DBS

Live more,
Bank less

OUR PATH TO

NET ZERO

SUPPORTING ASIA'S TRANSITION
TO A LOW-CARBON ECONOMY

EXECUTIVE SUMMARY

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List of abbreviations

Abbreviations (alphabetical order)	
AER	Annual efficiency ratio
AR6	IPCC's Sixth Assessment Report
BF-BOF	Blast furnaces-basic oxygen furnace(s)
CCUS	Carbon capture, utilisation and storage
CIX	Climate Impact X
CO_2	Carbon dioxide
CRREM	Carbon Risk Real Estate Monitor
DCM	Debt capital markets
DRI-EAF	Direct reduced iron-electric arc furnace(s)
EAF	Electric arc furnaces
EAF-Scrap	Scrap-based electric arc furnace(s)
ECM	Equity capital markets
EU	European Union
EV	Electric vehicle(s)
GDP	Gross domestic product
GHG	Greenhouse gas(es)
IATA	International Air Transport Association
IBG	Institutional Banking Group
ICE	Internal combustion engine
IEA	International Energy Agency
IEA NZE	International Energy Agency's Net Zero Emissions by 2050 Scenario
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
$kgCO_2/MWh$	Kilograms of CO_2 emissions per megawatt hour of power produced
$kgCO_2/p\text{-}km$	Kilograms of CO_2 emissions per passenger kilometre travelled
$kgCO_2/vehicle\text{-}km$	Kilograms of CO_2 from tailpipe emissions per vehicle kilometre travelled
$kgCO_2e/kg$	Kilogram of CO_2 equivalent per kilogram of crude steel produced
LLE	Loans and loan equivalent(s)
MPP	Mission Possible Partnership
$MtCO_2e$	Million tons of CO_2 equivalent
N/A	Not applicable
NGFS	Network for Greening the Financial System
NZBA	Net-Zero Banking Alliance
O&G	Oil & Gas
OEM	Original equipment manufacturer(s)

List of abbreviations

PCAF	Partnership for Carbon Accounting Financials
REIT	Real estate investment trust(s)
SAF	Sustainable aviation fuel
SGX	Singapore Exchange
SPV	Special purpose vehicle(s)
TCFD	Task Force on Climate-Related Financial Disclosures

Executive summary

Addressing climate change is one of the greatest challenges today. International agreements, such as the Paris Agreement and the Glasgow Climate Pact, have garnered international consensus around the urgency of addressing this challenge by setting a clear goal of limiting global warming to 1.5°C above pre-industrial levels, halting and reversing global warming through reaching a net zero level of greenhouse gas (GHG) emissions by 2050. International agencies have spelled out the scale of this challenge, which requires an overhaul of all elements of the global economy, and time is of essence here.

We are mindful of the many environmental and social challenges in front of us, but we have chosen to prioritise climate change as the most immediate issue today given its urgency and how it is interrelated with other long-term and far-reaching environmental and social concerns.

In the context of climate change, we not only want to ensure a healthy planet but also accomplish a fair and just transition. As a bank, we believe that engaging with and empowering our clients to reduce their GHG footprint can be an important part of our contribution. It is our responsibility to reduce GHG emissions from our own operations and, more importantly, to engage with our clients to reduce their GHG footprint through the activities we finance. This category of GHG emissions is generally referred to as Category 15 downstream Scope 3 financed emissions attributed to a financial institution's financing activities[4].

DBS became a signatory of the Net-Zero Banking Alliance (NZBA) in October 2021. To cement our net zero commitment and fulfil our responsibilities as a NZBA signatory, we have established the very first set of targets for our Scope 3 financed emissions attributable to us as a bank. These targets will guide us on strategically channelling financing away from high-emitting activities towards low-carbon alternatives. By doing so, we expect to contribute by rebalancing the economic equation for the real economy and to accelerate the transition while facilitating sustainable and inclusive growth and prosperity. Through setting our net zero targets, we also protect our shareholders from the risks associated with being left behind in the transition and help them gain from the tailwinds against this megatrend.

