REALIZING CLIMATE FINANCE OPPORTUNITIES

Webinar for white paper assessing current market progress on climate and transition financing

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A business of Marsh McLennan

OLIVER WYMAN PUBLISHED A REPORT WITH IACPM, ASSESSING MARKET PROGRESS ON REALIZING CLIMATE AND TRANSITION FINANCING OPPORTUNITIES

Our approach

- We outline how financial institutions frame their commercial climate strategy and are capitalizing on climate finance
- The paper articulates the practices, solutions, and approaches financial institutions across four action areas:
  - **Products and services** – Start with existing capabilities and building out following clients’ and market growth
  - **Deal-level capabilities and enablers** – Direct engagements to scale deal origination alongside risk defeasance
  - **Risk management and portfolio steering** – Employ management and steering actions to achieve climate strategy along with risk sharing partnerships
  - **Organizational enablers** – Build capabilities through climate teams, including hiring non-traditional skillsets, to embed across the organization over time

Participants

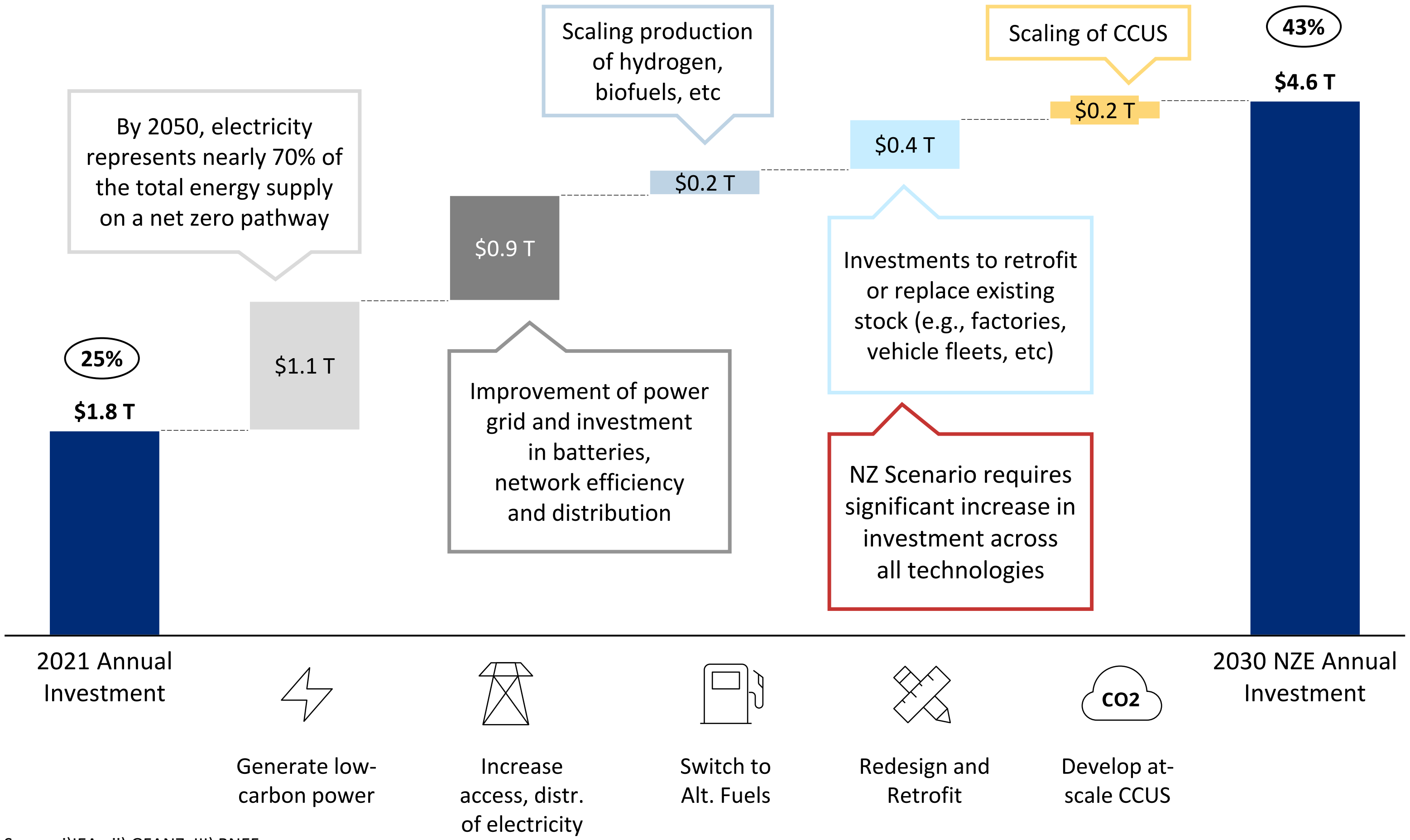
- The report is grounded in interviews with 25 of the leading global banks, asset managers, insurers, export credit agencies (ECAs), and multilateral development banks (MDBs)
- Selected list of contributors:

ADB Asian Development Bank | IFC International Finance Corporation | RBC | DBS
BBVA | Lloyds Banking Group | standard chartered | BNP Paribas
Macquarie | Munich RE | UK Export Finance
European Investment Bank | NatWest | usbank | Wells Fargo
FirstRand Bank | Newmarket Capital | Goldman Sachs | PGGM

Oliver Wyman, 2023. [Realizing climate finance opportunities]

CLIMATE FINANCE IS EXPECTED TO SCALE SIGNIFICANTLY

Incremental (annual) global investment by 2030 under a net-zero scenario[i]
% of total Global demand-side Capex



Source i)IEA;, ii) GFANZ; III) BNEF

$4.7 TN

Annual global investment by 2050, driven largely by emerging markets and developing economies[i]

40%

Global private financial assets committed to net zero[ii]

4:1

The ratio of clean energy supply investment relative to fossil fuels required by 2030 to reach NZ by 2050[iii]

FINANCING IN THIS SPACE CAN BE CHALLENGING

Market lifecycle risks

Introduction	Growth	Maturity	Decline
High tech costs and unproven models	*Scaling challenges and limited pipeline*	*Over-saturation of market investments*	*Risk of stranded assets*

The climate and transition **market lifecycle** is predominantly in the introduction and growth stage

Project lifecycle risks

Preparation | **Design & construction** | **Early operations** | **Later operations**

Construction/completion risk

Technology/performance risk

Business model risk

Climate and transition **project lifecycles'** often have a longer timelines for preparation and design & constriction

Investment constraints

Tenor of investments	Risk appetite	Size of investments
Projects often face longer tenor than investment horizon	*Risk of project unaligned with institution's risk appetite*	*Project size may be under or over institution's size criteria*

Given the unique nature and challenges of climate and transition solutions, financial institutions face specific **investment constraints**

Potential market trajectory

LEADING FINANCIAL INSTITUTIONS ARE INNOVATING ACROSS FOUR KEY AREAS

Area	What's being done	Company examples
Products and services	Business teams are building products and services, starting with actions that align with their existing capabilities and building to new offerings following clients' needs and market opportunities	• Tax credit transfer: BAC conducted a $580 million tax credit transfer of renewable energy credits • Supply-chain financing: HSBC partnered with Walmart to offer a sustainable supply chain finance program for suppliers
Deal-level capabilities and enablers	Business and risk teams increasing engagement with clients to scale deal origination alongside integrating emerging risk defeasance solutions to address investment constraints	• Synthetic securitizations: PGGM and Alecta invested €500 million in a synthetic securitization of BBVA's project finance book, with one third of the portfolio renewable projects
Risk management and portfolio steering	Risk management frameworks and portfolio steering are being updated and employed in the interest of achieving the climate strategy, alongside developing risk-sharing partnerships	• Climate risk score cards: NatWest has built in customer transition plan assessments into their climate risk scoring
Organizational enablers	Financial institutions are developing climate and transition teams while hiring non-traditional financial skillsets, including engineers	• Low carbon transition groups: BNPP established a 200 employee their Low Carbon Transition Group to support clients' transitions

FINANCIAL INSTITUTIONS ARE DEVELOPING CLIMATE-RELATED PRODUCTS, STARTING WITH COMBINING TRADITIONAL PRODUCTS WITH A SET OF CLIMATE-RELATED CHARACTERISTICS

