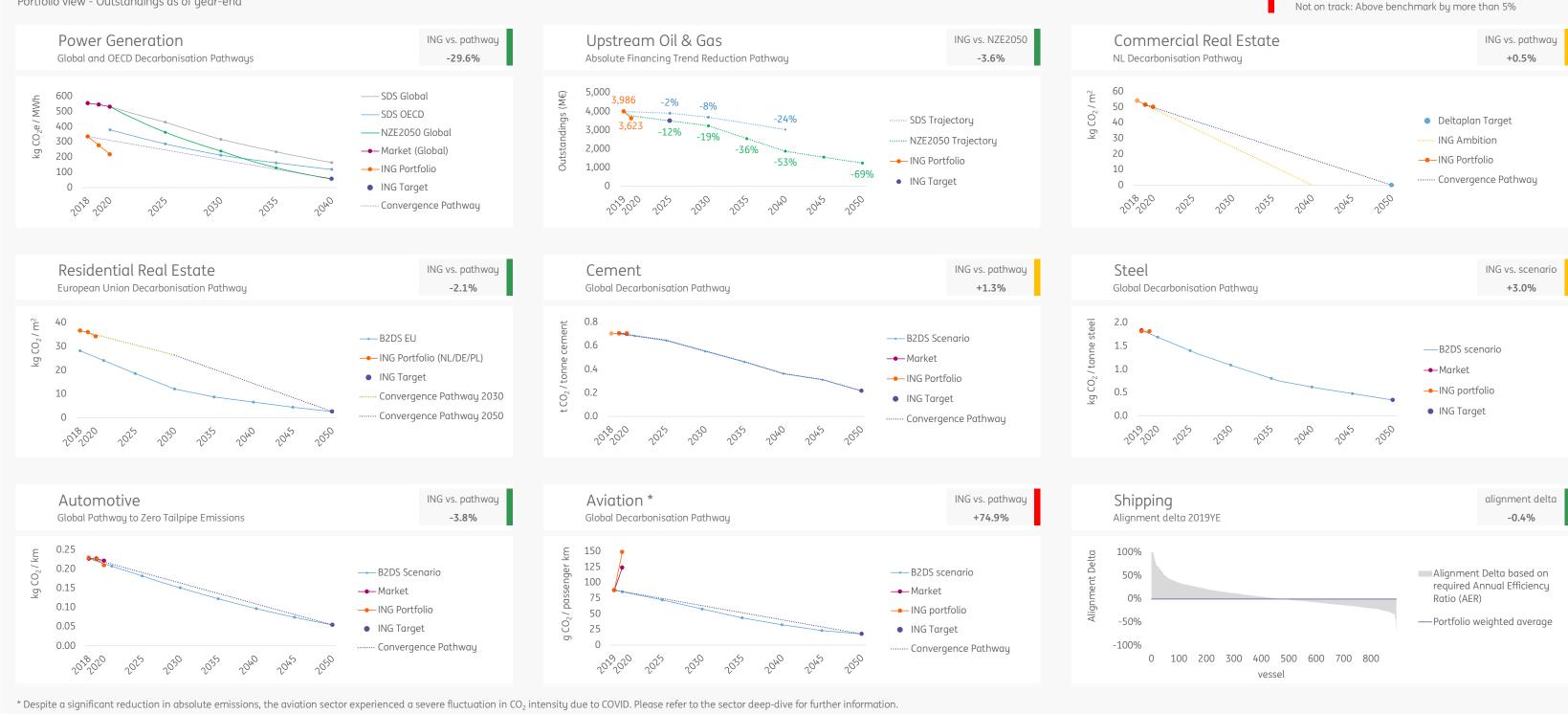
Many of the leaders are now disclosing an environmental financing dashboard, detailing their sustainable financing metrics and science-based targets for their portfolio alignment. Some banks are now also developing programs to establish internal carbon pricing models.

Financing metrics is one of the most complex climate issues faced by firms, as many large organizations have only recently sought to establish a holistic climate or ESG data strategy. The overwhelming breadth of metrics has the potential to distract from the collection of achievable climate metrics. Successful firms will be able to demonstrate a cohesive ESG data strategy that goes hand-in-hand with their customer engagement strategies. Commonly, banks' data gaps are those of their customers. As all industries continue their own work to understand climate and emissions data, banks are uniquely positioned to drive positive action across all sectors of the economy.

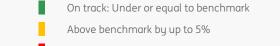
ING has included a Climate Alignment Dashboard in its annual Climate Report to showcase the analysis of CO_2 intensity per sector of its portfolio. The Dutch bank's Terra approach draws upon industry-recognized methodologies for target setting and pathway assessments, namely the Science Based Targets initiative (SBTi) and the Paris Agreement Capital Transition Assessment (PACTA). The bank's holistic portfolio measurement and steering approach has demonstrated progress in embedding Terra into decision making processes, and enabling an engagement-led approach by mobilizing front-office teams.

Climate Alignment Dashboard





Source: ING, Climate Report, 2021 – p40



Summary of Recommendations

Best practice and recommendations in relation to TCFD disclosures have been provided throughout the report. The table below is based on the current level of maturity that we are seeing across the industry. It draws out key recommendations from our analysis, tailored to support banks as they further develop and embed their climate initiatives.

Pillar: Governance

Recommendations	Example
Reference examples of the climate-related metrics and targets that are being reviewed by the board and senior management.	Include in disclosures examples of dashboards that are used in risk monitoring processes and governance forums, as well as specific decisions taken.
Review remuneration policies of the board, senior management and relationship management teams to incorporate management of climate-related issues— and disclose how this is administered.	Link the variable remuneration of executives and the board to their performance against climate-related objectives and disclose methodology.
Drive climate strategy by cultivating climate expertise among board members through upskilling, career progression, and recruitment.	Define minimum board training requirements, implement extensive training for board members, and consider setting a target for the proportion of board members with climate expertise.

Pillar: Risk Management

Recommendations	Example
Disclose key mechanisms that are utilized to manage climate risk in line with strategy and risk appetite.	 Integrate climate considerations in customer-level, sector-level, and third-party risk assessments, including early-warning indicators, rating models, covenant management, risk and control self-assessments (RCSAs), and event management. Integrate climate in the operational resilience framework.
Engage with customers in an advisory capacity to develop their climate strategy and to enhance counterparty data gaps.	Introduce customer questionnaires to identify counterparty risks and assess customers' responses to climate change.
Provide evidence of transaction reviews and tools used to measure and monitor climate risk.	Collate and disclose the number of transactions subjected to enhanced climate-related due diligence checks during the financial period, including details of the number of transactions approved, rejected, etc.

Pillar: Strategy

Recommendations	Example	Recommendations	Example
In line with TCFD guidance, identify short-, medium- and long-term time horizons; the rationale for these; and the climate risks and opportunities associated with each horizon.	 Conduct climate sector analysis to identify, measure and quantify material climate risk exposure in the portfolio. Identify key climate risk drivers for the bank across different time horizons and the rationale underpinning the selection of these. Conduct strategic workshops to determine objectives in relation to climate management and agree key aspirations of the business in green 	Identify which metrics recommended by the TCFD guidance are most relevant for the organization to deepen its understanding of the impacts of financing activities. Ensure metrics and targets	Review TCFD guidance, industry guidance, and peer metrics against the current business model to determine priority metrics. Partner with third-party data providers to assess the data landscape, identify gaps, and develop solutions. Disclose the methodology and assumptions used to define and calculate climate-related metrics. Initiate a metrics review and optimization project
Consider and simulate severe scenarios such as a 3° and 4° temperature	financing and climate action engagement. Utilize existing quantitative frameworks and models such as International Energy Agency (IEA) and Network for Greening the Financial System (NGFS) to start scenario analysis.	have a clear objective and are linked to a specific plan or element of the roadmap.	Develop a plan for metric enhancements (i.e. more granular metrics at individual and sector level) and automation based on the priorities of the organization and current data sourcing limitations, to enable a robust, flexible and scalable ESG information architecture.
a 3° and 4° temperature rise. Disclose the results of stress testing.	Leverage third-party expertise to support capability development. Disclose severe scenario results, their impact on financials and any resulting changes to strategy.		
	Define and disclose relevant management actions under various scenarios as with standard stress tests.	Detail how the business strategy aligns with Paris	Complete strategic planning to define how portfolios will be adjusted to align with decarbonization pathways,
Introduce training across the organization to shape a climate risk management culture.	Create a curriculum for all three lines of defense (including RMs) on climate risk management and climate science expertise (across industries).	Agreement or net zero goals and articulate plans to support this transition.	defining associated timelines for change. Refine position statements in relation to climate- sensitive activities and sectors and benchmark current policies against peers.

Pillar: Metrics & Targets



TCFD What's Next?



In this section, Alana Robinson explores the relationship between the TCFD and other emerging climate-related standards. The TCFD is shaping the approach that governments and regulators are taking around the world. Not only can this be seen through the implementation of mandatory TCFD disclosures, in countries such as the UK and New Zealand, but also the development of specific disclosure proposals which build upon the framework, such as the ISSB, the proposed climate disclosure rules from the Securities and Exchange Commission (SEC) in the US and the EU Sustainability Reporting Standards (ESRS) from the European Financial Reporting Advisory Group.

Focusing on the ISSB and the TNFD, Alana has identified ways that these frameworks collaborate with the TCFD to encourage firms to address sustainability-related issues, expand corporations' understanding of sustainability, and allow firms to extend their learnings from the TCFD to other areas.



Alana Robinson FS Sustainability Consultant

The International Sustainability Standards Board (ISSB)

The framework set out by the TCFD has developed into the industry benchmark for climate-related reporting. This is evidenced by the fact that the core components of the framework are being integrated into other global standards.

Announced by the IFRS Foundation in November 2021, the International Sustainability Standards Board (ISSB) aims to develop and maintain standards for sustainability-related disclosures by companies, to guide investors and market participants into making sustainable investment decisions.

In March 2022 the ISSB published two draft standards, consolidating the frameworks of the TCFD, the Climate Disclosure Standards Board (CDSB), the Value Reporting Foundation (VRF), the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI). These standards align with the TCFD's goals for increased climate-related disclosures and engagement with investors and, similarly to the ESRS, build upon the recommendations of the TCFD by requiring additional and more granular information as well as proposing additional specific disclosures. However, while the SEC's proposed climate disclosure rules also follow this trend to some degree, they do vary from the TCFD guidance to a greater extent than the ISSB and ESRS. One example is the requirement to report Scope 3 emissions.

Although the ISSB standards are currently not mandatory, there has been extensive international endorsement from, among others, the finance ministers of the G7 and G20 and the government of the UK. It is anticipated that international convergence on climaterelated disclosures will support the overall intentions of the TCFD and contribute towards better collaboration and consistency with climate-related disclosures.

Task Force on Nature-related Financial Disclosures

Building on the aims of the TCFD, the Task Force on Nature-related Financial Disclosures (TNFD) is a global framework established in 2021 in response to the growing need to address the impact that financial and other business decisions have on nature.

Where the TCFD focuses on disclosing against climate-related risks, the TNFD will encourage financial institutions and companies to address nature-related risks and opportunities and become more transparent regarding their impact on nature.

To understand the importance of disclosing against nature-related risks and opportunities, and to leverage learnings from the TCFD framework, we must first recognize the TNFD's definition of nature. It defines it as "the natural world", with an emphasis on living organisms, their diversity and their interactions with each other and their environments. The TNFD also places emphasis on biodiversity, which is a critical characteristic of nature, enabling ecosystems that are productive and can adapt resiliently to change. Therefore, nature-related risks and opportunities are centered on the rapid deterioration of nature and the subsequent decline in the services nature provides to people, businesses and financial institutions. For example, recent severe weather events have led to biodiversity loss, which is considered one of the most severe risks to businesses over the next decade.