We see the case for setting net zero targets as multi-faceted:

1. **Decarbonisation is a societal responsibility.** Banks have a critical role to play in mobilising capital to avoid the worst consequences of climate change, such as extreme weather conditions and uncontrolled temperature increases around the world. When it comes to DBS, this role is embedded not just in our sustainability pillars but in the origin of our founding name and purpose as The Development Bank of Singapore. Besides supporting Singapore's national effort in achieving net zero, we are also taking a proactive approach to accelerating the transition for the benefit of people across the region in which we operate. This means building a financing approach that facilitates transition, thereby protecting those who are most at risk from the devastating effects of climate change, and doing so in a way that enhances the ability of the region (and beyond) to achieve inclusive and sustainable growth.

[4] According to Greenhouse Gas Protocol, this type of GHG emissions is classified as Category 15 and can be described as downstream Scope 3 emissions associated with a financial institution's investment and financing activities. https://ghgprotocol.org

2. **Decarbonisation is a risk management imperative.** We believe that governmental and corporate efforts to decarbonise will radically change almost every aspect of the economy. Those that adapt and lead the transition will likely reap the benefit of economic reward. Conversely, those that fail to adapt may risk being left with stranded assets and uneconomical businesses. For financial institutions, unpreparedness for climate change may translate into material transition and physical risks of climate change. Strengthening climate risk management capability has been our strategic priority, with progress made in climate risk assessment, measurement and scenario analysis (details can be found in our 2021 Sustainability Report[5]).

3. **Decarbonisation is a business opportunity.** We see net zero as one of the key investment themes of the future. Many of our clients share the same philosophy as us and are developing and implementing robust plans to decarbonise and transition. We expect that these plans will inevitably involve investments, be it in new lines of low-carbon businesses and technologies, proactive retirement of carbon-intensive assets at risk of being stranded or obsolete, or reconfiguring the supply and distribution chains. This paradigm shift will affect all industries in the coming decades and will require massive investment. As estimated by the Intergovernmental Panel on Climate Change (IPCC) in 2021, this investment would amount to an additional USD3.5 trillion annually[6].

We present here a set of targets for our Scope 3 financed emissions which will guide us onto a path for DBS' financing to align with the world of net zero by 2050. Our approach is underpinned by the following four guiding principles:

a) Grounding our targets in science

b) Aspiring towards net zero while ensuring inclusive growth and prosperity

c) Targeting 2050 as the goal for net zero emissions with 2030 as the first interim checkpoint

d) Building partnerships with clients on the transition journey

We have included seven sectors across our markets in setting our emissions reduction targets, and they are: 1) Power, 2) Oil & Gas (O&G), 3) Automotive, 4) Steel, 5) Aviation, 6) Real Estate and 7) Shipping. We are also paving the way for future decarbonisation roadmaps by setting data coverage targets for the Food & Agribusiness, and Chemicals sectors.

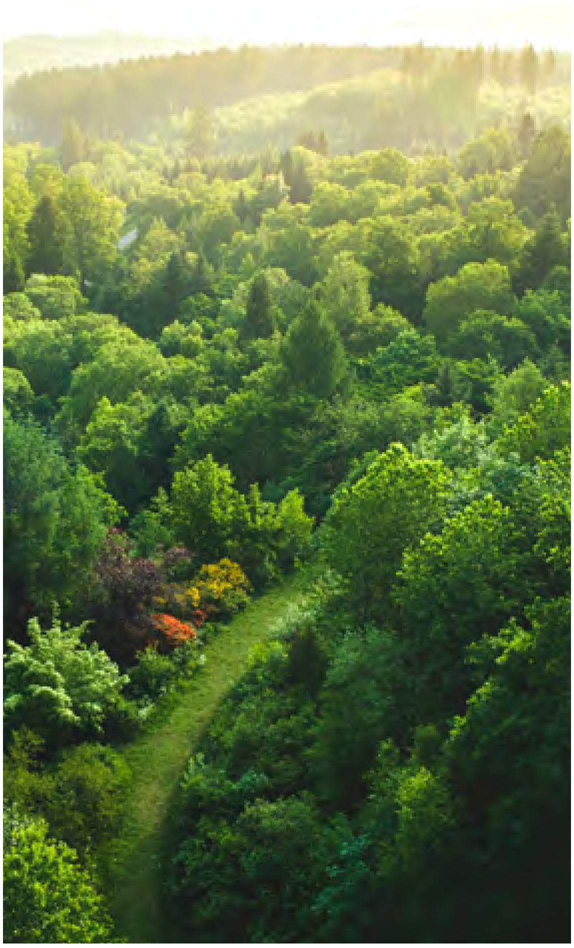
Given that these sectors collectively account for a majority of global GHG emissions, this sectoral coverage allows our targets to account for a material share of GHG emissions attributable to our corporate financing and capital markets activities. **They also represent one of the most comprehensive set of targets in the global banking industry thus far.**

