



Final Report

Hedging Interest Rate Risk

NORTHERN FIBER

17 march 2025

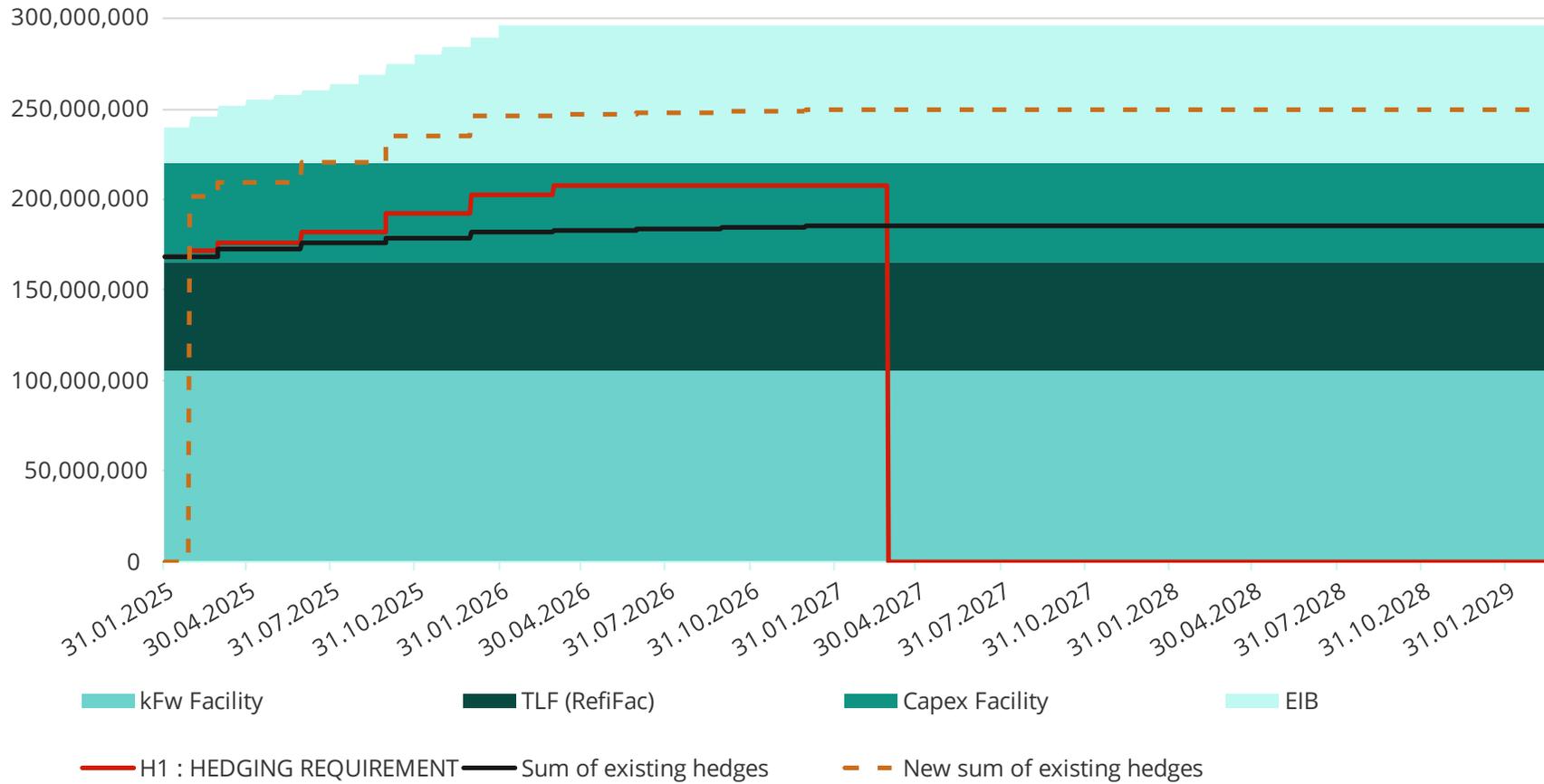


KERIUS Finance SAS
Conseiller en Investissements Financiers
Membre de l'ANACOFI CIF- Association agréée par l'AMF - ORIAS N° 13000716

Summary of hedging decisions

- New hedge set up on a 4-year horizon to mitigate the sensitivity of the group to interest rates variations, including the impact of negatives rates with the Cash Flow Hedge objective (future cash flow hedging).
- An evolving cap with a protection rate (strike) at 3% and 4% has been set up to limit the financing rate. Those products take into account the 0% floor on the debt.
- The old hedges have been kept since they match the hedging objectives.

Map after hedge inception



Hedges set up:
 Purchased Evolving Cap 3% for 2 years then 4% for 2 years.

Banking split :
 NORDLB 100%

Debts characteristics

Financing :

Refinancing Facility A : €60'000'000, bullet amortization, maturing 01/04/2029, **floor 0%** on Euribor 3 months + 3,00%.

CAPEX Facility : €55'000'000, bullet amortization, maturing 01/04/2029, **floor 0%** on Euribor 3 months + 3,00%.

KfW CAPEX Facility : €105'000'000, bullet amortization, maturing 01/04/2029, **floor 0%** on Base rate (3,00%) + 3,00%.

EIB CAPEX Facility : €20'000'000, bullet amortization, maturing 01/04/2029, **floor 0%** on Base rate (3,00%) + 2,15%.

Currently, the debt is drawn based on a 1-month Euribor, whereas the existing hedges are aligned with a 3-month Euribor. This creates a minor mismatch between the hedging instrument and the underlying exposure. To improve hedge efficiency, aligning both to a 3-month Euribor would be preferable.

Hedging requirement :

The Borrower shall, no later than 60 days after the first utilisation of the Refinancing Facility and/or Capex Facility B; and with respect to the Facilities C1 and C2 no later than 60 days after the Additional Capex Facility C1 Commitment Date, enter into interest rate hedging with an aggregate notional amount of no less than 70% and max. 110% of the aggregate amount expected to be outstanding under the Refinancing Facility and the Capex Facility B or the Facilities C1 and C2, as applicable, as per the base case model within the first four years, taking into account any fixed rate instruments including KfW funding products counting towards the hedged amounts, once available. Hedging can be executed by swaps, caps, collars etc. Documentation will allow for an orphan swap provider concept and can, at the election of the Borrower be based on ISDA and/or DRV. Every Lender will have a right to bid for the chosen instrument(s). → **30/06/2027**

Existing hedges :

SEB Hedge Evolving Cap 3%-4% : starting on 30/06/2023, maturing 31/03/2029, € 45,863,426.00 amortization as set out in the table, annual premium to pay on a quarterly basis until 31/03/2029 : **0.6458%**, corresponding to an upfront premium of € 2,667,759.70.

- **Cap Rate 30/06/2023 - 31/03/2027 = 3,00%**
- **Cap Rate 31/03/2027 - 31/03/2029 = 4,00%**

In the case of hedging a loan that has not yet been drawn down as of the hedging date: verify that the contract allows this, or request authorization from the arranging bank, as it is generally prohibited to hedge more than 100% of the drawn debt.

Details of hedges set up

Cap with premium:

Bank : NORDLB

Strike price : 3% then 4% (strike)

Trade date : 05.03.2025

Start date : 28.02.2025

End date: 31.03.2029

Index : Euribor 3 Months

Base : Actual/360

Notional principal : € 33'570'000 amortization as set out in the table

Annual premium to pay on a quarterly basis until 29.03.2029: **0.1210%**, corresponding to an upfront premium of **€ 300'799**.

