Deutsche Post SLB: does it deliver?

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Deutsche Post (ticker DPWGR), a German logistics company rated A-, issued its first Sustainability-Linked Bond (SLB) on 26 Jun 2023. Group emissions, which include international logistics brand DHL, are driven by transport, predominantly air and road travel. The SLB makes commitments to reduce all emissions to levels verified by the Science Based Targets Initiative (SBTi).

We analyse the structure, assess its ambition level and price the option value of the associated Sustainability Performance Targets (SPT).[1]

Overall, there is much to commend this bond from a sustainability perspective. There is limited comparable issuance, so this SLB could establish an encouraging trend in supporting emissions reduction in the transport sector. We offer the following conclusions:

- **The structure offers strong sustainability targets - material Key Performance Indicators (KPIs) combined with ambitious SPTs.** This is encouraging to see in the transport sector, where highly rated issuance has been low.

- **The bond is insufficiently material.** A distant observation date means it does not achieve AFII's threshold for a material instrument (a "Greenback SLB").[2]

- **The ambitious SPTs translate into an option valued at 4.5bp (around 10% of spread).** A wide trading levels means this bond offers the chance to support an ambitious transition in a high-emitting transport issuer.

Figure 1. Bond z-spreads for Deutsche Post bonds. Source: Bloomberg, accessed 27 Jun 2023.



[1] For full details please see "An option pricing approach for Sustainability-Linked Bonds", AFII, 8 Nov 2022.
[2] Described in "Greenback SLBs: an impact standardisation proposal", AFII, 10 May 2023.

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Deutsche Post emissions

The Deutsche Post SLB includes two KPIs, linked to Scope 1+2 and Scope 3 emissions. Including Scope 3 emissions is to be commended, as it offers a more complete picture of the emissions of the issuer.[3]

The 2022 sustainability report shows annual emissions of 36.46 Mt CO_2e,[4] which are broken down in Table 1. The company's main business is freight transport which is included in Scope 1. Outsourced similar operations are in Scope 3.

Table 1. Deutsche Post 2022 emissions. Source: Deutsche Post.

Emissions category		Annual emissions (Mt CO_2e)
Scope 1		8.30
Scope 2		0.07
Scope 3	Air travel	19.38
Scope 3	Road travel	6.18
Scope 3	Sea travel	2.25
Scope 3	Buildings	0.28
TOTAL		36.46

Scope 3 figures are reported to include 'logistics-related GHG categories', which include upstream fuel and energy, upstream transport and distribution and business travel. The Second Party Opinion (SPO), provided by Sustainalytics, reports that emissions included in these two KPIs represented approximately 90% of total group emissions in 2021.[5] Sustainalytics rank both KPIs to be 'very strong', as they are material to the overall business.

Bond details

The DPWGR SLB (ISIN XS2644423035) was priced on 26 Jun 2023 for total size €0.5bn. The bond was 4.0x oversubscribed and was guided with initial pricing of mid swaps + 85bp before pricing at mid swaps + 45bp.[6] The bond has a fixed coupon of 3.375% per annum with a maturity date of 3 Jul 2033. This issue extends the duration of the outstanding bonds of Deutsche Post AG, which has not issued debt in over three years. The proceeds will primarily be used for general corporate purposes, including refinancing of existing financial liabilities.

The bond's interest rate is linked to two KPIs as defined in the Group's Sustainability-Linked Finance Framework published in November 2022.[5] More details are in the next section. The coupon steps up by 25bps if the company fails to achieve one or both SPTs by an observation date of Dec 2030. These SPT targets are also certified by the independent Science Based Target Initiative (SBTi) and thus reflect the current state of climate science. SBTi only verifies targets from between five and ten years from the date of submission, which can be a limiting factor in validating targets in SLBs with shorter maturities.[7]

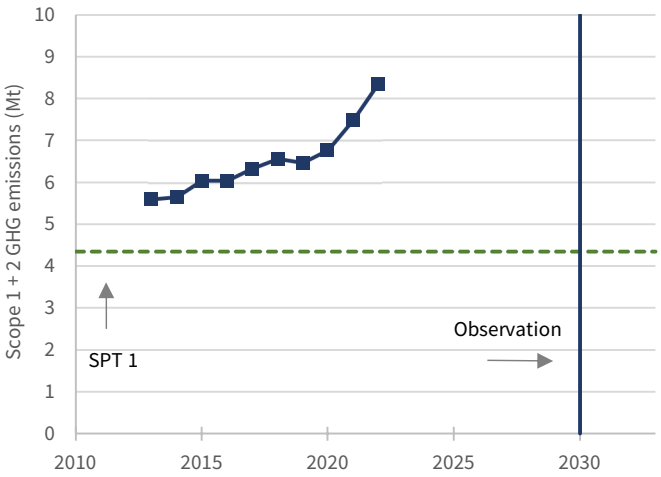
As the coupon is annual, only the payments in 2032 and 2033 will potentially be at the increased level. Most issuers follow a similar step-up in the SLB market but adjusted for the credit risk of the issuer, the value from the higher coupons is promising. We calculate, using an illustrative 50% probability of stepping-up, that the total value of increased coupons is 0.19%, well below the 1% required for Greenback SLB status.[2]

