UBS

Our climate strategy

What we do to act on a low-carbon future – our climate strategy

Our climate strategy[1] underpins our activities designed to support our clients and our firm in preparing for an increasingly carbon-constrained world. It underlines our commitment to the Sustainable Development Goals (SDGs) on climate action and on affordable and clean energy as well as the Paris Agreement. These key UBS commitments are embedded in the Principles for Responsible Banking (PRB). This global framework specifies the role of banks in supporting a sustainable future and scaling up their contribution to the achievement of both the SDGs and the Paris Agreement.

We have reported on our climate strategy aligned with the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) recommendations since 2017. The recommendations call on companies to disclose the impacts of climate change on their businesses. This will allow investors and financial institutions to make better investment decisions with a common set of data to assess the climate-related risks and opportunities of specific companies. We are committed to aligning our climate disclosure within the five-year pathway outlined by the TCFD (until end of 2022) and to collaborating within the industry to close gaps.

We publicly support international, collaborative action against climate change. Our Chairman is a signatory to the European Financial Services Round Table's statement in support of a strong, ambitious response to climate change. Our Group CEO is a member of the Alliance of CEO Climate Leaders, an informal network of CEOs convened by the World Economic Forum and committed to climate action. We also continue to support the TCFD development with formal representation in the Task Force since 2016.

Our climate-related achievements have been widely recognized by external experts. In 2020, UBS underscored its leading position in sustainability by being ranked number one globally for the sixth consecutive year in the Diversified Financial Services and Capital Markets Industry of the Dow Jones Sustainability Index (DJSI). This is the most widely recognized corporate sustainability rating. CDP, which runs a global disclosure system that enables companies, cities, states and regions to measure and manage their environmental impacts, awarded UBS with Leadership status and a Climate A List rating. In 2020, UBS participated in the Global Association of Risk Professionals (GARP) Climate Risk Survey and was recognized amongst the firms that are currently providing leading practice in climate financial risk management.

In 2020, our firm became a founding member of the Net Zero Asset Managers initiative, and a founding member of the Net Zero Banking Alliance in 2021. These industry-led alliances bring together banks and asset managers committed to reaching net zero emissions by 2050. In April 2021, we issued a Net Zero Commitment, pledging our firm to achieve net zero greenhouse gas emissions resulting from all aspects (Scope 1, 2, 3) of our business by 2050, with intermediate milestones established to ensure progress.

› **Refer to www.ubs.com/climate for the UBS Net Zero Commitment Statement**

Climate action – a snapshot

The transition to a low-carbon economy poses both risks and opportunities for the economy and the financial sector. Scientists warn that, without a timely decarbonization, by 2100 our planet will be warmer than at any other time in human history. Achieving the Paris Agreement goals demands unprecedented levels of investment. With regard to current progress on climate action and the SDGs, there is a recognized climate finance as well as an investment gap – to meet the low-carbon transition targets. At the same time, we see a clear investor appetite for directing capital toward a low-carbon future. In 2020, we confirmed our continued commitment on being at the vanguard of sustainability by receiving leading corporate sustainability ratings and actively collaborating with the financial community on developing solutions to better understand climate risks and to make climate-smart investments available. By partnering with industry bodies, we seek to amplify our message: the time to act on climate is now.

Our climate strategy – 2020 highlights

- Our climate strategy underlines our commitment to the SDGs on climate action and on affordable and clean energy and supports an orderly transition to a low-carbon economy, as defined by the Paris Agreement.
- Our exposure to carbon-related assets on our banking balance sheet is low, at 1.9% or USD 5.4 billion as of 31 December 2020, a further decrease from 2.3% at the end of 2019 and 2.8% at the end of 2018.
- Our climate-related sustainable investments increased to USD 160.8 billion in 2020 from USD 108 billion in 2019.
- We became a founding signatory of the Net Zero Asset Managers Initiative, a leading group of global asset managers committed to supporting the goal of net zero greenhouse gas (GHG) emissions by 2050 or sooner. We actively engaged on climate topics with 49 oil and gas, and utilities companies, and voted on 50 climate-related shareholder resolutions.
- We piloted a novel transition risk heatmap methodology to further inform our climate risk management strategy.
- We reached our goal of 100% renewable electricity consumption and committed to achieving net zero emissions in our own operations (scope 1 and 2) by 2025.
- We were awarded top ratings and rankings by external experts, including climate industry group leader in the Dow Jones Sustainability Indices and CDP's top Climate A List.

1 This document has been updated following the release of the UBS Net Zero Commitment Statement in April 2021.

Climate governance

Our climate strategy is overseen by the Board of Directors' (BoD) Corporate Culture and Responsibility Committee (CCRC), as embedded in the Organization Regulations of UBS Group AG. Within the parameters set by the CCRC, the *UBS in Society* Steering Committee ensures firm-wide execution of the climate strategy while our firm's climate-related risk appetite is set at the Group Executive Board level. In joint meetings, the BoD's CCRC and Risk Committee regularly and critically review the assessments and steps taken by these management bodies toward executing our climate strategy. The CCRC approves UBS's annual climate-related objectives and oversees the progressive alignment of our climate disclosure with the TCFD recommendations. These annual plans and objectives are managed as part of our ISO 14001-certified environmental management system (EMS), with defined management accountabilities across the firm. The EMS helps us to systematically reduce environmental risks, seize market opportunities and continuously improve our environmental and climate performance and resource efficiency.

Climate strategy

As one of the world's largest managers of private and institutional wealth, we play an active role in shaping a sustainable future. We aim to be a leading financial provider in enabling investors to mobilize private and institutional capital to climate change mitigation and adaptation while supporting the transition to a low-carbon economy. In 2020, we again saw a growth in investor appetite for directing capital into climate solutions. We address this by continuously developing our offering in sustainable finance and actively engaging with clients. Our climate strategy supports our clients and our firm in preparing for success in an increasingly carbon-constrained world.