By having such broad sectoral coverage, we anticipate that cross-sectoral synergies in terms of decarbonisation will be realised. For instance, when a power grid is being decarbonised, we would expect the GHG footprint of other sectors dependent on that grid, such as Real Estate and Automotive given the growth of electric vehicles (EV), to decarbonise as well. Over time, economy-wide decarbonisation can be achieved through these sectoral targets.

[5] https://www.dbs.com/iwov-resources/images/sustainability/reporting/pdf/web/DBS_SR2021.pdf?pid=sg-group-pweb-sustainability-pdf-dbs-sustainability-report-2021

[6] IPCC's Special Report – *Chapter 4 Strengthening and Implementing the Global Response.* https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter4_Low_Res.pdf

In order to set GHG emissions reduction targets consistent with net zero by 2050, we adopted globally-recognised, science-based, and net zero-consistent pathways which are aligned with limiting global warming to 1.5°C above pre-industrial levels. Despite widespread recognition that many emerging markets will, and should move to net zero at slower rates than their developed counterparts, we did not adjust our net zero approach to our emissions reduction target setting just because many of our markets[7] are based in a region expected to achieve a slower transition path. This implies that our emissions reduction targets are more ambitious than the current Nationally Determined Contributions (NDCs) of many of the countries in which we operate. DBS' targets aim directly for net zero by 2050, setting us on a path to be proactive and anticipatory, rather than merely reacting to stated governmental policy.



We have established different sets of targets for the select sectors as described below:

1 Target set one – emissions intensity reduction targets

For these six sectors (Power, Automotive, Aviation, Shipping, Steel and Real Estate), we are making a commitment to reduce the emissions intensity of our financing. While these sectors are instrumental to delivering essential goods and services and sustaining livelihoods in the economy, their activities need to become less carbon-intensive over time. The widespread technological innovation and transformation implied by net zero can spur higher growth and create material economic opportunities. In setting these emissions intensity reduction targets, we support these industries in their decarbonisation efforts.

- For four of these six sectors (**Power, Automotive, Steel** and **Aviation**) – we are expressing the target metric directly in terms of emissions intensity.
- For two of the six sectors (**Shipping** and **Real Estate**) – we are expressing the target metric as an "Alignment Delta" expressed as a percentage (%), which is derived based on emissions intensity. This Alignment Delta measures how our clients, constituents in sectors made up of varying asset types and activities, compare to a range of diverse underlying benchmarks. While this approach is well established in the shipping sector, it is novel in real estate. Real estate, made up of commercial, residential, hospitality and other assets, is an important sector in our Institutional Banking Group (IBG) portfolio. This Alignment Delta method has allowed us to include a much wider range of property types and countries in our Real Estate targets than what other banks have announced thus far.

[7] DBS is present in 18 markets globally, including six core markets in Asia, namely Singapore, Hong Kong, China, India, Indonesia and Taiwan.

2 Target set two – absolute emissions reduction targets

For **O&G**, we have chosen to set a target to reduce absolute financed emissions covering Scope 1, Scope 2 and Scope 3 emissions. We aim to reduce emissions from the O&G sector in line with the International Energy Agency's Net Zero Emissions by 2050 Scenario (IEA NZE)[8]. The IEA NZE describes a path for industrial sectors and countries that cumulatively arrives at net zero emissions by 2050 in line with scientific guidance on what is needed to avoid more than 1.5°C warming above pre-industrial levels. It places minimal reliance on carbon removal technologies and nature-based solutions which has become an industry reference point for what is required to achieve net zero by 2050.

As we progress towards our goal of reducing financed emissions from the O&G sector, we will continue working with companies in this sector of which many could be drivers of transition by investing in low-carbon energy sources and associated infrastructure.