[3] "Scope 3 targets add impact to SLBs", IFR, 5 May 2023.
[4] "2022 ESG Presentation", Deutsche Post, accessed 26 Jun 2023.
[5] "Second-Party Opinion Deutsche Post DHL Group Sustainabililty-Linked Finance Framework", Sustainalytics, 21 Nov 2022.
[6] "IG Analysis EU: Deutsche Post Delivers Its First SLB Bond Deal", Bloomberg, 27 Jun 2023.
[7] "FAQ", SBTi, accessed 27 Jun 2023.

KPI details

KPI1

Figure 2. Deutsche Post KPI1 historic levels and target. Source: Company data and Bloomberg.

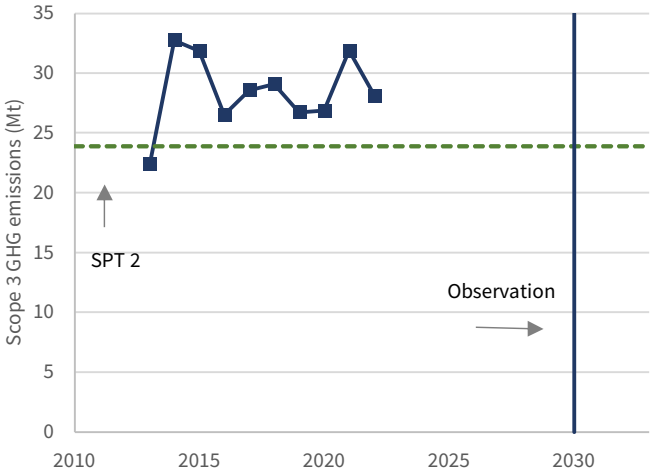


The first KPI for the SLB is a reduction in the absolute level of Scope 1 + 2 GHG emissions by 42% by 2030, with 2021 as the base year. Scope 1 emissions are the direct emissions from Deutsche Post's own aircraft and vehicles. Figure 2 presents the first SPT to be achieved, a reduction to 4.39 Mt of GHG emissions by the observation year, together with historical data. Scope 1 + 2 emissions have increased by an average of 4.5% from 2013 to 2022. However, it needs a 7.9% yearly reduction to achieve the target. The company plans to achieve this reduction by increasing the share of sustainable fuels to over 30% by 2030 and electrifying the pickup vehicles fleet to over 60%[8].

Though the company managed a reduction in Scope 2 emissions in 2022, it was offset by increases in Scope 1 emissions, which historically account for 95% of the Scope 1+2 emissions. The target looks extremely ambitious, considering the historic trend of emissions.

KPI2

Figure 3. Deutsche Post KPI2 historic levels and target. Source: company data and Bloomberg.



The second KPI is to reduce Scope 3 emissions by 25%. The magnitude of these emissions is three times higher than Scope 1 + 2 emissions. Upstream transportation services are the main driver for these emissions, constituting 21.5 Mt of GHG in 2022. As suppliers and contractors of Deutsche Post drive these emissions, it might need more efficient data collection and linkages with more sustainable contractors.

Figure 3 presents the SPT target to achieve and the historical trend of these emissions. We note the cyclicality of these emissions and no trend in the data. The historic data suggests a neutral drift and higher volatility in Scope 3 emissions, which suggests a higher probability of achieving this SPT.

Option pricing parameters

To apply the AFII Black-Scholes-based option pricing framework to this emissions option, we need emissions dynamics such as drift and volatility. Due to limited historical data and lack of real pricing data, we developed our options framework with certain assumptions geared towards the

[8] "2022 ESG Presentation", Deutsche Post, accessed 26 Jun 2023.

SLB market[1] Our approach requires us to assume the trend or drift parameter for historical emissions and the volatility of these emissions.

From the historic data shown in Figure 2 and Figure 3, we estimate these parameters for each KPI. We observe that the first KPI has a clear upward trend (the average change in emissions), and lower volatility (as measured by the standard deviation of the change in emissions). The second KPI has an average flat drift parameter, but with much higher volatility reflecting the cyclicality in the data.

Table 2 shows the pricing parameters used for the option pricing.

Table 2. DPWGR SLB option pricing parameters. Source: AFII.