Primary labeled products identified

	Capital markets	Corporate lending	Asset managers and owners	Insurance	Retail lending
Established	**Green bonds** with proceeds designated for green activities	**Green loans** with proceeds designated for green activities **Project finance** for climate- and transition-focused projects	**Climate-focused funds** that invest in low-carbon climate technology **Green minus brown tilt funds** that prioritize so-called green investments over brown	**Low-carbon insurance discounts with e**xpanded coverage and better terms for insurance on low-carbon investments **Extended warranty** claims on green products	**Green mortgages and green home equity lines of credit** with better terms and incentives for climate-friendly housing **Green cards** that are sustainably produced
Emerging	**Low carbon commodity hedges** for transition-related commodities **Tax credit transfers** for climate and transition projects looking to transfer credits for additional capital **Transition bonds** for high-emitting companies' investment into transitioning to lower emissions	**Supply-chain, climate-linked lending** for clients to enhance 'greening' of supply chains **Transition finance:** Loans to support decarbonization efforts (often to traditionally high-emitting firms)	**Transition funds** that invest in technologies and companies to support decarbonization **"Carbon-improver" funds** and portfolios that invest in corporates progressively reducing emission footprints	**Weather-based derivatives** that allow clients to hedge against weather shocks **Performance guarantees** on the performance and technical qualities of low-carbon technologies **Repair-over-replace claims** that offer better terms for repairing damaged assets **Incentive-related premiums** with discounts for clients that achieve transition-related KPIs	**Electric vehicle loans** with better rates and education platforms for potential EV purchasers **Green credit rewards** that offer higher cash back for climate-conscious purchases **Climate-linked deposits** earmarked for climate financing

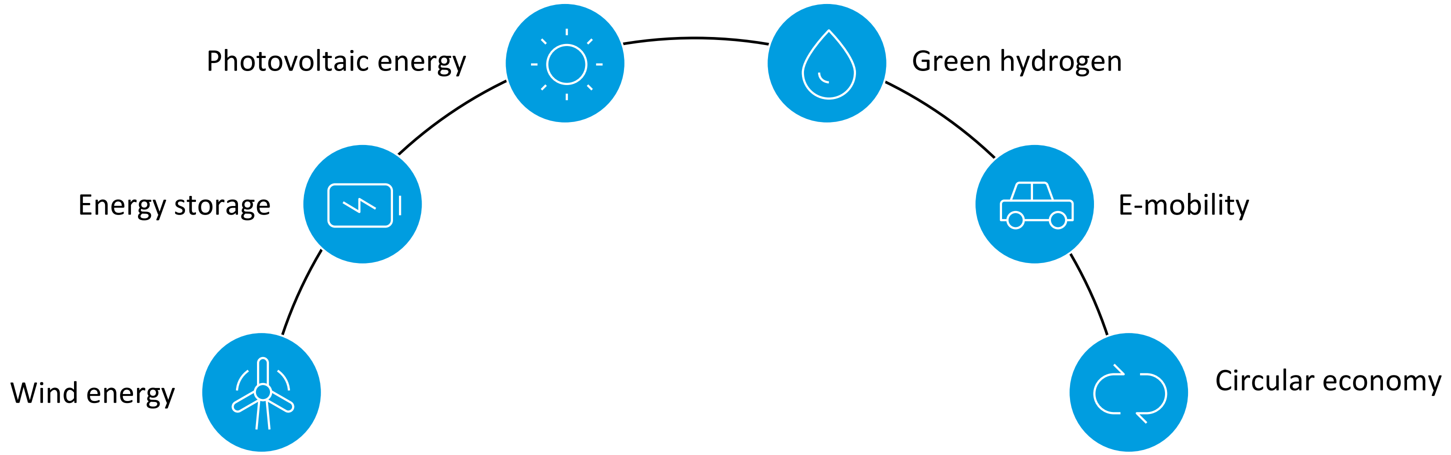
INNOVATION IS ALSO OCCURRING IN THE BROADER BUSINESS SERVICE OFFERINGS FROM FINANCIAL INSTITUTIONS TO SUPPORT CLIENTS' TRANSITION