We advance toward this goal through our innovative financial product offering and advisory, as well as through embedding climate risk in our firm-wide risk management framework and in our own operations. Our climate strategy focuses on four pillars:

- Protecting our own assets: We seek to protect our assets by limiting our risk appetite for carbon-related assets and by estimating our firm's vulnerability to climate-related risks using scenario-based stress-testing approaches and other forward-looking portfolio analyses. We have reduced carbon-related assets on our banking balance sheet to 1.9%, or USD 5.4 billion, as of 31 December 2020, down from 2.3% at the end of 2019 and 2.8% at the end of 2018.
- Protecting our clients' assets: We support our clients in assessing and managing climate-related risks and opportunities through our innovative products and services in investment, financing and research. We actively engage on climate topics with companies that we invest in. Asset Management (AM) has implemented an engagement program with 49 companies from oil and gas, and utilities sectors and we voted on 50 climate-related shareholder resolutions during 2020.
- Mobilizing private and institutional capital: We mobilize private and institutional capital toward investments that facilitate climate change mitigation and adaptation, and we also support the transition to a low-carbon economy as corporate advisor, and / or with our lending capacity. In 2020, our climate-related sustainable investments rose to USD 160.8 billion, from USD 108 billion at the end of 2019, and the deal value in equity and debt capital market services, and in financial advisory services, related to climate change mitigation and adaptation, rose to USD 98.9 billion, from USD 87.2 billion in 2019.
- Reducing our direct climate impact: We continue to drive the reduction of our GHG emissions and therefore have committed to achieving net zero emissions in our own operations (scope 1 and 2) by 2025. In 2020, we achieved the target of using 100% renewable electricity. This reduces our firm's GHG footprint by 79% compared with 2004 levels.

› **Refer to "What we do for our clients" in the UBS Sustainability Report 2020 for more information on our sustainable finance activities**

› **Refer to "Reducing our environmental footprint" in the UBS Sustainability Report 2020 for more information**

Climate risk management

The physical and transition risks from a changing climate contribute to a structural change across economies and therefore affect banks and the financial sector as a whole. In order to protect our clients' and our own assets from climate-related risks, we continue to drive the integration of climate-related risk into our standard risk management framework.

UBS manages climate risks in our own operations, balance sheet, client assets and supply chain. We are embedding climate risk into the UBS risk appetite framework and operational risk appetite statement. In 2020, we further integrated climate risk in risk identification, management stress testing methodology and reporting processes across the organization. We have consistently reduced our exposure to carbon-related assets and continued our multi-year efforts to develop methodologies that enable more robust and transparent disclosure of climate metrics. This work will continue our efforts to ensure we are prepared to respond to increased regulatory requirements on climate risk, are aligning our disclosure with the TCFD recommendations and collaborate within the industry to close gaps.

In 2020, we also refined our ability to estimate the firm's vulnerability to climate-related risks using forward-looking scenario-based approaches, and developed a climate transition risk heatmap.

› **Refer to the subsequent "Climate-related standards in the energy and utilities sectors" table**

› **Refer to "Scenario analysis" in this document**

Climate-related standards in the energy and utilities sectors

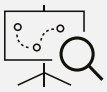
Coal 	**Coal-fired power plants**	Not providing project-level finance to new coal-fired power plants globally. Only supporting financing to transactions of existing coal-fired operators (>20% coal reliance) if they have a transition strategy that aligns with the goals of the Paris Agreement, or if the transaction is related to renewable energy or clean technology.
	Coal mining	Not providing financing where the stated use of proceeds is for greenfield[1] thermal coal mines. Only provide financing to existing thermal coal-mining companies (>20% of revenues) if they have a transition strategy that aligns with the goals of the Paris Agreement, or if the transaction is related to renewable energy or clean technology.
	Mountaintop removal (MTR)	Not providing financing to coal-mining companies engaged in MTR operations.
Oil and gas 	**Arctic oil and oil sands**	Not providing financing where the stated use of proceeds is for new offshore oil projects in the Arctic or greenfield[1] oil sands projects. Only provide financing to companies with significant reserves or production in arctic oil and/or oil sands (>20% of reserves or production) if they have a transition strategy that aligns with the goals of the Paris Agreement, or if the transaction is related to renewable energy or clean technology.
	Liquefied natural gas (LNG) and ultra-deepwater drilling	Transactions directly related to LNG infrastructure assets are subject to enhanced environmental and social risk (ESR) due diligence considering relevant factors such as management of methane leaks as well as the company's past and present environmental and social performance. Transactions directly related to ultra-deepwater drilling assets are subject to enhanced ESR due diligence considering relevant factors such as environmental impact analysis, spill prevention and response plans, and the company's past and presentenvironmental and social performance.

1 Greenfield means a new mine/well or an expansion of an existing mine/well which results in a material increase in existing production capacity.

Scenario analysis

We have been using scenario-based approaches since 2014 to assess our exposure to physical and transition risks stemming from climate change. These early in-house scenario analyses have been followed by a series of assessments performed through industry collaborations in order to harmonize approaches in addressing identified methodological and data gaps.

We have performed both top-down balance sheet stress testing (across the firm), as well as targeted, bottom-up analysis of specific sector exposures covering short-, mid-, and long-term time horizons. The table below summarizes the UBS scenario assessments performed to date.

	Assessment	Year	Scenarios used	Time horizon[1]	Outcomes
In-house scenario analysis 	UBS climate stress test to assess firm-wide vulnerability to climate change (impacts to balance sheet, operational income and physical assets)	2014	Climate scenario developed in-house	– ST – MT	Moderate financial impact in line with other stress scenarios, such as those that foresee an oil shock
	Assessment of physical climate hazard impacts on mortgage portfolios secured by real estate	2015	Climate scenario developed in-house	– ST – MT	Low financial impact due to insurance coverage and loan maturity profile
	Assessment of climate transition risk impacts (changing oil, gas and coal prices, implying an increased carbon price) on oil, gas and electric utilities credit portfolios	2015	Climate scenario developed in-house	– ST – MT	Low financial impact due to high quality and maturity profile of portfolio
Industry collaboration 	Natural Capital Finance Alliance/United Nations Environment Programme Finance Initiative (UNEP FI): Assessment of the impact of increased drought on productivity of borrowers in UBS energy credit portfolio	2017	Historic academic precipitation observations	– ST – MT	No significant production impact from drought
	UNEP FI TCFD phase I project for banks: Development of a credit analysis methodology that uses integrated assessment modeling (IAM) climate scenarios; pilot testing the methodology on UBS power utilities credit portfolio	2018–2019	Integrated Assessment Modeling Consortium (IAMC)	– ST – MT	No significant credit loss from transition risks in 2 degree scenarios, nor impacts from physical risks in 4 and 2 degree scenarios
	UNEP FI TCFD phase II project for banks: – Further development of climate scenarios, in line with the range of reference scenarios published by the Network for Greening the Financial System (NGFS) – Development of a heatmap methodology – Pilot testing the credit analysis methodology on our oil and gas portfolio and physical risk analysis on our real estate mortgage portfolio	2020	– IAMC based on NGFS scenarios – CICERO	– ST – MT – LT	UBS has a very low exposure to economic activities with moderate to high transition risk; no significant credit loss from transition risks in orderly and disorderly 1.5 degree scenarios
	UNEP FI TCFD phase III project for banks and investors: deep dive on climate transition risks in real estate, portfolio alignment methods, and client-centric approaches for supporting transition strategies	2021	– To be defined during 2021	– ST – MT – LT	To be defined during 2021
	Paris Agreement Capital Transition Assessment (PACTA): Testing the alignment of UBS corporate lending portfolios with Paris Agreement benchmarks	2019–2020	– IEA[2] – B2DS[3] – SDS[4] – NPS[5] – CPS[6]	– ST – MT	UBS has a low lending exposure to high-carbon sectors
	PACTA 2020 climate alignment test: studying the climate alignment of Swiss mortgages, direct real estate investments and listed investments portfolios	2020		– ST – MT	Listed investments results show that UBS has a relatively low exposure to power, automotive and fossil fuel sectors overall, compared to the aggregated results of all participating banks' portfolios