The TNFD disclosure recommendations align to the structure of the TCFD. They measure the four pillars of governance, strategy, risk management, and metrics & targets, with many of the recommended disclosures mirroring those set by the TCFD. Whilst the final TNFD recommendations are yet to be established¹¹, it seems likely that the TNFD disclosures will require a less quantitative approach than those of the TCFD, with a reduced focus on specific metrics and a greater emphasis on descriptions and reflections.

However, there are learnings that can be taken from the TCFD disclosures. The two frameworks have common themes, including the importance of setting a nature-related risk culture from the top, establishing good governance and accountability, integrating nature-related risks and opportunities into business frameworks, and using reliable data. There is also a circular relationship between nature and climaterelated risks and opportunities—climate change is an important cause of changes to nature, and is itself impacted by the drivers of the loss of nature. This link means that society cannot mitigate and adapt to the adverse impacts of one without considering the other. Therefore, despite having different focuses, the overall aims of the TCFD and TNFD frameworks are similar and will reinforce each other to create a more sustainable environment.

If we are to follow the trends of the TCFD and the initial view of the TNFD, it is reasonable to assume that the TNFD too will eventually become mandatory within the UK if not internationally. Indeed, government bodies are already recognizing the need for action against nature loss, with a global set of standards for nature goals likely to be negotiated later this year under the authority of the UN Convention on Biological Diversity.

As the world shifts towards global sustainability standards under the ISSB, the TNFD will expand our understanding of sustainability to include nature and biodiversity. It will also provide the opportunity for organizations to learn from the TCFD framework and contribute towards society's ESG progress.

How can we help?



Accenture believes that being a sustainable bank means embedding sustainability considerations at every level of the organization: from strategy, through insight generation and operations.

With the tools, technology, and holistic methodology to support every stage of the transformation process, we use five strategic levers to help clients make the right decisions, redefine what value means for them, and create enduring value with the right insights:



Clear Sustainability Strategy

Fully integrating sustainability into the corporate and business strategy is key to achieving net zero and other sustainability ambitions, and to harnessing sustainability as a driver of growth and infusing a sustainability culture among employees.



Integrated Controls & Decisioning Framework

Clarifying the implications that ESG factors have on your risk profile, framework and controls, and defining new regulatory commitments.



Information **Architecture**

Without data, there can be no purposeful action. The ESG data landscape is evolving rapidly, so building robust, scalable data solutions is critical. So too are a data control framework, analytics, stress tests, reporting and disclosure.



Sustainability-driven **Products & Services**

The ability to respond rapidly to the demand for sustainability-centered products and services will become an even more important differentiator for banks as public sentiment, behavior patterns and market dynamics continue to change.



Sustainability-infused **Operations, Processes** & Technology

Banks must continue to transform their operating models to align with their sustainability purpose and the SDGs. From procurement, to operations, to CIO and beyond, we help clients build new cultures and infrastructure.

Sustainability Measurement, Analytics and Performance

Leaders must now rethink what performance means in their organizations and devote the same resources and attention to ESG issues as they do to their financials. **Accenture helps clients identify the risks and opportunities and stay on top of emerging disclosure requirements.**

We offer a comprehensive, data-led performance management capability that blends financial and non-financial goals and consolidates the metrics in one place—to be available to everyone and to lay a firm foundation for better-informed decision-making.

Examples of our recent projects include:

- A net zero roadmap for operational and financed emissions
- TCFD reporting and capability development advisory
- A gap assessment of climate-related reporting and macroeconomic analysis to identify critical transition risks and opportunities under multiple climate scenarios
- An ESG data clearing house with external data vendor strategy, data inventory, reference data repository and MI and analytics
- An ESG measurement target operating model including a C-level interaction model and governance
- An ESG dashboard for banking executives that includes emerging ISSB requirements

Public Commitments

Environmental

CHG Emissions: Net Zero by 2000

Green finance raised and facilitated: \$23bn by 2025

Reduction in water consumption 55% by 2025

Small business loans provided to improve sustainability: 150k by 2025

突, Social

Employee participation rate in our community volunteering program 85% by 2025

fistorically underserved sustamers given access to inancial services: 1.4m by 2025

Customers provided with availability to alfordsale housing: 200k by 2025

Ø Governance

Women in senior leadership: 40% by 2025

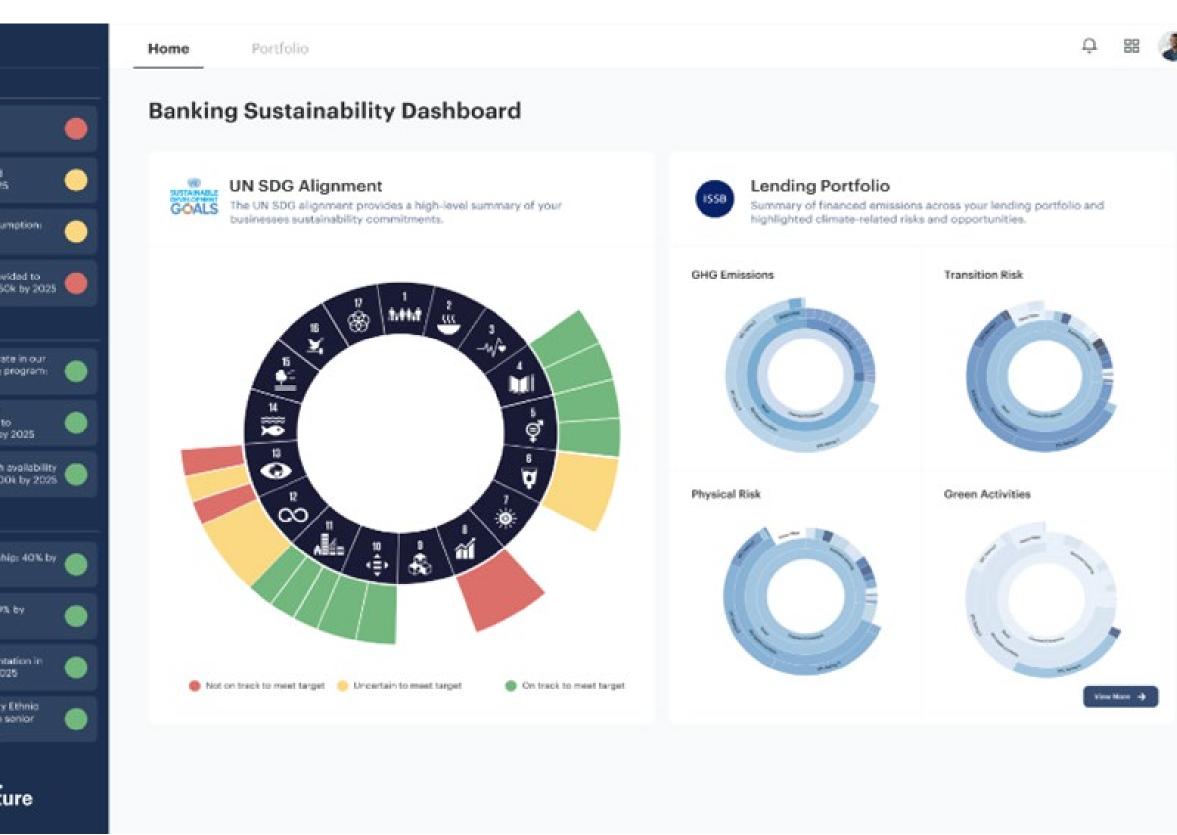
Women on the Board: 50% by 2030

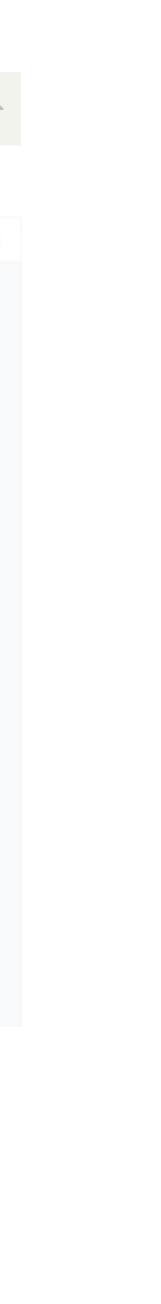
Black employee representation is North America: 19% by 2025

Black, Asian, and Minority Ethnic (BAME) representation in senior leadship: 20% by 2025

accenture

Our Sustainability Performance Dashboard helps leadership understand their bank's sustainability performance across multiple dimensions and views, their progress towards targets, the contribution of in-flight initiatives and the lineage and reliability of data—as well as helping drive improvements in the end-to-end value chain.





Key Contacts



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Peter Beardshaw Managing Director, Financial Services Sustainability Global Lead





Mauricio Bermudez Neubauer Managing Director, Carbon Strategy & Intelligence Global Lead





Annex A TCFD Background

Overview and Purpose

The Task Force on Climate-related Financial Disclosures (TCFD) was formed by the Financial Stability Board (FSB) in December 2015 in response to a request from the G20 countries to better understand the financial risks posed by climate change. The main objective of the TCFD is to develop consistent climate-related financial disclosures to help investors, lenders, and insurance underwriters improve their understanding and analysis of climate-related risks and opportunities.

The voluntary recommendations set out by the TCFD have been designed to assist companies in identifying and disclosing the potential financial impacts of climate-related risks and opportunities. The final recommendations were issued in June 2017.

TCFD Framework Structure

The TCFD structured its recommendations, which transcend sectors and jurisdictions, around four key areas: Governance, Strategy, Risk Management, and Metrics & Targets. An overview of the framework is detailed below.¹²

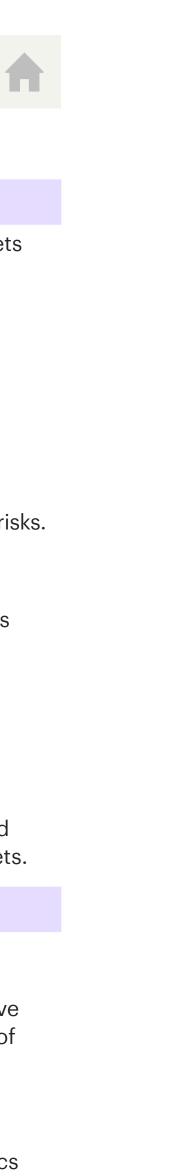
Governance

Disclose the organization's governance around climaterelated risks and opportunities.

Recommended Disclosures:

- 1. Describe management's role in assessing and managing climate-related risks and opportunities.
- 2. Describe the board's oversight of climate-related risks and opportunities.

- Banks should describe processes and frequency by which the board and/or board committees are informed about climate-related issues.
- Banks should describe how the board monitors and oversees progress against goals and targets for addressing climaterelated issues.



Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning where such information is material.

Recommended Disclosures:

- 3. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long terms.
- 4. Describe the impact of climaterelated risks and opportunities on the organization's business strategy and financial planning.
- 5. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks.

Recommended Disclosures:

- 6. Describe the organization's processes for identifying and assessing climate-related risks.
- 7. Describe the organization's processes for managing climate-related risks.
- 8. Describe how processes for identifying, assessing, and managing climaterelated risks are integrated into the organization's overall risk management.

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Recommended Disclosures:

- 9. Disclose Scope 1, Scope 2, and if appropriate Scope 3 greenhouse gas (GHG) emissions, and the related risks.
- 10. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
- 11. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Complementary guidance for the banking sector (summary view)

- Banks should describe significant concentrations of credit exposure to carbon-related assets.
- Banks should consider disclosing climate-related risks (transitional and physical) in lending and other financial intermediary business activities.
- Banks should consider characterising their climaterelated risks in the context of traditional banking industry risk categories such as credit risk, market risk, liquidity risk, opeational risk.
- Banks should consider describing any risk classification frameworks used.
- Banks should provide the amount and percentage of carbon-related assets relative to total assets, the amount of lending and other financing connected with climaterelated opportunities.
- Banks should provide metrics to assess the impact of climate-related risks on their financing activities, considering industry, geography, credit quality and average tenor.