Primary business services identified

	Services
Established	**Carbon calculators** provide emission inventorying for clients in addition to high-level guidance on decarbonization levers **Client engagement and education efforts** allow client engagement on climate change via webinars, conferences, focus groups, or one-on-one **Carbon-credit access programs** that provide clients guidance on carbon credits and helps them purchase credits and offsets to reduce their emissions footprint
Emerging	**Partnership-based offerings** with third-party organizations to enable investment and engagement initiatives related to climate and transition investments **M&A advisory** that helps clients identify and acquire assets that lower their carbon footprint **Cross-portfolio services** that connect portfolio companies and corporate clients to help enable additional climate and transition solutions

CASE STUDY: MUNICH RE GREEN SOLUTIONS BUSINESS PERFORMANCE GUARANTEES HELP ENABLE INVESTMENTS IN LOW CARBON TECHNOLOGIES

Munich Re's performance guarantee product



Solution offerings (non exhaustive)

- Due diligence on solutions and products to ensure and guarantee performance
- Contractual warranty mitigation
- Faulty construction, material, and production coverage
- Revenue guarantee and repair coverage

Improved investor appetite (non exhaustive)

- Seeks to foster revenue and cost stability of suppliers, manufacturers, and developers
- Assurance of performance and revenue may improve bankability to investors and lenders

Market opportunity

- Insurance agencies are using their technical know-how to help project emerging climate tech performance, improve investor insight, and support low carbon solutions
- Munich Re offers a range of performance guarantees tailored for low carbon technologies
- These include assuring the long-term performance and quality and absorbing potential technical risks of emerging "green" technology solutions
- These performance guarantees may result in more attractive financing terms and improve bankability of climate- and transition- technology solutions.

Source: Munich Re's renewable energy and energy efficiency platform page

BUSINESS AND RISK TEAMS HAVE ESTABLISHED DEAL-LEVEL CAPABILITIES AND ENABLERS THROUGH ACTION-ORIENTED PARTNERSHIPS AS WELL AS FOSTERING TEAM INNOVATION

Primary deal level capabilities and enablers identified

	Origination	Underwriting	Distribution and mitigation and hold
Established	**Staff upskilling** that provides training on available offerings to relationship managers **Third-party data** that's used to assess customer emissions and transition plans **Blended finance** that matches public and private capital to scale the investable universe for private investors	**Climate-related assessments** of emissions data and transition plans incorporated within the credit memo	**Climate risk monitoring** that provides climate-related performance assessments of portfolio holdings **Loan sales and participations** that enhance diversification and risk reduction **Originate to distribute models** that allows higher risk lending or longer-term time horizons
Emerging	**Enhanced customer engagement models** that support new and existing clients to decarbonize	**Extended timelines** that match low-carbon infrastructure time horizons **Risk defeasance** utilized to de-risk climate- and transition-related solutions **Climate risk assessments** that incorporate physical and transition risks into underwriting **In-house emissions projection tools** that show impacts of financed emissions on targets	**Transition plan assessments** of clients' transition plans to ensure alignment with financial institution's expectations **Emerging risk mitigation solutions** that transfer risk of climate and transition financings and/or portfolios **MDB capital markets distribution** that expands usage of capital markets by MDBs to support distribution of risk

BUSINESS AND RISK TEAMS HAVE INCREASINGLY FOCUSED ON DEVELOPING METRICS AND TARGETS TO TRACK CLIENTS' TRANSITION PROGRESS

GFANZ metrics and targets for measuring clients' transition progress

Metric	Approach	Examples
GHG emission metrics	Quantify company's level of ambition through interim GHG reduction targets	• Emission reduction targets dates, scopes, and metrics utilized alongside baseline year
Sectoral pathways	Clarify company's level of ambition in terms of alignment with recognized pathways	• Sectoral pathway disclosed and alignment of company target and current progress
Carbon credits	Disclosure of carbon credits to understand if and how companies adhere to their own commitments	• Disclosure of carbon credits including quality indicators and third-party verification
Operation metrics	Translate climate targets into tangible key performance indicators for the company	• % of capital expenditures utilized for the transition plan • % procurement from low-carbon suppliers
Financing strategies	Categorize financing into the four GFANZ financing strategies: Climate solutions (products that contribute to net zero), managed phase-out (early phase out of high-emitting assets), aligned (Entities aligned to a 1.5 C pathway), aligning (Entities committed to aligning to a 1.5 C pathway)	• Financing provided in each strategy as USD financed ($) or split of portfolio (%) • # of clients newly engaged on the net zero transition • # of clients with new net zero-aligned transition plans
Expected emissions reduction*	Benchmark via a business-as-usual pathway, project an entity's forward-looking emissions profile, calculate difference across temporal and risk-weighting features	• Absolute emissions reduced relative to business as usual • Physical intensity at target date relative to BAU intensity

