

FINANCIAL INSTITUTIONS

ESG AS A BUSINESS OPPORTUNITY

How banks can capitalize on the net zero transition business opportunity

2nd EDITION

November 2023



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Alvarez & Marsal (A&M) is delighted to publish the second edition of our report "ESG as a Business Opportunity" for Financial Services. In this edition, we update results from our research examining top 24 global banks with regards to their ESG business activities along the the GREEN PACE evaluation framework introduced in September 2022

https://www.alvarezandmarsal.com/insights/esg-business-opportunity

This document aims to provide bank leaders with a framework to size and capitalize on the ESG business opportunity when assisting clients through their net zero transition journey. We focus on the E of the broad ESG spectrum of opportunity.

Introduction

Last year, A&M introduced the report ESG as a business opportunity to help frame revenue growth opportunities¹ for banks in their journey to accompany clients toward net zero transition.

2023 has been a year of high competition in the sustainable finance market with new business volumes negatively impacted by rising rates and macro conditions.

- Banks have continued working on deploying a broad offering of sustainable finance and investing products.
- Many banks have expanded disclosure of their net zero plans for emissions financed portfolios.
- Significant progress has been made in reduction of portfolio emission intensity by those banks that disclosure current vs. plan information.
- Most advanced banks have continued to deploy new client transition planning analytics, insights and operational end-toend solutions.
- Some banks have expanded their investment bets on climate tech and ESG innovative companies.

This document provides updated results on how well banks are capitalizing on the ESG business opportunity and displays new examples of leading industry initiatives emerging in the space.

 Sustainable bank strategies have moved from regulatory compliance to a wide range of initiatives designed to capitalize on the ESG business opportunity

A&M Perspective

Winning Formula: GREEN PACE

Last year, we introduced **GREEN PACE**, the framework to evaluate how well banks were maximizing the ESG business opportunity, with four winning attributes that define success:

GREEN Products





 Wide range of sustainable financing solutions customised by customer segment and ambitious 2030 sustainable finance targets.

Alignment to Net Zero





 Net zero targets across all lending portfolios with transparent emission reduction metrics / goals using benchmarks and internal tooling.

Client Orientation and Insights





 Transition playbook advice and analytics linking client operational solutions with financial business case and insights.

Execution of Transition Plans





 Bank involvement in operational execution through climate tech investing, innovative joint ventures and digital platforms/marketplaces.

Based on publicly available information disclosed by banks, A&M has updated his outside-in view scorecard of GREEN PACE across 24 top global bank (see next page for updated results).

NatWest continues to be our winner for the second consecutive year. European banks continue to perform better than U.S. peers and UK banks outperform other European banks. The gap between banks has narrowed evidencing capability build up and catch up by laggards.

ALVAREZ & MARSAL

LEADERSHIP. ACTION. RESULTS.™

GREEN Products





Alignment to Net Zero



Execution of Transition Plans

Client Orientation and Insights



Bank Ranking 2023 vs. 2022

Based on publicly available information, A&M has updated its GREEN PACE Rankings across top 24 global banks

	Scorecard by Area 1 2 3 4	2023 Score	2022 Score	Score Change	Ranking Change
₹ NatWest Group		69%	65%	A 4	-
BARCLAYS		66%	55%	▲ 11	-
ING 🌺		62%	50%	▲ 12	▲ 4
♦ Santander		60%	54%	▲ 6	-
BNP PARIBAS		59%	52%	^ 7	-
BBVA		58%	49%	▲ 11	▲ 3
CRÉDIT AGRICOLE		56%	45%	▲11	▲7
HSBC		56%	54%	▲2	▼5
SOCIETE GENERALE		56%	44%	▲ 12	▲ 6
UBS		54%	50%	A 4	▼4
LLOYDS BANK		53%	49%	4	▼1
Deutsche Bank		53%	48%	▲ 5	-
JPMorgan Chase & Co.		53%	50%	▲ 3	▼5
standard chartered		50%	47%	▲ 3	▼1
cîti		49%	40%	▲ 9	▲2
COMMERZBANK 🔼		48%	48%	-	▼5
▼ ABN·AMRO		43%	34%	▲ 9	▲1
INTESA 🦳 SANDAOLO		43%	40%	▲ 3	▼2
BANK OF AMERICA 🥟		42%	31%	▲ 11	-
WELLS FARGO		38%	30%	▲ 8	▼1
CaixaBank		38%	27%	▲11	▲ 3
Nordea		34%	29%	▲ 5	-
UniCredit		33%	28%	▲ 5	-
© BPCE		32%	30%	▲ 2	▼4
		44%	50%	▲ 6	

Source: A&M analysis.

Some of the top movers are

- ING increases 12 points thanks to new ambitious sustainable finance goals and strong Terra portfolio alignment progress across portfolios.
- · Societe Generale increases 12 points thank to becoming top bank in climate venture capital and strong progress in net zero targets and client analytics.
- Barclays increased 11 points through extended use of BlueTrack into client transition analytical applications, all net zero targets on track and increased ambition in climate venture capital.
- · Credit Agricole increases 11 points thanks to strong sustainable finance production, portfolio alignment and becoming an ESG consultant to provide end-to-end solutions across homeowners, SMEs and farmers.

GREEN Products



Top 24 European and U.S. banks have committed €15 trillion of sustainable finance targets by 2030. U.S. banks account for \$5 trillion while European banks have targets for €10 trillion. Annualized target levels amount €1,5 trillion. 2030 sustainable finance targets represent an average 42 percent of total bank assets.

2030 sustainable finance targets set by banks display a broad range of ambitions with total volume as a percent of total assets ranging from 13 to 126%. Banks continue to use multiple scope and criteria to classify new business as sustainable, thus making comparability difficult but also showing different levels of conservatism that can lead to greenwashing risks in the sector.

Volume of sustainable finance during 2022 dropped by 16% compared to 2021 levels driven by rate and macro environment. Germany and US markets are the ones experience largest decline, -46% and -31%, respectively. Growth rates by region vary widely (see table below).

Lastly, only two banks report revenue potential associated to sustainability finance (Deutsche Bank and Standard Chartered) showing that the industry continues to struggle define an equity story related to sustainable finance business activity.

	Targets 2030 in EUR (BN)	Target as a % of Assets	New Production 2022 in EUR (BN)	% Growth New Production 21-22 (%)
United Kingdom	2,424	32%	178	23%
Germany	1,600	100%	110	-46%
Switzerland	748	72%	15	-85%
France	2,185	27%	327	36%
Spain	841	37%	101	28%
Italy	668	37%	74	84%
Netherlands	1,087	63%	107	249%
Denmark	533	90%	24	76%
United States	5,140	46%	500	-31%
Total	15,227	42%	1,436	-16%

Source: A&M analysis.

Alignment to Net Zero



A&M has updated its benchmarking of bank net zero targets conducted in our first edition. Most banks have committed to exit phase-out coal financing in EU/OECD by 2030 and worldwide by 2040, with a handful of banks committing to earlier exits. The number of portfolios with net zero targets (excluding Coal) has increased from 3 to 5 in average. All banks have targets now for Oil and Gas and Power. Auto is the third most popular sector in terms of coverage followed by Steel and Cement. Real estate and transportation (aviation and shipping) portfolios continue to have partial coverage.

Sectors	% Banks with Targets
Oil and Gas	100%
★ Power	96%
Cement	50%
Steel	62%
Residential RE	33%
Commercial RE	29%
Auto	79%
Aviation	37%
Shipping	29%

Source: A&M analysis.

ING continues to be our industry leader in the alignment to net zero category. ING's Terra net zero lending portfolio steering approach was pioneering when launched in 2020. The Bank is on track with five of the nine Terra sectors. We also display leading practices at Natwest, JPMorganChase and Barclays.

Client Orientation and Insights



Winners in sustainable finance must wear client shoes to effectively bundle bank solutions and offer transition analytics, insights and solutions. Banks that do this well will improve business win rate and protect margins in a highly competitive environment. In fact, Lloyds Bank and Natwest, our winners in this category last year, experienced more than 200% growth in sustainable finance new volume during 2022 compared to an average -16% decline in the industry.

In this edition, we display some leading industry practice examples:

- 1. Natwest's Carbon Planner tool to support energy transition of corporates and SMEs.
- 2. Barclays' BlueTrack transition analytical tool to support net zero target definition and tracking for corporates.
- 3. Credit Agricole becoming an ESG consultant across all client segments.

It is too early to define the end winners in this category but continue to believe that key capabilities will entail

- Understand well operational challenges faced by clients.
- Provide advice in available transition solutions.
- Engage with them in strategic dialogue to support transition planning and decision making.
- Leverage the full bank service offering to accompany them in the net zero journey.

Execution of Transition Plans



Engaging with clients in execution of their transition plans can also improve success rate and drive revenue growth. In our view, banks committed to execution will need to deliver a combination of the following:

- Giving client access to innovative climate tech solutions by investing or supporting start-up companies in the space.
- · Partnering with industrials to bring financing and operational solutions to clients.
- Developing digital marketplaces/platforms to efficiently scale up transition solutions to a large set of clients.
- Promoting circular economy solutions.