1 ST= short term, 0–3 years; MT = medium term, 3–10 years ; LT = long term, over 10 years. 2 International Energy Agency (IEA), World Energy Outlook. 3 Beyond 2 Degrees Scenario
4 Sustainable Development Scenario 5 New Policies Scenario 6 Current Policies Scenario.

Note: Climate scenario analysis is a novel area of research, and we expect the methodologies, tools and data availability to evolve and improve over time. This overview summarizes the key scenario assessments and pilots conducted at UBS since 2014, which we will build upon to deepen our understanding of climate risks and opportunities.

Our initial (2014) top-down approach consisted of a scenario-based stress test to assess UBS's balance sheet vulnerability across the firm. Leveraging our existing firm-wide top-down stress-testing methodology, we developed a climate change scenario (which assumes that severe weather events result in governments around the world agreeing to implement carbon-pricing mechanisms to assess the impact on financial assets, operational income and physical assets). The scenario anticipated that these mechanisms will prompt a shift away from coal and other fossil fuels to cleaner alternatives and adversely impact markets and gross domestic product.

Our subsequent (2015) bottom-up analyses of oil and gas utilities' as well as electric utilities' loan portfolios consisted of a forward-looking analysis to assess impacts of a long-term low fossil fuel price scenario resulting from policies promoting greater use of renewables, enhancing efficiency standards and limiting emissions. We calculated the impact this scenario would have on company probability of default and aggregated company-level results at the portfolio level to assess changes to expected loss. We also assessed the vulnerability of loan portfolios secured by real estate in Switzerland and the US to physical risk by mapping the location of collateral in over 6,000 postal code areas against Swiss Re's CatNet tool, which aggregates a large dataset of observed natural hazards such as wildfire, river and pluvial flooding and tropical cyclones.

From both top-down and bottom-up approaches, our internal stress tests suggested no immediate threat to UBS's balance sheet. However, we identified methodological challenges ranging from the suitability of climate scenarios for banking risk modeling to data availability.

UNEP FI TCFD Working Group for Banks

In 2018, UBS began a multi-year collaboration with a peer group of up to 35 banks, the UNEP FI, the IAMC, and risk consultancies Oliver Wyman and Acclimatise. Now entering its third iteration, our objective is to develop analytical tools to help banks define and disclose climate-related risks and opportunities, as recommended by the TCFD. This includes developing and standardizing how we quantify climate-related risks, addressing data gaps in the process, including Paris-aligned scenarios, and further refining scenario-based stress-testing methodologies. These advancements aim for banks to more robustly identify and disclose exposure to climate-related risks and opportunities.

Phase I: Power utilities

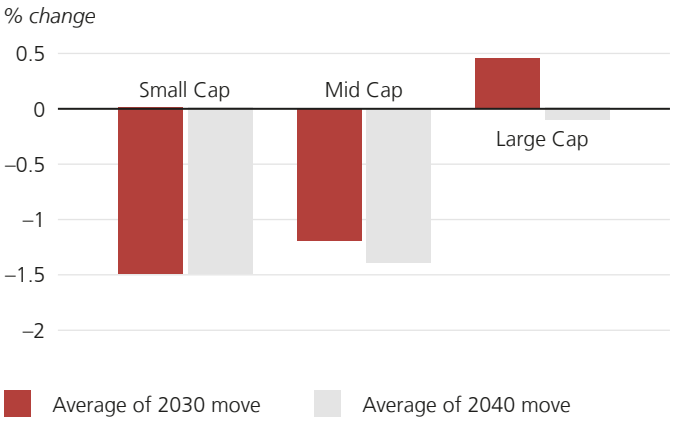
UBS pilot tested a methodology developed with Oliver Wyman and 16 banks, as part of the UNEP FI TCFD working group, on its power utilities portfolio (power). The methodology combines quantitative bottom-up borrower-level analysis with top-down portfolio segmentation, to analyze for credit-rating impacts under a 2 degree climate scenario. A sample of over 30 counterparties headquartered in the US and the EU was analyzed. The main results showed minimal impacts to UBS, primarily due to the financial strength of our borrowers and the ability for them to adapt to climate-related policy and technology risks. Counterparties in UBS's portfolio were quantitatively analyzed based on the narrative that a high carbon price under the climate scenarios would result in reduced revenue from high carbon-based assets (e.g., coal-fired power plants). Meanwhile, low-carbon capital expenditure would increase as these companies invest in renewable technologies to maintain production capacity. Capital would be raised based on a mixture of debt and equity, based on the companies' capital structure today. Increased revenues from the renewable capacity would offset lost revenues.

Most of UBS's counterparties tested at the time were investment grade large-cap names, many of whom were already planning on their own low-carbon transition strategies. These companies are most able to adapt to the shock of carbon pricing and low-carbon capital expenditure risk factors, and included a handful of winners in the transition (rating upgrades). The graph below reflects that credit-rating impacts were more pronounced in small-cap names.

Average credit-rating impacts

Average ratings upgrades / downgrades, based on climate-related financial impacts

Grouped by market capitalization (unit: notches up / down according to internal UBS rating scale in UBS Annual Report 2020, page 117)



Phase II: Oil and gas

In 2020, UBS pilot tested the methodology on its 2020 oil and gas (O&G) portfolio. This time, testing against a range of 1.5˚C pathways, including an orderly and immediate transition, a disorderly and delayed transition, and a disorderly transition that assumed low reliance on carbon dioxide removals (CDR). The scenarios were developed in partnership with the IAMC and were also the basis for the reference scenarios issued by the Network for Greening the Financial System (NGFS).