Annex B Report Methodology

To support qualitative and quantitative analysis, the approach used to prepare this report consisted of four stages:

- **1.** Reviewing public sources of data
- 2. Collating and classifying the data
- **3.** Applying the assessment methodology
- 4. Consolidating results to obtain an industry view

Where we refer to disclosures for 2020, this covers disclosures made in 2019/20. Where we refer to disclosures for 2022, this covers disclosures made in 2021/22.

Data Sources

TCFD Signatures List / Banking & Capital Markets

Signature lists include: name of organisation, country, date of commitment and sector

Banks' Public Disclosures

Annual reports, integrated reports, non-financial reports, ESG reports, CSR reports, standalone reports, and others

> TCFD Recommendations

TCFD final guidelines, TCFD annexe (financial sector recommendations)

Banking Market Data

Sources from central banks, Factset etc. (see references for further detail)







Data Categorization

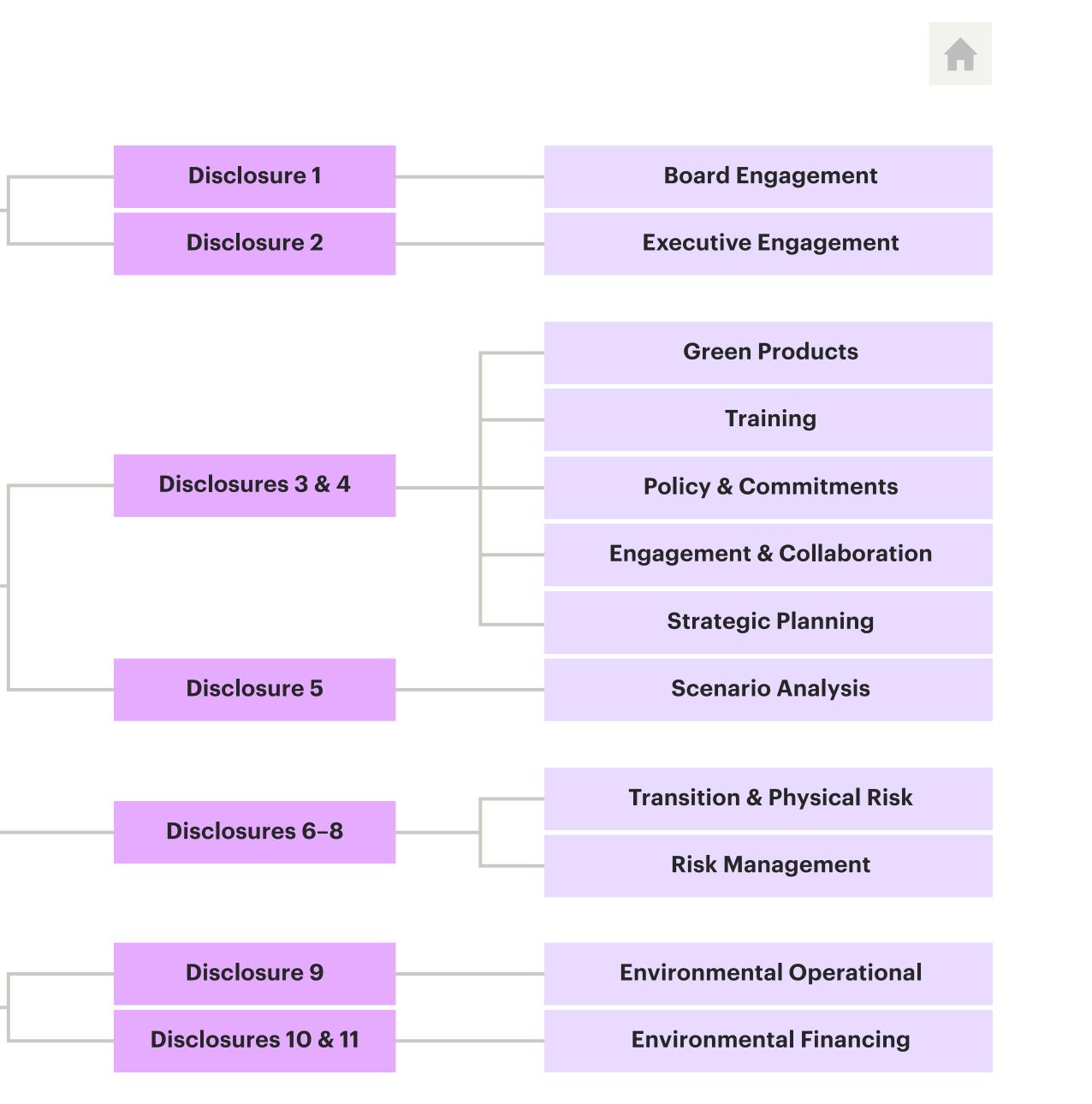
All the information collated from TCFD disclosures was documented by year of disclosure and status (ongoing, implemented, and future) and categorized into disclosure themes. All disclosures were mapped to the TCFD recommendations as illustrated below.

Governance

Strategy

Risk Management

Metrics & Targets



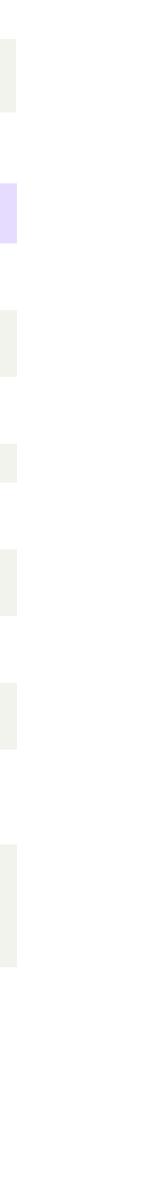
Maturity Assessment

Accenture Financial Services Sustainability developed a maturity assessment methodology to evaluate progress in the disclosures based on 12 questions across the four TCFD pillars. All banks were rated against the methodology for each theme and the results (% of banks "Not Started", "Beginner", "Intermediate" and "Advanced" stage for each assessment question) have been produced for this report. The assessment methodology is described below.

#	Pillar	Theme	Progress	Description	Maturity Level
1	Governance	Board engagement	Board oversight	Committee in place to provide oversight of risks and opportunities	Beginner
1	Governance	Board engagement	Board roles and responsibilities	Description of specific roles and responsibilities of the board in relation to climate change	Intermediate
1	Governance	Board engagement	Board action	Evidence of specific reviews, decisions carried by the board in regard to climate risk during the year	Advanced
2	Governance	Executive engagement	Executive oversight	Committee in place to provide oversight of risks and opportunities	Beginner
2	Governance	Executive engagement	Executive roles and responsibilities	Description of specific roles and responsibilities of the executive committee	Intermediate
2	Governance	Executive engagement	Executive action	Evidence of specific reviews, decisions carried by executives in regard to climate risk during the year	Advanced

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#	Pillar	Theme	Progress	Description	Maturity Level
3	Strategy	Green products	Development	Development of green products	Beginner
3	Strategy	Green products	Release	Release of product suites, new offerings	Intermediate
3	Strategy	Green products	Reporting	Metrics of green reporting and/or targets	Advanced
1	Strategy	Training	Development	Training plans	Beginner
ļ	Strategy	Training	Release	Description of specific teams being trained	Intermediate
1	Strategy	Training	Mature reporting	Metrics of training conducted and/or targets	Advanced
ō	Strategy	Policy & commitments	Position review	Commitment to review position, policies, etc.	Beginner
5	Strategy	Policy & commitments	Internal emissions	Evidence of policy amendments	Intermediate
•	Strategy	Policy & commitments	Lending impact	Lending targets in high impact sectors and policy amendments	Advanced
6	Strategy	Engagement & collaboration	Global initiative endorsement	Endorsement of Equator Principles, SDGs, Principles for Responsible Banking, Paris Agreement, PRI, etc.	Beginner
\$	Strategy	Engagement & collaboration	External or internal collaboration	The above, plus evidence of internal collaboration (e.g. creation of inter-disciplinary forum, research team) or external collaboration (e.g. partnership with other organizations)	Intermediate



#	Pillar	Theme	Progress	Description	Maturity Level	#	Pillar	Theme	Progress	Description	Maturity Level
6	Strategy	Engagement & collaboration	External and internal collaboration	Evidence of both internal and external collaboration, plus endorsement of global initiatives	Advanced	9	Strategy	Scenario analysis	Implementation	Disclosure of quantitative outputs such as expected impairments (credit costs) / P&L net impact and/or	Advanced
7	Strategy	Strategic planning	Vision	Identification of short-, medium-, and long-term horizons in consideration of the assets and infrastructure of the organization	Beginner	8	Risk management	Transition & physical risk	Vision	capital impact Objective to assess clients' impact on climate change agenda (e.g. physical risk, transition risk, etc.)	Beginner
7	Strategy	Strategic planning	Design	Description of specific climate-related issues for each time horizon that could have a material impact	Intermediate	8	Risk management	Transition & physical risk	Design	Evidence of measurement approach and methodologies discussed for the management of these risks	Intermediate
7	Strategy	Strategic planning	Implementation	for the organization Evidence that these issues are integrated in financial strategy and risk as well as opportunity prioritization (e.g. costs, revenue, capital expenditures, product offering, adaptation and mitigation activities,	Advanced	8	Risk management	Transition & physical risk	Implementation	Adoption of climate risk considerations in credit risk processes (e.g. annual renewal of internal rating, risk factor modelling, customer thermal coal utilization, transition risk rating development, etc.)	Advanced
9	Strategy	Scenario analysis	Vision	supply chain etc.) Commitment to complete scenario analysis and enhance	Beginner	10	Risk management	Risk management framework	Vision	Reference to consideration of ESG factors in screening process	Beginner
9	Strategy	Scenario analysis	Design	stress testing capabilities Development of specific scenarios (e.g. 2°C, 4°C etc.),	Intermediate	10	Risk management	Risk management framework	Design	Embedding of climate risk into processes and standards	Intermediate
				sector shocks and evidence of specific techniques, e.g. carbon price calculation in rate of return and/or disclosure of credit portfolio in high impact sectors (e.g. exposure disclosure)		10	Risk management	Risk management framework	Implementation	Description of specific monitoring tools used (e.g. cross sector specific policies, specific credit and rating policies, ESG screening tool reference, EMS system, etc.)	Advanced



