

# Air France–KLM: Come fly with SLBs

Josephine Richardson (\*), Stéphanie Mielnik

Air France-KLM is currently speaking to investors on its inaugural sustainability financing framework,<sup>1</sup> and is in the market today with two Sustainability-Linked Bonds (SLBs). Initial press reports have been critical of the proposed purpose of such debt, suggesting that the repayment of a state-guaranteed loan granted during the pandemic is not an appropriate use of sustainable financing.<sup>2</sup>

Examining the public information on this deal, we highlight the following positive elements of the SLB proposal:

- SLBs are complementary to ‘use-of-proceeds’ products such as green bonds in mobilising capital for the climate transition, as they provide an opportunity to improve disclosure and climate performance at a broader, corporate level. By issuing SLBs, Air France-KLM is shifting from post-pandemic government support to debt products that both **increase transparency and their commitment to reducing emissions**.
- The Key Performance Indicators (KPIs) included in the SLB are intensity measures and baselined to 2019, i.e. before the pandemic when volumes were high. Emissions dropped in 2020 in absolute terms, but increased on intensity measures. **Setting the reduction from 2019 is therefore more ambitious, and the probability of pay-outs in the SLB structure commensurately higher**. We estimate it at around 50%.
- The debt is short dated (3Y and 5Y), so only the 2025 observation date is used. The post-trigger period is short, which limits the value of the step-up coupon. **Using the AFII option pricing model,<sup>3</sup> we estimate the value for the 5y bond SLB premium to be 7.5bp**. While significant for an investment grade issuer, this has a more muted impact on the funding spreads for Air France-KLM.<sup>4</sup> Nevertheless, it is **a positive step to make a public climate commitment**, which will increase transparency in a challenging sector.

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<sup>1</sup> “[Inaugural Sustainability-Linked Bond](#)”, Air France-KLM, Jan 2023.

<sup>2</sup> “[Air France-KLM Taps Contentious ESG Market to Repay State Aid](#)”, Bloomberg, 4 Jan 2023.

<sup>3</sup> This is discussed in more details later in this note, and for full details please also see “[An option pricing approach for sustainability-linked bonds](#)”, AFII, 8 Nov 2022.

<sup>4</sup> The 5y SLB has an initial pricing target of 8.5%, source Bloomberg.