Close to 50 counterparties were analyzed in the US and EU – including both lending and traded products exposure to corporate entities classified in the O&G sector. Upstream O&G extraction, midstream O&G processing and transport, and integrated O&G companies were included in the analysis. The total exposure analyzed was around USD 1.4 billion[3] (sectoral credit exposure in the Investment Bank).

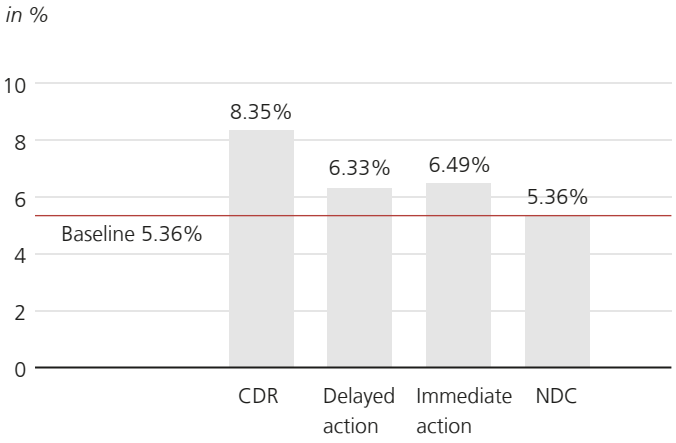
After segmenting the credit portfolio according to the heatmap methodology (see climate risk heatmap section), credit officers were asked to determine ratings impacts on our counterparties, based on scenario data. To do so, they were given the three different transition risk scenarios and the nationally determined contributions (NDC) scenario (considered as a baseline scenario). Scenario variables included O&G demand, price, electricity technology use and pricing, and other macroeconomic data. Regional (US and EU) and global views were created to accommodate the geographic focus of the portfolio and the upstream segments.

Credit officers discussed and debated the relative risk factors within each scenario and re-rated each company in their respective portfolio according to an approximate order of magnitude of credit ratings downgrades, for projected years 2030 and 2040. Both 2030 and 2040 were chosen to analyze impacts from both an immediate and delayed transition. Existing defaults during COVID-19 and the oil price shock in 2020 were considered within their determinations. Ratings estimates based upon mitigants (e.g., transition strategies) were also factored in.

According to our assessment, integrated O&G, as large-cap companies, are well equipped to forecast and strategize for their role in the transition to a low-carbon economy. Large integrated O&G companies are also considered to have control over major reserves, making them some of the last oil drillers in 2040 that supply residual oil demand.

Key findings supported earlier analyses: no significant risk to UBS was identified. Expected loss impacts to UBS exposure in the sector ranged from 0.4% to 1.1% of the total sectoral exposure in a delayed transition scenario and low-CDR scenario respectively, in 2040. In addition, the weighted average profitability and default (PD) impacts by scenario show greater credit impacts in a CDR scenario, followed by an immediate action scenario, as shown in the next graph.

Weighted average 2040 probability of default



Losses were found to be lower in a delayed (disorderly) transition as certain companies may continue to produce over the next 10 years, which would generate additional cash flow. A delayed action scenario also gives integrated companies time to adapt, such as implementing stated net-zero commitments.

The exercise highlighted that improving the granularity of scenarios to capture regional dynamics of energy production and O&G prices would yield a more robust analysis. Further efforts are required to continue to bridge methodological and data gaps (e.g., capturing systems impacts and downstream impacts). As companies continue to develop their own TCFD disclosures, we can expect better quality counterparty-level data as well.

Climate risk heatmap

To inform the further development of its climate risk management strategy, UBS has piloted a transition risk heatmap, developed in collaboration with the UNEP FI TCFD working group. The heatmap enables UBS to take a materiality-driven approach to further inform its climate risk management strategy by:

- helping to identify concentrations of exposure with high climate risk vulnerability, which, in turn, enables resource prioritization for detailed bottom-up risk analysis;
- supporting a client-centric strategy that prioritizes clients who may benefit from UBS products and services in support of their transition strategies; and by
- providing decision-useful information in internal reports to executive and board leadership and external disclosure to stakeholders.

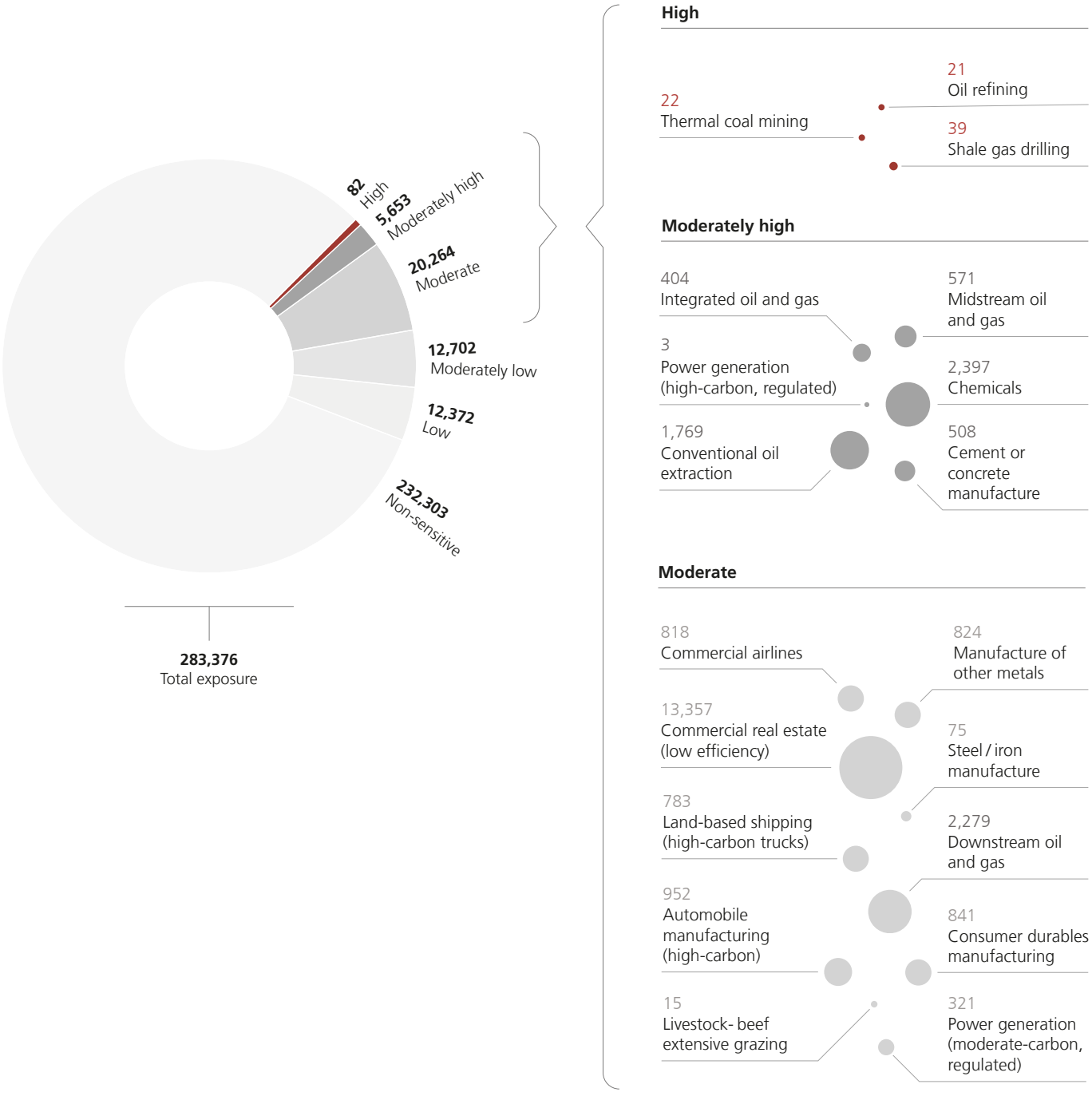
The heatmap rates cross-sectoral credit risk exposure to climate sensitivity, from high to low, through a risk segmentation process. These ratings are based upon climate risk ratings determined by ratings agencies, regulators and expert consultants. The working group discussed how to group companies with similar risk characteristics into risk segments and rate those segments according to their vulnerability to climate policy, low-carbon technology risks, and revenue / demand shifts under an aggressive approach to meeting the well below 2˚C Paris goal. The next steps for UBS are to pilot the physical risk heatmap methodology, also developed with the UNEP FI TCFD working group, and to examine the applicability of the heatmap methodology in other traditional risk categories.