Some leading industry practices in this area include:

- Six European banks have committed approximately €2.7 billion of equity capital to be invested in climate tech and sustainable venture capital companies. Societe Generale and Barclays are going big in climate tech investments with combined equity commitments of €1.6bn. Citi's Impact fund has committed \$0.5bn.
- Several banks are partnering with real estate service providers to offer financing and retrofit turnkey solutions to corporate and retail real estate owners.
- Santander is becoming the king of joint ventures in the ESG space, hard to follow.
- Banks are partnering with large retailers to provide green supply chain financing solutions to third-party suppliers.
- Digital marketplaces such as Carbonplace and many others are emerging to provide scalable transition solutions to clients.
- Banks are promoting financing and business models involving circular economy principles. Intesa continues to be the leading bank betting on circular economy solutions.

2 ESG Regulatory Developments in 2023

2023 Regulatory Developments

The growing concern about climate change has driven regulation in recent years. Some general regulations apply to all industries, such as climate change laws or CSRD. Other regulatory trends are specific to the financial services industry such as supervisory stress testing and risk transparency standards (ESG Pillar III).

Below listed are the main bank supervisory and regulatory priorities on sustainability:

- Risk Analytics & Stress Test: The ECB Fit-for-55 ST exercise is requesting banks very detailed starting point data, including credit and market risk climate metrics.
 - Also, as part of the ECB expectations, banks need to develop appropriate data governance and risk quantification approaches as well as robust climate risk stress-testing frameworks
- 2. **Greenwashing & Climate Change: The** ECB is focusing on targeted deep dives and assessment of banks compliance with new reporting standards and disclosure requirements (ITS, Pillar III).
 - Greenwashing is considered as a top priority for banks as reporting increases.
- Pillar I, II and III Climate Risk Capital: 3. The EBA proposes risk-based enhancements to the Pillar I framework and suggests using macroprudential tools.
 - The ECB is assessing Pillar III disclosures as part of the banking compliance assessment. Pillar II benefits for banks that transition rapidly are also under discussion.
- 4. **CSRD & Double Materiality:** The Corporate Sustainability Reporting Directive (CSRD) requires companies (including banks) to report on the impact of corporate activities on the environment and society. Largest banks will need to report FY24 information on their 2025 disclosures.

Impact in ESG business opportunity

The 2023 regulatory developments require additional bank implementation efforts. However, it also brings a great opportunity for banks to enhance and update their ESG capabilities for business origination.

Some material impacts for banks include:

- Risk Analytics & Stress Test: an enhanced framework on transition and physical risk models and analytics can help identify main client gaps/ issues, as well as identify transition business opportunities.
- 2. **Greenwashing & Climate Change: to** avoid greenwashing, as well as reputational or data risks, banks should develop or enhance an ESG data and reporting control tools. Consistent sustainable finance / net zero criteria and targets can help.
- Pillars I, II and III: capital requirements related to climate risk will influence risk reward considerations of sustainable finance new business. It will also drive pricing, portfolio management and exit decisions. Pillar 3 disclosures can also support benchmarking of competitive positioning.
- **CSRD & Double Materiality: a** comprehensive approach to double materiality within each bank can inform capabilities required by clients and related ESG business opportunities.
- Sustainable regulatory priorities bring a great opportunity for banks to enhance and update their ESG capabilities

A&M Perspective

ESG Business Opportunity Updated Results

Range of Leading Industry Practices

GREEN PACE is A&M's framework to evaluate how banks are capitalizing on sustainability as a business opportunity. Below we provide 25 capabilities assessed and bank rankings along the four dimensions of GREEN PACE. Level of commitment, complexity and innovation is widespread.

Green Products



- Extensive green product offering across corporate, SME and retail clients including capital markets, lending and advisory solutions.
- Disclosed green and sustainability financing product framework.
- 2030 sustainable finance targets (total and by asset class) with progress reported.
- Strong ambition in 2030 target levels (e.g., exceeding 50 percent of total assets).
- Track record in target delivery (2021-22 production exceeding target run rate).
- 1. COMMERZBANK <



2. Deutsche Bank

3. JPMorgan Chase & Co.

- 4. CÎTÎ
- 5. **ING** 🔊

Alignment to Net Zero



- Articulation of net zero targets for financed emissions across portfolios.
- Strong target coverage based on number of portfolios and percent of assets.
- Net zero target disclosures include absolute/relative emissions data, assumptions, pathways, data scorecards and client transition strategies.
- Portfolio alignment proprietary tools (e.g., BlueTrack, Terra, CarbonCompass).
- Net zero target set at more aggressive levels than peer average.

- 1. **ING**
- 2. W BARCLAYS
- 3. JPMorgan Chase & Co.
- 4. A NatWest Group

Client Orientation and Insights



- CO2 footprint tracking tools provided to multiple client segments.
- Transition planning analytics provided to clients (transition playbooks, assessment, benchmarks, cost-benefit analysis of transition solutions).
- Dedicated ESG experts and ESG client advisors.
- Extensive internal training.
- Dedicated ESG research teams and regular ESG insights customized for clients.
- 1. A NatWest Group
- 2. LLOYDS BANK
- 3. **W** UBS
- 4. CRÉDIT AGRICOLE
- Santander

Execution of Client Transition



- Direct equity investments in climate tech and sustainable venture capital.
- Innovative partnerships with industrial partners to accompany clients in execution.
- Digital platforms/marketplaces to provide scalable client transition solutions (e.g., real estate transition hubs, carbon marketplaces, etc.).
- Initiatives to promote circular economy solutions.
- Client transition planning progress monitoring and benchmarking.

- CRÉDIT AGRICOLE
- **BNP PARIBAS**
- 3. **Santander**
- BARCLAYS
- NatWest Group



GREEN Products



€15 trillion

2030 Bank Sustainable Finance Target

Top 24 European and U.S. banks have committed €15 trillion of sustainable finance as targets by 2030. Four top U.S. banks account for €5 trillion or one third of the total while 17 European banks have targets for €10 trillion. 2030 sustainable finance targets represent 42 percent of total bank assets. Annualized target levels amount to €1,5 trillion.

Our assumptions for the analysis above are:

- Standardized target time horizon to 2030 when such time horizon not used by banks. Targets provided for shorter time profiles are linearly extrapolated to 2030.
- Midpoint taken where range provided.
- · Banks use different eligibility criteria to define their sustainable finance targets as evidenced in our first edition report. We have not corrected for those inconsistencies as there is not enough granular public data to do so.

Sustainable finance targets include

- Green, social and sustainable linked bonds.
- Green and sustainable linked loans.
- Green mortgages and auto loans.
- Sustainable derivatives.
- Equity capital raising for sustainable and impact growth companies.
- Assets under management change for sustainable investments.

Bank Sustainable Finance Targets

2030 targets defined by banks display a broad range of ambitions with sustainable finance as a percent of total assets ranging from 13 to 126%.

	2030 Targets (bn)	% of total assets
JPMorgan Chase & Co.	\$2.500	68%
BANK OF AMERICA	\$1.500	49%
Deutsche Bank	€1.000	75%
ING 🔊	€1.000	103%
BARCLAYS	\$1.000	53%
cîti	\$1.000	41%
HSBC	\$875	30%
BNP PARIBAS	€817	31%
SOCIETE GENERALE	€800	55%
₩ UBS	\$800	72%
COMMERZBANK 🔼	€600	126%
CRÉDIT AGRICOLE	€568	24%
Nordea	€533	90%
WELLS FARGO	\$500	26%
BBVA	€450	63%
UniCredit	€400	47%
standard chartered	\$300	36%
INTESA \overline SANPAOLO	€268	28%
♦ Santander	€220	13%
NatWest Group	£189	26%
<u>CaixaBank</u>	€171	34%
LLOYDS BANK	£148	17%
ABN-AMRO	€87	22%

Banks that adjusted their targets during 2023:

- BBVA increased its target from €200bn (18-25) to €300bn.
- Societe Generale increased its 3-year target to €300bn (22-25) from €120bn (19-23).
- Barclays increased goal from \$100bn to \$1trn of sustainable / transition financing (23-30).
- ING announced a new goal of €125 bn of sustainable finance per year by 2025.

Sources: Bank disclosures and A&M Analysis.



GREEN Products



Sustainable finance scorecard shows the following:

- Target as % of Total Assets: the level of sustainable finance ambition can be evaluated relative to total balance sheet size. Different criteria used by banks to classify new activity as sustainable produces a wide range of 13% to 126% target as % of total assets. German banks are the most aggressive in target setting while French banks are the most conservative.
- Level of achievement: we measure degree of progress by comparing actual production of sustainable finance during 2021-2022 against established targets. Industry achievement average is 20% with French banks leading at 27% level and US banks following at 24%. Citi has achieved 29% of its target during 21-
- Sustainable Finance Growth: 2022 volume of sustainable finance has dropped by 16% compared to 2021 levels driven by rate and macro environment. Germany and US markets are the ones experience largest decline, -46% and -31%, respectively.
- Sustainable Finance Income: Only 2 banks report revenue potential associated to sustainability finance (see next page).