Premium to be paid (lissée)

Accounting deferral of the premium (upfront)

Hedge NORDLB							
Fixing	Start	End	Payment	Strike	Notionnal	Premium to be paid	Remaining to be paid in case of unwinding
26.02.2025	28.02.2025	31.03.2025	31.03.2025	3.0%	33,570,000	3,498	-297,301
27.03.2025	31.03.2025	30.06.2025	30.06.2025	3.0%	37,456,000	11,456	-285,844
26.06.2025	30.06.2025	30.09.2025	30.09.2025	3.0%	44,844,000	13,867	-271,978
26.09.2025	30.09.2025	31.12.2025	31.12.2025	3.0%	56,481,000	17,465	-254,513
29.12.2025	31.12.2025	31.03.2026	31.03.2026	3.0%	63,955,000	19,346	-235,166
27.03.2026	31.03.2026	30.06.2026	30.06.2026	3.0%	63,955,000	19,561	-215,605
26.06.2026	30.06.2026	30.09.2026	30.09.2026	3.0%	63,955,000	19,776	-195,828
28.09.2026	30.09.2026	31.12.2026	31.12.2026	3.0%	63,955,000	19,776	-176,052
29.12.2026	31.12.2026	31.03.2027	31.03.2027	3.0%	63,955,000	19,346	-156,706
25.03.2027	31.03.2027	30.06.2027	30.06.2027	4.0%	63,955,000	19,561	-137,144
28.06.2027	30.06.2027	30.09.2027	30.09.2027	4.0%	63,955,000	19,776	-117,368
28.09.2027	30.09.2027	31.12.2027	31.12.2027	4.0%	63,955,000	19,776	-97,592
29.12.2027	31.12.2027	31.03.2028	31.03.2028	4.0%	63,955,000	19,561	-78,030
29.03.2028	31.03.2028	30.06.2028	30.06.2028	4.0%	63,955,000	19,561	-58,469
28.06.2028	30.06.2028	29.09.2028	29.09.2028	4.0%	63,955,000	19,561	-38,908
27.09.2028	29.09.2028	29.12.2028	29.12.2028	4.0%	63,955,000	19,561	-19,346
27.12.2028	29.12.2028	29.03.2029	29.03.2029	4.0%	63,955,000	19,346	0

Running Premium

0.1210%

Total to be paid

300,799

Amortization table

FIXING DATE	START DATE	END DATE	PAYMENT DATE	H10bis= H10 - Existing Hedges	STRIKE
26.02.2025	28.02.2025	31.03.2025	31.03.2025	33,570,000	3%
27.03.2025	31.03.2025	30.06.2025	30.06.2025	37,456,000	3%
26.06.2025	30.06.2025	30.09.2025	30.09.2025	44,844,000	3%
26.09.2025	30.09.2025	31.12.2025	31.12.2025	56,481,000	3%
29.12.2025	31.12.2025	31.03.2026	31.03.2026	63,955,000	3%
27.03.2026	31.03.2026	30.06.2026	30.06.2026	63,955,000	3%
26.06.2026	30.06.2026	30.09.2026	30.09.2026	63,955,000	3%
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29.03.2028	31.03.2028	30.06.2028	30.06.2028	63,955,000	4%
28.06.2028	30.06.2028	29.09.2028	29.09.2028	63,955,000	4%
27.09.2028	29.09.2028	29.12.2028	29.12.2028	63,955,000	4%
27.12.2028	29.12.2028	29.03.2029	29.03.2029	63,955,000	4%
Période brisée					

ROI analysis

In addition to the qualitative aspects (analysis and choice of the most appropriate strategy) and the time saved during the process, the KERIUS Finance service generated the following savings:

Value of 1 BP	24,895
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	NORDLB
Total savings	180,404
Market price without bank margin	232,253
Price with standard bank margin *	481,203
Standard bank margin (10 basis points) *	248,949
Final price	300,799
Final margin	68,546

* The standard margin taken by banks in this context is 10 to 15 basis points over the fixed rate or running premium compared to the rate / price without margin used above. A margin of 10 basis points is used for this comparison.

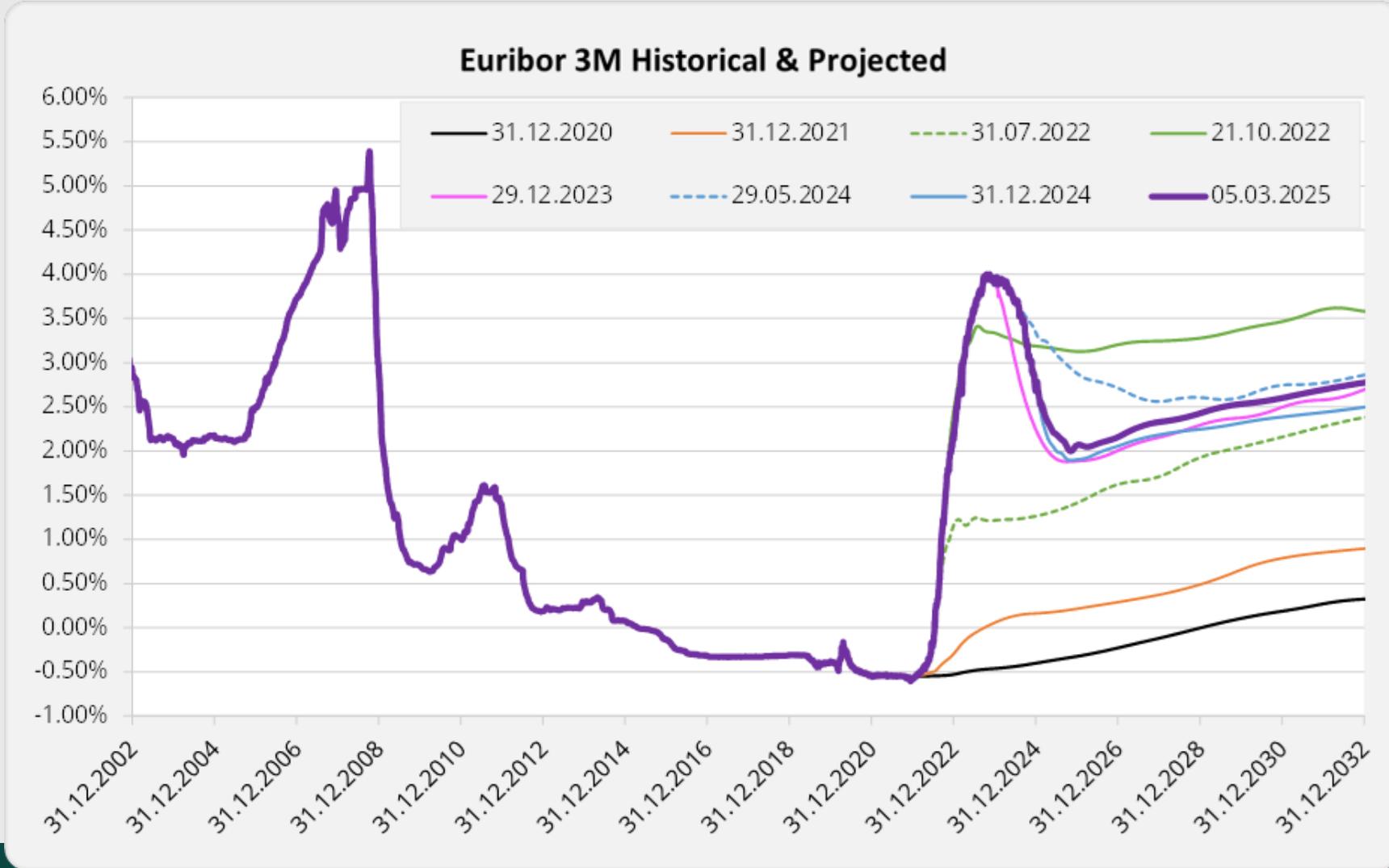
The total savings are made in three stages in a "cooperative" way with the bank:

- Choosing the optimal product: similar or identical products are often "priced" differently
- Preliminary negotiations before quotes tender (explanation of KERIUS method and target margin to be selected)
- Final negotiation at the end of the process