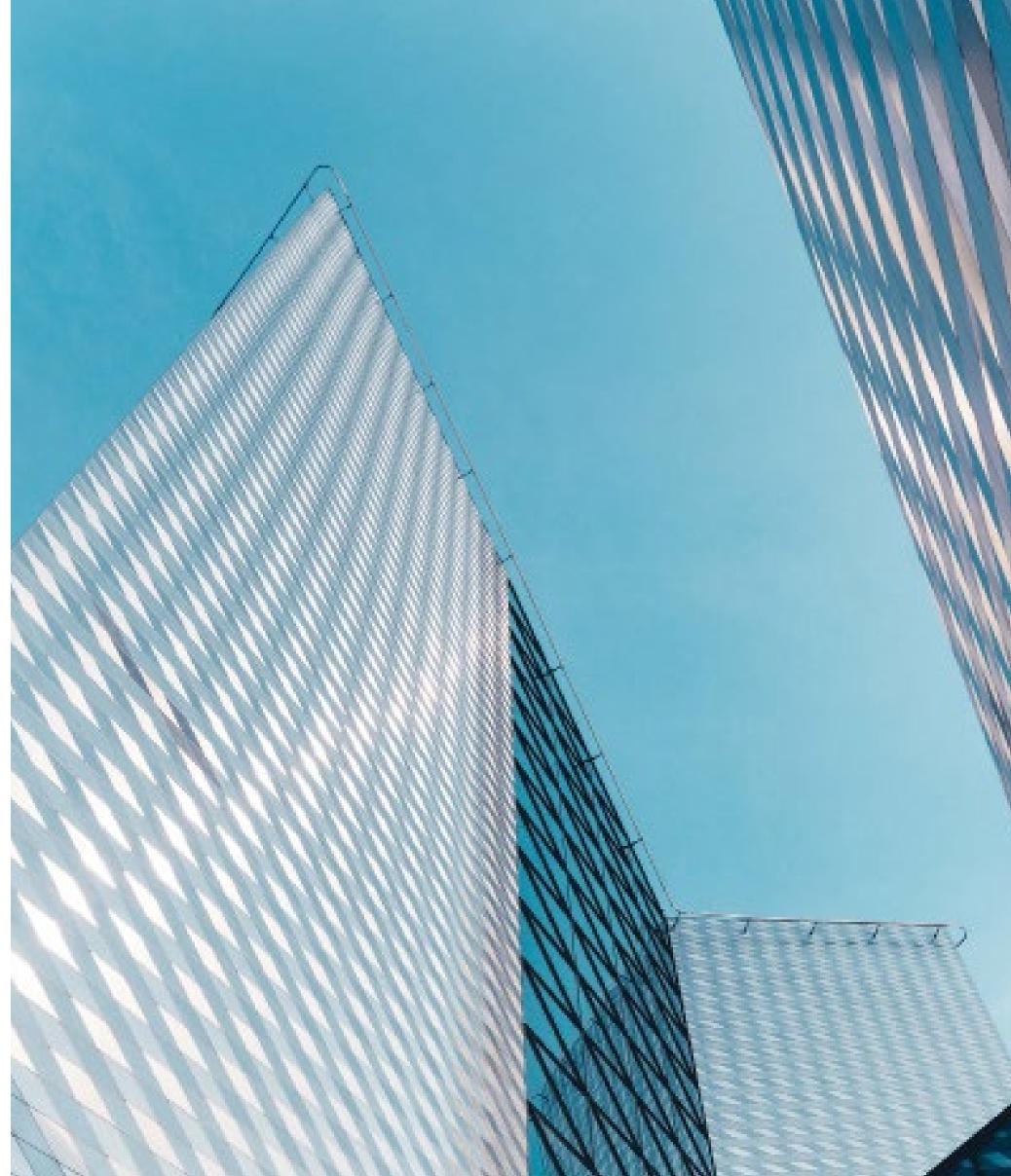


#	Pillar	Theme	Progress	Description	Maturity Lev
11	Metrics & targets	Environmental operational metrics	Vision	Current development of measurement tools	Beginner
11	Metrics & targets	Environmental operational metrics	Design	Targets and/or description of mitigation initiatives (e.g. purchasing of renewable energy, water consumption, air travel, etc.)	Intermediate
11	Metrics & targets	Environmental operational metrics	Implementation	The above plus reporting CO_2 metrics and/or materiality assessment of key drivers of internal footprint impact or carbon neutral status	Advanced
12	Metrics & targets	Environmental financing metrics	Vision	Current development of measurement tools	Beginner
12	Metrics & targets	Environmental financing metrics	Design	Targets or plans for risk metrics (e.g. integrating CO_2 measurement in funds, GHG emissions for lending etc.) and/or disclosure of sustainable finance metrics (e.g. total sustainable financing, revenues, etc.)	Intermediate
12	Metrics & targets	Environmental financing metrics	Implementation	Evidence of environmental risk measurement (e.g. measure of balance sheet and credit-risk weighted assets across fossil fuel sectors, etc.) and sustainable financing metrics and impact on transition plan / alignment to 2°C scenario	Advanced



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Regional Banking Sector Size as Measured by Total Assets

Market sizes are estimated to obtain an understanding of market penetration. Therefore, actual numbers may vary, and will either be slightly lower or slightly higher than the numbers referenced in the tables below.

To support the analysis, banks have been categorized by asset size:

Bank Categorization (our definition)	Total Asset Size (USD billion)
Large	>500
Medium	50-500
Small	<50

Whilst most banks in the study can be considered large, having more than USD 50 billion in total assets, for the purpose of analysis the population has been split to distinguish between the Large (>USD 500 billion), which tend to be globally systemically important banks; Medium (USD 50–500 billion), which tend to be at least nationally systemically important banks (even in developed financial markets); and Small (smaller than USD 50 billion). The table below details the regional banking assets estimates used for the comparative analysis shown in Figures 2, 3 and 4, for banks endorsing/disclosing against TCFD up to Q2 2020 vs. 9th May 2022. This approach has been taken to show the impact of additional endorsees in the last two years, removing any effect of different rates of asset growth or FX movements.

Regional comparisons may be slightly distorted by comparing assets of banking groups headquartered in a region, with estimates for banking assets in those regions due to the multinational nature of many large global banks. However, this is unlikely to impact the overall picture and trends.

Regio

Asia Pa

Europe

Other

Globa

on	Banking Assets (USD trillion)	Year	Source
Pacific	68.7	2019	Market Line (2020)
De	51.8	2019	EBF (2020)
n America	48.0	2020	FSB (2021) CNBV (2020)
r	11.9		Residual Estimate
al	180.4	2020	FSB (2021)



Scope

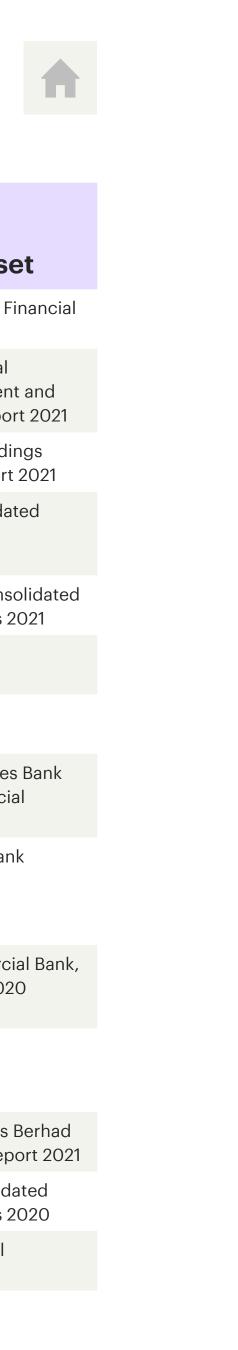
The study analysed the disclosures of 257 banks that had formally endorsed the TCFD framework by 9th May 2022. The list was sourced from the TCFD supporters directory. The study looked specifically at financial sector banks, capital markets, and diversified financial services supporters. The complete list of firms analysed is detailed below. As part of the study, 14 banks were deemed to be out of scope due to their being non-banks or a lack of information.

Financial Sector – TCFD endorsement for banks¹³ – FSB 2022 (extracted 9th May 2022)

		_ .	Endorsement	Total Assets	
Name	Location	Region	Date	(millions, USD)	Source of Asset
ABN AMRO Bank N.V.	Netherlands	Europe	Nov-17	423,060	ABN AMRO Bank N.V. Integrated Annual Report 2021
Agricultural Bank of China Limited	China (Mainland)	Asia Pacific	Nov-21	4,360,373	Agricultural Bank Of China Limited Annual Report 2021
AIB Group plc	Ireland	Europe	Sep-19	135,548	AIB Group plc Annual Report 2021
Akbank TAŞ	Turkey	Europe	Nov-21	44,242	Akbank TAŞ Annual Report 2021
Aktia Bank Plc	Finland	Europe	Mar-21	2,239	Aktia Bank Plc Annual Report 2021
Amalgamated Bank	United States	North America	Oct-21	7,078	Amalgamated Bank Annual Report 2021
Aozora Bank, Ltd.	Japan	Asia Pacific	Mar-20	45,560	Aozora Bank Ltd. Annual Report Integrated Report 2021
Arion Bank	Iceland	Europe	Feb-22	10,006	Arion Bank Consolidated Financial Statements 2021
Asian Development Bank	Philippines	Asia Pacific	Nov-21	92,860	Asian Development Bank Annual Report 2021
Associated Banc-Corp	United States	North America	Sep-21	36,291	Associated Banc-Corp Annual Report 2021
Australia and New Zealand Banking Group Limited (ANZ)	Australia	Asia Pacific	Jun-17	675,441	Australia and New Zealand Banking Group Limited (ANZ) Annual Report 2021
Banco Bradesco	Brazil	Latin America	Feb-20	323,000	Banco Bradesco Form 20-F 2021
Banco de Crédito e Inversiones – Bci	Chile	Latin America	Aug-21	77,947	Banco de Crédito e Inversiones – Bci Accumulated and Consolidated Results 2022
Banco de Sabadell	Spain	Europe	Nov-20	264,544	Banco de Sabadell Annual Report 2021
Banco do Brasil	Brazil	Latin America	May-21	367,181	Banco do Brasil S.A. Financial Statements 2021
Banco Santander	Spain	Europe	Dec-17	1,675,627	Banco Santander Consolidated Annual Financial Report 2021
Bancolombia	Colombia	Latin America	Aug-19	63,108	Bancolombia Integrated Annual Report 2020
Bank J. Safra Sarasin Ltd.	Switzerland	Europe	May-19	44,018	Bank J. Safra Sarasin Ltd. Annual Report 2021
Bank of Africa – BMCE Group	Morocco	Middle East & Africa	Sep-18	9,970	Bank of Africa – BMCE Group Integrated Annual Report 2020
Bank of America	United States	North America	Jun-17	3,169,495	Bank of America Driving Responsible Growth now and going forward 2021
Bank of China Limited	China (Mainland)	Asia Pacific	Feb-21	3,962,113	Bank of China Limited Annual Report 2021

ne	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset	Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	
Communi- Co., Ltd.	China (Mainland)	Asia Pacific	Sep-21	1,729,674	Bank of Communications Co., Ltd. Annual Report 2021	BNK Financial Group	South Korea	Asia Pacific	May-21	106,412	
of Ireland	Ireland	Europe	Feb-20	27,234	Bank of Ireland Annual Report 2021	BNP Paribas	France	Europe	Jun-17	2,792,511	
c of New Mellon	United States	North America	Dec-19	444,438	Bank of New York Mellon Annual Report 2021	BOC Hong Kong	China (Hong Kong)	Asia Pacific	May-21	473,126	
of the pine Islands	Philippines	Asia Pacific	May-21	45,470	Bank of the Philippine Islands Financial Statement 2021	Holdings Limited BPER Banca	(Hong Kong) Italy	Europe	Dec-21	145,330	
of The yus, Ltd.	Japan	Asia Pacific	Jul-21	25,241	Bank of The Ryukyus, Ltd. Consolidated						
of Tianjin	China	Asia Pacific	Dec-21	827,818	Balance Sheets 2021 Bank of Tianjin Co., Ltd.	BTG Pactual S.A.	Brazil	Latin America	Dec-17	67,039	
Ltd. kinter	(Mainland) Spain	Europe	May-19	114,039	Annual Report 2020 Bankinter Executive	CaixaBank	Spain	Europe	Dec-17	720,838	
lays	United Kingdom		Jun-17	1,730,356	Summary 2021 Barclays Annual Report 2021	Caja de Ingenieros	Spain	Europe	Jun-21	4,450	
llandschaftli- Kantonalbank	Switzerland	Europe	Jan-21	33	Basellandschaftliche Kantonalbank Annual Report 2021	Cambridge & Counties Bank	United Kingdom	Europe	Sep-20	1,341	
sche sbank	Germany	Europe	May-19	282,547	Bayerische Landesbank Annual Report and Accounts 2021	Canadian Imperial Bank of Commerce	Canada	North America	Mar-18	653,393	
	Spain	Europe	Dec-17	686,790	BBVA Annual Report 2021	(CIBC)					
ank	Belgium	Europe	Apr-22	201,759	Belfius Bank SA/NV Annual Report 2021	Chang Hwa Commercial	Taiwan	Asia Pacific	Jul-21	77,685	
o and de Bank	Australia	Asia Pacific	Dec-20	59,738	Bendigo and Adelaide Bank Annual Report 2021	Bank, Ltd China	China	Asia Pacific	May-21	4,538,097	
ep Bank AB	Sweden	Europe	Apr-21	2,104	Bluestep Bank AB Year-End Report 2021	Construction Bank Corporation	(Mainland)				
Bank a	Morocco	Middle East & Africa	Sep-18	20,640	BMCE Bank of Africa Annual Report 2020	CIMB Group Holdings Berhad	Malaysia	Asia Pacific	Sep-21	141,420	
nancial	Canada	North America	Dec-17	770,777	BMO Financial Group Annual Report 2021	Citibanamex	Mexico	North America	Mar-20	68,784	
)						Citigroup Inc.	United States	North America	Jun-17	2,291,413	





Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
Commercial International Bank	Egypt	Middle East & Africa	Aug-20	27,223	Commercial International Bank Annual Report 2021
Commerzbank AG	Germany	Europe	Sep-20	497,705	Commerzbank AG Annual Report 2021
Commonwealth Bank of Australia	Australia	Asia Pacific	Mar-18	753,454	Commonwealth Bank of Australia Annual Report 2021
Concordia Financial Group, Ltd.	Japan	Asia Pacific	Dec-19	160,453	Concordia Financial Group, Ltd. Integrated Annual Report 2021
Conister Bank	United Kingdom	Europe	Jul-21	374	Conister Bank Limited Annual Report 2021
Coventry Building Society	United Kingdom	Europe	Nov-20	68,162	Coventry Building Society Annual Report and Accounts 2021
Crédit Agricole S.A.	France	Europe	Dec-17	2,177,653	Crédit Agricole S.A. Integrated Report 2021
Crédit Mutuel Arkéa	France	Europe	Jul-21	188,265	Crédit Mutuel Arkéa Results Release 2021
Credit Suisse Group AG	Switzerland	Europe	Nov-17	786,066	Credit Suisse Group AG Annual Report 2021
CTBC Financial Holding Co., Ltd.	Taiwan	Asia Pacific	Apr-20	238,183	CTBC Financial Holding Co., Ltd. Annual Report 2021
Daishi Hokuetsu Financial Group	Japan	Asia Pacific	Apr-21	82,161	Daishi Hokuetsu Financial Group (株式会社第四北 越フィナンシャルグループ) Annual Report 2022
Daiwa Securities Group	Japan	Asia Pacific	Apr-18	200,965	Daiwa Securities Group Integrated Report 2021
Danske Bank A/S	Denmark	Europe	Sep-18	567,154	Danske Bank A/S Annual Report 2021
Davivienda Bank	Colombia	Latin America	Dec-20	38,170	Davivienda Bank Annual Report 2021



	Endorsement Total		Total Assets		
Name	Location	Region	Date	(millions, USD)	Source of Asset
DBS	Singapore	Asia Pacific	Dec-17	953,540	DBS Annual Report 2021
Deutsche Bank	Germany	Europe	Sep-18	1,390,200	Deutsche Bank Annual Report 2021
Development Bank of Japan	Japan	Asia Pacific	Jun-18	120,087	Development Bank of Japan Integrated Report 2021
DGB Financial Group	South Korea	Asia Pacific	Sep-18	68,725	DGB Financial Group Annual Report 2020
DNB ASA	Norway	Europe	Jun-17	304,302	DNB ASA Annual Report 2021
DZ BANK AG	Germany	Europe	Apr-22	353,645	DZ BANK AG Annual Report 2021
E.SUN Financial Holding	Taiwan	Asia Pacific	Dec-17	109,851	E.SUN Financial Holding Financial Holding Report 2021
Erste Group Bank AG	Austria	Europe	Mar-22	328	Erste Group Bank AG Annual Report 2021
European Bank for Reconstruc- ion and Devel- opment (EBRD)	United Kingdom	Europe	Mar-18	78,512	European Bank for Reconstruction and Development (EBRD) Financial Report 2021
Evli Plc	Finland	Europe	Aug-19	796	Evli Plc Annual Report 2021
Far Eastern International Bank	Taiwan	Asia Pacific	Dec-21	24,374	Far Eastern International Bank Consolidated Financial Statements 2021
FIDEA Holdings Co. Ltd.	Japan	Asia Pacific	Mar-22	24,805	FIDEA Holdings Co. Ltd. Annual Security Report 2021
Fifth Third Bank	United States	North America	Sep-20	211,116	Fifth Third Bank Annual Report 2021
First Abu Dhabi Bank	United Arab Emirates	Middle East & Africa	Dec-19	272,394	First Abu Dhabi Bank Annual Report 2021
First Financial Holding Co., Ltd.	Taiwan	Asia Pacific	Apr-20	127,146	First Financial Holding Co., Ltd. Annual Report 2021
FirstRand Ltd.	South Africa	Middle East & Africa	Oct-20	89,147	FirstRand Ltd. Annual Report 2021



Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
Fukuoka Financial Group, Inc.	Japan	Asia Pacific	Sep-20	143,325	Fukuoka Financial Group, Inc. Annual Report 2021
GLS Gemein- schaftsbank eG	Germany	Europe	Mar-20	8,427	GLS Gemeinschaftsbank eG Jahresabschluss und Lagebericht 2020
Goldman Sachs	United States	North America	Sep-18	1,463,988	Goldman Sachs Annual Report 2021
Grupo Cooperativo Cajamar	Spain	Europe	Jun-21	61,746	Grupo Cooperativo Cajamar Independant Auditor's Report on the Consolidated Annual Accounts 2021
Grupo Financiero Banorte, S.A.B. de C.V.	Mexico	Latin America	Apr-22	90,693	Grupo Financiero Banorte, S.A.B. de C.V. Annual Report 2021
Gruppo Banco BPM	Italy	Europe	Nov-21	210,514	Gruppo Banco BPM Consolidated Annual Report 2021
Gulf International Bank	Bahrain	Middle East & Africa	Nov-19	31,797	Gulf International Bank Annual Report 2021
Hana Financial Group	South Korea	Asia Pacific	Mar-21	373,931	Hana Financial Group Financial Statement 2021
Handelsbanken	Sweden	Europe	Jul-18	354,591	Handelsbanken Interim Report 2022
Hang Seng Bank Limited	China (Hong Kong)	Asia Pacific	Sep-20	236,624	Hang Seng Bank Limited Annual Report Highlights 2021
Hanwha Savings Bank	South Korea	Asia Pacific	Mar-21	1,006	Hanwha Savings Bank Profile 2020
Hokkoku Bank	Japan	Asia Pacific	Apr-21	49,901	Hokkoku Bank (株式会 社北國銀行) Integrated Annual Report 2021
Hokuhoku Financial Group, Inc.	Japan	Asia Pacific	Jan-21	133,057	Hokuhoku Financial Group, Inc. Financial Results 2021



Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
HSBC Holdings plc	United Kingdom	Europe	Jun-17	2,957,939	HSBC Holdings plc Annual Report and Accounts 2021
Hua Xia Bank Co., Limited	China (Mainland)	Asia Pacific	Aug-21	509,972	Hua Xia Bank Co., Limited Annual Report 2020
Ibercaja Banco	Spain	Europe	Aug-19	61,563	Ibercaja Banco Consolidated Directors Report 2021
IGM Financial	Canada	North America	Dec-19	13,776	IGM Financial Annual Report 2021
Industrial and Commercial Bank of China (ICBC)	China (Mainland)	Asia Pacific	Jun-17	5,275,707	Industrial and Commercial Bank of China (ICBC) Annual Report 2021
Industrial Bank of Korea	South Korea	Asia Pacific	Jun-20	318,458	Industrial Bank of Korea Consolidated Financial Statements 2021
ING Group	Netherlands	Europe	Jun-17	998,855	ING Group Annual Report 2021
International Finance Corporation (IFC)	United States	North America	Sep-18	105,264	International Finance Corporation (IFC) Annual Report 2021
Intesa Sanpaolo	Italy	Europe	Oct-18	1,137,639	Intesa Sanpaolo Annual Report 2021
IOOF Holdings Ltd.	Australia	Asia Pacific	Sep-18	3,995	IOOF Holdings Ltd. Annual Report 2021
Islandsbanki	Iceland	Europe	Dec-20	10,780	Islandsbanki Annual and Sustainability Report 2021
Itaú	Brazil	Latin America	Oct-17	383,667	Itaú Integrated Annual Report 2020
Japan Bank for International Cooperation	Japan	Asia Pacific	Oct-19	129,925	Japan Bank for International Cooperation Annual Report 2021
Japan Finance Corporation	Japan	Asia Pacific	May-19	276,890	Japan Finance Corporation Annual Report 2021
Japan Post Bank Co., Ltd.	Japan	Asia Pacific	Apr-19	1,793,499	JAPAN POST BANK Co., Ltd. Annual Report 2021



Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset	Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
JB Financial Group	South Korea	Asia Pacific	Aug-21	44,260	JB Financial Group Financial Information 2021	Lloyds Banking Group	United Kingdom	Europe	Dec-17	1,096,458	Lloyds Banking Group Annual Report 2021
JPMorgan Chase & Co.	United States	North America	Dec-17	3,743,567	JPMorgan Chase & Co. Annual Report 2021	Luzerner Kantonalbank	Switzerland	Europe	Sep-21	53,454	Luzerner Kantonalbank Annual Report 2021
Juroku Financial Group, Inc.	Japan	Asia Pacific	Mar-22	56,390	Juroku Financial Group, Inc. Annual Report 2021	M&T Bank Corp	United States	North America	Dec-21	155,107	M&T Bank Corp Annual Report 2021
Jyske Bank A/S	Denmark	Europe	Dec-21	91,410	Jyske Bank A/S Annual Report 2021	Macquarie Group	Australia	Asia Pacific	Apr-19	169,501	Macquarie Group Annual Report 2021
Kaiser Partner Privatbank AG	Liechtenstein	Europe	Jan-20	731	Kaiser Partner Privatbank AG Annual Report 2021	Mebuki Financial Group, Inc.	Japan	Asia Pacific	Mar-21	171,715	Mebuki Financial Group, Inc. Annual Report 2021
Kasikornbank PCL	Thailand	Asia Pacific	Jun-20	118,609	Kasikornbank PCL Annual Report 2021	Mediobanca S.p.A.	Italy	Europe	Mar-22	76,680	Mediobanca S.p.A. Financial Report 2021
KB Financial Group	South Korea	Asia Pacific	Oct-18	896,960	KB Financial Group Annual Report 2021	Mitsubishi UFJ Financial	Japan	Asia Pacific	Dec-17	2,830,905	Mitsubishi UFJ Financial Group, Inc Annual Report 2021
KBC Group	Belgium	Europe	Dec-17	360,767	KBC Group Annual Report 2021	Group, Inc					
KfW Bankengruppe	Germany	Europe	Oct-18	578,000	KfW Bankengruppe Annual Report 2021	Mitsui Trust Holdings, Inc.	Japan	Asia Pacific	Jul-18	565,943	Mitsui Trust Holdings, Inc. Annual Report 2020
King's Town Bank Co., Ltd.	Taiwan	Asia Pacific	Jul-21	9,117	King's Town Bank Co., Ltd. Annual Report 2021	Mizuho Financial Group	Japan	Asia Pacific	Dec-17	1,867,899	Mizuho Financial Group Integrated Report Annual Review 2021
Korea Securities Depository	South Korea	Asia Pacific	May-21	3,952	Korea Securities Depository Annual Report 2020	MONETA Money Bank	Czech Republic	Europe	Mar-22	14,222	MONETA Money Bank Annual Report 2021
Korea Securities Finance Corp.	South Korea	Asia Pacific	May-21	56,820	Korea Securities Finance Corp. Statement of Financial Position 2021	Morgan Stanley	United States	North America	Jun-17	1,188,140	Morgan Stanley Annual Report 2021
Kyushu Financial Group, Inc.	Japan	Asia Pacific	Jul-19	95,672	Kyushu Financial Group, Inc. Annual Report 2021	National Australia Bank	Australia	Asia Pacific	Oct-17	638,918	National Australia Bank Annual Financial Report 2021
Land Bank of Taiwan	Taiwan	Asia Pacific	Apr-22	101,448	Land Bank of Taiwan Annual Report 2020	National Bank of Canada	Canada	North America	Apr-18	277,520	National Bank of Canada Annual Report 2021
Laurentian Bank Financial Group	Canada	North America	Apr-22	35,276	Laurentian Bank Financial Group Annual Report 2021	Nationwide Building Society	United Kingdom	Europe	Nov-19	310,037	Nationwide Building Society Annual Report and Accounts 2021
Leeds Building Society	United Kingdom	Europe	Aug-21	28,097	Leeds Building Society Annual Report 2021	Natixis	France	Europe	Feb-21	597,024	Natixis Universal Registration Document and Financial Report 2021