COUNTRY/BANK	Target 2030 (€BN)	Target as a % of Assets	Quartile	Cum 21-22 production as % of TA	% Tar	get Achievement	Quartile	Sustainable Origination 2022 (€BN)	Growth 21-22	Quartile
United Kingdom	2,424	32%	3rd	5%	14%	86%	4th	178	23%	2nd
Barclays	935	53%	2nd	4%	7 %	93%	4th	24	-14%	3rd
Lloyds	172	17%	4th	3%	20%	80%	2nd	26	214%	1st
NatWest	220	26%	4th	5%	17%	83%	3rd	28	202%	1st
HSBC	818	30%	3rd	6%	19%	81%	3rd	79	2%	3rd
Standard Chartered	280	36%	3rd	6%	16%	84%	3rd	22	-5%	3rd
Germany	1,600	100%	1st	21%	21%	79%	2nd	110	-46%	4th
Commerzbank	600	126%	1st	30%	24%	76%	2nd	52	-43%	4th
Deutsche Bank	1,000	75%	1st	13%	17%	83%	3rd	58	-48%	4th
Switzerland	748	72%	1st	11%	16%	84%	3rd	15	-85%	4th
UBS	748	72%	1st	11%	16%	84%	3rd	15	-85%	4th
France	2,185	27%	4th	7%	27%	73%	1st	327	36%	2nd
BNP Paribas	817	31%	3rd	7%	23%	77%	2nd	119	78%	1st
Credit Agricole	568	24%	4th	6%	23%	77%	2nd	72	21%	2nd
Societe Generale	800	55%	2nd	13%	24%	76%	1st	100	9%	2nd
Spain	841	37%	3rd	7%	20%	80%	2nd	101	28%	2nd
BBVA	450	63%	2nd	12%	19%	81%	3rd	50	41%	2nd
Caixabank	171	34%	3rd	7%	19%	81%	2nd	22	100%	1st
Santander	220	13%	4th	4%	28%	72%	1st	29	-10%	3rd
Italy	668	37%	3rd	6%	17%	83%	3rd	74	84%	1st
Intesa Sanpaolo	268	28%	4th	3%	12%	88%	4th	16	0%	3rd
UniCredit	400	47%	2nd	10%	20%	80%	2nd	58	140%	1st
Netherlands	1,087	63%	2nd	9%	14%	86%	4th	107	249%	1st
ABN AMRO	87	22%	4th	6%	28%	72%	1st	6	-71%	4th
ING	1,000	103%	1st	12%	11%	89%	4th	101	794%	1st
Denmark	533	90%	1st	6%	7 %	93%	4th	24	76%	2nd
Nordea	533	90%	1st	6%	7 %	93%	4th	24	76%	2nd
United States	5,140	46%	2nd	11%	24%	76%	1st	500	-31%	3rd
JP Morgan Chase	2,336	68%	1st	13%	19%	81%	3rd	184	-31%	4th
Citi	935	41%	3rd	12%	29%	71%	1st	115	-24%	3rd
Bank of America	1,402	49%	2nd	13%	27%	73%	1st	149	-37%	4th
Wells Fargo	467	26%	4th	7%	26%	74%	1st	51	-26%	3rd
Total	15,227	42%	2nd	9%	20%	80%	2nd	1,436	-16%	3rd

Sources: Bank disclosures and A&M Analysis.



GREEN Products

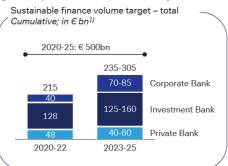


Leading Practice Examples

1. COMMERZBANK 🔼

- Commerzbank continues to be our leader in green products. The bank has defined sustainable finance targets by business (capital markets advisory, corporate and retail lending, and sustainable investment products) and environmental and social purposes. The level of ambition is the highest in the industry (126 percent of total assets by 2030) and delivered 24 percent of its through 2021-22 production. The bank has disclosed its sustainable finance framework covering all eligible activities and product offerings.
- Deutsche Bank's 2025 target of €500 billion is one of the largest in Europe. It represents 75% of total assets. Deutsche Bank is together with Standard Chartered the only two global Banks that report sustainable finance revenue goals (€1.4bn and €1bn by end of 2025, respectively).

2. Deutsche Bank





3. JPMORGAN CHASE & CO.

Source: Deutsche Bank

- JP Morgan Chase's 2030 target of \$2.5 trillion is the largest in the industry. It represents 17 percent of the €15 trillion committed by the banks covered in this report and 68% of the bank's total assets.
- Citi's sustainable finance target by 2030 amounts to \$1 trillion. Citi has achieved 35 percent of its target in 2020-22. Its reporting of progress vs. targets continues to be one of the most comprehensive in the industry.

\$1 Trillion Sustainable Finance Goal

FINANCIAL DATA

Sustainable Finance	2020	2021	2022	Total	%
	\$ 62.5	\$ 162.5	\$ 123.5	\$ 348.5	100%
Business	2020	2021	2022	Total	%
Investment Banking	\$ 50.1	\$150.3	\$ 107.0	\$307.4	88.2%
Mergers and Acquisitions	\$ 5.3	\$ 57.4	\$34.9	\$ 97.5	
Debt Capital Markets	\$ 30.4	\$78.2	\$ 57.9	\$166.5	
Thematic Bonds (Green, Social, Sustainable)	\$ 25.8	\$44.7	\$ 27.4	\$ 97.9	
Sustainability-Linked Bonds	\$ 0.0	\$4.3	\$ 3.5	\$7.8	
Sustainability-Linked Loans	\$ 4.6	\$ 28.6	\$ 25.1	\$58.3	
Green and Other Loans	\$ 0.0	\$ 0.7	\$1.8	\$ 2.5	
Equity Capital Markets	\$ 2.8	\$ 3.4	\$ 2.3	\$8.5	
Municipal Underwriting	\$11.6	\$11.3	\$11.9	\$34.9	
Corporate Lending**	\$ 10.7	\$10.2	\$14.2	\$35.1	10.1%
Treasury and Trade Solutions	\$1.4	\$0.6	\$1.0	\$3.0	0.9%
Markets***	\$ 0.3	\$1.3	\$1.3	\$2.9	0.8%
Corporate/Other (Citi Investments)	\$ 0.0	\$0.1	\$0.0	\$0.2	0.0%
	\$ 62.5	\$ 162.5	\$123.5	\$348.5	100.0%

Sustainable Finance Criteria	2020	2021	2022	Total	%	
Circular Economy	\$0.4	\$2.1	\$0.3	\$2.8	0.8%	
Clean Technology	\$0.6	\$0.0	\$2.5	\$3.1	0.9%	
Energy Efficiency	\$1.2	\$2.5	\$0.5	\$4.1	1.2%	
Green Buildings	\$1.6	\$1.4	\$1.3	\$4.3	1.2%	
Renewable Energy	\$7.0	\$19.6	\$17.3	\$43.9	12.6%	
Sustainable Agriculture and Land Use	\$0.2	\$0.0	\$0.5	\$0.8	0.2%	
Sustainable Transportation	\$ 3.7	\$46.7	\$29.4	\$79.8	22.9%	
Water Quality and Conservation	\$1.4	\$1.6	\$3.1	\$6.2	1.8%	
Environmental: Multiple†	\$12.9	\$49.4	\$31.7	\$94.1	27.0%	
Total Environmental	\$ 28.8	\$123.5	\$86.7	\$238.9	68.6%	
Affordable Basic Infrastructure	\$0.7	\$0.3	\$0.1	\$1.2	0.3%	
Affordable Housing**	\$10.4	\$10.6	\$9.2	\$30.2	8.7%	
Diversity and Equity	\$0.3	\$0.3	\$0.0	\$0.6	0.2%	
Economic Inclusion	\$3.9	\$2.7	\$1.2	\$7.9	2.3%	
Education	\$4.3	\$0.9	\$3.1	\$8.4	2.4%	
Healthcare	\$4.1	\$2.1	\$0.9	\$7.1	2.0%	
Food Security	\$0.0	\$0.5	\$0.1	\$0.6	0.2%	
Social: Multiple†	\$1.4	\$4.3	\$4.2	\$9.9	2.9%	
Total Social	\$25.2	\$21.8	\$18.8	\$65.8	18.9%	
Environmental and Social***	\$8.5	\$17.3	\$18.0	\$43.7	12.6%	
Total	\$62.5	\$162.5	\$123.5	\$348.5	100%	
Region	2020	2021	2022	Total	%	Ī
Asia Pacific	\$5.0	\$14.2	\$14.1	\$33.3	9.5%	

\$44.3 \$58.3 \$118.2 \$15.6 \$2.4 \$8.7 \$5.5 \$16.6

4. Citi

Source: Citi



ING joins the top 5 banks in green products with its new 2025 target by which the Bank aims to channel €125 billion annually to sustainable finance solutions. In 2022, ING mobilised €101 billion of sustainable finance, largest amount in Europe after BNP Paribas which produced €119 billion.





5 Alignment to Net Zero

Developing Bank Net Zero Targets

During 2023, banks have continued to extend net zero target disclosures for their lending portfolios. Banks continue to be challenged by substantial data gaps and trade-offs between net zero targets, profitability and climate risk profiles.

A&M has updated its benchmarking of disclosed bank net zero targets. The number of portfolios with net zero targets (excluding Coal) has increased from 3 to 5 in average. All banks have targets now for Oil and Gas and Power. Auto is the third most popular sector in terms of coverage followed by Steel and Cement. Real estate and transportation (aviation and shipping) portfolios continue to have partial coverage.