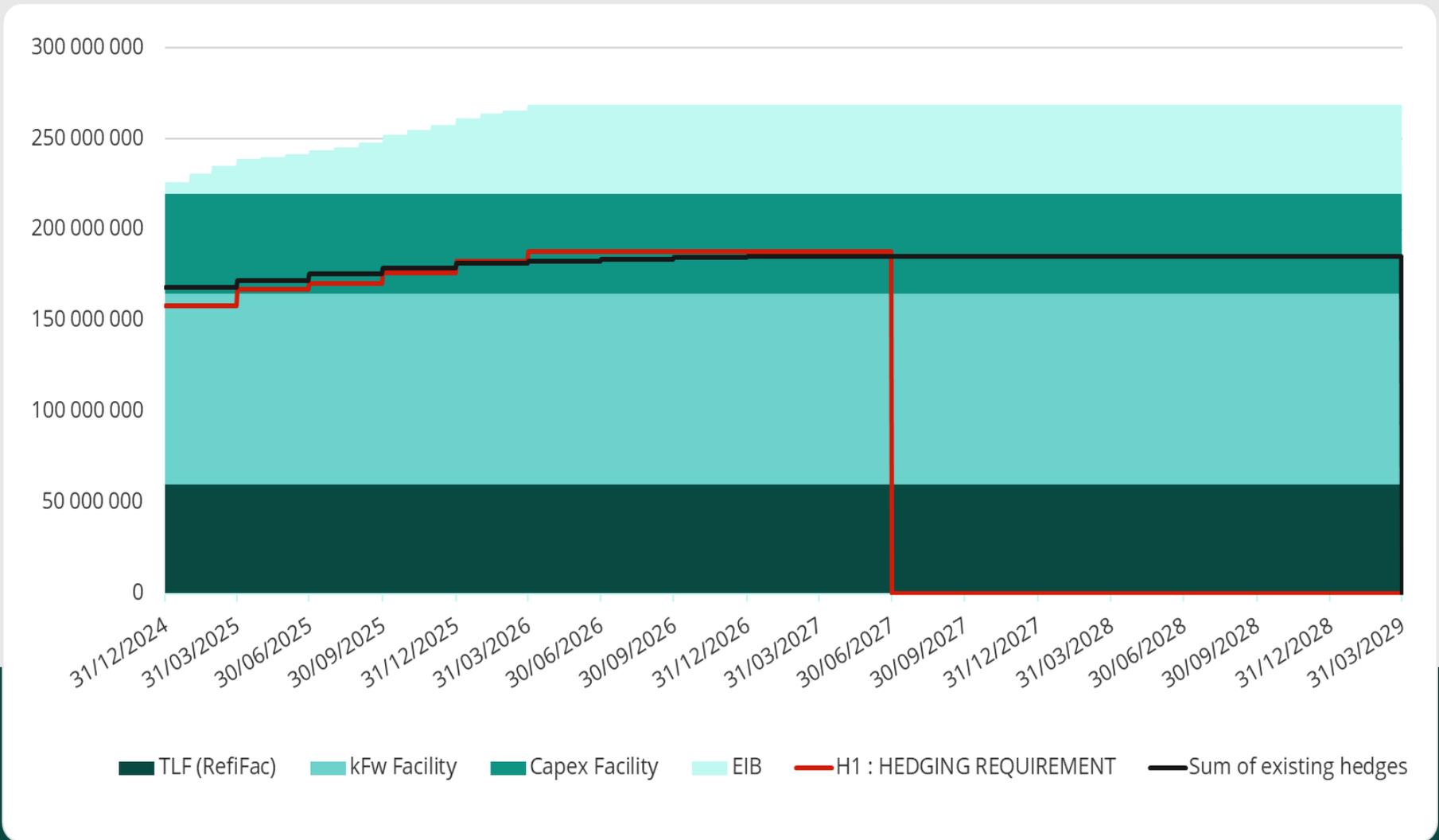
Appendices

- Market Data : Historic and projected Euribor
- Recall: Situation before new hedges and Financial expenses simulation
- Financing terms
- Recall : Profiles at maturity of different types of hedge

Market data (05/03/2025)



Debt & Hedging Requirement Mapping



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Existing hedges :

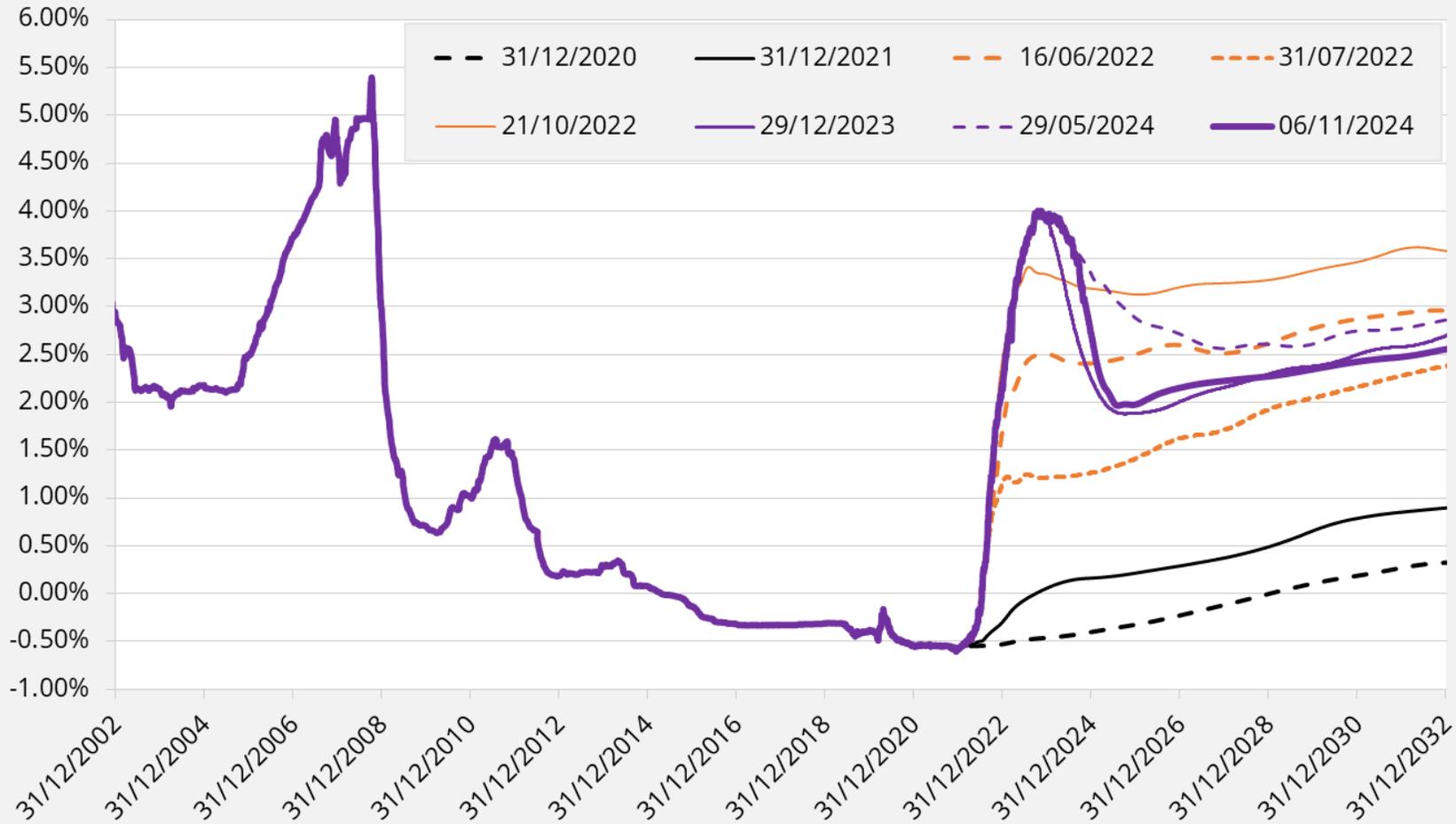
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Market data

Euribor 3M Historical & Projected

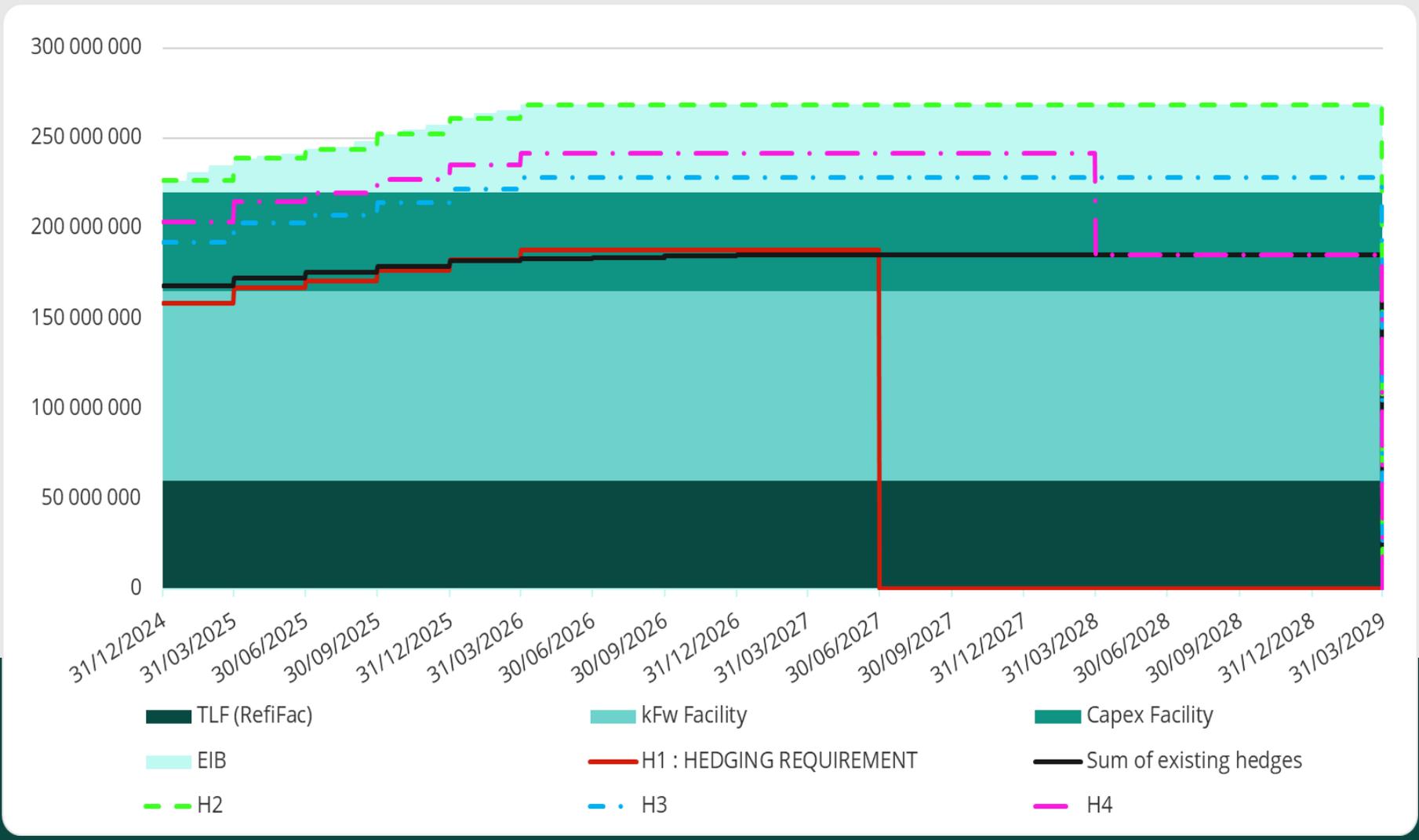


The markets are currently very volatile and can cause the price of hedges to vary significantly.