3 UBS corporate lending to climate-sensitive sectors, see page 13

The graph below shows UBS's year-end climate risk exposure across the Investment Bank and Personal & Corporate Banking through the heatmap methodology.

Heatmap of climate-sensitive sectors

in USD million



Paris Agreement Capital Transition Assessment (PACTA)

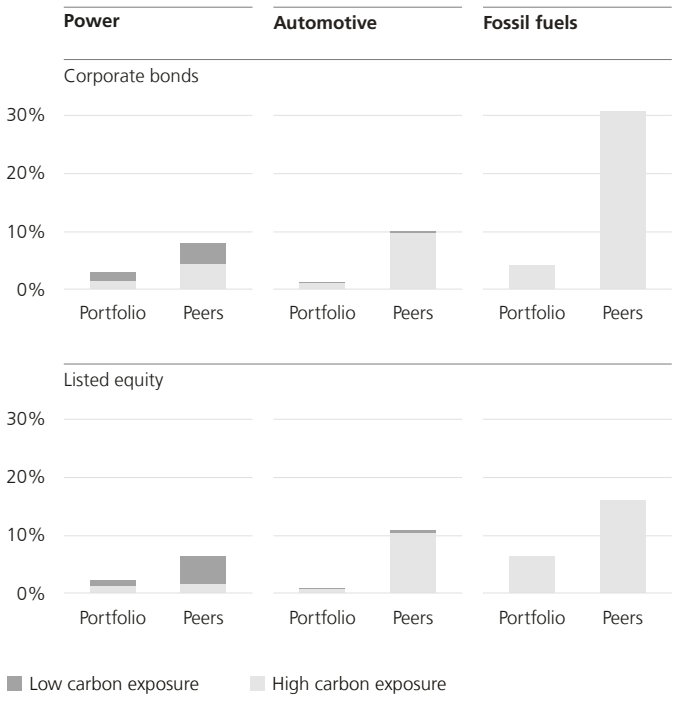
In addition to the UNEP FI TCFD working group for Banks, between 2019 and 2020, UBS has been one of the pilot banks testing the PACTA methodology. In the context of the PACTA pilot, we studied the alignment of select climate-sensitive sectors in our corporate credit portfolio with Paris Agreement benchmarks. The methodology provides an assessment of a bank's credit-financed activities in relation to the global shift to a low-carbon economy. Among other results, the PACTA for lending assessment showed that the fuel mix in UBS's power utilities credit portfolio is significantly less carbon-intensive than the global corporate economy as of 2019. As an outcome of the collaboration between UBS and 16 other international banks, academia and experts, a *PACTA for Banks Methodology Document* was published.

In 2020, UBS participated in the PACTA 2020 climate alignment test that focused on assessing listed investments, mortgage and direct real estate portfolios. In this occasion, the PACTA methodology was applied to the listed investments portfolios. The UBS results for this portfolio were compared with the aggregated results of all participating banks' portfolios.

The graph below shows the sector exposure (% of portfolio value) in selected sectors (power, automotive and fossil fuels). The upper bar graphs refer to corporate bonds and the lower ones to equity. The bar colors indicate low carbon exposure (dark grey) and high carbon exposure (light grey). The output below suggests that UBS has a relatively low exposure to the three sectors overall, compared with the aggregated results of all participating banks' portfolios.

Sector exposure

% of portfolio value



A detailed report of the PACTA 2020 climate alignment test for the Swiss financial market is available online on the Federal Office for the Environment webpage.

Both UNEP FI and PACTA pilots promote industry learning and have provided guidance for disclosing climate-related risks and opportunities in line with the TCFD recommendations. Overall, the results of the past climate risk pilots have confirmed findings from our previous in-house assessment on climate risk. We have, so far, not identified significant climate-related financial risk on our balance sheet. We explain this by UBS's relatively small lending book in climate-sensitive sectors (see "UBS corporate lending to climate-sensitive sectors 2020") and availability of insurance where we have relevant exposures to such sectors (e.g., Swiss mortgage lending book).

Protecting our clients' assets

As a global financial institution, it's our responsibility to help clients navigate through the challenges of the transition to a low-carbon economy. We help our clients assess, manage and protect their assets from climate-related risks by offering innovative products and services in investment, financing and research.

UBS Asset Management (AM) has developed a suite of products, termed Climate Aware, to help investors align their portfolios toward a lower-carbon future. The first Climate Aware passive equity strategy was launched in 2017. In 2020, we launched a broader Climate Aware suite of investment strategies based on the original Climate Aware methodology, including active and passive, equity and fixed income.