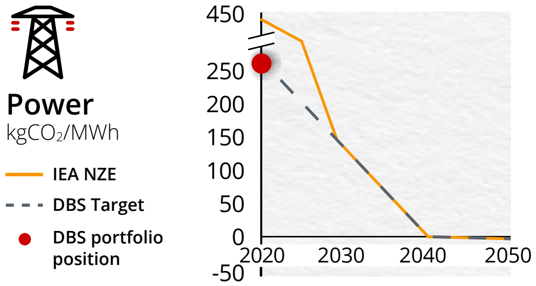
3 Target set three – data coverage targets

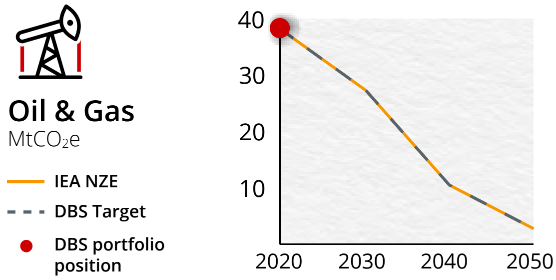
For **Food & Agribusiness** and **Chemicals**, we have set data coverage targets at this juncture. Both sectors are diverse and hard-to-abate. Having gone through the process of the baselining and target setting exercise, it is evident to us that there is still limited industry consensus on the pathways to net zero target. Additionally, public disclosure of the relevant emissions intensity data is limited. Based on these two points, it is premature to set emissions reduction targets for these two sectors currently. However, we believe one of the first steps towards transition is quantification and disclosure of GHG emissions. To facilitate that, we have set data coverage targets committing us to encourage our clients to improve their GHG emissions reporting, thereby increasing emissions and production data coverage over time that will, in turn, enable us to set decarbonisation targets in the future.

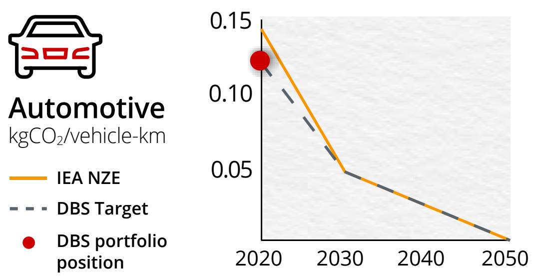
[8] IEA (2021), Net Zero by 2050, IEA, Paris. https://www.iea.org/reports/world-energy-model/net-zero-emissions-by-2050-scenario-nze

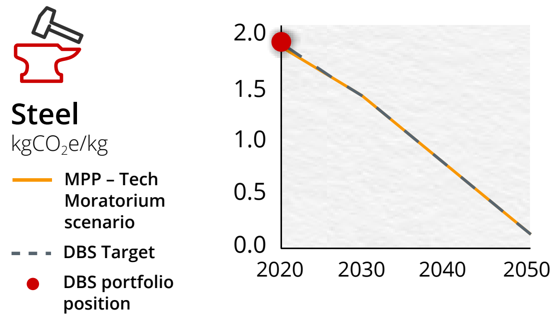
Executive summary

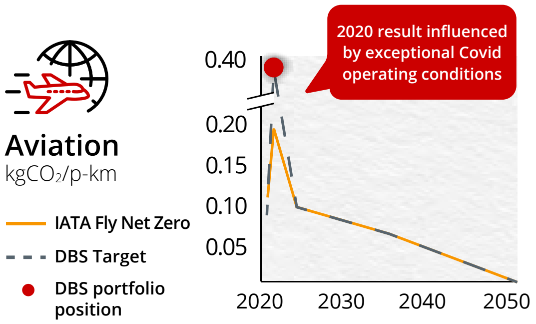
Our decarbonisation glidepaths and targets are summarised below and details can be found in subsequent chapters for the individual sectors.