*GFANZ, 2023. Consultation of Defining Transition Finance and Considerations for Decarbonization Contribution Methodologies
Source: GFANZ and Oliver Wyman, 2022. Financial Institution Net-zero Transition Plans

Key observations

- Business have established transition plan frameworks to assess their clients' decarbonization transition plans
- Metrics and targets in these frameworks have focused more on forward-looking metrics to track transition progress, alongside the typical backward-looking emissions inventorying
- Having a robust understanding of clients' transition plans can:
  - Lead to more informed fundraising and exit strategies
  - Thus, potentially raising the valuation of the financing and attracting more capital

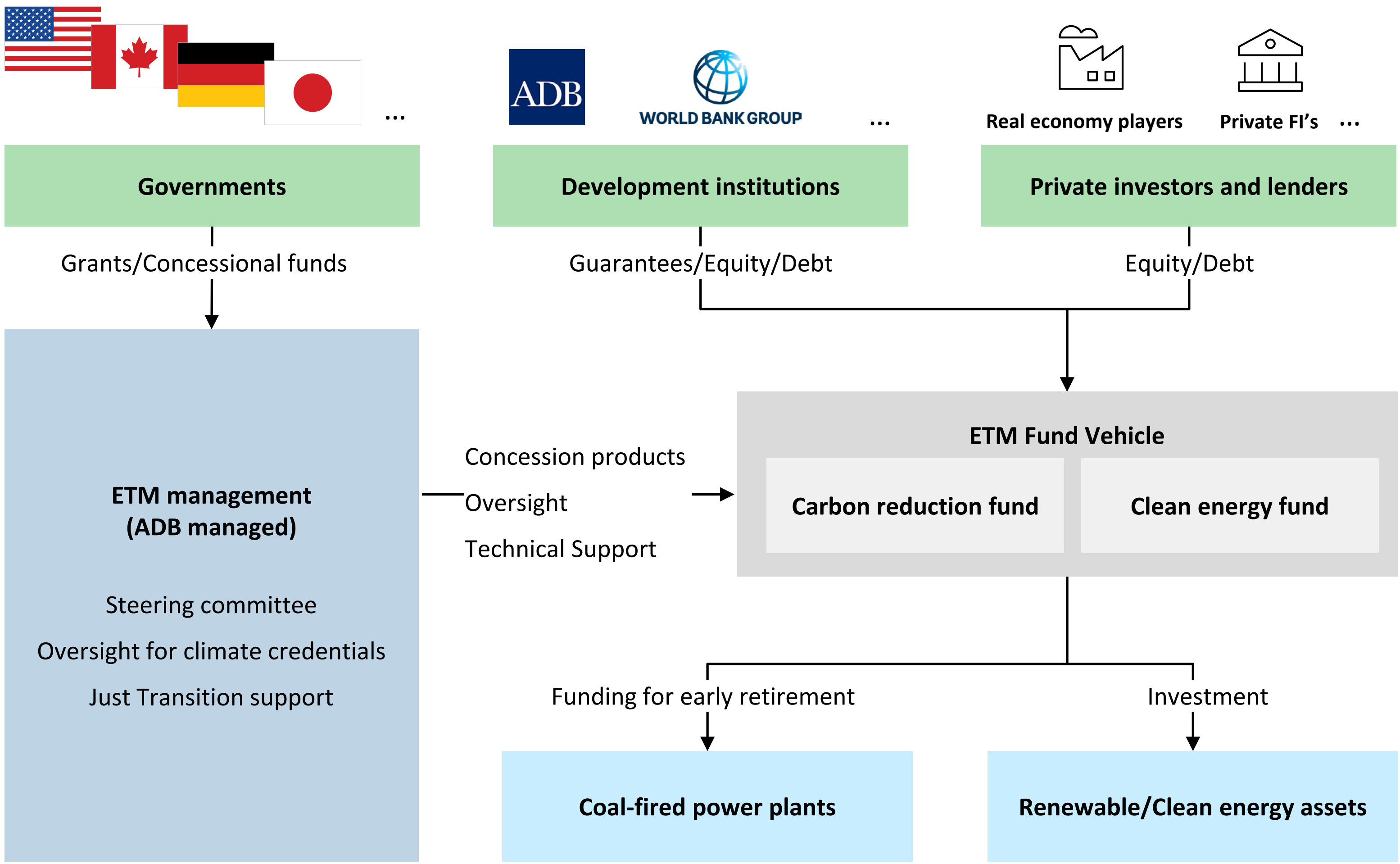
FINANCIAL INSTITUTIONS' WILLINGNESS TO INNOVATE AND SEEK PARTNERSHIPS SUPPORTS BUSINESS AND RISK TEAMS DEVELOP RISK MANAGEMENT AND STEERING SOLUTIONS