This expanded offering is delivering on the commitment our firm made at the World Economic Forum (WEF) Annual Meeting 2020 to support clients in their own climate change transition. It enables clients to reduce the carbon footprint of their portfolios in line with their sustainability goals while meeting their financial objectives.

Furthermore, AM empowers equity portfolio managers to examine the carbon footprint of their portfolios and compare the relative carbon footprints of their company holdings to that of the benchmark.

In December 2020, UBS became a founding signatory of the Net Zero Asset Managers Initiative alongside 30 other asset managers representing over USD 9 trillion of assets under management (AUM). This leading group of global asset managers has committed to supporting the goal of net zero GHG emissions by 2050 or sooner, in line with global efforts to limit global warming to 1.5°C.

As part of the initiative, asset manager signatories have committed to:

- working in partnership with asset owner clients on decarbonization goals, consistent with an ambition to reach net zero emissions by 2050 or sooner across all assets under management;
- setting an interim target for the proportion of assets to be managed in line with the attainment of net zero emissions by 2050 or sooner; and
- reviewing their interim target at least every five years, with a view to ratcheting up the proportion of AUM covered until 100% of assets are included.

The commitment recognizes an urgent need to accelerate the transition toward global net zero emissions and for asset managers to play their part to help deliver the goals of the Paris Agreement and ensure a just transition.

In terms of financing, we help clients implement and execute their sustainability strategies though innovative capital-raising and global advisory services, which offers them seamless and sustainable access to capital markets. On the markets side, we develop and offer products and services relevant to climate change mitigation and adaptation (and in line with client demand), such as access to EU emissions allowances via futures and structured solutions, and portfolio tracker solutions providing exposure to stocks identified as best positioned to benefit from the EU deals and initiatives.

Engagement

On behalf of clients, AM engages with companies it invests in to discuss approaches to mitigating climate-related risk. AM also actively votes on shareholder resolutions to improve transparency and disclosure around climate-related reporting. Specifically in the context of its Climate Aware strategy, AM has implemented an engagement program with 49 oil and gas companies as well as utilities companies underweighted in the strategy. Communication with these companies aims at improving their disclosure and performance alignment with the TCFD recommendations. Engagement also makes it possible to share the results of the quantitative and qualitative assessments included in the fund methodology with investee companies. This allows for the verification of company performance with additional information collected before and after meetings. It also means AM can collect feedback, explicitly communicate objectives for change in corporate practices and further enhance the model used to inform the under- / overweights in the strategy.

AM is a member of Climate Action 100+, a collaborative engagement initiative launched in December 2017. Its aim is to engage with high-level GHG emitters, and other companies across the global economy that have significant opportunities to drive the clean energy transition and help achieve the goals of the Paris Agreement. It has the support of 545 investors, representing more than USD 52 trillion of assets under management (at end of 2020). AM is directly involved in 21 coalitions of investors (at the end of 2020) within Climate Action 100+ and leads eight of the company dialogues across regions. Whether AM is a lead or participating investor, it is an active member of these coalitions, providing feedback on the climate change performance of companies, the discussion agenda, engagement goals and the progress of these dialogues.

AM is also a member of the Institutional Investors Group on Climate Change (IIGCC) Climate Action 100+ European Advisory Group, which advocates for the world's transition to a low-carbon economy.

Climate-related opportunities

As one of the world's largest managers of private and institutional wealth, UBS plays an active role in shaping a sustainable future. We were among the first banks to shine a light on the importance of the SDGs – and specifically on what it takes to make them investable for clients. We are keen to help develop solutions in this regard, building on our successful and, in many cases, pioneering work aimed at mobilizing private and institutional capital toward the SDGs.

This includes investments that facilitate climate change mitigation and adaptation, notably through the Climate Aware suite of strategies.

A Climate Aware framework for investors

The Climate Aware framework is built on the methodology that underlies AM's Climate Aware strategy. The main characteristics of the framework are:

- Portfolio mitigation: lowering investment exposures to carbon risk
- Portfolio adaptation: increasing investment exposure to climate-related innovation and solutions
- Portfolio transition: aligning portfolios to an investor's chosen climate glidepath

Portfolio mitigation

Based on our experience, maintaining a balance between required investment returns and minimizing climate risks works most effectively when investors integrate climate change considerations into a diversified portfolio. Similar to ESG integration, this is an important element in understanding the specific effects of climate change. As the TCFD has highlighted, these can be viewed as regulatory, market, technology and physical risks. How they play out at the level of markets, industry sectors and individual issuers depends on an interplay of:

- regulation;
- commercial considerations; and
- impact of technology on business models, revenues, costs and capital requirements.

Integrating these three aspects puts the focus on the most material issues relating to the reduction of emissions generated by the most carbon-intensive sectors. It also leads to a deeper and more investment-relevant understanding of the physical risks.

Portfolio adaptation

Supporting a low-carbon future translates into investing in, and funding of, new technologies and solutions. The key investment areas relate to GHG emissions reduction, energy transition, and energy efficiency. They include companies that manufacture and deploy these technologies as well as the infrastructure and services that make them achievable at scale. There are a variety of developments in business structure, asset ownership, supply chains and delivery models that may be deployed as part of the climate change transition. It is also important to recognize that there are different kinds of investors that are better-placed for certain kinds of investments. Venture capital, private equity, real estate, public equity and public fixed income all have different appetites for technology risk.

Portfolio transition

It is important for investors to understand the difference between where they are now and the possibilities of the climate transition. Scenario analysis is emerging as a response to the uncertainties of climate change. Engagement, meanwhile, provides an opportunity for investors to encourage good corporate practice and, together with voting, keep management accountable for the actions needed to keep pace with the climate transition. It also allows investors to understand the investment dynamics in individual sectors and countries and determine the overall direction of travel. By applying the tools of scenario analysis and engagement, investors are better able to manage the transition to a climate-smart future.

Our other business divisions also translate this strategic thinking on climate into concrete products and services. UBS supports the orderly transition to a low-carbon economy as corporate advisor, and / or with its lending capacity. UBS also offers 100% sustainable discretionary mandates and asset allocation funds based on an innovative dedicated Sustainable Investing Strategic Asset Allocation for private clients in Global Wealth Management (GWM) and Personal & Corporate Banking (P&C). These include an explicit allocation to strategies that aim at mitigating climate change, such as green bonds and thematic investments, but also others that contribute indirectly to climate change mitigation such as multilateral development bank bonds, ESG leaders and ESG improvers. GWM developed a new advisory solution that includes an explicit climate change dimension, allowing clients to tilt their portfolios toward the issues they care about. Ultimately our goal in developing new products and services is to ensure that all material risks and opportunities are addressed, and to allow clients to select sustainable investments aligned to their interests while receiving financial returns in line with traditional investment approaches.