		Energy		Indu	ıstry	Real	Estate		Transportation	
	Coal	Oil and Gas	Power	Cement	Steel	Residential	CRE	Auto	Aviation	Shipping
			養		\ODE			-	十	<u> </u>
BARCLAYS	√	√	√	√	√	$\overline{\checkmark}$	2023	$\overline{\checkmark}$	2023	2023
LLOYDS BANK	✓	✓	✓			$\overline{\checkmark}$		✓	$\overline{\checkmark}$	
NatWest Group	✓	✓	✓	√	✓	✓	✓	✓	✓	✓
HSBC	✓	✓	✓	$\overline{\checkmark}$	$\overline{\checkmark}$			$\overline{\checkmark}$	$\overline{\checkmark}$	
standard chartered	✓	✓	✓		√	2023		$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
COMMERZBANK	✓		✓	✓	✓	$\overline{\checkmark}$	✓	✓	✓	
Deutsche Bank	✓	✓	✓	$\overline{\checkmark}$	✓			✓		$\overline{\checkmark}$
□ 💥 UBS	✓	✓	✓	$\overline{\checkmark}$		√	✓			
■ BNP PARIBAS	√	✓	✓	$\overline{\checkmark}$	$\overline{\checkmark}$			✓		
BPCE	✓	✓	$\overline{\mathbf{V}}$							
CRÉDIT AGRICOLE	\checkmark	✓	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	2023	2023	$\overline{\checkmark}$	✓	2023	2023
SOCIETE GENERALE	✓	✓	✓	$\overline{\checkmark}$	$\overline{\checkmark}$	2023	2023	\checkmark	2024	✓
■ BBVA	\checkmark	✓	✓	✓	✓			✓		
CaixaBank	\checkmark	$\overline{\checkmark}$	$\overline{\mathbf{V}}$		$\overline{\checkmark}$			\checkmark		
🗷 📣 Santander	✓	✓	✓		✓				✓	
INTESA 🕝 SANDAOLO	\checkmark	✓	✓					✓		
□	✓	$\overline{\checkmark}$	$\overline{\checkmark}$					$\overline{\checkmark}$		
□ ABN·AMR0	✓	$\overline{\checkmark}$	$\overline{\checkmark}$			$\overline{\mathbf{V}}$	$\overline{\checkmark}$			✓
□ ING 	√	✓	✓	✓	✓	√	✓	✓	✓	✓
■ Nordea	✓	$\overline{\checkmark}$				$\overline{\checkmark}$				✓
JPMorgan Chase & Co.	✓	✓	✓	$\overline{\checkmark}$	$\overline{\checkmark}$			✓	$\overline{\mathbf{V}}$	
cîtî	✓	✓	✓		$\overline{\checkmark}$		$\overline{\checkmark}$	$\overline{\checkmark}$		
BANK OF AMERICA	✓	✓	✓					✓		
WELLS FARGO	√	✓	√		$\overline{\checkmark}$			$\overline{\checkmark}$	$\overline{\checkmark}$	

2nd Edition Coverage

Sources: Bank climate disclosures and A&M Analysis.

1st Edition Coverage



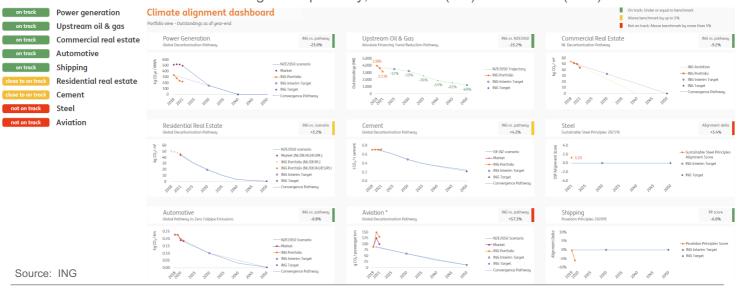
5 Alignment to Net Zero



Leading Practice Examples



- ING continues to be our industry leader in the alignment to net zero category. ING's Terra net zero lending portfolio steering approach was pioneering when launched in 2020. It includes detailed targets for nine sectors, climate alignment dashboards, sector outlook, steering actions and client advice opportunities.
- The Bank is on track with five of the nine Terra sectors power generation (-23%), upstream oil and gas (-15%), Commercial real estate (-9%), automotive (-1%), and shipping (-6%). Residential real estate (3%) and cement (4%) are within 5% of their alignment pathway, while steel (5%) and aviation (57%) are not on track.



- NatWest is our industry leader in overall GREEN PACE scorecard. Its foundational work in setting net zero targets is leading practice. The bank has analysed more than 50 percent of the balance sheet and set up targets for 15 portfolios while peers only cover 5 portfolios in average.
- The Bank is on track on 2 (oil and gas and power) of the 10 portfolios reported.

	Syste	n	Sector	Scope 1 and 2 (MtCC	_z e) Scope	3 (MtCO _z e)	Physical emissions intensity ⁽¹⁾	Convergence point	Difference %(2)	RAG	
			Residential mortgages	3	.1	-	37.8 kgCO₂e/m²	35 kgCO₂e/m²	7%		
		Property	Commercial real estate	0	.3	-	56.6 kgCO ₂ e/m ²				
2. <page-header> NatWest Group</page-header>			Construction	0	.6	-	43.4 tCO₂e/£m	37.3 tCO₂e/£m	14%		
			Automotive manufacturing			0.5	250.0 gCO₂e/v-km	243 gCO ₂ e/v-km	3%		
			Land transport and logistics								
		Mobility	Of which freight road	0	.1	0.2	45.9 gCO ₂ e/t-km	35.5 gCO₂e/t-km			
			Of which passenger rail	0	.2	0.1	59.4 gCO₂e/p-km	46.8 gCO ₂ e/p-km	21%		
			Of which passenger road	0	.2	0.2	86.9 gCO₂e/p-km	61.2 gCO₂e/p-km	29%		
		Energy	Electricity generation	0	.5	-	116.7 kgCO₂e/MWh	174 kgCO₂e/MWh	(49)%		
		Energy	Oil and gas	0	.9	0.2	2.4 tCO ₂ e/TJ	2.4 tCO₂e/TJ	-		
	~	Food	Agriculture								
Source: Natwest		rood	Of which Primary farming	3	.9	-	2,111 tCO₂e/£m	2,101 tCO ₂ e/Em	2,101 tCO ₂ e/Em 0.47%		
odiloc. Hatwoot		NatWest Grou	p estimate – RAG status		Above convergence pathway by up to 5%		onvergence (1) Refer to page by more than 5% required by 2	89 for further detail on physical emissions inte 330.	nsity metrics used to es	timate reduction	

- 3. JPMorgan Chase & Co.
- JPMorganChase has developed Carbon Compass as its methodology for setting Paris-aligned emissions reduction targets for financed emission portfolios. The Bank has published 3 new sectors during last year. Of the prior 3 portfolios
 - disclosed, 2 are on track (power and auto).
- **BARCLAYS**
- Barclays uses its BlueTrack Proprietary Portfolio Alignment tool. It is how the bank measures financed emissions, tracks them over time and leverages client transition support financing decisions.
- The Bank has published 2 new sectors during last year. Of the prior 4 portfolios disclosed, all are on track (oil and gas, power, cement and steel).







Net Zero Benchmarking

A&M has conducted extensive benchmarking of bank net zero targets for the following portfolios:

Energy	Industry	Real Estate	Transportation
Oil and Gas	Cement	Residential	Auto
Power	Steel	Commercial	Aviation
			Shipping

See Appendix 1 – Net Zero Target Portfolio Benchmarking for scorecards across nine portfolios. The benchmarking analysis shows baseline emission intensity and level of reduction targets by bank. Over time this will be an indication of strategic portfolio choices and potential risk of stranded assets for banks that fall behind emission intensity peer average. Below is an illustration for Power.



		_	sions 2/MWh)		Targets			el of achieven	nent
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction
Barclays	2,9	322,0	4th	-60	% 130,4	3rd	-9%	3rd	15%
Lloyds	2,6	192,0	2nd	-81%	37,0	1st	-	_	
NatWest	5,4	223,0	3rd	-77%	51,3	1st	-48%	1st	62%
HSBC	21,5	589,9	4th	-77%	138,0	4th	-14%	2nd	18%
Standard Chartered (1)	-	-	_	-639	%	-	-44%	1st	70%
Commerzbank	7,4	91,0	1st	-74%	23,7	1st	-	_	
Deutsche Bank	9,7	359,0	4th	-69%	112,0	3rd	-1%	4th	2%
UBS	0,4	238,0	3rd	-49°	121,4	3rd	-12%	3rd	249
BNP Paribas (2)	17,0	208,0	2nd	-30%	146,0	4th	-14%	2nd	47%
BPCE	6,7	156,0	1st	-12%	138,0	4th	-	-	
Credit Agricole	16,5	224,0	3rd	-58	94,1	1st	-	-	
Societe Generale	7,4	260,0	3rd	-58	163,0	4th	-	-	
BBVA	16,2	221,0	2nd	-52	107,0	2nd	-4%	3rd	√ 8%
Caixabank	13,7	136,0	1st	-30%	95,2	2nd	-	-	
Santander	10,3	210,0	2nd	-46%	113,4	3rd	-	-	
Intesa Sanpaolo	-	214,0	2nd	49	110,0	2nd	18%	4th	-38%
UniCredit	8,9	208,0	2nd	47°	% 111,0	2nd	-	-	
ABN AMRO (3)	2,2	0	-		188,0	4th	-	-	
ING	8,9	335,0	4th	-53	157,5	4th	-33%	1st	■ 63%
Nordea	2,8	-	-		-	-	-	-	
JP Morgan Chase	33,8	375,0	4th	-69%	115,4	3rd	-22%	2nd	I 32%
Citi	4,5	313,5	3rd	-639	116,0	3rd	-	-	327
Bank of America	19,0	336,4	4th	-70%	100,9	2nd	9%	4th	I ₋₁₃₉
Wells Fargo	8,8	273,0	3rd	-60	102,0	2nd	-	-	107
Banks Average	9,4	228,5		-57	% 103,0		-14%		24%

Sources: Bank climate disclosures and A&M Analysis.