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Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
Nishi-Nippon Financial Holdings, Inc.	Japan	Asia Pacific	Apr-21	109,074	Nishi-Nippon Financial Holdings, Inc. Integrated Report 2021
Nomura Holdings, Inc.	Japan	Asia Pacific	Jun-18	327,377	Nomura Holdings, Inc. Integrated Report 2021
Nonghyup Financial Group	South Korea	Asia Pacific	Sep-21	374,474	Nonghyup Financial Group Annual Report 2020
Nordea Bank Abp	Sweden	Europe	Dec-18	604,574	Nordea Bank Abp Annual Report 2021
Nordic Investment Bank	Finland	Europe	Dec-19	39,329	Nordic Investment Bank Financial Report 2021
North Pacific Bank, Ltd.	Japan	Asia Pacific	May-21	107,111	North Pacific Bank, Ltd. Annual Report 2021
O-Bank	Taiwan	Asia Pacific	May-21	19,253	O-Bank Annual Report 2020
OCBC Bank	Singapore	Asia Pacific	Nov-19	322,222	OCBC Bank Reports and Financial Statements 2021
OeEB AG	Austria	Europe	Dec-20	1,192	OeEB AG Financial Figures and Portfolio 2021
Okasan Securities Group Inc.	Japan	Asia Pacific	Feb-22	7,076	Okasan Securities Group Inc. Consolidated Financial Highlights 2021
Okinawa Financial Group	Japan	Asia Pacific	Oct-21	20,041	Okinawa Financial Group Results Briefing Materials 2021
Old Mutual	South Africa	Middle East & Africa	Oct-21	65,565	Old Mutual Annual Report 2021
ORIX Corporation	Japan	Asia Pacific	Oct-20	101,110	ORIX Corporation Integrated Report 2021
Paragon Banking Group PLC	United Kingdom	Europe	Oct-21	18,435	Paragon Banking Group PLC Annual Report 2021
Permanent TSB	Ireland	Europe	Nov-21	23,347	Permanent TSB Annual Report 2021
PFA Bank	Denmark	Europe	Nov-19	104,381	PFA Bank Annual Report 2021



Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
PNC Financial Services Group	United States	North America	Oct-19	557,191	PNC Financial Services Group Annual Report 2021
Postal Savings Bank of China (PSBC)	China (Mainland)	Asia Pacific	Jul-21	1,888,181	Postal Savings Bank of China (PSBC) Annual Report 2021
PT Bank Tabungan Negara (Persero), Tbk	Indonesia	Asia Pacific	Aug-20	25,659	PT Bank Tabungan Negara (Persero), Tbk Annual Report 2021
Rabobank	Netherlands	Europe	Oct-17	677,950	Rabobank Annual Report 2021
Raiffeisen Switzerland Cooperative	Switzerland	Europe	Apr-21	90,356	Raiffeisen Switzerland Cooperative Annual Report 2021
Rakuten Bank, Ltd.	Japan	Asia Pacific	Mar-22	96,437	Rakuten Bank, Ltd. Corporate Report2020
RBS	United Kingdom	Europe	Dec-17	977,490	RBS Annual Report and Accounts 2021
Regional SAB de CV	Mexico	Latin America	Nov-21	6,953	Regional SAB de CV Annual Report 2021
Resona Holdings, Inc	Japan	Asia Pacific	Oct-18	601,794	Resona Holdings, Inc. Consolidated Financial Results 2021
Royal Bank of Canada	Canada	North America	Oct-17	1,330,932	Royal Bank of Canada Annual Report 2021
San ju San Financial Group, Inc.	Japan	Asia Pacific	Dec-21	32,778	San ju San Financial Group, Inc. Annual Report 2021
Scotiabank	Canada	North America	Feb-18	924,300	Scotiabank Annual Report 2021
SEB	Sweden	Europe	May-18	330,423	SEB Annual and Sustainability Report2021
Senshu Ikeda Holdings, Inc.	Japan	Asia Pacific	Nov-21	60,569	Senshu Ikeda Holdings, Inc. Annual Report 2021
Shinhan Financial Group	South Korea	Asia Pacific	Sep-18	518,522	Shinhan Financial Group Financial Statements 2021



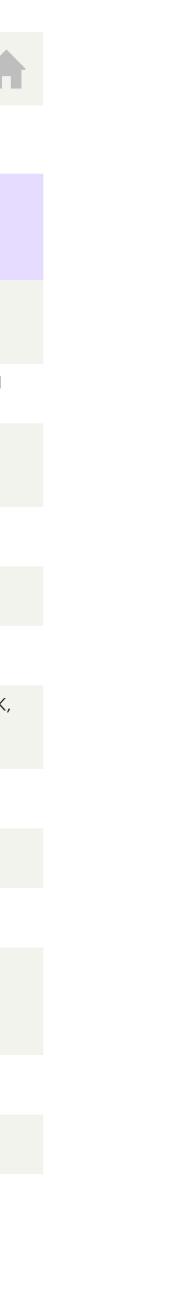
Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset	Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
Shinkin Central Bank	Japan	Asia Pacific	Jul-19	394,000	Shinkin Central Bank Annual Report 2021	TD Bank Group	Canada	North America	Oct-17	1,348,364	TD Bank Group Annual Report 2021
Shinsei Bank, Limited	Japan	Asia Pacific	Jan-20	82,040	Shinsei Bank, Limited Company Profile 2021	The 77Bank, Ltd.	Japan	Asia Pacific	Jul-21	1,450,687	The 77Bank, Ltd. Financial Section Consolidated Balance Sheet 2021
SinoPac Financial Holdings Company Limited	Taiwan	Asia Pacific	May-21	73,074	SinoPac Financial Holdings Company Limited Annual Report 2021	The Aichi Bank, Ltd. (愛知銀行)	Japan	Asia Pacific	Sep-21	34,216	
Société Générale	France	Europe	Oct-17	1,537,445	Société Générale Consolidated Financial Statements2021	The Akita Bank, Ltd.	Japan	Asia Pacific	Oct-21	1,595	The Akita Bank, Ltd. Annual Report 2021
Sovcombank	Russia	Europe	Nov-21	32,857	Sovcombank UNEPFI Bank Summary 2021	The Awa Bank, Ltd.	Japan	Asia Pacific	Jun-21	34,921	The Awa Bank Ltd (株式会 社阿波銀行) Consolidated
SpareBank 1 østlandet	Norway	Europe	Apr-20	16,205	SpareBank 1 østlandet Annual Report 2021	The Bank of East Asia	Hong Kong	Asia Pacific	Aug-21	115,612	Financial Statements 2021 The Bank of East Asia Annual Report 2021
Standard Chartered	United Kingdom	Europe	Jun-17	827,818	Standard Chartered Annual Report 2021	The Bank of	Japan	Asia Pacific	Aug-21	34,694	The Bank of Iwate, Ltd. Annual Report 2021
State Street Corporation	United States	North America	Oct-17	314,624	State Street Corporation Annual Report 2021	Iwate, Ltd. The Bank of	Japan	Asia Pacific	Oct-21	110,865	The Bank of Kyoto,Ltd.
Sumitomo Mitsui Financial Group	Japan	Asia Pacific	Dec-17	1,867,899	Sumitomo Mitsui Financial Group Annual Report 2021	Kyoto, Ltd. The Bank of	Japan	Asia Pacific	Oct-21	44,375	Annual Report 2021 The Bank of Nagoya, Ltd.
SURUGA bank Ltd.	Japan	Asia Pacific	Dec-21	27,643	SURUGA bank Ltd. Consolidated financial report 2021	Nagoya, Ltd. THE BANK OF SAGA LTD.	Japan	Asia Pacific	Mar-22	27,559	Annual Report 2021 THE BANK OF SAGA LTD. Annual Report 2021
Swedbank	Sweden	Europe	Sep-18	275,062	Swedbank Annual Report 2021	The Bank of	Japan	Asia Pacific	Mar-22	4,359	The Bank of Toyama,
Taishin Financial Holdings	Taiwan	Asia Pacific	Jan-19	70,133	Taishin Financial Holdings Annual Report 2020	Toyama,Ltd.					Ltd. Financial Results for the Fiscal Year 2022
Taiwan Business Bank, Ltd.	Taiwan	Asia Pacific	Nov-21	68,723	Taiwan Business Bank, LTD Annual Report 2021	The Chiba Bank, Ltd.	Japan	Asia Pacific	Dec-19	161,667	The Chiba Bank, Ltd. Annual Report 2021
Taiwan Cooperative	Taiwan	Asia Pacific	Dec-20	150,750	Taiwan Cooperative Holdings Annual Report 2020	The Chikuho Bank, Ltd.	Japan	Asia Pacific	Dec-21	6,970	The Chikuho Bank, Ltd. Reuters2022
Holdings Taiwan	Taiwan	Asia Pacific	Jan-22	33	Taiwan Depository	The Chugoku Bank, Ltd.(株式 会社中国銀行)	Japan	Asia Pacific	May-21	82,677	The Chugoku Bank, Ltd.(株式会 社中国銀行Annual Report 2021
Depository and Clearing Corp.					and Clearing Corp. Annual Report 2020	The Chukyo Bank, Limited	Japan	Asia Pacific	Mar-22	19,032	The Chukyo Bank, Limited Annual Report 2021