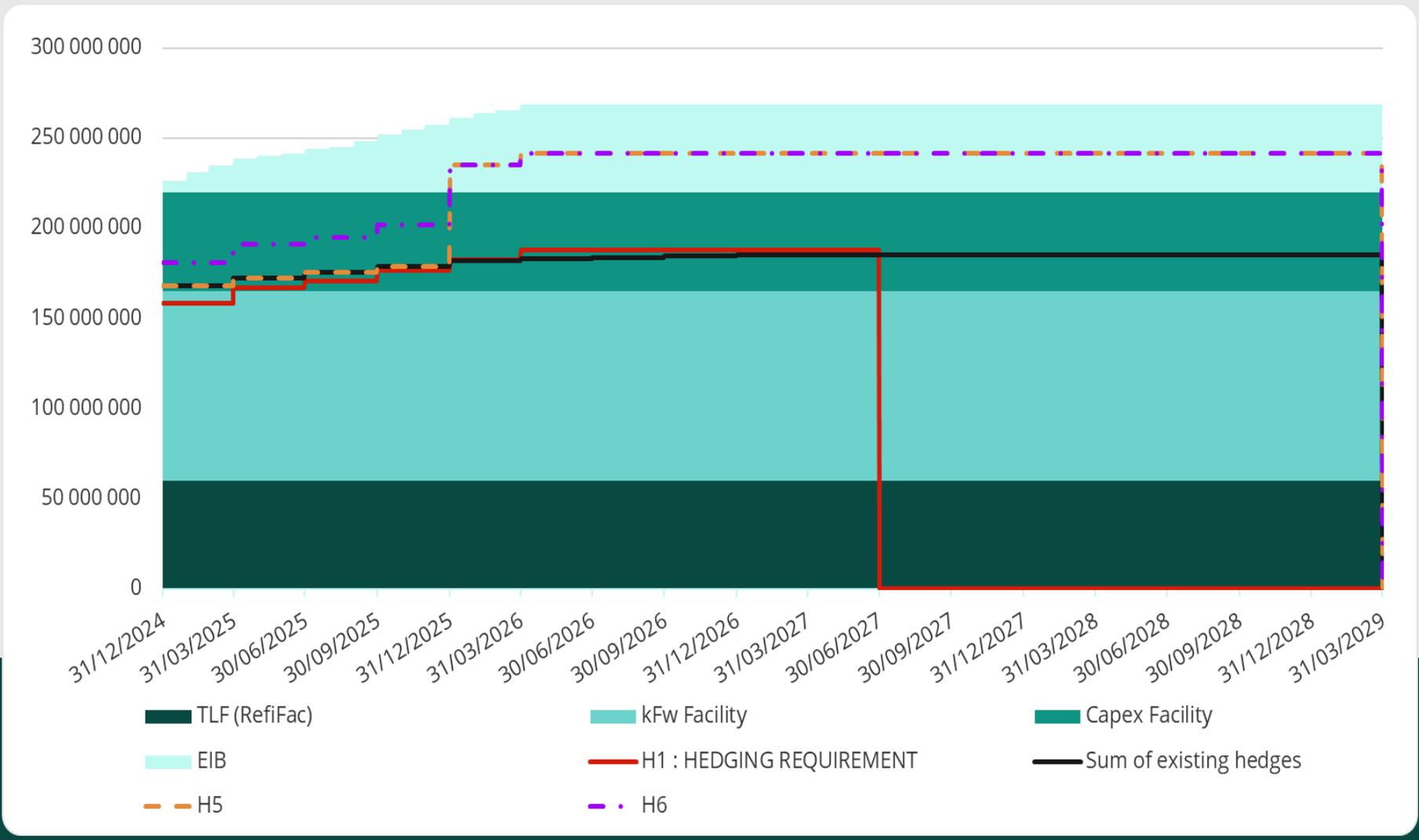
The price of hedges moves daily by +/-10 or 15 basis points

Since Covid, banks' legal departments have been saturated and implementation times have been significantly extended. Several procedures can only be launched after the customer has chosen the bank. This is why it is necessary to allow a period of between 2 and 4 weeks between the call for tenders and the instauration of the hedge.

New hedging profiles



New hedging profiles



Not recommended products

Hedging	H1 bis	H2 bis
Value of 1 bp in EUR	465	34,129
Swap without floor	2.12%	2.17%
Swap with floor	2.21%	2.28%

There are many interest rate hedging products. There are certain products that we do not recommend or no longer recommend for various reasons, relating to a problem of efficiency or accounting (sometimes the two are linked) or comparative profitability. Product sheets are available in the appendix of this report to clarify the mechanisms and their intrinsic advantages/disadvantages.

Here is a (non-exhaustive) list of products we do not recommend and the reasons why:

▪ Interest rate swap (simple and floored) :

- Simple: toxic in a context of negative rates and therefore can be de-qualified and considered as a speculative product by the company's auditors even in a period of positive rates, which implies recording changes in the product's net asset value in financial income at each closing.
- Floored: increased bank margin for a product equivalent to Cap 0%, but sold at a higher price most of the time for reasons specific to the banks.

▪ Cap 0% :

- Does not allow to benefit from a decrease in rates because this product, which is currently very expensive, completely freezes the interest rates.
- Requires more risk lines in the banks
- This is a product that we recommended when Euribor rates were negative or close to zero.

▪ Collar (purchase of cap / sale of floor):

- Does not guarantee a cap rate in the event of negative rates because the financing already includes a floor/floor at 0%, which induces an increase in the overall financing rate in the event of a fall in Euribor rates in the negative zone. As such, the product can be de-qualified and considered as a speculative product by the company's auditors even in a period of positive rates (in the same way as the simple swap).

▪ Knock-out Cap :

- Does not guarantee a cap rate, therefore it is not a hedging product and must be considered as speculative by the auditor.

▪ Knock-in Cap:

- Increased bank margin and interesting product on very large amounts only to absorb additional bank costs.

▪ Cap Spread (e.g.: buy 1% cap / sell 3% cap) :

- Does not guarantee a cap rate and is never a hedging product in the event of a highly unfavorable rate scenario, so can be considered as speculative by auditors.

Recommended products

Hedging	H1 bis*	H2 bis	H3 bis	H4 bis	H5 bis	H6 bis
Maturity	3.25 years	4.25 years	4.25 years	3.25 years	3.25 years	4.25 years
Index	Euribor 3M					
Starting Notionnal	846,760	58,008,707	24,063,557	35,378,607	53,069,837	12,748,507
Notionnal on 31/12/2025	846,760	79,181,376	40,014,068	53,069,837	53,069,837	53,069,837
Start Date	31.12.2025	31.12.2024	31.12.2024	31.12.2024	31.12.2025	31.12.2024
End Date	31.03.2029	31.03.2029	31.03.2029	31.03.2028	31.03.2029	31.03.2029
Value of 1 bp in EUR	465	34,129	17,232	17,169	18,559	20,427

Estimated bank margin in bps included in the prices : **7 bps**

*bis : to be added on top of existing hedges

H1 bis = H1 - existing hedges

Given the current interest rate environment and the increased risk of rates moving lower, a strategy combining a 0% cap with a 2.5% cap could be advantageous. This approach would protect the company against the risk of rising rates while also reducing opportunity costs if rates fall below the projected curves

Running premium						
Cap 0% annualized	2.21%	2.28%	2.28%	2.23%	2.27%	2.27%
Max Financing rate	2.21%	2.28%	2.28%	2.23%	2.27%	2.27%

Cap 2.5% annualized	0.37%	0.43%	0.43%	0.36%	0.48%	0.46%
Max Financing rate	2.87%	2.93%	2.93%	2.86%	2.98%	2.96%

Cap 3% annualized	0.24%	0.29%	0.30%	0.24%	0.34%	0.32%
Max Financing rate	3.24%	3.29%	3.30%	3.24%	3.34%	3.32%

Cap 3.5% annualized	0.17%	0.21%	0.22%	0.17%	0.25%	0.23%
Max Financing rate	3.67%	3.71%	3.72%	3.67%	3.75%	3.73%

Premium in Euros						
Cap 0%	98 300	7,373,700	3,714,100	3,674,600	3,957,400	4,374,200
Cap 2.5%	16 700	1,383,200	705,600	595,600	838,600	879,300
Cap 3%	10 900	945,100	483,700	389,200	589,700	609,700
Cap 3.5%	7 600	691,300	353,200	278,300	432,200	444,500

Indicatives quotes

See comparison of hedging profiles in the appendix.