GWM integrates sustainability assessments, focusing on the sustainability intentionality of fund managers, into all fund and exchange-traded fund (ETF) onboardings. We have surpassed our commitment of directing USD 5 billion of client assets into SDG-related impact investments by the end of 2021 by contributing USD 6.9 billion in 2020 – more than one year early.

These investments include a significant climate component. GWM's mutual fund and ETF offering includes climate-focused investment strategies, comprising those focused on clean / alternative energy.

Our AM and GWM businesses have a comprehensive approach in place to address environmental, social and corporate governance factors across investment disciplines. For example, sustainability themes are embedded in GWM's equity research processes, while AM's Real Estate and Private Markets has developed a Responsible Investment Strategy to enhance investment performance of mandates for direct and indirect real estate and infrastructure investments.

Our Investment Bank provides capital-raising and advisory services globally to companies that make a positive contribution to climate change mitigation and adaptation, including those in the solar, wind, hydro, energy efficiency, waste and biofuels, and transport sectors. In 2020, the deal value in equity or debt capital market services and of financial advisory services related to climate change mitigation and adaptation, rose to USD 98.9 billion, from USD 87.2 billion in 2019.

We strive to be the preferred strategic partner for advisory and financing transactions related to Switzerland's Energy Strategy 2050. In this context, we support energy utilities in raising capital on international capital markets to progress their quest for renewable energy. In 2020, P&C supported 11 strategic transactions in support of the strategy. In our P&C business, we have also integrated Sustainable Investing Advisory into the strategic dialogue with our institutional clients.

Furthermore, we support Swiss small and medium-sized enterprises (SMEs) in their energy-saving efforts and transition to a low-carbon economy. SMEs benefit from initiatives such as energy check-ups or leasing bonuses (financial contributions toward enhancing environmental performance) for production machines. The UBS Clean Energy Infrastructure Switzerland strategy offers institutional investors unprecedented access to a diversified portfolio of Swiss infrastructure facilities and renewable energy companies.

Since its establishment, the UBS Optimus Foundation has focused on children's health, education and protection. In 2020, to ring in the Foundation's 20-year anniversary and in light of the growing threat of climate change, we expanded our offering. To make sure clients maximize their environmental impact with their philanthropy, we, together with experts, conducted an extensive landscape analysis. The outcome is a systematic approach for clients to assess where to invest philanthropically and how to best contribute to accelerate environmental and climate action. Clients interested in this space can now get involved in i) sustainable land use, by contributing to land restoration, conservation, climate-resilient agriculture, and agroforestry; and ii) coastal and marine ecosystems, by contributing to wetland restoration and conservation, sustainable fisheries, as well as reducing ocean waste and pollution.

Climate-related metrics

In 2020, we continued our multi-year efforts to develop methodologies that enable more robust and transparent disclosure of climate metrics. This includes the development of a novel transition risk heatmap methodology, improved granularity and accuracy of climate-sensitive sectors and carbon-related assets disclosure and expansion of the weighted carbon intensity metric.

The climate-sensitive inventory now applies to sectors captured by the transition risk heatmap. Following the enhanced methodology, our exposure to climate-sensitive sectors has remained relatively static – lending to high-risk sectors has been reduced and lending to low-risk sectors has increased.

UBS exposure to carbon-related assets was revised to analyze underlying commodities in our commodity trade finance business. We have recalculated all previous years' exposure figures using the enhanced approach. In 2020, we have again reduced our exposure to high-carbon sectors (as defined by the TCFD and those rated higher risk on the heatmap) to 1.9%, down from 2.3 % in 2019 (and 2.8% in 2018). The weighted carbon intensity of our Climate Aware strategies went down to 68.2 tonnes carbon dioxide equivalent (CO2e) per USD million of revenue (from 74.5 tonnes in 2019). This is 51% less when compared against the weighted carbon intensity of the composite benchmark.

Climate-related sustainable investments increased to USD 160.8 billion, up from USD 108 billion in the previous year. At the end of 2020, we reached our goal of using 100% renewable energy and reduced our firm's own GHG emissions by 79% compared to baseline year 2004.

Climate-related metrics 2020

	For the year ended			% change from
	31.12.20	31.12.19	31.12.18	31.12.19
Risk management				
Identified significant climate-related financial risk on balance sheet[1]	None	None	None	
Carbon-related assets (USD billion)[2]	5.4	6.1	7.5	(10)
Proportion of total banking products exposure, gross (%)	*1.9*	*2.3*	*2.8*	
Total exposure to climate-sensitive sectors (USD billion)[3]	38.7	35.2	36.1	10
Proportion of total banking products exposure, gross (%)	*13.7*	*13.3*	*13.5*	
Weighted carbon intensity of Climate Aware strategies (in tonnes CO_2e per USD million of revenue)[4]	68.2	74.5	89.6	(9)
Compared to weighted carbon intensity of composite benchmark (%)[5]	*(51.0)*	*(54.0)*	*(54.0)*	
Number of climate-related shareholder resolutions voted upon[6]	50	44	43	14
Proportion of supported climate-related shareholder resolutions (%)	*88.0*	*81.8*	*88.0*	
Opportunities				
Climate-related sustainable investments (USD billion)[7]	160.8	108.0	87.5	49
Proportion of UBS clients' total invested assets (%)	*3.8*	*3.0*	*2.8*	
Total deal value in equity or debt capital market services related to climate change mitigation and adaptation (CCMA) (USD billion)[8]	69.8	52.7	31.6	32
Total deal value of financial advisory services related to CCMA (USD billion)	29.1	34.5	24.9	(16)
Number of strategic transactions in support of Switzerland's Energy Strategy 2050	11	12	8	(8)
Own operations				
GHG footprint (kilotonnes CO_2e)[9]	75	104	132	(28)
Percentage change from baseline 2004 (target: –75% by 2020) (%)	*(79.0)*	*(71.2)*	*(63.4)*	