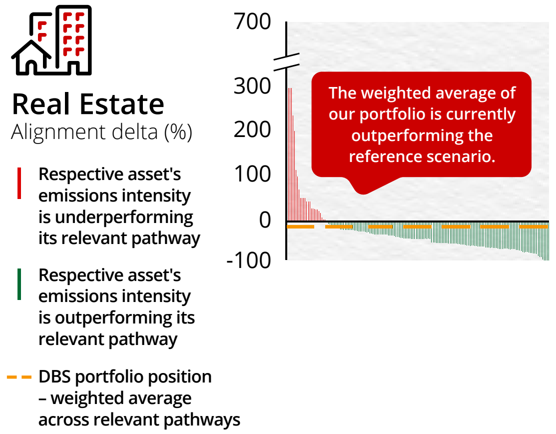


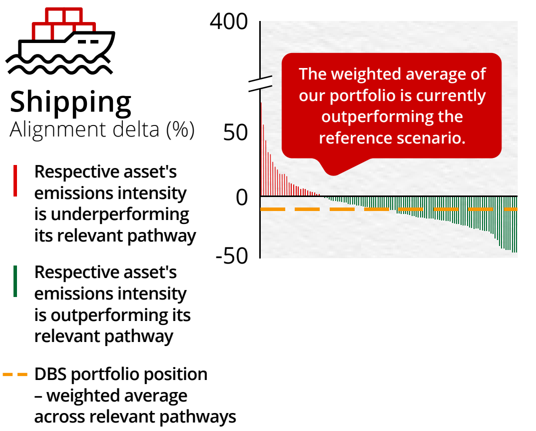


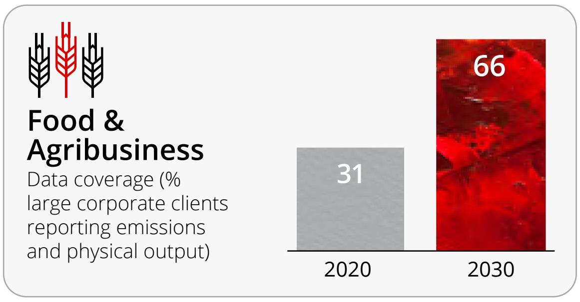


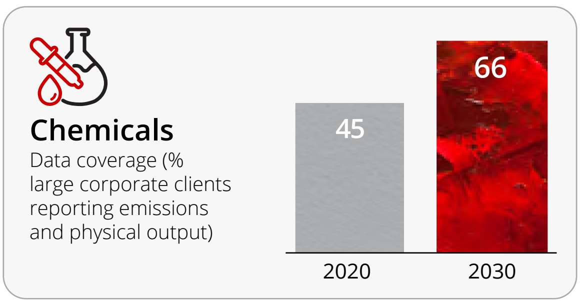












Comprehensive inclusion of our corporate financing activity – This is one of the most comprehensive sets of targets in the global banking industry. Our emissions reduction targets for Scope 3 financed emissions have included those we finance via corporate financing, which includes lending of our IBG portfolio (i.e. loan and loan equivalent), equity capital markets (ECM) and debt capital markets (DCM) activities[9]. We have used drawn facilities for loan and loan equivalent to compute our financed emissions, in line with guidance from the Partnership for Carbon Accounting Financials (PCAF).

Furthermore, these subsectors and types of financings represent the vast majority of our financed emissions, and constitute 31%[10] of our outstanding IBG portfolio.

In addition to targeting net zero by 2050, we have also set interim targets for 2030. While the path to net zero relies on as-yet undeveloped technological innovations, there is a clear, near-term imperative to materially reduce GHG emissions by scaling up and deploying existing and commercially available technologies. Our 2030 interim targets recognise this. Many of the key decarbonisation levers to achieve our interim targets focus on allocating more financing towards low-carbon activities.

Our 2030 interim targets were calibrated to be in line with our chosen science-based reference pathways regardless of our starting point (see table on the next page). In the Automotive, Real Estate and Shipping sectors – and especially the Power sector – our efforts to date mean that our portfolio has lower carbon emissions than the global or regional average. For others, such as Steel, the regional nature of our portfolio means that we start above the global average and therefore require a greater effort to bridge the gap.

Through our net zero journey, promoting climate change awareness and recognition along with its risks and opportunities is as important as financing transition activities, as this helps preparedness and drives both organisational and individual behavioural change. For our clients that have existing and future transition plans, our sectoral targets for the nine sectors highlight our commitment to supporting them on their transition journey.