Indicative quotes without bank margin or with estimated bank margin. A non-negotiated bank margin is generally between 0.10% and 0.20%.

The markets are currently very volatile and can cause these prices to vary significantly.

Collars : Please note that we do not recommend this product since the risk of loss is unlimited since the financing is already floored. In fact, the Tunnel floor doubles that of financing. This generates a loss in the event of a drop in rates or a return to negative rates. In addition, this product does not fall within the scope of hedge accounting since it is considered speculative.

Indications for comparing quotes with each other:

The swap rate represents the financing rate of the hedged part of the debt (excluding the specific problem of the floor in the event of negative rates).

- The annualized cap premium represents the cost to pay over time to benefit from the cap (strike). The overall financing rate is then capped at strike + annualized premium. The cap allows you to benefit from Euribor rates lower than the strike, as long as the strike is higher than the floor included in the hedged financing.
- In the event of resale of the cap before maturity, the unpaid running premium remains due, but from this amount will be deducted the residual value (mark to market / fair value) of the cap, which may exceed the amount of the premium remaining due (for example if rates have risen).

Example of annualized premium payments: H5 bis Cap 2,5%

Fixing	Start	End	Payment	Notional	Premium to be paid	Remaining to be paid in case of unwinding
24.12.2025	30.12.2025	30.03.2026	30.03.2026	53,069,837	59,997	-778,603
26.03.2026	30.03.2026	30.06.2026	30.06.2026	58,789,588	67,941	-710,662
26.06.2026	30.06.2026	30.09.2026	30.09.2026	57,888,105	66,899	-643,763
28.09.2026	30.09.2026	30.12.2026	30.12.2026	56,986,574	65,141	-578,622
28.12.2026	30.12.2026	30.03.2027	30.03.2027	56,174,578	63,507	-515,115
24.03.2027	30.03.2027	30.06.2027	30.06.2027	56,174,578	64,919	-450,196
28.06.2027	30.06.2027	30.09.2027	30.09.2027	56,174,578	64,919	-385,278
28.09.2027	30.09.2027	30.12.2027	30.12.2027	56,174,578	64,213	-321,065
28.12.2027	30.12.2027	30.03.2028	30.03.2028	56,174,578	64,213	-256,852
28.03.2028	30.03.2028	30.06.2028	30.06.2028	56,174,578	64,919	-191,933
28.06.2028	30.06.2028	29.09.2028	29.09.2028	56,174,578	64,213	-127,720
27.09.2028	29.09.2028	29.12.2028	29.12.2028	56,174,578	64,213	-63,507
27.12.2028	29.12.2028	29.03.2029	29.03.2029	56,174,578	63,507	0

Running Premium

0.48%

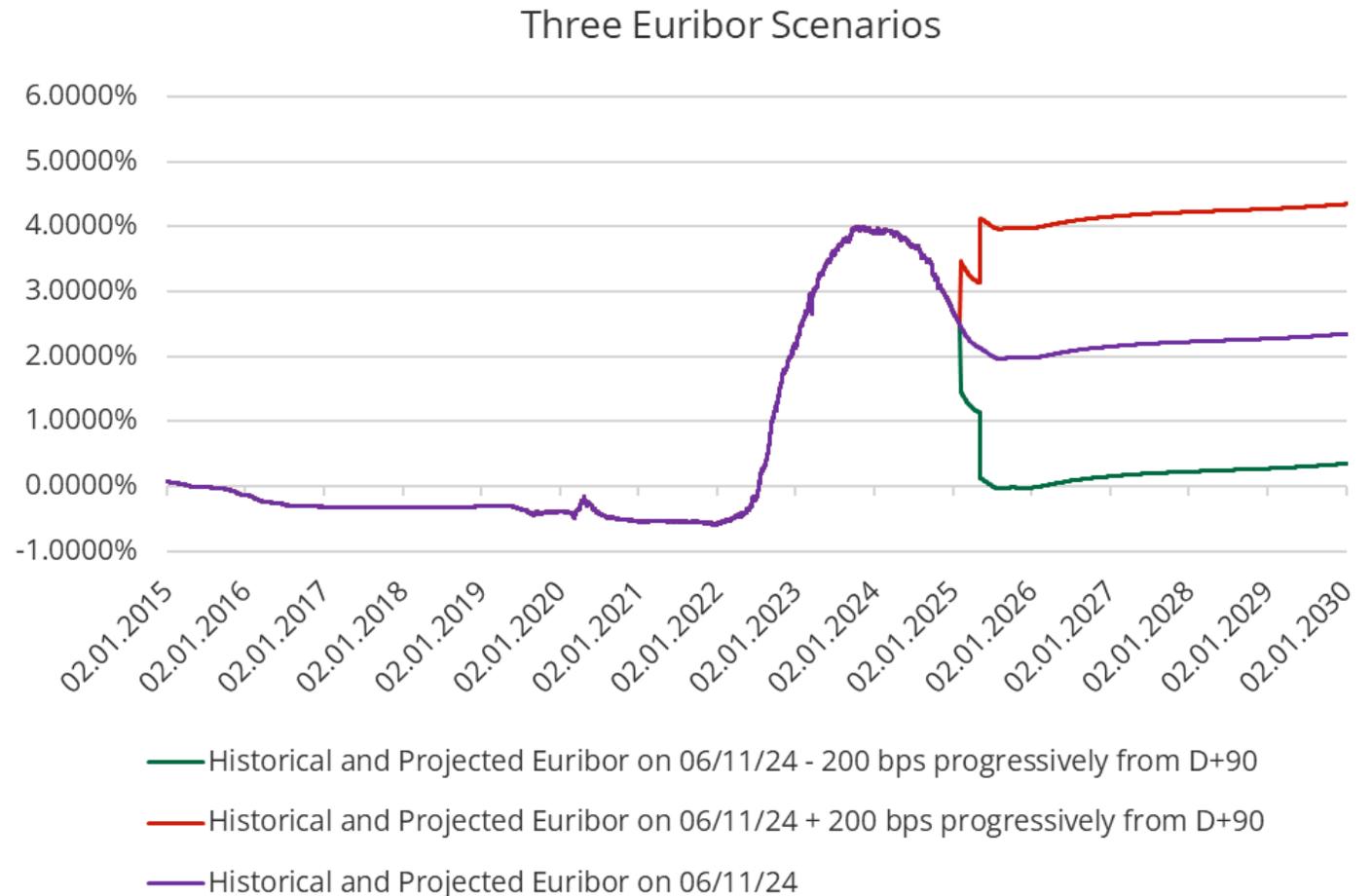
Total to be paid

838,600

Simulation of financial expenses with three Euribor evolution scenarios

All financial expenses simulations start in **2025**.

This include the evolving credit margin **3%** (RefiFac, CapexFac and kFwFac), **2,15%** (EIB), the fix rate of the embedded swap (**2.59%**), the cost of existing hedge, Euribor 3m variations' impact and the cost of setting up the new hedge.