6 Client Orientation and Insights

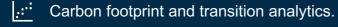


Accompanying Clients in Their Transition

Banks that want to maximize the ESG business opportunity must deepen their client relationships. We call it ESG Client Orientation and Insights but it is nothing more than wearing client shoes to:

- · Understand well operational challenges faced by clients.
- Provide advice in available transition solutions.
- · Engage with them in strategic dialogue to support transition planning and decision making.
- · Leverage the full bank service offering to accompany them in the net zero journey
- Ultimately improve success rate and margin.

Taking a client orientation in ESG requires banks to develop:





Internal training.

Dedicated research.

Winners in sustainable finance must wear client shoes to effectively bundle bank solutions into client transition needs. Win rate and margins are at stake.

A&M Perspective

A&M Update

- Our first edition of this report identified Lloyds and Natwest as the top 2 in the Client Orientation and Insight Category. Both banks have invested heavily in the deployment of client CO2 footprint and transition analytics across segments and needs.
- Our believe is that the stronger the analytics, the better the understanding of client needs and higher prospects for new business. In fact, Lloyds Bank and Natwest experienced more than 200% growth in sustainable finance new volume during 2022 compared to an average -16% decline in the industry.
- Our leading industry practice examples section displays three case studies:
 - 1. Natwest's Carbon Planner tool to support corporates and SMEs to identify transition planning solutions and prioritise carbon and energy cost saving initiatives. It will become an industry standard to capitalise on the ESG opportunity for SMEs.
 - 2. Barclays' BlueTrack transition analytical tool to support net zero target definition and tracking for corporates is now used to assess client transition risks and identify engagement business opportunities.
 - 3. Credit Agricole is becoming an ESG consultant across all client segments.





Client Orientation and Insights

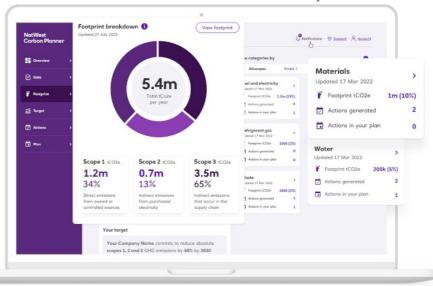


Leading Practice Examples



NatWest Group

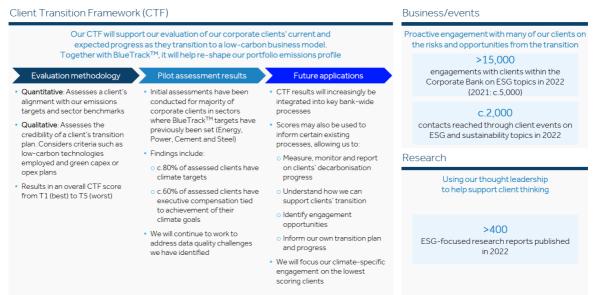
Natwest launched during 2022 its Carbon Planner, a tool to help UK SMEs identify potential cost and carbon saving plans. Carbon Planner contains more than 40 action plans which UK businesses can take to reduce their carbon footprint and potentially operating costs. Actions range from improving insulation and packaging return programmes to electric vehicle adoption and generating energy from waste. Several thousand UK businesses have signed up to CarbonPlanner and are using the tool regularly. It has won several awards including the Digital Leaders Awards Most Successful Environmental Project of the Year.



Source: Natwest https://www.natwest.com/business/green-banking/carbon-planner.htm

BARCLAYS

Barclays continues to expand the applications of its BlueTrack methodology and tool for corporates. What began as an analytical tool to measure and track financed emissions by sector, it is now leveraged as a client transition framework and tool to evaluate client's transition plan credibility and identify client engagement business opportunities.



Source: Barclavs



Client Orientation and Insights



Leading Practice Examples



Credit Agricole continues to invest in its ESG client orientation. The bank has created a new consulting business line providing advice and solutions for professionals, SMEs and farmer clients. The mission is to cover end-to-end solutions from diagnostic to operational and diagnostic tools, very much aligned to our view that you need to provide turn-key solutions to clients if you want to win business.



3 major achievements since the publication of our Societal project to support the transition efforts of all our customers



« Hub de Transition énergétique »: tailor-made turn-key solutions for all

Encourage and facilitate energy transition for our corporate, professional, farmer and public sector clients. Support them at all stages of their transition, from consulting to financing and implementation and monitoring

Pilot since June 2022 Q1 2023 launch for corporates (H2 2023 for professionals)

« Livret engagé sociétaire »

Enable individuals, through their savings, to contribute to major economic, agricultural and regional transitions

Launch for mutual shareholders in October 2022

Already € 375 m collected

The Bank has developed multiple partnerships to provide client solutions: GreenFlex, for advice on ESG transition issues; Voltalia for Corporate Power Purchase Agreements; Global Climate Initiatives (GCI) for measuring and reducing environmental impact; Tennaxia, software to manage CSR indicators; Greenly, to carry out a digital carbon assessment and an associated action plan to reduce their CO2 footprint; and Ekwateur, a supplier of green energy.

Source: Credit Agricole



7 Execution of Client Transition



Getting Involved in Execution

Engaging with clients in execution of their transition plans means that banks need to be involved operationally in facilitating transition solutions for clients. How can banks effectively accompany clients in their net zero journey?

In our view, banks committed to execution will need to deliver a combination of the following solutions:

- Giving client access to innovative climate tech solutions by investing or supporting start-up companies in the space.
- Partnering with industrial partners to bring financing and operational solutions to clients (e.g., partner with a real estate services company to offer financial and retrofit solutions for real estate asset owners).
- Developing digital marketplaces/platforms that are able to efficiently scale transition solutions to a large number of clients.
- Promoting circular economy solutions for clients.

Banks have the possibility to accelerate the net zero transition of their clients by delivering digital marketplaces that bring together investors, banks and corporates.

A&M Perspective

A&M Update

Our first edition of this report identified Credit Agricole and BNP as the top 2 in the Client Transition Execution Category. Both banks have focused on joint ventures with transition industrial partners and investing in climate tech companies.

Our believe is that providing turn-key solutions enhances the conversion rate of new business. In fact, Credit Agricole and BNP experienced growth in sustainable finance new volume during 2022, 78% and 21%, respectively, compared to an average -16% decline in the industry.

Our leading industry practice examples section display the following case studies:

- 1. Societe Generale and Barclays are going big in climate tech investments with combined equity commitments of €1.6bn.
- 2. Santander is becoming the king of joint ventures in the ESG space, hard to follow.
- 3. Banks continue to create JVs to capitalize on the residential real estate opportunity
- 4. There is a new innovative Industrial JV created by BNP, Metron, Dalkia and AWS.
- 5. Finally, there are new JVs in the supply chain finance space such as the one developed by Deutsche Bank and Henkel.





Execution of Client Transition



Leading Practice Examples – Climate Tech Venture Capital Committed and Deployed

	Capital Committed	Capital Deployed	Description
SOCIETE GENERALE	€700mn		 Societe Generale is launching a €1bn Transition Investment Fund to be invested in debt (0.3bn) and equity (€0.7bn) to support emerging players and new solutions.
2. BARCLAYS	£500mn	£112mn	 Sustainable Impact Capital Programme invests equity in sustainability-focused start-ups. Increased commitment from £175 to £500mn. Investments have included from property retrofit solutions to long-duration energy storage, carbon capture and hydrogen solutions.
3. BNP PARIBAS	€450mn	€59mn	• Dedicated to investments in favour of innovative energy transition (€250mn), natural capital (€55mn), and local development and social impact (€145mn). 59mn deployed in 2022.
4. ABN·AMRO	€425mn	€175mn	Energy Transition Fund to concentrate on three main themes: the circular economy, energy transition and social impact.
5. CRÉDIT AGRICOLE	€300mn	-	 Fund of €300 million to develop environmental transition projects and technological solutions of the agricultural and food sectors in France and Italy.
6. HSBC	\$250mn	\$100mn	Fund dedicated to climate technology companies to connect financing with fresh thinking that bring climate solutions to clients. Increased commitment from \$100 to \$250mn.
7. Santander	-	-	Santander invests in climate tech investments through its partnership with EIT InnoEnergy (renewable energy, smart grids, energy efficiency, storage systems, batteries for green energy, mobility, and the circular economy).
8. BBV	-	\$50mn approx.	• BBVA has invested \$20mn in Just Climate's Climate Asset Fund, \$20mn in Lowercarbon, specializing in climate change, in Fifth Wall specialized in technologies that decarbonize the construction and real estate, and €10mn in the hydrogen fund managed by Hy24.
9. ING 🔊	-	-	• ING Sustainable Investments provides client financing solutions (equity and subordinated debt solutions) and ING retains a portion of the transaction. 4 transactions were done in 22.