Primary risk management and portfolio steering approaches identified

	Risk management	Portfolio steering
Established	**Qualitative climate risk assessments** that use climate risk and opportunity heatmaps to categorize key climate risks across portfolios **Quantitative climate risk assessments** that support scenario analysis models at the portfolio level	**Green taxonomies** on what is "green" to guide financing strategy
Emerging	**Integrated climate risk assessments** that aggregate and integrate climate risk into portfolio-level risk metrics or external metrics to inform portfolio steering **Risk sharing partnerships** that strategically engage with climate-focused investors to enable risk-sharing opportunities related to climate and transition solutions	**Financing steering mechanisms** that incentivize financial solutions and/or disincentivizes financing high-emitting clients such as through carbon prices and climate-related fund transfer pricing

CASE STUDY: THE ASIAN DEVELOPMENT BANK'S ENERGY TRANSITION MECHANISM (ETM) IS A PARTNERSHIP THAT ENABLES PRIVATE SECTOR CAPITAL AND SHARES FINANCING RISK

ADB's ETM partnership and funding structure



Partnership details

- The Energy Transition Mechanism (ETM) is being developed by the Asian Development Bank (ADB) in partnership with developing member countries (DMCs)
- Japan was the first government funder, providing concessionary capital to the ETM
- Alongside managing the fund, the ADB, in addition to other development institution, provide guarantees as well as equity and debt financing
- Pending on project region, real economy players and private financial institutions provide equity and debt funding
  – For example, PLN, a power producer, is part of the MoU to help finance an early coal retirement in Indonesia

Source: [ADB's Energy Transition Mechanism]