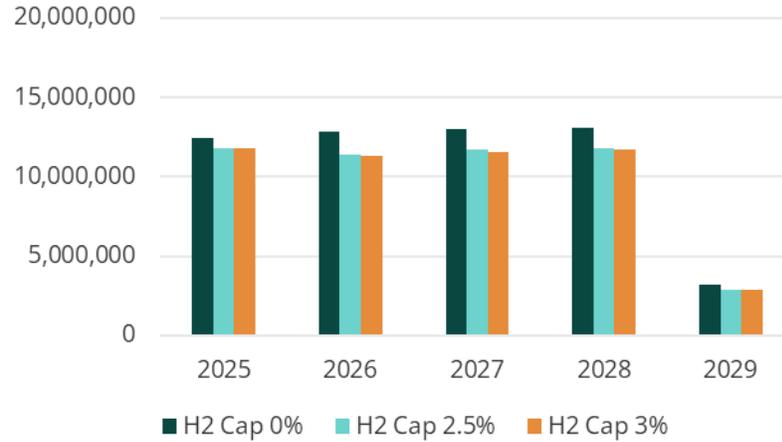


Financial expenses simulation in expected Euribor -2% Scenario

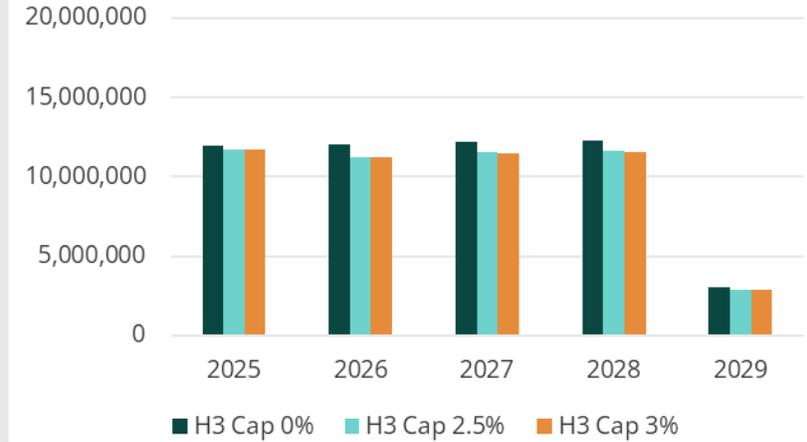
STRATEGY H1



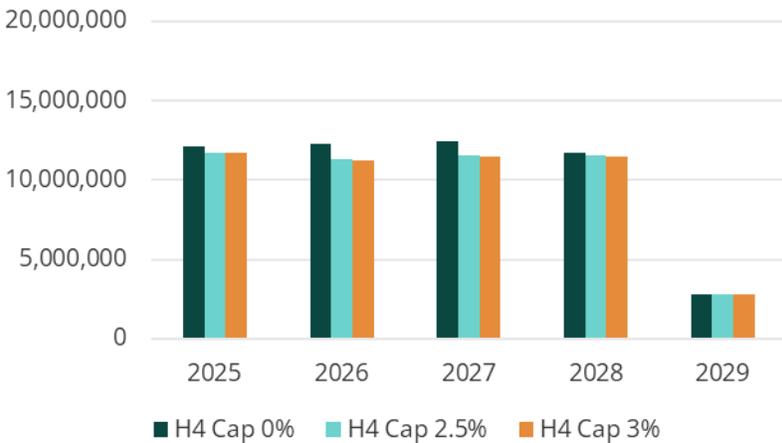
STRATEGY H2



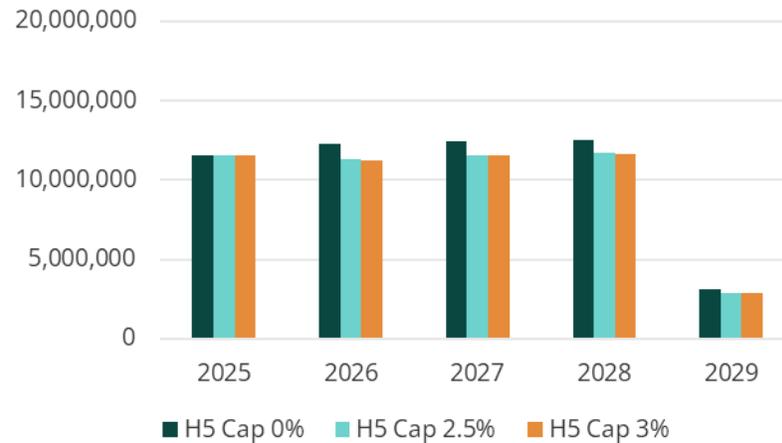
STRATEGY H3



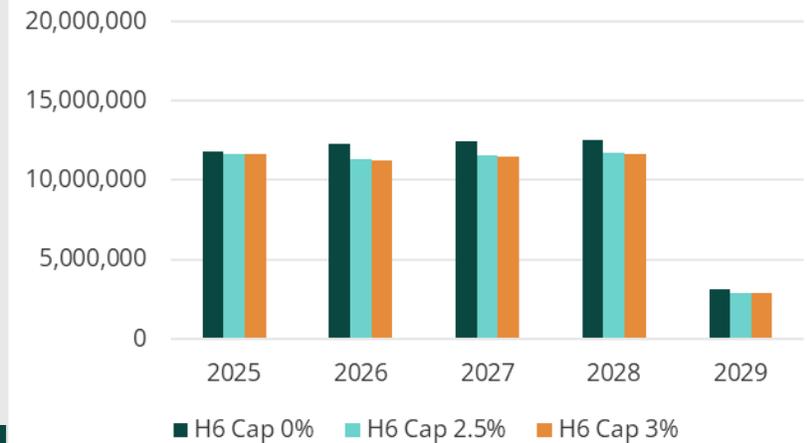
STRATEGY H4



STRATEGY H5



STRATEGY H6

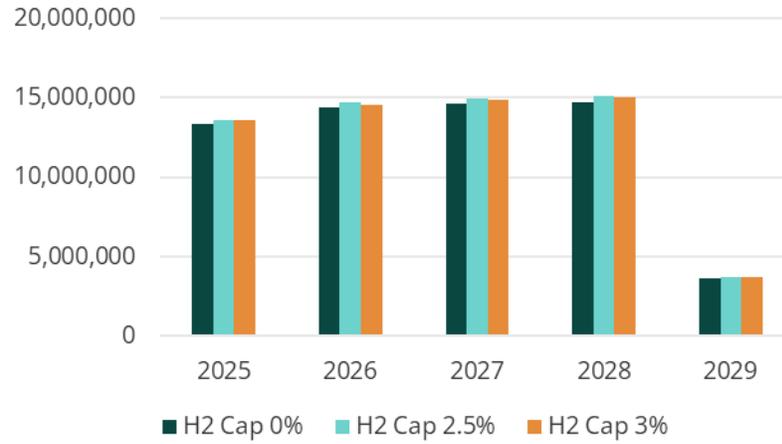


Financial expenses simulation in expected Euribor Scenario

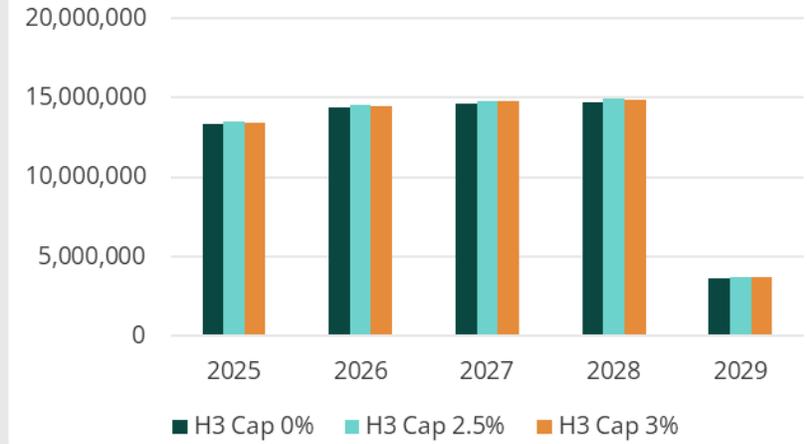
STRATEGY H1



STRATEGY H2



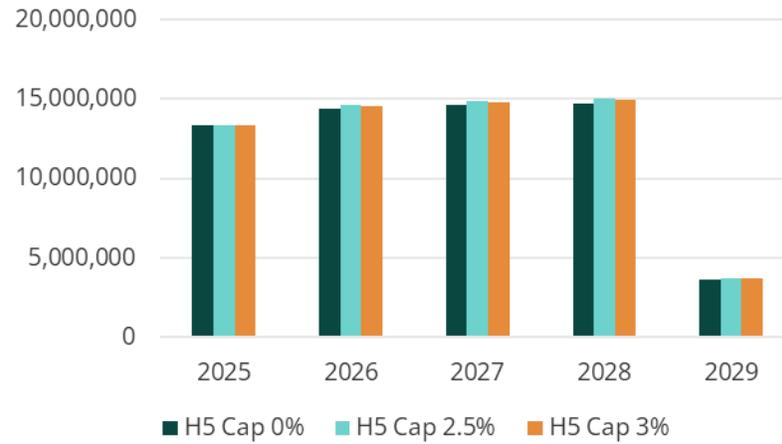
STRATEGY H3



STRATEGY H4



STRATEGY H5



STRATEGY H6

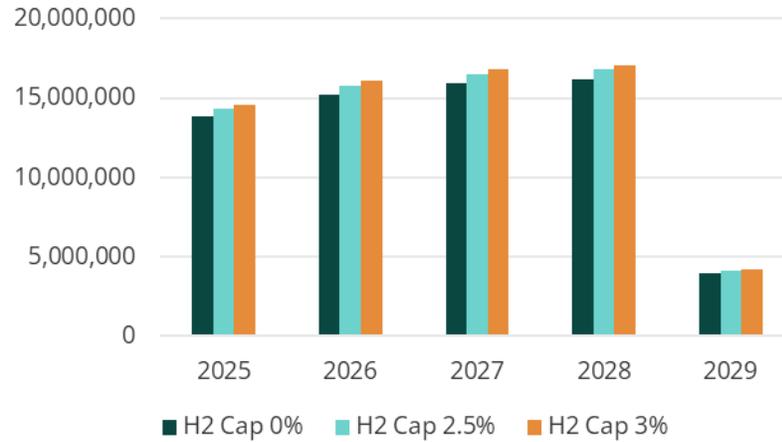


Financial expenses simulation in expected Euribor + 2% Scenario

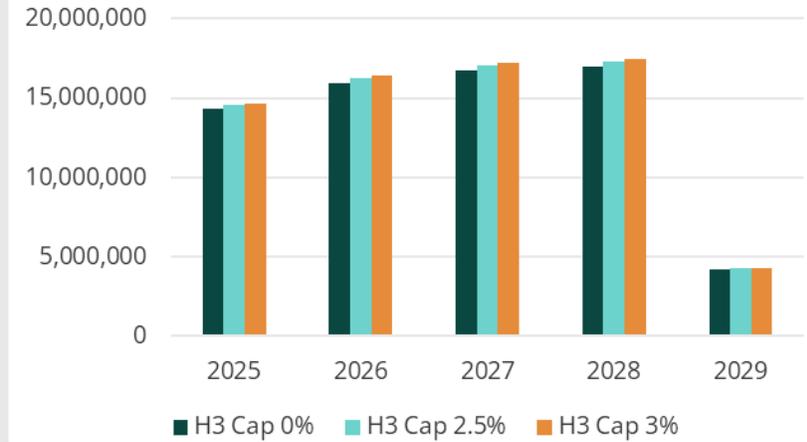
STRATEGY H1



STRATEGY H2



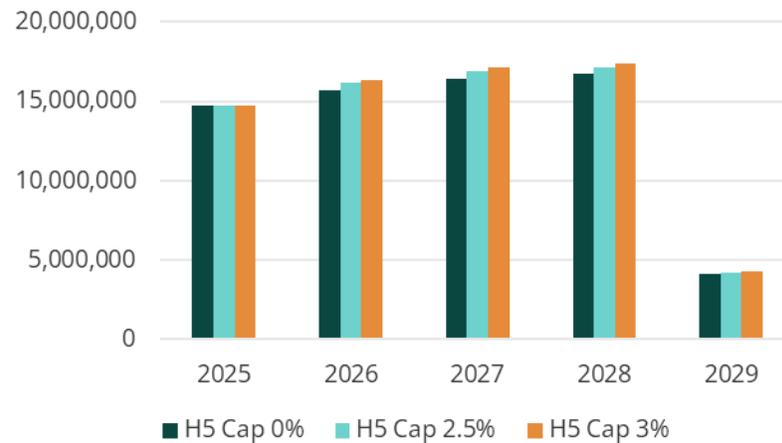
STRATEGY H3



STRATEGY H4



STRATEGY H5

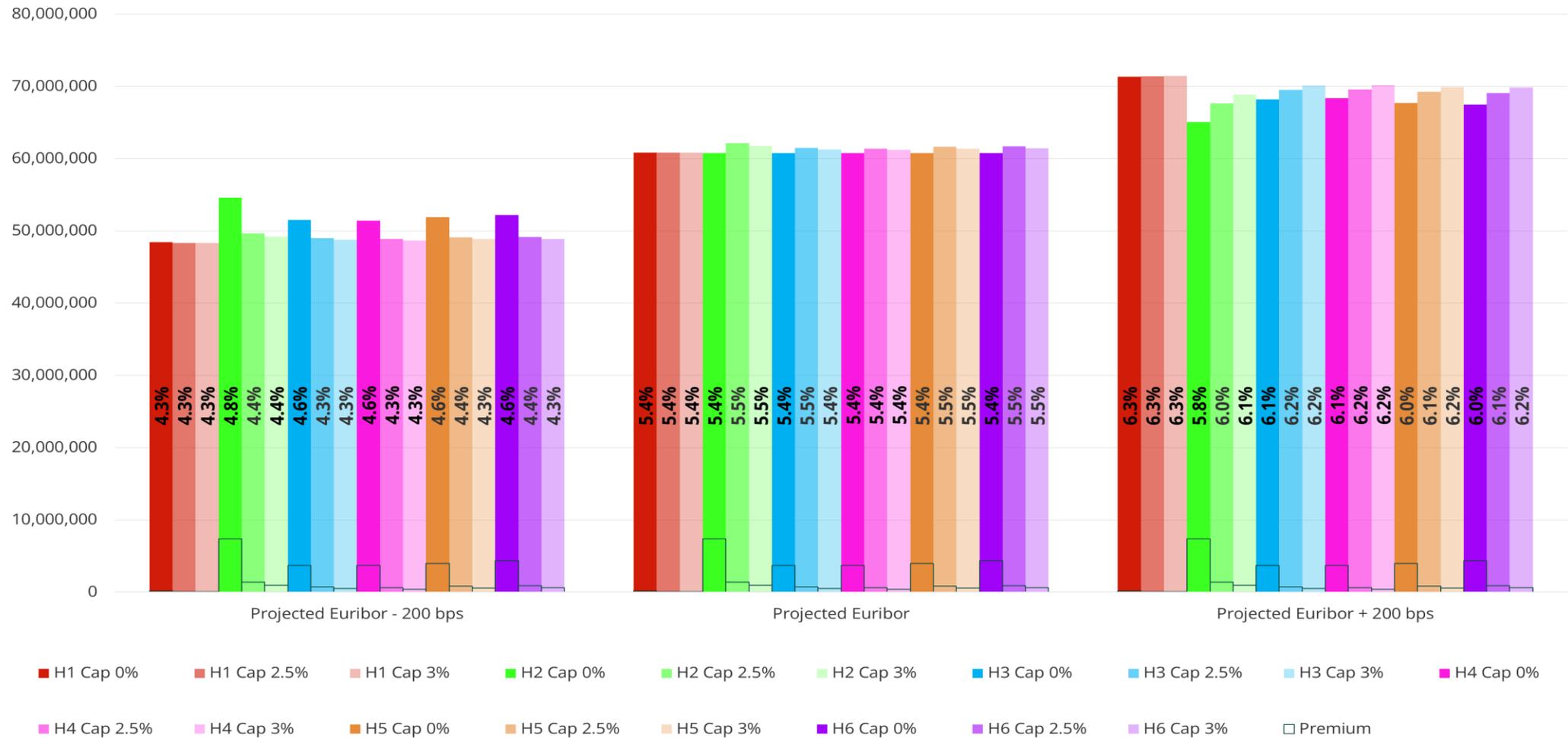


STRATEGY H6



Synthesis of financial costs simulation

(over the total duration of the financing, hedging cost included – APR approach)



Synthesis of financial costs simulation