1 Methodologies for climate-related financial risk are emerging and may change over time, as described earlier under "Scenario analysis." 2 Banking products across the Investment Bank and Personal & Corporate Banking. IFRS 9 gross exposure including other financial assets at amortized cost, but excluding cash, receivables from securities financing transactions, cash collateral receivables on derivative instruments, financial assets at FVOCI, irrevocable committed prolongation of existing loans and unconditionally revocable committed credit lines, and forward starting reverse repurchase and securities borrowing agreements. As recommended by the TCFD, carbon-related assets are defined as assets tied to the energy and utilities sectors (Global Industry Classification Standard). Non-carbon-related assets, such as renewables, water utilities, and nuclear power, are excluded. For grid utilities, the national grid mix is applied. UBS methodology for carbon-related assets has been revised to analyze underlying commodities in our commodity trade finance business. As a result, we have restated the metric for 2018 and 2019 using the enhanced approach. 3 Banking products across the Investment Bank and Personal & Corporate Banking (IFRS 9). Climate-sensitive sectors defined as business activities that are rated as having high, moderately high, moderate, or moderately low vulnerability to transition risks. For more details, see "Scenario analysis" and the "UBS corporate lending to climate-sensitive sectors 2020" table. UBS methodology for climate-sensitive sectors has been revised to analyze underlying commodities in our commodity trade finance business. As a result, we have restated the metric for 2018 and 2019 using the enhanced approach. 4 Year-on-year decrease of carbon intensity is mainly driven by higher carbon targets of the investment strategy. Carbon intensity is based on scope 1 and 2 CO_2 emissions of investee companies, which often rely on third-party estimates. Metric has been expanded in 2020 to include all equity and fixed income funds with a proprietary Climate Aware strategy (active and rules-based). Metric is the assets under management (AUM)-weighted average of the weighted average carbon intensities of the portfolios. 5 The metric is the AUM-weighted average of the weighted average carbon intensities of the respective benchmarks. 6 This excludes proposals related to Japanese companies that included changes to the companies' articles of association. 7 Invested assets of products such as sustainably managed properties and infrastructure, and renewable energy. 8 Refer to "Calculating and reporting on climate change-related financing and advisory activities" in appendix 9 of the UBS Sustainability Report 2020. 9 GHG footprint equals gross GHG emissions minus GHG reductions from renewable energy and CO_2e offsets (gross GHG emissions include: direct GHG emissions by UBS; indirect GHG emissions associated with the generation of imported / purchased electricity (grid average emission factor), heat or steam; and other indirect GHG emissions associated with business travel, paper consumption and waste disposal). A breakdown of our GHG emissions (scope 1, 2, 3) is provided in appendix 4 of the UBS Sustainability Report 2020.

UBS corporate lending to climate-sensitive sectors 2020

UBS has led an effort, together with UNEP FI and peer banks, to define an inventory of climate-sensitive activities based on TCFD, regulators' and rating agencies' climate risk definitions. The current inventory of UBS's exposure to climate-sensitive activities is summarized in the table below at the sector level.

UBS corporate lending to climate-sensitive sectors, 2020

Inventory of exposure to transition-risk-sensitive sectors, across the Investment Bank and Personal & Corporate Banking

	As of 31.12.20	
USD million, except where indicated	Gross exposure[1,2]	Share of total exposure to all sectors (%)
Climate-sensitive sector[3]		
Aerospace and defense[4]	962	0.3
Automotive[5]	966	0.3
Chemicals[6]	2,021	0.7
Constructions and materials[7]	3,905	1.4
Food and beverage[8]	1,754	0.6
Industrial materials[9]	151	0.1
Machinery and equipment[10]	2,778	1.0
Mining[11]	3,276	1.2
Oil and gas[12]	4,951	1.7
Plastics and rubber[13]	373	0.1
Primary materials[14]	249	0.1
Textile products and apparel[15]	1,128	0.4
Real estate[16]	13,357	4.7
Transportation[17]	2,337	0.8
Utilities[18]	493	0.2
Total exposure to climate-sensitive sectors	38,700	13.7
Total exposure to all sectors	283,376	100.0

1 Banking products across the Investment Bank and Personal & Corporate Banking. IFRS 9 gross exposure including other financial assets at amortized cost, but excluding cash, receivables from securities financing transactions, cash collateral receivables on derivative instruments, financial assets at FVOCI, irrevocable committed prolongation of existing loans and unconditionally revocable committed credit lines, and forward starting reverse repurchase and securities borrowing agreements. 2 Significant concentrations (or lack thereof) are further described as of which USD x.x billion. 3 Climate-sensitive sectors defined as business activities that are rated as having high, moderately high, moderate, or moderately low vulnerability to transition risks, including policy, technology, and demand risk factors. Further breakdown of the methodology available in UNEP FI Phase II heatmap report. 4 Air transport: USD 0.8 billion. 5 Manufacturing of motor vehicles and parts: USD 0.9 billion. 6 Manufacturing of chemicals: USD 1.9 billion, wholesale of chemicals: USD 0.1 billion. 7 Construction: USD 3.2 billion, Manufacturing of cement: USD 0.5 billion. 8 Wholesale trade of grain and food products: USD 1.6 billion. 9 Manufacturing of iron: USD 0.08 billion. Manufacturing of basic metals: USD 0.06 billion. 10 Manufacturing of other products (metal-based): USD 1.0 billion. Manufacturing of medical equipment: USD 0.6 billion. Manufacturing of electrical equipment: USD 0.6 billion. Manufacturing of computers / IT: USD 0.5 billion. 11 Wholesale of metal / metal ores: USD 2.8 billion. Quarrying: USD 0.3 billion. Mining of coal and lignite: USD 0.02 billion. 12 Wholesale of refined petroleum: USD 2.3 billion. Wholesale of crude petroleum: USD 1.0 billion. Extraction of oil and gas: USD 0.7 billion, midstream oil and gas: USD 0.4 billion, integrated oil and gas: USD 0.4 billion. 13 Manufacturing of plastic goods: USD 0.3 billion. 14 Growing of food, nuts and seeds: USD 0.2 billion, cattle: USD 0.01 billion, other livestock: USD 0.02 billion. 15 Manufacturing of jewelry: USD 0.5 billion. Manufacturing of textiles: USD 0.3 billion. 16 Developing / selling real estate: USD 13.4 billion. In addition, UBS has residential and commercial real estate mortgage lending totaling USD 196.3 billion across Global Wealth Management and Personal & Corporate Banking. 17 Transit systems: USD 0.9 billion, road freight: USD 0.8 billion, passenger ships: USD 0.3 billion, sea freight: USD 0.2 billion. 18 Production and distribution of electricity (moderate carbon exposure): USD 0.3 billion, nuclear power generation: USD 0.2 billion, production and distribution of electricity (high carbon exposure): >USD 0.01 billion.

UBS