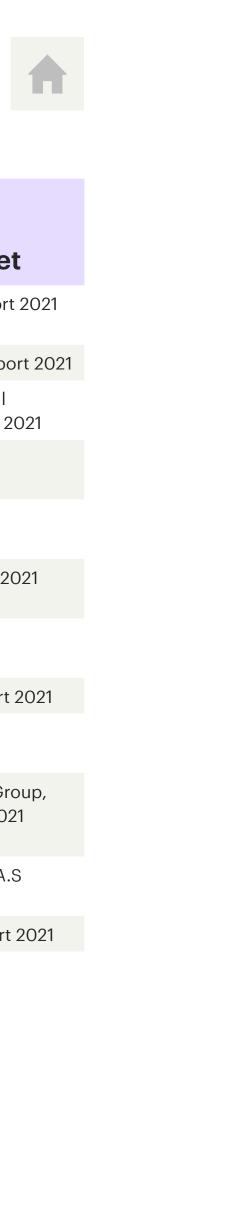
Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
The City Bank Limited	Bangladesh	Asia Pacific	Sep-21	4,586	The City Bank Limited Annual Report 2021
THE DAITO BANK, LTD.	Japan	Asia Pacific	Mar-22	909,462	THE DAITO BANK, LTD. Reuters 2022
The Ehime Bank,Ltd.	Japan	Asia Pacific	Aug-21	21,307	The Ehime Bank,Ltd. Balance sheet 2021
The Fukui Bank, Ltd.	Japan	Asia Pacific	Sep-21	31,734	The Fukui Bank, Ltd Annual Report 2021
The Fukuoka Chuo Bank, Ltd.	Japan	Asia Pacific	Jul-21	4,844	THE FUKUOKA CHUO BANK, LTD. Mid-term Disclosure Magazine 2021
The Gunma Bank, Ltd.	Japan	Asia Pacific	Jul-20	95,888	The Gunma Bank, Ltd. Annual Report 2021
The Hachijuni Bank, Ltd.	Japan	Asia Pacific	Mar-20	95,181	The Hachijuni Bank, Ltd. Annual Report 2021
The Hekikai Shinkin Bank	Japan	Asia Pacific	Apr-22	23,135	The Hekikai Shinkin Bank Annual Report 2021
The Hiroshima Bank Ltd.	Japan	Asia Pacific	Mar-20	72,677	The Hiroshima Bank Ltd. Annual Report 2021
The Hyakugo Bank, Ltd.	Japan	Asia Pacific	Jun-21	67,318	The Hyakugo Bank, Ltd. Consolidated Financial Statements 2021
The Hyakujushi Bank, Ltd	Japan	Asia Pacific	Oct-21	48,555	The Hyakujushi Bank,Ltd Integrated Report 2021
THE IYO BANK, LTD.	Japan	Asia Pacific	Feb-21	66,901	THE IYO BANK, LTD. Annual Report 2021
The Juroku Bank, Ltd.	Japan	Asia Pacific	Jun-21	65,381	The Juroku Bank, Ltd. Annual Report 2021
The Keiyo Bank, Ltd.	Japan	Asia Pacific	Dec-21	42,714	The Keiyo Bank, Ltd. Annual Report 2021
The Kiyo Bank, Ltd.	Japan	Asia Pacific	Nov-21	49,996	The Kiyo Bank, Ltd. Notes to Consolidated Financial Statements2021



Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
The Korea Development Bank	South Korea	Asia Pacific	May-21	243,997	The Korea Development Bank Annual Report 2020
The Kyoto Chuo Shinkin Bank	Japan	Asia Pacific	Apr-22	48,431	THE KYOTO CHUO SHINKIN BANK Annual Report 2021
The Miyazaki Bank, Ltd.	Japan	Asia Pacific	Feb-22	33,004	THE MIYAZAKI BANK, LTD. Consolidated Financial Statements 2021
The Musashino Bank, Ltd.	Japan	Asia Pacific	Sep-21	40,816	The Musashino Bank, Ltd Annual Report 2021
The Nanto Bank, Ltd.	Japan	Asia Pacific	Jul-21	50,377	The Nanto Bank, Ltd. Integrated Report 2021
The Norinchukin Bank	Japan	Asia Pacific	Apr-19	972,340	The Norinchukin Bank Annual Report 2021
The Ogaki Kyoritsu Bank, Ltd.	Japan	Asia Pacific	Dec-21	67,299	THE OGAKI KYORITSU BANK, LTD. Annual Report 2021
The Oita Bank, Ltd.	Japan	Asia Pacific	Dec-21	29,785	THE OITA BANK, LTD. Annual Report 2021
THE SAIKYO BANK, LTD.	Japan	Asia Pacific	Sep-21	17,375	THE SAIKYO BANK, LTD. Annual Report 2021
The San-in Godo Bank,Ltd.	Japan	Asia Pacific	Apr-21	49,670	The San-in Godo Bank,Ltd. Integrated Report 2021
The Shanghai Commercial and Savings Bank, Ltd.	Taiwan	Asia Pacific	Jun-21	30,411	The Shanghai Commercial and Savings Bank, Ltd. Annual Report 2020
THE SHIGA BANK, LTD.	Japan	Asia Pacific	Oct-18	60,620	THE SHIGA BANK, LTD. Annual Report 2021
The Shikoku Bank, Ltd.	Japan	Asia Pacific	Sep-21	30,087	The Shikoku Bank, Ltd. Annual Report 2021
The Shimizu Bank, Ltd.	Japan	Asia Pacific	Feb-22	13,825	THE SHIMIZU BANK, LTD. Annual Report 2021



Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset	Name	Location	Region	Endorsement Date	Total Assets (millions, USD)	Source of Asset
The Shizuoka Bank, Ltd.	Japan	Asia Pacific	Mar-20	127,142	The Shizuoka Bank, Ltd. Integrated Annual Report 2021	U.S. Bank	United States	North America	Nov-21	573,284	U.S. Bank Annual Report 2021
The Shoko Chukin Bank, Ltd.	Japan	Asia Pacific	May-19	100,741	The Shoko Chukin Bank,	UBS Group	Switzerland	Europe	Jun-17	1,117,182	UBS Group Annual Report 2021
THE TOCHIGI	Japan	Asia Pacific	Dec-21	27,081	Ltd. Annual Report 2021 THE TOCHIGI BANK, LTD.	UniCredit S.p.A.	Italy	Europe	Jan-20	955,125	UniCredit S.p.A.Annual Reports and Accounts 2021
BANK, LTD. The Toho	Japan	Asia Pacific	Feb-20	61,353	Consolidated Financial Results The Toho Bank, Ltd.	United Overseas Bank	Singapore	Asia Pacific	Nov-19	459,000	United Overseas Bank Annual Report 2021
Bank, Ltd. THE TOWA	Japan	Asia Pacific	Oct-21	2,567	Annual Report 2021 THE TOWA BANK,	Van Lanschot Kempen	Netherlands	Europe	Sep-18	17,285	Van Lanschot Kempen Annual Report 2021
BANK, LTD.				<i>,</i>	LTD. Reuters 2021	Vancity	Canada	North	Jan-20	26,600	VancityAnuual Report 2021
The Yamagata Bank, Ltd.	Japan	Asia Pacific	Jul-21	27,157	The Yamagata Bank, Ltd Annual Report 2021			America		4.0.44.0.05	
The Yamanashi	Japan	Asia Pacific	Nov-21	32,230	THE YAMANASHI CHUO BANK,	Wells Fargo	United States	North America	Nov-19	1,941,905	Wells Fargo Annual Report 2021
Chuo Bank, Ltd.					LTD. Annual Report 2021	Westpac	Australia	Asia Pacific	Dec-17	935,877	Westpac Annual Report 2021
Tokai Tokyo Financial Holdings, Inc.	Japan	Asia Pacific	Oct-21	10,908	Tokai Tokyo Financial Holdings, Inc. Integrated Report 2021	Woori Financial Group	South Korea	Asia Pacific	Jan-21	337,000	Woori Financial Group Annual Report 2020
Tokyo Kiraboshi Financial Group, Inc.	Japan	Asia Pacific	Feb-21	53,491	Tokyo Kiraboshi Financial Group, Inc. Annual Report 2021	Yamaguchi Financial Group, Inc.	Japan	Asia Pacific	Dec-21	108,335	Yamaguchi Financial Group, Inc. Financial Group 2021
Tsukuba Bank,Ltd.	Japan	Asia Pacific	Aug-21	213,174	Tsukuba Bank, Ltd. Annual Report 2021	Yapi ve Kredi Bankasi A.S	Turkey	Europe	Jan-21	48,333	Yapi ve Kredi Bankasi A.S Annual Report 2021
Türkiye Garanti Bankası A.Ş.	Turkey	Europe	Jun-17	49,265	Türkiye Garanti Bankası A.Ş. Integrated Annual Report 2021	Yes Bank	India	Asia Pacific	Dec-17	35,232	Yes Bank Annual Report 2021
Türkiye Sınai Kalkınma Bankası TSKB	Turkey	Europe	Feb-21	5,462	Türkiye Sınai Kalkınma Bankası TSKB Integrated Annual Report 2021						
Türkiye Vakiflar Bankasi T.A.O.	Turkey	Europe	Mar-21	30,877	Türkiye Vakiflar Bankasi T.A.O. Integrated Annual Report 2021						



Annex C Maturity Assessment **Data Tables**

The following tables support the data presented in figures 1–14 throughout the report by providing additional information on the maturity assessment of banks that have previously produced TCFD disclosures, versus those that are disclosing for the first time.

Table 1 - TCFD Discl

Describe the board's over of climate-related risks a

Describe management's managing climate-relate

Describe and explain the climate-related risks and the organization's busine financial planning across (short term, medium ter

Describe the resilience c strategy, taking into cons related scenarios, includ

Describe the processes f assessing, and managing risks and how they are int organization's overall risk

Disclose Scope 1, Scope if appropriate, Scope 3 g (GHG) emissions, and the

Disclose the metrics and organization to assess cl and opportunities in line and risk management pro



	2019	2020	2022 New Disclosers	2022 Existing Disclosers
closure				
versight and consideration and opportunities	41%	76%	63%	89%
's role in assessing and ed risks and opportunities	36%	74%	63%	93%
ne impact of d opportunities on nesses, strategy, and ss different time horizons rm, long term)	40%	59%	44%	75%
of the organization's nsideration different climate- ding a 2°C or lower scenario	38%	46%	42%	77%
for identifying, ng climate-related ntegrated into the sk management	53%	71%	53%	85%
e 2, and, greenhouse gas he related risks	64%	83%	69%	93%
d targets used by the climate-related risks e with its strategy processes	31%	57%	46%	81%

	2019	2020	2022 New Disclosers	2022 Existing Disclosers		2019	2020	2022 New Disclosers	2022 Existing Disclosers
Table 2 – Board Engagement					Table 5 – Strategic Planning				
Advanced	5%	30%	15%	41%	Advanced	n/a – theme	26%	6%	21%
Intermediate	36%	46%	48%	48%	Intermediate	introduced in 2021	26%	24%	38%
Beginner	23%	16%	26%	11%	Beginner		26%	34%	27%
Not Started	36%	8%	11%	0%	Not Started		21%	36%	14%

Table 3 – Executive Engagement									
Advanced	13%	24%	13%	26%					
Intermediate	23%	50%	50%	67%					
Beginner	31%	20%	25%	7%					
Not Started	33%	7%	12%	0%					

Table 4 – Training	9			
Advanced	5%	7%	6%	22%
Intermediate	5%	22%	19%	30%
Beginner	3%	29%	26%	26%
Not Started	87%	42%	50%	22%



Table 6 – Policy	/ & Commitm	nents		
Advanced	13%	30%	17%	41%
Intermediate	44%	37%	35%	44%
Beginner	18%	25%	34%	12%
Not Started	26%	8%	14%	3%

Table 7 – Gree	n Products				
Advanced	23%	37%	19%	47%	
Intermediate	28%	37%	43%	42%	
Beginner	26%	21%	23%	11%	
Not Started	23%	5%	15%	0%	



	2019	2020	2022 New Disclosers	2022 Existing Disclosers		2019	2020	2022 New Disclosers	2022 Existing Disclosers
Table 8 – Engag	ement & Collab	oration			Table 11 – Transit	tion & Physical I	Risk		
Advanced	13%	28%	9%	58%	Advanced	15%	28%	18%	37%
Intermediate	28%	43%	44%	33%	Intermediate	28%	37%	29%	47%
Beginner	46%	28%	30%	10%	Beginner	41%	28%	38%	15%
Not Started	13%	1%	18%	0%	Not Started	15%	8%	16%	1%

Table 9 – Scena	rio Analysis			
Advanced	10%	17%	12%	29%
Intermediate	28%	29%	30%	48%
Beginner	10%	34%	27%	16%
Not Started	51%	20%	31%	7%

Table 10 – Risk M	lanagement Fra	amework		
Advanced	15%	26%	21%	37%
Intermediate	46%	51%	38%	49%
Beginner	13%	18%	26%	11%
Not Started	23%	4%	15%	3%



Table 12 – Envir	onmental Opera	ational Metrics		
Advanced	18%	55%	34%	63%
Intermediate	46%	28%	34%	30%
Beginner	8%	16%	19%	5%
Not Started	28%	1%	13%	1%

Table 13 – Env	ironmental F	inancing Metric	S	
Advanced	5%	20%	6%	36%
Intermediate	26%	37%	40%	45%
Beginner	13%	30%	31%	12%
Not Started	56%	13%	24%	7%



Annex D References and Data Sources

Key Term

Carbon Metrics

Conference of the Parties (COP 26)

Equator Principles

Equator Principles (EP) Association

EU Sustainable FinanceThe Sustainable Finance Disclosure Regulation (SFDR) is a European regulationDisclosure Regulation (SFDR)introduced to improve transparency in the market for sustainable investmentproducts, to prevent greenwashing and to increase transparency aroundsustainability claims made by financial market participants (Eurosif, 2019).