(over the total duration of the financing, hedging cost included – APR approach)

	STRATEGY H1			STRATEGY H2			STRATEGY H3		
	H1 Cap 0%	H1 Cap 2.5%	H1 Cap 3%	H2 Cap 0%	H2 Cap 2.5%	H2 Cap 3%	H3 Cap 0%	H3 Cap 2.5%	H3 Cap 3%
Projected Euribor - 200 bps	48 388 389	48 311 003	48 305 203	54,603,219	49,644,483	49,239,403	51,510,568	48,986,205	48,778,003
Projected Euribor	60 815 157	60 830 696	60 824 896	60,763,785	62,164,175	61,759,096	60,785,846	61,505,898	61,297,696
Projected Euribor + 200 bps	71 416 583	71 451 202	71 468 646	65,090,316	67,632,113	68,860,982	68,231,503	69,531,050	70,154,378

	STRATEGY H4			STRATEGY H5			STRATEGY H6		
	H4 Cap 0%	H4 Cap 2.5%	H4 Cap 3%	H5 Cap 0%	H5 Cap 2.5%	H5 Cap 3%	H6 Cap 0%	H6 Cap 2.5%	H6 Cap 3%
Projected Euribor - 200 bps	51,426,134	48,869,765	48,683,503	51,938,768	49,132,903	48,884,003	52,210,435	49,166,346	48,904,003
Projected Euribor	60,802,271	61,389,457	61,203,196	60,749,755	61,652,596	61,403,696	60,759,999	61,686,039	61,423,696
Projected Euribor + 200 bps	68,347,314	69,560,575	70,188,543	67,732,272	69,253,328	69,932,400	67,479,848	69,091,808	69,834,901