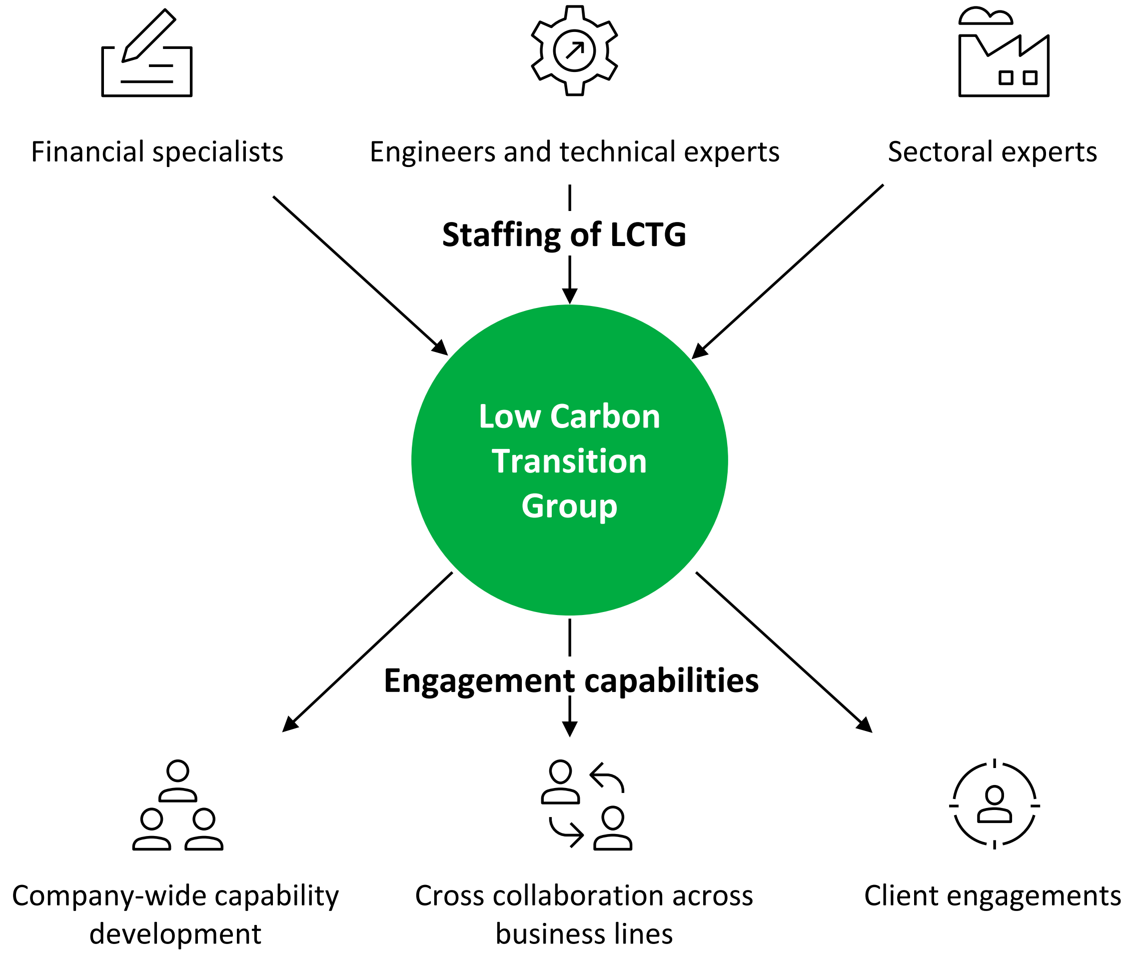
FINANCIAL INSTITUTIONS ARE BREAKING DOWN INTERNAL SILOES TO ENHANCE AND BUILD ON EXISTING ORGANIZATIONAL CAPABILITIES, WHILE ALSO BRINGING IN NEW EXPERTS

Primary organizational enablers identified

	Organizational enablers
Established	**Climate centers of excellence** that drive firm uniformity and expand capacity of climate-capable employees **Upskilling and education** of staff that's conducted regularly across financial institutions on both climate strategy and products, as well as key emerging trends within climate action **Board-level engagement** on climate that includes climate-focused managers on business committees **Climate leadership and "tone from the top"** that establishes a firmwide stance on climate action
Emerging	**Cross-sectional coverage teams**: • Hiring of engineers to inform sectoral-level expertise on climate and transition solutions • Teams integrated to work outside of silos, including building out balance sheet-lite advisory engagements across first line teams • Teams developed for specific sectors and climate and transition technologies, incorporating knowledge transfer across business lines **Compensation and performance**: Climate targets and variable sustainability KPIs tied to executives' year-end compensations

CASE STUDY: BNP PARIBAS' LOW CARBON TRANSITION GROUP ("LCTG") SUPPORTS CLIENTS' CLIMATE TRANSITION

Working structure of the Low Carbon Transition Group



Key characteristics

200+ sector specialists

In-house experts as well as new **technical hires**

LCTG provides **strategic dialogue with clients** and **in-house capacity building**

Source: BNPPs Low Carbon Transition Group

HOW TO GET STARTED

Summary of main themes identified

Playing to their strengths	Financial institutions have expressed early success by commercializing on climate action through their existing capabilities, building off their product expertise, the demands of their existing client base, and their sectoral priorities
Breaking down silos to enable knowledge transfer	Financial institutions have been taking stock of where their relevant knowledge bases and skillsets are located and subsequently bringing the identified experts together across business lines, focusing on how they can better offer client solutions and maximize engagement impact
Bringing in new talent to deal with new market risks and deal with business development	The search has shifted to non-traditional sources to the financial institution help mitigate risks of the unknown from climate and transition solutions. The hiring has primarily focused on engineering, climate technology, and low carbon investment-related expertise
Demonstrating the willingness to innovate and experiment	Capitalizing on the climate and transition financing market may require significant changes in operational management and a new look at risk appetite. As such, leading financial institutions have prioritized innovation and the openness to experiment new products and actions
Enabling investment-oriented partnerships	Financial institutions have begun to focus on developing partnerships so that investments in climate and transition financing can increase through them