LaVilleE+ launched from SG's Internal Start- Up Programme: building an ecosystem of partners needed to collaborate to build tomorrow's cities



Equity investment in impact rating agency Impak Finance, with a commercial partnership to scale-up E&S assessment of corporate clients



Acquisition of Lumo, a participatory investment platform which allows individuals and businesses to finance projects with positive impact, useful for the ecological transition



Equity investment in greentech EcoTree, supporting biodiversity solutions



carbo

Partnership with Carbo, supporting our French corporate and retail clients to measure their carbon footprint



Equity investment in greentech EcoTree, supporting biodiversity solutions

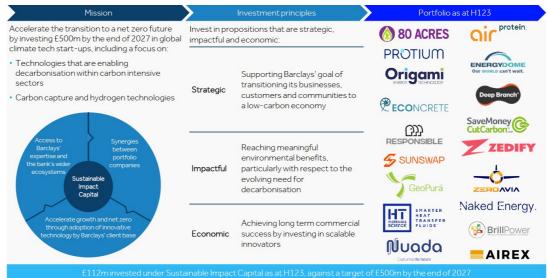


100% acquisition by KB of Enviros, an ESG consultancy company, to support KB's expansion in environmental advisory

Source: Societe Generale



Skip: Equity investment in Skipr, a Mobility-as-a-Service startup



Source: Barclays



7 Execution of Client Transition



Leading Practice Examples – Execution Joint Venture/Partnerships

	holaluz '	Santander set up a JV with Holaluz to provide benefits to its customers for the installation of solar panels in their homes, promoting energy transition.
	ReformANERR®	Santander has a JV with ReformAnner a platform that offers retrofirt solutions for residential real estate assets in Spain by which Santander offers financing.
№ Santander	CBRE '	In 2023, Santander signed a JV with CBRE to offer commercial real estate decarbonization solutions to its corporate and institutional clients in Spain
Santander	BYD	In 2023, Santander signed a strategic alliance with BYD (chinese electrical vehicle company) to finance BYD automobiles in the Mexican market.
	enel .	Enel and Santander promote collaboration to support clients' with energy transition financing solutions in Latin America.
	CARBON	Santander acquired 80 percent of WayCarbon, a leading Brazil-based ESG consultancy firm.
WUBS	esg 2 go	UBS became a and member of the strategic committee of esg2go, which provides small SMEs with detailed insights into their sustainability performance, based on ESG criteria. This takes the form of a sustainability rating score for the SME and an accompanying report which the SME can pass on to its stakeholders.
BNP PARIBAS	METRON dalkia GROUPE EDF AWS	European JV intended to reduce 100K tons of CO2 and 10% of energy consumption by equipping industrial sites with energy management and optimization solutions.
BNP PARIBAS	• Actif Ecobonus	To improve the energy efficiency of homes, BNP brings an energy renovation offer, in partnership with Actif (a certified energy adviser), ranging from energy consulting to the financing of the project. Ecobonus and BNP provide its with tax credits for their energy renovation work.
LLOYDS BANK	octopus energy	Lloyds and Octopus Energy provide energy efficiency home improvements to retail clients. It offers lower air-cost source heat pumps to UK households. It is part of the Green Living Reward Scheme with £1k cashback for clients. Lloyds aims £10bn green mortgage lending by 24 and has delivered £6bn since 22.
* BARCLAYS	British Gas	In 2023, Barclays announced a partnership with British Gas to offer energy efficient thermostats to UK mortgage clients. The JV is designed to encourage retail customers to retrofit existing properties. In addition, Barclays offers 1K-2K cashback incentives for customers (Greener Home Reward). Barclays has lent £3bn in green mortgage lending since 2018.
Deutsche Bank	Henkel .	In 2022, Deutsche Bank launched with Henkel a supply chain finance program which links supplier ESG ratings with reduced financing costs. The supply chain finance business at Deutsche ended 2022 with € 2 billion in sustainable financing.

Conclusion – ESG Business Opportunity

Net zero transition presents a huge business opportunity for global banks. By accompanying clients in their transition to net zero, banks can finance business model transformation while originating material new balance sheet and revenue volumes.

To capitalize on the **ESG** business opportunity, banks must think long-term and act bravely. working in the combination of capabilities embraced by the GREEN PACE formula.

- 1. A strong and diversified product offering for green and sustainable financing and investment solutions.
- 2. A credible and well-articulated net zero portfolio alignment plan for financed emissions.
- 3. A strong client orientation with data, insights, tools and analytics available to assist them in transition decision making.
- 4. A clear commitment to be involved in execution of transition plans, solution tracking and corrective actions.

Our report highlights:

- Increasingly ambitious bank sustainable financing targets.
- Great industry progress setting net zero targets.
- · Emerging tools and analytics to assist clients with transition planning.
- Innovative ideas that combine digital platforms, partnerships and marketplaces to accompany clients throughout the process.

We have found some championing organizations that are placing ESG as a core business priority. We have also observed leading industry practices to capitalize on the business opportunity. We also realize that banks will make choices and not all decide to develop capabilities and infrastructure, but rather adopt a banking as a service model through partnerships and open ESG marketplaces.

Each year we plan to update this study to evaluate industry progress and review ESG champions and leading practices. We hope to contribute to the acceleration of the fight against climate change and provide banks with ideas and direction on the commercial opportunities related to ESG.

Net Zero Target Portfolio Benchmarking



Oil and Gas Benchmarking

Banks Emission Intensity - (Banks reporting MtCO2)

		Emission	s (MtCO2)		Targets		Level of achievement			
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Barclays	3.2	75.2	4th	-40%	45.1	4th	-32%	2nd	80%	
Lloyds	1.0	7.8	1st	-50%	3.9	1st	-4%	4th	8%	
NatWest	1.4	3.6	1st	-38%	2.2	1st	-69%	1st	183%	
HSBC	16.3	33.0	4th	-34%	21.8	4th	-9%	3rd	26%	
Standard Chartered (1)	7.7	13.7	2nd	-30%	9.6	2nd	-8%	4th	28%	
Deutsche Bank	10.7	23.4	3rd	-23%	18.0	3rd	-29%	3rd	126%	
UBS	-	3.8	1st	-71%	1.1	1st	-87%	1st	122%	
BPCE	3.4	-	-	-30%	-	-	-	-		
Credit Agricole	15.3	26.9	3rd	-30%	18.8	3rd	-	-		
Societe Generale	6.4	-	-	-20%	-	-	-	-		
BBVA	4.0	14.0	2nd	-30%	9.8	2nd	-	-		
Caixabank	6.2	9.1	2nd	-23%	7.0	2nd	-19%	3rd	80%	
Santander	6.7	23.8	3rd	-29%	16.9	3rd	-5%	4th	18%	
UniCredit	7.8	21.4	3rd	-29%	15.2	3rd	-	-		
ABN AMRO (2)	2.6	-	-	-22%	-	-	-	-		
ING ⁽²⁾	3.1	-	-	-19%	-	-	-	-		
Nordea	0.7	3.0	1st	-55%	1.3	1st	-98%	1st	178%	
Citi	12.2	143.8	4th	-29%	102.1	4th	-	-	-	
Wells Fargo	9.3	97.7	4th	-26%	72.3	4th	-	-		
Banks Average	6.2	33.3		-33%	23.0		-36%		85%	

Banks Emission Intensity - (Banks reporting gCO2e/MJ)

			(gCO2/MJ)	. (= 3	Targets	9 9	Level of achievement			
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Commerzbank	-	25.3	1st	-74%	6.7	1st	-	-		
BNP Paribas ⁽³⁾	22	68.0	4th	-10%	61.0	4th	14%	4th	14%	
Intesa Sanpaolo	-	64.0	2nd	-14%	55.0	3rd		-		
JP Morgan Chase	36	71.9	4th	-17%	59.7	4th	0%			
Bank of America	14	67.7	3rd	-30%	47.2	2nd	3%	3rd	3%	
Banks Average	14.5	59.4		-29%	45.9		6%		9%	

⁽¹⁾ Target based on revenue emission intensity; (2) Target based on loan outstanding; (3) Target 2025 Sources: Bank climate disclosures and A&M Analysis.