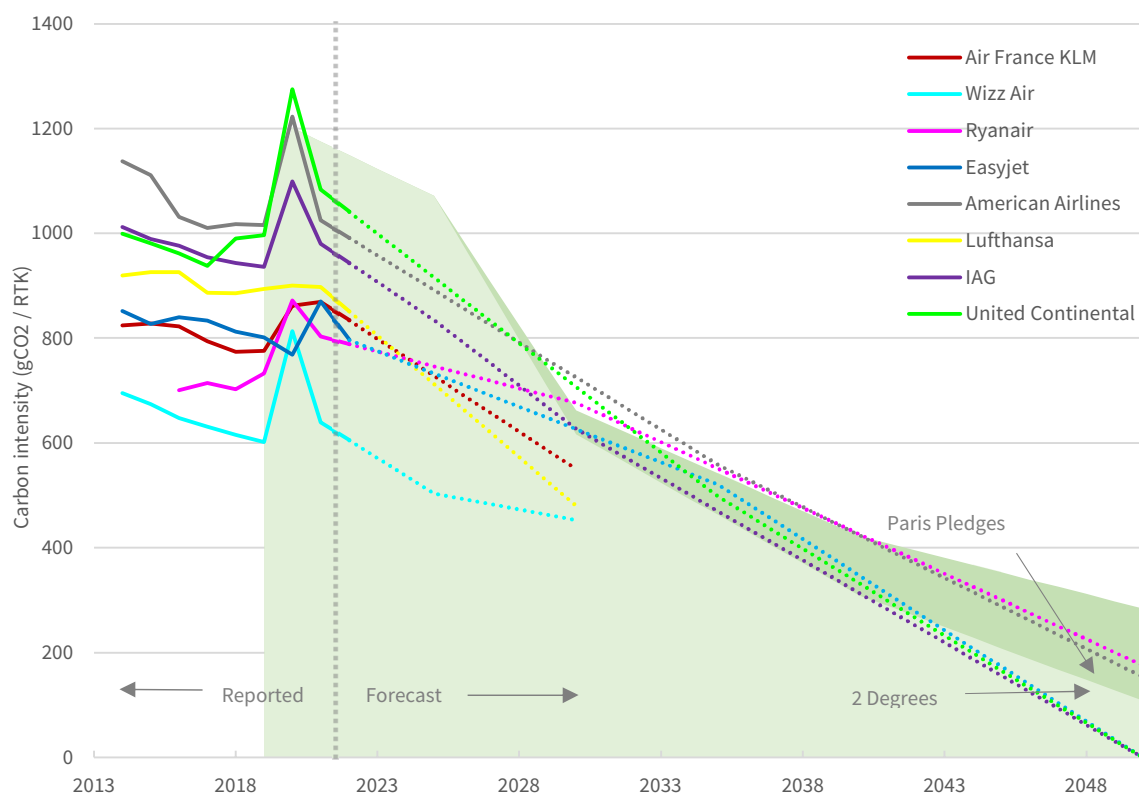
## Airline industry

The airline industry is responsible for over 2% of global emissions.<sup>5</sup> The International Energy Agency (IEA) categorises the sector as ‘Not on Track’,<sup>6</sup> and reports that a 10% reduction from 2019 baseline is required in absolute emissions to be in line with net zero scenario milestones. Activity growth is currently outpacing fuel efficiency improvements, and so other measures will be needed to curb emissions.

Aviation is one of the sectors covered by the Transition Pathway Initiative (TPI),<sup>7</sup> to which most net zero targets from the industry seem to be aligned (see Figure 1). However, some airlines, including Air France-KLM, have targets only to 2030. Furthermore, having adequate targets does not mean the airlines have credible plans to achieve them.<sup>8</sup>

Aviation is a sector which needs more focus and attention. Increasing SLB issuance in the space will improve disclosure and debate for climate solutions in this area.

Figure 1. Reported and targeted forward-looking carbon emissions of the airline sector. Source: Transition Pathway Initiative, accessed 5 Jan 2023.



<sup>5</sup> The [Air Transport Action Group](#) (ATAG), an airline funded NGO, reports this as 2.1%. [The International Energy Agency](#) (IEA) reports “over 2% global energy-related CO<sub>2</sub> emissions in 2021”, when total absolute emissions from the airline sector was 72% of 2019.

<sup>6</sup> “[Aviation Sector](#)”, IEA, accessed 5 Jan 2023.

<sup>7</sup> The [Transition Pathway Initiative](#) is an independent NGO providing research and data into carbon pathways.

<sup>8</sup> The Air France-KLM Sustainable Financing Framework, for example, is vague about how precisely it plans to achieve its targeted emissions reductions to 2030, and to further unquantified targets in 2050.

## Air France-KLM existing debt

Air France-KLM (Ticker AFFP) has six securities outstanding (as shown in Figure 2). One is a convertible bond, one is a subordinated perpetual, and four are traditional bonds with maturity dates between Jul 24 and Dec 26. Two were issued recently in Jul 2021 raising €800mm.

Figure 2. Air France-KLM outstanding debt. Source: Bloomberg accessed 5 Jan 2023.