EACH FINANCIAL INSTITUTION WILL HAVE DIFFERENT APPETITE ON THEIR COMMERCIAL CLIMATE STRATEGY DEPENDING ON THEIR AMBITION AND WILLINGNESS TO INVEST

Themes and illustrative steps to take across financial institutions' climate journey spectrum

Establishing 'no regret' moves	Building a foundation	Innovating and expanding
Key themes		
Meeting the needs of current customers and build on existing strengths	Aligning organization structure and risk management with climate strategy, while exploring additional products and clients	Pushing boundaries of risk management and commercial strategies, developing fundamentally new products and investment opportunities
Products and services		
• Ability to have ESG conversations • Green and sustainable linked bonds and loans	• Partnership with third-party providers • Green retail products like green mortgages and deposits	• Cleantech M&A/IPOs • Transition loans and bonds
Deal-level capabilities and enablers		
• Train relationship managers on available offerings • Leverage existing company practices for offerings	• Utilize risk defeasance to de-risk climate solutions • Build in-house tools to show impact of emissions	• Client engagement strategy to support their transition • Leverage synthetic securitizations of their portfolios
Risk measurement and portfolio steering		
• Qualitative climate risk assessments • Developed green taxonomy	• Quantitative climate risk assessments • Steering to incentivize lower-carbon investments	• Dynamic scenario analyses which inform risk appetite • Climate-related fund transfer pricing
Organizational enablers		
• Established climate center • Expanded capacity of climate-capable employees	• Knowledge transfer across business lines • Engaged climate "tone from the top"	• Linked climate targets and variable compensations • Developing cross-sectional coverage teams

OLIVER WYMAN HELPS CLIENTS REALIZE THEIR CLIMATE FINANCING OPPORTUNITIES AND COMMERCIALIZE ON THE LOW CARBON TRANSITION

Area	Examples of how OW have supported our clients	Outcomes
Products and services	• Prioritized a subset (4-5) market opportunities and detail supporting business cases/market entry strategy to accelerate capital deployment	✓ Defined go-to-market strategies supported by an understanding of (and alignment on) capability requirements, key risks, and mitigating actions
	• Sized revenue opportunity across priority technologies and financing products based on client's footprint and expected investment flows	✓ Longlist of revenue opportunities segmented by client product and technology to inform business strategy and climate commitments
Deal-level capabilities and enablers	• Developed/ integrated scenario analyses at the investment/ portfolio level	✓ Developed risk management tool that identifies the climate transition and physical risks across investments
	• Defined client transition plan assessments for clients in high emitting sectors to inform client engagement and decision making	✓ Understanding of where clients are in their decarbonization journeys ✓ Potential to use assessments to inform engagement and internal decision making
Risk management and portfolio steering	• Developed risk taxonomy/ appetite framework for climate and transition financing	✓ Integrated risk model that reflects the emerging climate and transition solution market into the client's risk appetite
	• Calculated FE footprint across high emitting sectors1 leveraging vendor data and existing work to date	✓ Top FE concentrations by sector, product for deeper review and target setting
	• Identified enhancements to existing processes that (a) improve efficiency, and (b) further embed climate-related commitments into business strategy	✓ Defined target state for metric management and reporting processes (e.g., integration with deal approval processes, reporting R&R across the org)
Organizational enablers	• Developed and review content for external communications, and create management talking points for stakeholder engagement	✓ Insights on key messages and potential watchpoints, informed by our exposure to investor networks, industry bodies, and regulators
	• Conducted review of top-of-the-house program to prioritize and direct resources toward high-impact enhancements	✓ Prioritized and directed resources toward high-impact enhancements that address gaps/lagging practice relative to the market

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