We strive to realise our vision of being the **Best Bank for a Better World**. We recognise that our success in meeting our net zero targets is highly dependent on our clients' commitments and actions to decarbonise. We are also keenly aware of the scale of efforts required to achieve the targets and to fulfil our commitment as a NZBA signatory. From this point onwards, we intend to report our progress against our targets for the nine sectors on an annual basis and review our targets and our approach at least every five years. In addition, we have begun the work to operationalise and embed the targets into our corporate financing and client engagement activities.

[9] Please note that the financing activities covered in our Scope 3 financed emissions baselining approach have expanded to include DCM and ECM activities since the publication of our Sustainability Report in March 2022.

[10] Figure reported as approximately 34% in DBS' Sustainability Report 2021 has since been readjusted after further assessment.

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Sector	Sub-sectors & types of financings included	Emission scopes included	Target metric	Reference scenario	2020 baseline *(and reference start-point)*[11]	2030 target *(reduction vs. baseline)*	2050 target
Power	• Power generation • Power equipment manufacturers	Scope 1 (generation) Scope 3 (equipment)	Emissions intensity (kgCO_2/MWh)	IEA NZE	260 (438)	138 (-47%)	0 (-100%)
Oil & Gas	• Upstream • Downstream • Integrated	Scope 1-3	Absolute financed emissions (MtCO_2e)	IEA NZE[12]	38.6 (N/A)	27.7 (-28%)	3.0 (-92%)
Automotive	• Automotive OEMs • Captive automotive finance companies[13] • Automotive distributors • Dedicated powertrain manufacturers	Scope 3 (tailpipe emissions of passenger vehicles)	Emissions intensity (kgCO_2/vehicle-km)	IEA NZE[14]	0.120 (0.144)	0.052 (-57%)	0 (-100%)
Steel	• Steel production	Scope 1-2	Emissions intensity (kgCO_2e/kg)	Mission Possible Partnership – Tech Moratorium scenario	1.95 (1.90)	1.42 (-27%)	0.14 (-93%)
Aviation	• Airlines • Aircraft leasing companies • Secured aircraft financing	Scope 1 for airlines and secured aircraft financing Scope 3 for aircraft leasing companies	Emissions intensity (kgCO_2/p-km)	IATA Fly Net Zero[15]	2020: 0.389 (0.191) 2019: 0.088 (0.107[16])	0.074 (-16%)[17]	0 (-100%)[18]
Real Estate	• Real estate owner-operators • Real estate special purpose vehicles • Real Estate Investment Trusts (REITs)	Scope 1-2 (operating emissions)	Alignment delta (%)	Carbon Risk Real Estate Monitor – Global Decarbonisation Pathways	-14.0%	≤0% (-42%)	≤0% (-95%)
Shipping	• Individual vessel financing	Scope 1	Alignment delta (%)	International Maritime Organization – Poseidon Principles	-11.8%	≤0% (-23%)	≤0% (-71%)
Food & Agribusiness	• Primary growers, producers and processors • Integrated agribusiness companies • Food and beverage manufacturers • Food retail • Animal protein and feed producers	N/A	Data coverage (% large corporate clients reporting emissions and physical output)	N/A	31% (N/A)	≥66%	N/A
Chemicals	• Petrochemicals • Commodity & diversified chemicals • Industrial gases • Specialty chemicals • Fertilisers & agrichemicals	N/A	Data coverage (% large corporate clients reporting emissions and physical output)	N/A	45% (N/A)	≥66%	N/A

[11] Calculated for DBS' clients as of August 2021; latest emissions data per client from 2020, or latest date in lieu of 2020 if required.

[12] Modified to additionally include emissions from methane flaring.

[13] Captive automotive finance companies refer to automotive finance or leasing or mobility service companies owned by and largely supporting captive brand sales of an automotive company in our value chain.

[14] Rebased to account for emissions only from new vehicles in each period and not emissions from the full global stock.

[15] Rebased to the IEA NZE emissions intensity for Aviation in 2020 as IATA Fly New Zero does not have 2019 data whereas the IEA NZE does, and because IATA Fly New Zero only accounts for passenger numbers and not passenger-kilometers.

[16] IEA NZE emissions intensity for Aviation in 2019, as IATA Fly Net Zero does not have data for 2019.

[17] Reduction vs. baseline for the Aviation sector calculated versus 2019, not 2020.

[18] Reduction vs. baseline for the Aviation sector calculated versus 2019, not 2020.