Bond	Maturity	Issue Date	Amount		Mid
			Outstanding	Currency	Spread
AFFP €3 24s	01-Jul-24	01-Jul-21	300,000,000	EUR	55
AFFP €1.875 25s	16-Jan-25	16-Jan-20	750,000,000	EUR	338
AFFP €0.125 26s	25-Mar-26	25-Mar-19	499,999,987	EUR	411
AFFP €3.875 26s	01-Jul-26	01-Jul-21	500,000,000	EUR	379
AFFP \$4.3 26s	15-Dec-26	15-Dec-16	145,000,000	USD	234
AFFP €6.5 PERP	PERP	23-Nov-22	305,300,000	EUR	1,957

In 2020, after the pandemic temporarily decimated air travel, Air France-KLM received at least €9bn in state guaranteed loans from the French and Dutch governments,<sup>9</sup> as a temporary exception to European Commission state aid restrictions.<sup>10</sup> As airlines begin to look beyond the pandemic, repaying this aid is a priority in order to remain competitive in a consolidating market.<sup>11</sup>

Figure 3. Air France-KLM EUR traditional bond spreads. Source: Bloomberg, accessed 5 Jan 2023.

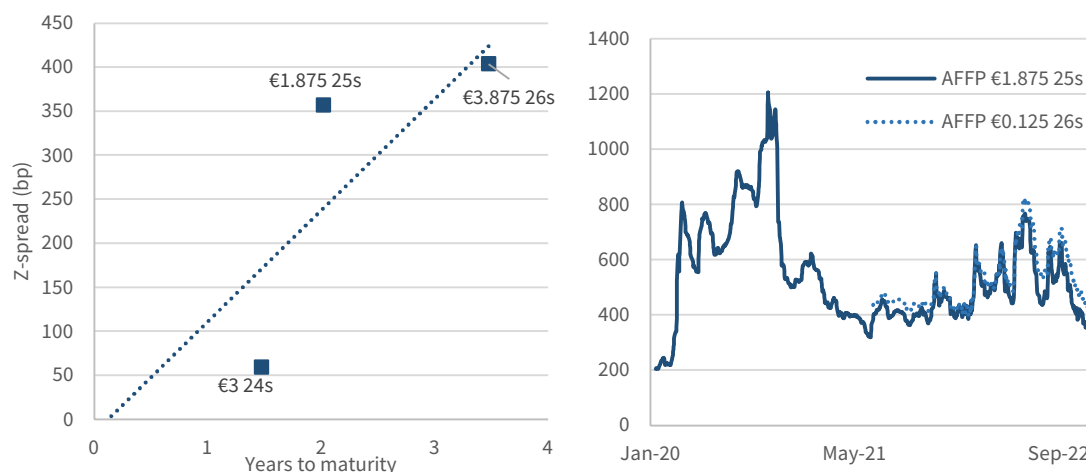


Figure 3 shows Air France-KLM’s bond spreads. The 1.875 25s was issued just prior to the pandemic, and although it is still trading at double its issuance spread despite rolling down from a 5 year to a 2 year bond, it is well off the wides of 2020 and 2022.

<sup>9</sup> “[Coronavirus: Air France-KLM secures billions in government aid](#)”, BBC, 24 Apr 2020.

<sup>10</sup> “[State aid: Commissions approves up to €4 billion French measure to recapitalise Air France](#)”, European Commission, 6 Apr 2021.

<sup>11</sup> “[Air France-KLM hobbled by state aid while rivals pounce on deals](#)”, FT, 1 Feb 2022.

## Air France–KLM sustainability financing framework

SLBs are an accessible form of financing as there are no restrictions on ‘use-of-proceeds’. They have allowed a wider diversity of issuers to come to market including several High Yield (HY) issuers.<sup>12</sup> Air France-KLM is not rated by the major rating agencies, but carries a CCC rating from Egan Jones. Its spread has widened 3x since before the pandemic. Figure 4 shows this may be a relative outperformance compared with some of the better rated airlines. Nevertheless, financing costs across the sector are materially higher than three years ago, and so strategically that may be a reason for the industry to turn to SLBs.<sup>13</sup>

Figure 4. European Airline CDS spreads. Source: Bloomberg, accessed 5 Jan 2023.