Option Pricing KPI1		Option Pricing KPI2	
Observation Date KPI1	31-Dec-2030	Observation Date KPI2	31-Dec-2030
First Accrual Date KPI1	04-Jul-2031	First Accrual Date KPI2	04-Jul-2031
Step Direction	Up	Step Direction	Up
Coupon Step KPI1	0.125%	Coupon Step KPI2	0.125%
Latest level of KPI1	7.50	Current level of KPI	31.86
Date of KPI observation	31-Dec-2021	Date of KPI observation	31-Dec-2021
Strike	4.35	Strike	23.90
Volatility	4.00%	Volatility	10.00%
Drift	4.00%	Drift	0.00%
Forward	10.68	Forward	31.86

For KPI1, due to the positive drift and long length of time before observation date, the probability of missing the target is estimated as 100%. For KPI2, there is much higher volatility, and our model suggests a 79% probability of missing the target.

The structure of this SLB is to pay 25bp if one or both targets are missed; we assign 100% probability of paying the step-up, based on KPI1.

This translates into a total option value of 0.388% upfront or 4.5bp running. This may seem like a low price, but for an A- rated issuance which priced at mid swaps + 45bp, it is 10% of the spread, and should be material.

Comparable issuance

To understand the market context of this deal, we examine SLB issuance from similar industries. DPWGR is classified as 'Transportation & Logistics'; we have also included 'Airlines' as this represents the bulk of the emissions.

Table 3. SLB issuance in Transportation & Logistics or Airlines industries, denominated in USD/EUR/JPY billion, split by rating. Source: Bloomberg, accessed 26 Jun 2023.

	USD	EUR	JPY
A	1.1	0.0	20
BBB	0.1	0.5	0
BB	1.5	0.3	0
B	0.4	0.0	0
NR	0.3	2.3	0
TOTAL	3.3	3.1	20

Table 3 shows the total issuance denominated in USD, EUR or JPY, split by rating, in billions. Issuance in USD is spread by credit ratings, however half of the A-rated issuance is one secured note issued by British Airways (ISIN US11042CAA80). The EUR market seems more popular with unrated issuers.[9] This shows that highly rated SLB issuance, such as DPWGR, is uncommon.

[9] This rating distribution is confirmed more broadly in "SLBs: complementary, my dear investor", AFII, 13 Apr 2023.

Looking at the specific KPIs of the largest deals, we see four SLB issuances worth mentioning.

In the aviation sector most recently, Air France-KLM, a major French airline, issued two SLBs in Jan 2023 referencing emissions intensity (ISINs FR001400F2R8 & FR001400F2Q0). Both Scope 1 and Scope 3 were included and estimated as contributing 73.7% and 18.7% of total emissions, respectively.[10] Etihad, an Emirati airline, issued a sukuk SLB in Nov 2020 also referencing emissions intensity (ISIN XS2245508044). Scope 3 emissions were not included,[11] and rather than paying an increased coupon, carbon offsets were to be purchased in the event of missing the target.[12]

Another SLB issuance within the transport and logistics sector with absolute emissions targets was issued by Aeroporti di Roma, the company that manages Rome's two largest airports. It issued an SLB in Apr 2021 and referenced three KPIs (ISIN XS2337326727). The first was absolute Scope 1 + 2 emissions, and the second was ACA Level 4+ accreditation and the final one was on Scope 3 emissions intensity.[13]

In the logistics sector, Simpar Europe, the European arm of the Brazilian logistic company, issued an SLB in Jan 2021 (ISIN US82883PAA21). However, the KPI included Scope 1 + 2 + 3 emissions as an intensity compared to revenue.[14]

In summary, SLBs have been used in the Logistics and Airlines industries, and there is some precedent for including Scope 3 emissions. However, emissions reductions are usually targeted only in the context of intensity measures, which can fail to deliver absolute reductions. We also note that issuance is often from High Yield or unrated issuers in USD and EUR, and the largest deals were over two years ago, so there is not much recent issuance to directly compare with this new DPWGR SLB.

Conclusion

Overall, the bond has been structured for impact. It has ambitious, scientifically verified targets which are based on absolute emissions including Scope 3. This should set a precedent for more science-based targets in this sector. We hope other issuers follow similar standardised approaches to setting targets.

Unfortunately, SBTi certification means the targets are quite far in the future. This means such verification may only be suitable for longer-dated issuance, and risks lower materiality of cumulative step-up coupons. In this example, given only two increased coupons would be paid in the event of a missed target, **the bond does not reach the materiality required to be classified as a Greenback SLB,[2]** which may deter investors.

From the initial price guidance to final issue, there was a significant tightening of the spread. We also believe the bond pricing includes a high new issue premium (as shown in Figure 1). **Combining this with a model option price of 4.5bp is an illustration of progressive bond instruments which have the potential of supporting an ambitious transition in a high-emitting transport issuer.**

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[10] For more details please see "Air France-KLM: Come fly with SLBs", AFII, 9 Jan 2023.
[11] "Second Party Opinion on Etihad Airways' Sustainability-Linked Financing Framework", Vigeo Eiris, Oct 2020.
[12] For more details on these structures please see "Sustainability-Linked Bonds: alternative steps", AFII, 23 May 2023.
[13] "Second Party Opinion", Sustainalytics, Apr 2021.
[14] "Second Party Opinion", ISS ESG, Jan 2021.

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