Net Zero Target Portfolio Benchmarking



Power Benchmarking

	Outstanding		sions 2/MWh)		Targets		Level of achievement			
BANK	Exposure (€Bn)	Starting Quartile		Target 2030 (% of reduction)	2030 (% of Target 2030 Ta		Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Barclays	2,9	322,0	4th	-60°	130,4	3rd	-9%	3rd	15%	
Lloyds	2,6	192,0	2nd	-81%	37,0	1st	-	_		
NatWest	5,4	223,0	3rd	-77%	51,3	1st	-48%	1st	62%	
HSBC	21,5	589,9	4th	-77%	138,0	4th	-14%	2nd	18%	
Standard Chartered (1)	-	-	-	-63%	-	-	-44%	1st	70%	
Commerzbank	7,4	91,0	1st	-74%	23,7	1st	-			
Deutsche Bank	9,7	359,0	4th	-69%	112,0	3rd	-1%	4th	⊢ 2 %	
UBS	0,4	238,0	3rd	-499	121,4	3rd	-12%	3rd	24%	
BNP Paribas ⁽²⁾	17,0	208,0	2nd	-30%	146,0	4th	-14%	2nd	47%	
BPCE	6,7	156,0	1st	-12%	138,0	4th	-	_		
Credit Agricole	16,5	224,0	3rd	-589	% 94,1	1st	-	_		
Societe Generale	7,4	260,0	3rd	-589	163,0	4th	-	-		
BBVA	16,2	221,0	2nd	-52°	107,0	2nd	-4%	3rd	├ 8%	
Caixabank	13,7	136,0	1st	-30%	95,2	2nd	-	_		
Santander	10,3	210,0	2nd	-46%	113,4	3rd	-	_		
Intesa Sanpaolo	-	214,0	2nd	499	110,0	2nd	18%	4th	-38%	
UniCredit	8,9	208,0	2nd	479	111,0	2nd	-	_		
ABN AMRO (3)	2,2	C	-		188,0	4th	-	-		
ING	8,9	335,0	4th	-53°	157,5	4th	-33%	1st	63%	
Nordea	2,8	-	-		-	-	-	-	-	
JP Morgan Chase	33,8	375,0	4th	-69%	115,4	3rd	-22%	2nd	32%	
Citi	4,5	313,5	3rd	-63%	116,0	3rd	-	-	<i>527</i>	
Bank of America	19,0	336,4	4th	-70%	100,9	2nd	9%	4th	l _{-13%}	
Wells Fargo	8,8	273,0	3rd	-609	102,0	2nd	_	-	10,	
Banks Average	9,4	228,5		-579	103,0		-14%		24%	

⁽¹⁾ Target based on revenue emission intensity; (2) Target 2025; (3) ABN current portfolio is predominantly renewables with a baseline = 0 Sources: Bank climate disclosures and A&M Analysis.

Net Zero Target Portfolio Benchmarking



			Emissions			Targets		Leve	el of achiever	ment
BANK	Outstanding Exposure (€Bn)	Emissions Intensity Metric	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction
Barclays	7.5	gCO2/km	167.2	3rd	-52%	80.3	1st		Baseline Dec2	22
Lloyds	2.8	gCO2/vkm	217.0	4th	47%	115.0	4th	-		
NatWest	8.5	gCO2/vkm	64.9	1st	-31%	44.8	1st	34%	4th	-109%
HSBC	-	gCO2/vkm	191.5	4th	-66%	66.0	1st	-8%	1st	12%
Standard Chartered	4.0	gCO2/vkm	160.0	2nd	-49%	81.6	1st	-	-	
Commerzbank	0.3	gCO2/pkm	162.0	2nd	-22%	111.0	4th	-		
Deutsche Bank	7.5	gCO2/vkm	190.0	3rd	-69%	112.0	4th	-1%	4th	2%
UBS	-	-	-	-		-	_			
BNP Paribas ⁽¹⁾	-	gCO2/km	183.0	3rd	-25%	137.0	4th	-9%	1st	35%
BPCE	-	-	-	-		-	-	-		
Credit Agricole	38.5	gCO2/km	190.0	3rd	-50%	95.0	3rd	-		
Societe Generale	3.0	gCO2/vkm	116.0	1st	-50%	59.0	1st	-		
BBVA	2.7	gCO2/vkm	205.0	4th	-46%	110.7	4th	-5%	3rd	10%
Caixabank	5.2	gCO2/vkm	154.0	1st	-33%	103.2	3rd	-		
Santander	-	-	-	-		-	_	-		
Intesa Sanpaolo	-	gCO2/vkm	162.0	2nd	-41%	95.0	3rd	-4%	3rd	10%
UniCredit	1.8	gCO2/vkm	161.0	2nd	-41%	95.0	3rd	-		
ABN AMRO	1.5	-	-	-		-	_	-		
ING	2.4	gCO2/km	199.0	4th	-49%	101.5	3rd	-6%	2nd	12%
Nordea	2.8	-	-			-	_			
JP Morgan Chase	31.1	gCO2/km	157.8	1st	-41%	92.3	2nd	-10%	1st	24%
Citi	20.6	gCO2/km	154.0	1st	-31%	106.3	3rd	-		
Bank of America	15.8	gCO2/km	169.4	3rd	-44%	94.9	2nd	-3%	4th	7%
Wells Fargo	12.3	gCO2/vkm	220.0	4th	-53%	103.0	3rd	-		
Banks Average	7.0	-	169.67	,	-44%	94.92		-1%	,	0%

Net Zero Target Portfolio Benchmarking



Steel Benchmarking

		Emissions (tCO2/t metal)		Targets		Level of achievement			
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Barclays	0.005	1.9	4th	-30%	1.4	4th	-11%	1st	37%	
Lloyds	0.5		-			-		-	31 70	
NatWest	0.5	1.6	4th	-50%	0.8	1st	19%	4th	-38%	
HSBC	13.2	1.8	4th	-42%	1.1	3rd	11%	4th	-27% _36%	
Standard Chartered (1)	2.0	-		-33%	-	_	-12%	1st		
Commerzbank	0.4	1.6	4th	-37%	1.0	1st	-	-		
Deutsche Bank	2.1	1.5	2nd	-34%	1.0	2nd	-2%	3rd	5%	
UBS	-	-			-			-		
BNP Paribas	5.3	1.6	4th	-25%	1.2	4th	Ва	seline in Dec	22	
BPCE	-	-	-		-	-	-	-		
Credit Agricole	8.7	-	-		-	-	-	-		
Societe Generale	3.7	-			-		-	-	45%	
BBVA	4.7	1.3	1st	-23%	1.0	1st	-10%	2nd		
Caixabank	2.2	1.2	1st	-15%	1.0	3rd	Ва	seline in Dec	22	
Santander	1.3	1.6	3rd	-32%	1.1	4th	-	-		
Intesa Sanpaolo	-	-	-		-	-	-	-		
UniCredit	-	-	-		-	-	-	-		
ABN AMRO (2)	-	-	-		-	-	-	-		
ING	2.9	2.1	4th	-28%	1.5	4th	0%	-		
Nordea	-		-		-	-	-	-		
JP Morgan Chase	14.9	1.5	2nd	-31%	1.0	3rd	-	-		
Citi	5.4	-	-		-	-	-	-		
Bank of America	-	-	-		-	-	-	-		
Wells Fargo	-	1.0	1st	0%	1.0	3rd	-	-		
Banks Average	2.8	1.4		-29%	1.0		-1%		10%	

⁽¹⁾ Target based on revenue emission intensity; (2) The 2021 baseline emissions intensity of the Steel portfolio is 1.01 t CO2/t steel; and the scenario's benchmark for 2030 is 1.09 t CO2/t steel



Net Zero Target Portfolio Benchmarking



Commercial Real Estate Benchmarking

		Emissions	(KgCO2/m2)		Targets		Level of achievement			
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Barclays	-	-	-		-	-	-	-		
Lloyds	25.2	-	-		-	_	-	-		
NatWest	20.3	56.0	3rd	-60%	22.4	1st	1%	4th	-2 %	
HSBC	67.5	-	-		-	-	-	-		
Standard Chartered	-	-	-		-	-	-	-		
Commerzbank	8.3	91.0	4th	-68%	30.0	3rd	-	-		
Deutsche Bank	-	-	_		-	-	-	-		
UBS	42.1	32.0	1st	-44%	7.0	1st	-	-		
BNP Paribas	-	-	-		-	-	-	-		
ВРСЕ	-	-	_		-	-	-	-		
Credit Agricole	26.4	46.0	1st	-40%	28.0	2nd	-	-		
Societe Generale	11.4	-	-		-	-	-	-		
BBVA	-	-	-		-	-	-	-		
Caixabank	6.9	-	-		-	-	-	-		
Santander	-	-	-		-	-	-	-		
Intesa Sanpaolo	-	-	-		-	-	-	-		
UniCredit	-	-	_		-	_	-	-		
ABN AMRO	16.8	66.7	4th	-46%	35.7	4th	-7%	3rd	15%	
ING	10.9	51.4	2nd	-35%	33.4	3rd	-15%	1st	43%	
Nordea	36.3	-	-		-	-	-	-		
JP Morgan Chase	159.7	-	-		-	-	-	-		
Citi	45.4	61.0	3rd	-41%	36.0	4th	-	-		
Bank of America	67.5	-	-		-	-	-	-		
Wells Fargo	22.9	-	-		-	-	-	-		
Banks Average	23.6	57.7		-48%			-7%		19%	