CDS Reference Name	Rating	01-Jan-20	2020 wides	2022 wides	04-Jan-23	Widening since Jan 20
Societe Air France SA	CCC	211	987	997	633	3.0x
Deutsche Lufthansa AG	BB	52	456	625	290	5.6x
International Consolidated Airlines Group	BB	31	606	731	520	16.9x

The Air France-KLM sustainability financing framework reveals one KPI<sup>14</sup> which is emissions intensity. This is defined as Scope 1 (emissions from direct activities) plus Scope 3 (upstream emissions from fuel production) divided by the sum of Revenue-Ton-Kilometre (freight travel) and Revenue-Passenger-Kilometre (passenger travel). The SPO<sup>15</sup> estimates that of the Air France group 2019 footprint, Scope 1 contributes 73.7% and Scope 3, linked to fuel production, a further 18.7%, totalling 92.4%.<sup>16</sup>

The targets given are to reduce this emissions intensity compared to a 2019 benchmark by 10% in 2025 and by 30% in 2030. The financing framework reports that these targets were validated by the Science Based Target initiative as being compatible with a ‘well below 2°C’ in November 2022. Given that SBTi validates targets between five and ten years from submission,<sup>17</sup> our interpretation is that only the 2030 target is validated.

Air France-KLM has chosen emissions intensity measures and set a baseline in 2019 in its SLB Framework. This is a time before pandemic restrictions dramatically affected air travel; 2020 was the peak year for this KPI. This makes the target more ambitious and harder to achieve, and therefore the investor is more likely to receive the step-up coupon. However, as detailed in our option pricing paper, investors should use the latest available data point as a reference point for pricing to reflect the current efforts needed by the issuer to achieve its target, which in Air France KLM’s case is the 2021 KPI level.

<sup>12</sup> In our earlier piece we show the bulk of SLB issuance has come lower down the rating spectrum, with 26% being HY; “[A review of Sustainability-Linked Bonds approaching KPI observation dates](#)”, AFII, 17 Nov 2022

<sup>13</sup> British Airways is the only airline to have issued SLBs to date. Their two SLBs are secured pass-through notes with maturities 2031 and 2035 and total outstanding notional of \$541mm. The KPI references fuel efficiency, emissions per passenger per kilometre with a target reduction of 8.1% from 2019 to 2025. Given these are not senior-unsecured bonds it is hard to draw pricing conclusions on the capital structure.

<sup>14</sup> “[Sustainability-Linked Financing Framework](#)”, Air France-KLM, Dec 2022.

<sup>15</sup> “[Second Party Opinion](#)”, Moody’s Investor Service, 20 Dec 2022.

<sup>16</sup> Scope 2 are estimated as 0.1% and the remaining Scope 3 such as embodied emissions from aircraft manufacturing are implied to be 7.5%.

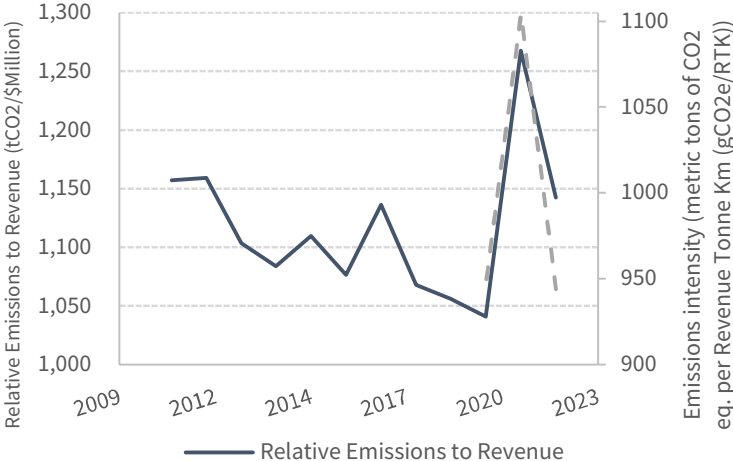
<sup>17</sup> “[FAQ](#)”, SBTi, accessed 5 Jan 2023.