Description

Examples include:

- Weighted Average Carbon Intensity Portfolio's exposure to carbon-intensive companies, expressed in tons CO₂e / USDM revenue.
- Carbon Emissions The absolute greenhouse gas emissions associated with a portfolio, expressed in tons CO_2e .
- Carbon Footprint Total carbon emissions for a portfolio normalized by the market value of the portfolio, expressed in tons CO₂e / USDM invested.
- Carbon Intensity Volume of carbon emissions per million dollars of revenue (carbon efficiency of a portfolio), expressed in tons CO_2e / USDM revenue.
- Exposure to Carbon Related Assets The amount or percentage of carbon-related assets in the portfolio, expressed in USDM or percentage of the current portfolio value (TCFD 2017).

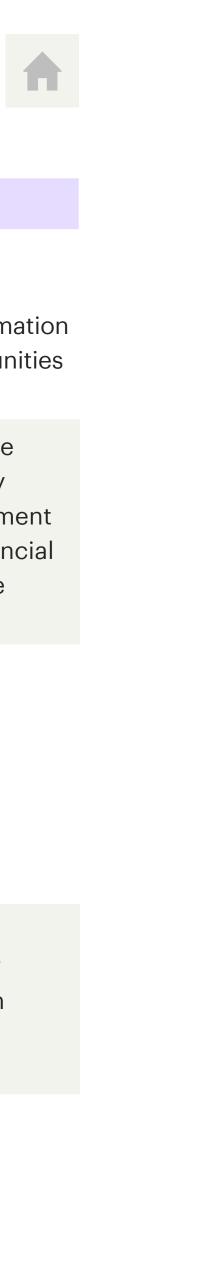
COP is a global climate summit that the UN has been bringing together for nearly three decades, whose aim is to tackle climate risk. The UK hosted the 26th UN Climate Change Conference of the Parties (COP26) at the Scottish Event Campus (SEC) in Glasgow on 31st October – 13th November 2021. It brought parties together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change (UK COP26, 2021).

Risk management framework which has been adopted by 97 financial institutions for managing environmental and social risks in projects with the intention to provide a minimum standard for due diligence and monitoring (Equator Principles, 2020).

The Equator Principles (EP) Association is the unincorporated association of member Equator Principles Financial Institutions (EPFIs) whose object is the management, administration and development of the EP (Equator Principles Association, 2022).



Key Term	Description	Key Term	Description
EU Taxonomy	In Action 2 of the 2018 European Commission Action Plan on Financing Sustainable Growth, the EC committed to creating standards and labels for green financial products. The EU Taxonomy is a classification system that determines whether an economic activity is	International Sustainability Standards Board (ISSB)	The purpose of the ISSB is to develop and maintain IFRS sustainability-related disclosure standards which provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions (IFRS, 2022).
Financial Stability Board (FSB)	environmentally sustainable (European Commission, 2020). The Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system. The FSB promotes international financial stability; it does so by coordinating national financial authorities and international standard-setting	Network for Greening the Financial System (NGFS)	A group of central banks and supervisors launched at the Paris One Planet Summit 2017. The group, on a voluntary basis, shares best practices, contributes to the development of environment and climate risk management in the financial sector, and mobilizes mainstream finance to support the transition towards a sustainable economy (NGFS, 2019).
Global Reporting Initiatives (GRI)			PACTA provides a methodology for governments and financial institutions to test the climate compatibility of their investments by measuring and aligning financial flows with the Paris Agreement's 1.5°C goal. The first assessments began in 2020 following a 2017 pilot project run by the 2° Investing Initiative and the Swiss government (2 Investing Initiative, 2022).
			United Nations Framework Convention on Climate Change. This landmark agreement has been adopted by 195 countries since 2016 to combat climate change with the central aim of keeping the global temperature rise below 2°C above pre-industrial levels (UNFCC, 2017).
Greenhouse Gas Protocol	The Greenhouse Gas Protocol provides a global standardized framework to measure and manage greenhouse gas (GHG) emissions (GHG Protocol, 2022).		



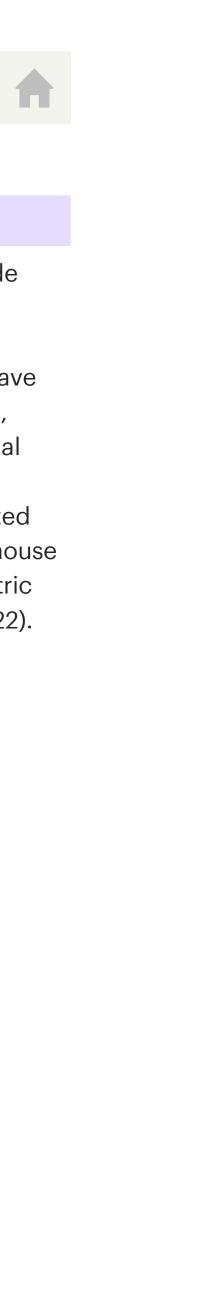
Key Term	Description
PRA Climate Biennial Exploratory Scenario	The BES is the part of the Bank of England's stress testing framework used to explore less-well-understood risks that are not neatly linked to the financial cycle. In 2021, this will explore the financial risks posed by climate change using three climate scenarios: early, late, and no additional policy action (Bank of England, 2019).
Science Based Targets	An initiative that champions science-based target setting as a powerful way of boosting companies' competitive advantage in the transition to a low-carbon economy. The initiative showcases companies that set science-based targets, defines and promotes best practice in science- based target setting, offers resources to reduce barriers to adoption, and independently assesses and approves companies' targets (Science Based Targets, 2022).
Shareholder Rights Directive II	A set of measures which relate to workplace pension scheme stewardship and governance that have been adopted into UK law through The Occupational Pension Schemes (Investment and Disclosure) (Amendment) Regulations 2019 and The Pension Protection Fund (Pensionable Service) and Occupational Pension Schemes (Investment and Disclosure) (Amendment and Modification) Regulations 2018. SRD II was introduced to improve transparency and stewardship of occupational pensions schemes, allowing for comparison between schemes so that engaged members and other stakeholders can better understand their investments (GOV, 2019).



Key Term	Description
Stewardship Code	The UK Stewardship Code 2020 sets high stewardship standards for those investing money on behalf of UK savers and pensioners, and those that support them. Stewardship is the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society (FRC, 2020).
Sustainable Development Goals	17 global goals led by the United Nations Development Programme and adopted by all United Nations Member States in 2015. They provide a blueprint for a better and sustainable planet by 2030 (United Nations, 2022).
Task Force on Climate- related Financial Disclosure (TCFD) Consortium	The TCFD Consortium was established on 27th May 2019, as an initiative of five leaders from industry and academia, with Professor Kunio Ito of Hitotsubashi University as its chair. Through a series of dialogues between the financial and non-financial sectors, the Consortium aims to further discuss effective and efficient corporate disclosure of climate-related information and its use by financial institutions (TCFD Consortium, 2019).
Taskforce on Nature-related Financial Disclosures (TNFD)	The TNFD is a new initiative, building on the model developed by the TCFD, with a mission to provide a framework for organizations to address environmental risks and opportunities (TNFD, 2022).



Key Term	Description
The Taskforce for Scaling Voluntary Carbon Markets (TSVCM)	The Taskforce on Scaling Voluntary Carbon Markets is a private-sector-led initiative working to scale an effective and efficient voluntary carbon market to help meet the goals of the Paris Agreement. The Taskforce's unique value proposition has been to bring all parts of the value chain to work intensively together and to provide recommended actions for the most pressing pain-points facing voluntary carbon markets (TSVCM, 2021).
UK Sustainable Disclosure Requirements (UK SDR)	SDR is the UK's sustainability disclosure framework designed to ensure that sustainability information flows into the real economy in order to empower investors and consumers to make financial decisions which align with their values. It ensures that the information exists to enable every financial decision to factor in climate change and the environment (GOV, 2021).
United Nations Environment Programme Finance Initiative (UNEP FI)	UNEPFI is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. The frameworks UNEP FI has established or co-created include: Principles for Responsible Banking, Principles for Sustainable Investment Principles for Responsible Investment (UNEPFI, 2022).



Key Term	Description
US Securities and Exchange Commission Climate Disclosure Regulation	The SEC Climate Disclosure requires registrants to include certain climate-related disclosures in their registration statements and periodic reports, including information about climate-related risks that are reasonably likely to have a material impact on their business, results of operations, or financial condition, and certain climate-related financial statement metrics in a note to their audited financial statements. The required information about climate-related risks also would include disclosure of a registrant's greenhouse gas emissions, which have become a commonly used metric to assess a registrant's exposure to such risks (US SEC 2022).

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Notes

- TCFD 2021 Status Report (TCFD, 2021).
- **2.** As part of the Green Finance Strategy Roadmap, the UK and other nations have indicated the intention to make transition plans mandatory for firms. The UK government launched a UK Transition Plan Taskforce at COP26, which is published in its Disclosure Framework and accompanying Implementation Guidance in November 2022.
- **3.** Assessment of market coverage and maturity analysis conducted for banks endorsing as of 9th May 2022, based on disclosures made as of 15th June 2022. Assessment of industry best-practice examples conducted for banks reporting as of 15th June 2022.
- 4. Our 2021 report assessed the market coverage of banks endorsing the TCFD as of 5th June 2020.
- See Annex B. for report methodology, including the definitions of "Not Started", 5. "Beginner", "Intermediate", "Advanced" maturity for each TCFD theme.
- 6. Our 2021 report assessed the maturity of banks' TCFD disclosures as of 30th December 2020.
- 20 Top 100 banks and total assets as per S&P Global Market Intelligence Report (S&P, 2022). List of banks not endorsing as of 9th May 2022 as per TCFD supporters directory (TCFD, 2022).

- 8. See Annex B for regional size estimates and sources.
- 9. Climate change stress tests have been introduced by, for example, the Netherlands' De Nederlandsche Bank (DNB), the Bank of England (BOE), the European Central Bank (ECB), the Hong Kong Monetary Authority (HKMA) and the Banque de France and Autorité de Contrôle Prudentiel et de Résolution (ACPR).
- **10.** Total value of green products estimated to be USD 540 billion in 2021 (TheCityUK, 2022).
- **11.** The final recommendations of the TNFD are due to be published in early 2023.
- **12.** See Implementing the Recommendations of the TCFD (TCFD, 2017) for a full list of guidelines to implement the recommendations.
- **13.** TCFD endorsement list sourced from TCFD supporters directory. Categories included from the TCFD supporters list are banks/banking, capital markets and diversified financial services. 14 Names have been removed from the official list based on not being a bank or lack of information or considered as part of the wider group company. The names of the excluded financial institutions are as follows: AllianceBernstein, Asociación de Bancos de México ABM, Bankia, AC., Comisión Nacional Bancaria y de Valores, eCOfunding, ESG Treasury Ltd, FACT 2006 Ltd, Gulf International Bank (UK) Ltd., Liontrust Asset Management plc, Procrea Holdings, Inc., Santander Chile, The Export-Import Bank of Korea, The Kanagawa Bank, Ltd., Worthwhile Capital Partners.

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