Net Zero Target Portfolio Benchmarking



Residential Real Estate Benchmarking

		Emissions	(KgCO2/m2)	1	Targets		Level of achievement			
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Barclays	188.7	32.9	32.9 3rd -40% 19.7 3rd Baseline Dec		ec22					
Lloyds	-	46.5	4th	-41%	27.6	4th	-	-		
NatWest	236.0	38.7	3rd	-49%	19.7	3rd	-2%	2nd	5%	
HSBC	-	-	-			-	-	-		
Standard Chartered	-	-	-			-	-	-		
Commerzbank	94.0	46.0	4th	-57%	19.8	4th	-	-		
Deutsche Bank	-	-	-			-	-	-		
UBS	145.0	30.0	2nd	-42%	17.4	1st	-10%	1st	<u>/</u> 24%	
BNP Paribas	-	-	-		-	-	-	-		
BPCE	-	-	-		-	-	-	-		
Credit Agricole	-	-	-		-	-	-	-		
Societe Generale	-	-	-		-	-	-	-		
BBVA	-	-	-		-	-	-	-		
Caixabank	120.9	-	-		-	-	-	-		
Santander	-	-	-		-	-	-	-		
Intesa Sanpaolo	-	-	-		-	-	-	-		
UniCredit	-	-	-		-	-	-	-		
ABN AMRO	-	27.6	1st	-34%	18.3	2nd	-2%	3rd	6%	
ING	297.0	45.7	4th	-57%	19.7	2nd	0%	-		
Nordea	116.4	17.6	1st	-45%	9.7	1st	-	-		
JP Morgan Chase	-	-	-		-	-	-	-		
Citi	-	-	-		-	-	-	-		
Bank of America	-	-	-		-	-	-	-		
Wells Fargo	-	-	-		-	-	-	-		
Banks Average	49.9	31.7		-46%	19.0		-4%		12%	

Net Zero Target Portfolio Benchmarking



Cement Benchmarking

		Emissions	(tCO2/t cement)		Targets		Level of achievement		
BANK	Outstanding Exposure (€Bn)	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction
Barclays	0,03	0,6	2nd	-23%	0,5	2nd	-2%	1st	9‰
Lloyds	-	-	-		-	-	-	-	
NatWest	-	0,6	1st	-67%	0,2	1st	-	-	
HSBC	-	0,6	2nd	-28%	0,5	1st	0%	-	
Standard Chartered	-	-	_		-	-	-	-	
Commerzbank	0,20	0,6	1st	-20%	0,5	3rd	-	-	
Deutsche Bank	-	-	-	-29%		-	-	-	
UBS	-	0,6	1st	-15%	0,5	3rd	-2%	1st	11%
BNP Paribas	-	0,7	3rd	-24%	0,5	3rd	-	-	
BPCE	-	-	-		-	-	-	-	
Credit Agricole	0,7	0,7	4th	-20%	0,5	4th	-	-	
Societe Generale	-	0,7	4th	-20%	0,5	4th	-	-	
BBVA	-	0,7	4th	-17%	0,6	4th	-1%	3rd	8%
Caixabank	0,3	-	-		-	-	-	-	
Santander	-	-	-		-	-	-	-	
Intesa Sanpaolo	-	-	-		-	-	-	-	
UniCredit	-	-	-		-	-	-	-	
ABN AMRO	-	-	-		-	-	-	-	
ING	0,3	0,7	4th	-31%	0,5	2nd	1%	4th	-2%
Nordea	-	-	-		-	-	-	-	
JP Morgan Chase	-	0,6	3rd	-29%	0,5	1st	-	-	
Citi	-	-	-		-	-	-	-	
Bank of America	-	-	-		-	-	-	-	
Wells Fargo	-	-	-		-	-	-	-	
Banks Average	0,1	0,6		-27%	0,5		-1%		6%

Net Zero Target Portfolio Benchmarking



Aviation

			Emissions			Targets		Level of achievement			
BANK	Outstanding Exposure (€Bn)	Emissions Intensity Metric	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction	
Barclays	3.1	-	-	-		-		-	-		
Lloyds	-	gCO2/rtk	918.0	3rd	-31%	633.4	4th	-	-	278%	
NatWest	-	MtCO2	1.8	1st	-28%	1.3	1st	-78%	1st		
HSBC	-	gCO2/rpk	84.0	1st	-39%	63.0	2nd	24%	3rd	-60%	
Standard Chartered	2.9	gCO2/rtk	1,152.0	4th	-34%	760.3	4th	Ва	seline in Dec	22	
Commerzbank	1.8	gCO2/tkm	781.0	3rd	-22%	611.0	3rd	-	-		
Deutsche Bank	-	-	-	-		-	-	-	-		
UBS	-	-	-	-		-	-	-	-		
BNP Paribas	-	-	-	-		-	-	-	-		
BPCE	-	-	-	-		-	-	-	-		
Credit Agricole	-	-	-	-		-	-	-	-		
Societe Generale	2.0	-	-	-		-	-	-	-		
BBVA	1.1	-	-	-		-	-	-	-		
Caixabank	-	-	-	-		-		-	-		
Santander	2.4	gCO2/rpk	92.5	2nd	-33%	62.0	1st	1%	2nd	-2%	
Intesa Sanpaolo	-	-	-	-		-	-	-	-		
UniCredit	-	-	-	-		-	-	-	-		
ABN AMRO	-	-	-	_		-		-	-		
ING	3.1	gCO2/pkm	88.2	1st	-33%	59.1	1st	48%	4th	1450/	
Nordea	0.1	-	-	-		-	-	-		-145%	
JP Morgan Chase	-	gCO2/rtk	972.6	4th	-36%	625.0	3rd	-	-		
Citi	-	-	-	-		-	-	-	-		
Bank of America	-	-	-	-		-	-	-			
Wells Fargo	-	gCO2/rtk	969.0	4th	-20%	775.0	4th	-			
Banks Average	0.7		562.1		-31%	398.9		-1%		18%	

Net Zero Target Portfolio Benchmarking



Shipping

			Emissions			Targets		Leve	el of achieven	nent
BANK	Outstanding Exposure (€Bn)	Emissions Intensity Metric	Starting Point	Quartile Starting Point	Target 2030 (% of reduction)	Target 2030	Quartile Target Intensity	Current Reduction (Current vs SP)	Quartile Current Reduction	Current Reduction/ Target Reduction
Barclays	0,4	-	-	-		-	-	-	-	
Lloyds	-	-	-	-		-	-	-	_	179%
NatWest	-	MtCO2	0,4	-	-28%	0,3	2nd	-50%	1st	
HSBC	-	-	-	-		-	-	-	-	
Standard Chartered	6,3	% alignment delta	2,6	-	0%	2,6	3rd	-	-	
Commerzbank	-	-	-	-		-	-	-	-	
Deutsche Bank	-	Scope 1	-	-	-100%	-	-	-	-	
UBS	-	-	-	-		-	-	-	-	
BNP Paribas	-	-	-	-		-	-	-	-	
BPCE	-	-	-	-		-	-	-	-	
Credit Agricole	-	-	-	-		-	-	-	-	
Societe Generale ⁽¹⁾	2,7	-	-	-	·50%	-	-	-	-	
BBVA	-	-	-	-		-	-	-	-	
Caixabank	-	-	-	-		-	-	-	-	
Santander	-	-	-	-		-	-	-	-	
Intesa Sanpaolo	-	-	-	-		-	-	-	-	
UniCredit	-	-	-	-		-	-	-	-	
ABN AMRO	-	% alignment delta % alignment	2,6	-	-100%	0	-	-	_	
ING	6,5	% alignment delta	- 0,4	-	-100%	-	-	-6%	4th	
Nordea	5,4	gco2/dwt-nm	8,3	-	-30%	5,8	4th	-	_	
JP Morgan Chase	-	-	-	-		-	-	-	-	
Citi	-	-	-	-		-	-	-	-	
Bank of America	-	-	-	-		-	-	-	-	
Wells Fargo	-	-		-				-		
Banks Average	0,9		2,7	,	-58%	2,2		-28%		179%

Appendix 2: **How A&M Can Help**

A&M assists financial institutions. corporates and private equity investors on their evaluation, design and execution of ESG priorities and value solutions.

Transition Value Analytics

ET2 Value is A&M's solution to measure and track financial value of ESG based in net zero transition and business transformation plans adopted by companies. It provides access to CO2 metrics/targets, sector benchmarking, risk analysis, quantification of transition Capex and value added through transition plan options.

https://youtu.be/yTRaZS50678



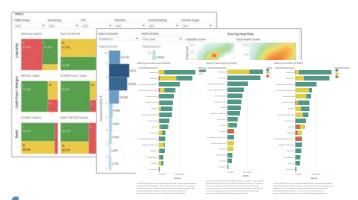
Net Zero Plans

A&M has developed a structured methodology to assist banks in setting and evaluating credibility of net zero portfolio alignment targets / progress by adequately balancing alignment, risk, profitability and business opportunity including capital benefits.



Transition and Physical Risk Tools

A&M transition risk and physical risk tools allow to perform scenario analysis on transition plans, transition/physical risk identification and mitigation planning.



ransition Dashboards

A&M provides access to dashboards to track progress of transition plans vs targets, KPI and KRI monitoring and operational governance and decision making.



Transition Marketplaces

A&M is working on a number of industry initiatives to design and implement digital enabled platforms and marketplaces to deliver transition solutions across industries. These marketplaces connect multiple stakeholders (banks, investors, corporates and start-ups) and bring scalability to accelerate net zero transition across multiple segments (corporates, SMEs, real estate, etc.).

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