# Pricing Air France-KLM SPTs

Using AFII’s option pricing approach for SLBs,<sup>18</sup> we estimate the probability of Air France-KLM meeting its SPTs. The first step is to calibrate the pricing parameters, drift, and volatility. There is insufficient historical data to calculate these precisely, therefore we use proxies to infer pricing parameters.

To estimate volatility, intensity per sales can be used as an acceptable proxy; it is likely to be highly correlated with the SLB’s KPI (see Figure 5) and has more data available. Using this proxy for the last 12 years, we estimate the historical volatility at 8.2%. Considering we empirically observe a surge in volatility when issuers reduce their emissions, we also evaluate the probabilities based on a beta parameter of 2 (i.e. doubling the historical volatility). This approach gives a figure of 16.40% which is used as an additional volatility scenario (or “tweaked level”).

Figure 5. Air France-KLM's scope 1+2 emissions intensity compared to revenue\*. Source, Bloomberg, AFII, accessed 5 Jan 2023.



\* only scope 1 emissions are used for 2015 and 2016. Our readers will note that scope 2 emissions account for less than 1% of total emissions.

Turning now to the drift, we first look at historical emissions reductions and forward-looking targets; according to the SPO<sup>19</sup>, the KPI fell at an annual average of 2.6% over 2016-19 and at an annual average of 1.6% over 2016-21. Looking forward, the company targets an annual decrease of 1.8% between 2019 and 2025, and 3.1% between 2025 and 2030, which is an average rate of 3.08% between 2019 and 2030 for the second observation date.

These proxies give two volatility levels and three drifts from which we can calculate the estimated probabilities of reaching the SPT in 2025 and 2030. The full results are shown in Figure 6. They suggest that the probability of Air France-KLM not meeting its target in 2025 has a range of 48-62%, and not meeting it in 2030, 48-78%.

From an investor perspective, we believe using a ballpark estimate of a 50% (approximately average) pay-out probability is helpful in terms of determining where the SLB should price to be fair valued.<sup>20</sup>

<sup>18</sup> “An option pricing approach for sustainability-linked bonds”, AFII, 8 Nov 2022.  
<sup>19</sup> “Second Party Opinion”, Moody’s Investor Service, 20 Dec 2022.  
<sup>20</sup> For a broader discussion on fair-value estimate using this approach, see “Notes on risk-neutral pricing of SLBs and step-down structures”, AFII, 29 Oct 2022.

5y SLB fair value spread = Probability of step-up x spread value of step-up = 50% x 15bps = 7.5bps <sup>21</sup>

We note this would apply to the initial pricing guidance of 8.5% for the long 5y note.

Of course, other market factors such as general new issue premiums and non-pecuniary greeniums should influence the pricing. Considering the high spread of the name as well as general market conditions and volatility, the 7.5bps premium due to optionality is likely to be marginal in term of overall pricing dynamics. Clearly, had the step-up been higher and pay-out longer, the issuer would likely have been able to capture a higher premium.

Figure 6. Estimated probabilities of missing Air France-KLM sustainability KPIs. Source: Bloomberg, AFII.

Scenario	Drift	Volatility	Probability to miss SPT 2025	Probability to miss SPT 2030
2016-2019 Drift, Implied Proxy Volatility	-1.60%	8.20%	62%	78%
2016-2019 Drift, Tweaked Volatility	-1.60%	16.40%	52%	59%
2016-2021 Drift, Implied Proxy Volatility	-2.60%	8.20%	54%	67%
2016-2021 Drift, Tweaked Volatility	-2.60%	16.40%	48%	52%
Targeted Drift, Implied Proxy Volatility	-1.8%/-3.08%	8.20%	62%	61%
Targeted Drift, Tweaked Volatility	-1.8%/-3.08%	16.40%	51%	48%

In conclusion, the Air France-KLM SLB issuance is a positive step in towards supporting its climate transition, delivering greater transparency and a commitment to reducing emissions, while providing financial benefits for investors.

<sup>21</sup> This does not include probability of default of the issuer to further reduce the value of the far-away coupons. This is typically trivial, but in Air France-KLM’s case it may not be.

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