Amortization table

DATE FIXING	START DATE	END DATE	DATE PAIEMENT	TLF (RefiFac)		Capex Facility		kFw Facility		EIB		TOTAL DEBT	EXISTING HEDGE SEB Evolving cap	EXISTING HEDGE Embedded Swap KfW	Sum of existing hedges	TOTAL DEBT %
				Amort.	CRD	Amort.	CRD	Amort.	CRD	Amort.	CRD					
27.12.2024	31.12.2024	31.03.2025	31.03.2025	0	60,000,000	0	55,000,000	0	105,000,000	0	6,301,000	226,301,000	63,292,293	105,000,000	168,292,293	70%
27.03.2025	31.03.2025	30.06.2025	30.06.2025	0	60,000,000	0	55,000,000	0	105,000,000	-12,506,631	18,807,631	238,807,631	67,376,488	105,000,000	172,376,488	70%
26.06.2025	30.06.2025	30.09.2025	30.09.2025	0	60,000,000	0	55,000,000	0	105,000,000	-5,042,134	23,849,765	243,849,765	70,706,962	105,000,000	175,706,962	70%
26.09.2025	30.09.2025	30.12.2025	30.12.2025	0	60,000,000	0	55,000,000	0	105,000,000	-8,348,490	32,198,255	252,198,255	73,973,372	105,000,000	178,973,372	70%
24.12.2025	30.12.2025	30.03.2026	30.03.2026	0	60,000,000	0	55,000,000	0	105,000,000	-8,917,131	41,115,385	261,115,385	76,934,010	105,000,000	181,934,010	70%
26.03.2026	30.03.2026	30.06.2026	30.06.2026	0	60,000,000	0	55,000,000	0	105,000,000	-7,399,692	48,515,077	268,515,077	77,873,982	105,000,000	182,873,982	70%
26.06.2026	30.06.2026	30.09.2026	30.09.2026	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	78,775,464	105,000,000	183,775,464	70%
28.09.2026	30.09.2026	30.12.2026	30.12.2026	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	79,676,995	105,000,000	184,676,995	70%
28.12.2026	30.12.2026	30.03.2027	30.03.2027	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	70%
24.03.2027	30.03.2027	30.06.2027	30.06.2027	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
28.06.2027	30.06.2027	30.09.2027	30.09.2027	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
28.09.2027	30.09.2027	30.12.2027	30.12.2027	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
28.12.2027	30.12.2027	30.03.2028	30.03.2028	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
28.03.2028	30.03.2028	30.06.2028	30.06.2028	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
28.06.2028	30.06.2028	29.09.2028	29.09.2028	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
27.09.2028	29.09.2028	29.12.2028	29.12.2028	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
27.12.2028	29.12.2028	29.03.2029	29.03.2029	0	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	268,515,077	80,488,991	105,000,000	185,488,991	
27.03.2029	29.03.2029	29.06.2029	29.06.2029	60,000,000	0	55,000,000	0	105,000,000	0	48,515,077	0	0	80,488,991	105,000,000	185,488,991	

Amortization table

DATE FIXING	START DATE	END DATE	DATE PAIEMENT	H1 : HEDGING REQUIREMENT	Minimum to be hedged	H1bis= H1 - Existing Hedges	H2bis= H2 - Existing Hedges	H3bis= H3 - Existing Hedges	H4bis= H4 - Existing Hedges	H5bis= H5 - Existing Hedges	H6bis= H6 - Existing Hedges
27.12.2024	31.12.2024	31.03.2025	31.03.2025	158,410,700	0	0	58,008,707	24,063,557	35,378,607	0	12,748,507
27.03.2025	31.03.2025	30.06.2025	30.06.2025	167,165,341	0	0	66,431,142	30,609,998	42,550,379	0	18,669,616
26.06.2025	30.06.2025	30.09.2025	30.09.2025	170,694,836	0	0	68,142,803	31,565,338	43,757,826	0	19,372,850
26.09.2025	30.09.2025	30.12.2025	30.12.2025	176,538,778	0	0	73,224,883	35,395,145	48,005,058	0	22,785,232
24.12.2025	30.12.2025	30.03.2026	30.03.2026	182,780,770	846,760	846,760	79,181,376	40,014,068	53,069,837	53,069,837	53,069,837
26.03.2026	30.03.2026	30.06.2026	30.06.2026	187,960,554	5,086,572	5,086,572	85,641,095	45,363,834	58,789,588	58,789,588	58,789,588
26.06.2026	30.06.2026	30.09.2026	30.09.2026	187,960,554	4,185,090	4,185,090	84,739,613	44,462,351	57,888,105	57,888,105	57,888,105
28.09.2026	30.09.2026	30.12.2026	30.12.2026	187,960,554	3,283,558	3,283,558	83,838,082	43,560,820	56,986,574	56,986,574	56,986,574
28.12.2026	30.12.2026	30.03.2027	30.03.2027	187,960,554	2,471,563	2,471,563	83,026,086	42,748,824	56,174,578	56,174,578	56,174,578
24.03.2027	30.03.2027	30.06.2027	30.06.2027	187,960,554	2,471,563	2,471,563	83,026,086	42,748,824	56,174,578	56,174,578	56,174,578
28.06.2027	30.06.2027	30.09.2027	30.09.2027	0	0	2,471,563	83,026,086	42,748,824	56,174,578	56,174,578	56,174,578
28.09.2027	30.09.2027	30.12.2027	30.12.2027	0	0	2,471,563	83,026,086	42,748,824	56,174,578	56,174,578	56,174,578
28.12.2027	30.12.2027	30.03.2028	30.03.2028	0	0	2,471,563	83,026,086	42,748,824	56,174,578	56,174,578	56,174,578
28.03.2028	30.03.2028	30.06.2028	30.06.2028	0	0	2,471,563	83,026,086	42,748,824	0	56,174,578	56,174,578
28.06.2028	30.06.2028	29.09.2028	29.09.2028	0	0	2,471,563	83,026,086	42,748,824	0	56,174,578	56,174,578
27.09.2028	29.09.2028	29.12.2028	29.12.2028	0	0	2,471,563	83,026,086	42,748,824	0	56,174,578	56,174,578
27.12.2028	29.12.2028	29.03.2029	29.03.2029	0	0	2,471,563	83,026,086	42,748,824	0	56,174,578	56,174,578
27.03.2029	29.03.2029	29.06.2029	29.06.2029	0	0	0	0	0	0	0	0

Next steps

Organize the transaction

Initiate the tender offer –
Ensure that all
documentation is complete
and fully up to date.

Finalize a choice of strategy

Valuation of existing hedge

IR Portfolio Valuation - NORTHERNFIBER

Value Date: 07.11.2024

Calculation Date: 07.11.2024

Allocation/Link ID	Strategy ID	Trade ID	Counterparty	Trade	Effective	Maturity	Trade Type	Strike	Index	Initial Notional	Outstanding Notional
Derivatives - Cap											
SEB01-D	SEB01-D	1	SEB	22-May-23	30-Jun-23	31-Mar-29	BUY Cap	3.0000%	Euribor3m	EUR 45,863,426.00	EUR 60,333,932.00
SEB01-D	SEB01-D	2	SEB	22-May-23	30-Jun-23	31-Mar-29	Premium PAY	0.6458%		EUR 45,863,426.00	EUR 60,333,932.00
											60,333,932.00
TOTAL											60,333,932.00

Valuation						Comment
EUR						
Fair Value *	Intrinsic Value	Time Value	Fair Value **	Accrued Interests		
0.75%	452,023.20	52,940.97	399,082.23	430,156.27	21,866.92	evolving cap; 3% until the 31/03/2027 and then 4%
-3.54%	-2,135,792.21	-	-2,135,792.21	-2,093,581.58	-42,210.62	evolving cap; 3% until the 31/03/2027 and then 4%
	-1,683,769.01	52,940.97	-1,736,709.98	-1,663,425.31	-20,343.70	
	-1,683,769.01	52,940.97	-1,736,709.98	-1,663,425.31	-20,343.70	

Appendices

- Constraints linked to negative rates
- Euribor curves used for simulations of financial costs
- Products Sheets

Ineffectiveness of simple swaps (and tunnels/collars) in case of a floor in the financing

A video detailing this concern is visible on the blog of KERIUS Finance by [clicking here](#).

The financing contract provides that the Libor cannot be negative, therefore the bank will not pay interest to the borrower.

An Interest Rate swap which allows to fix the rate of a debt is a contract by which the company undertakes to:

- Receive a floating rate on the amount of the hedged debt (to cancel the floating rate of the financing contract)
- Pay a fixed rate on the same amount.

A conventional swap, which does not replicate this floor, that is to say whose variable "leg" does not also include a floor, has two disadvantages when the index (Libor/Euribor) is negative

No cap on the overall financing rate: the negative Libor rate is added to the fixed rate to be paid by the company.

A similar problem arises with the collar :

- the floor of the collar doubles the floor of the financing.
- In the event of negative rates, it induces a loss which increases the financial expenses beyond the threshold rate (cap).

Potential problem for applying hedge accounting:

The hedges are no longer considered effective by the CACs due to this non-capping of the financing rate.

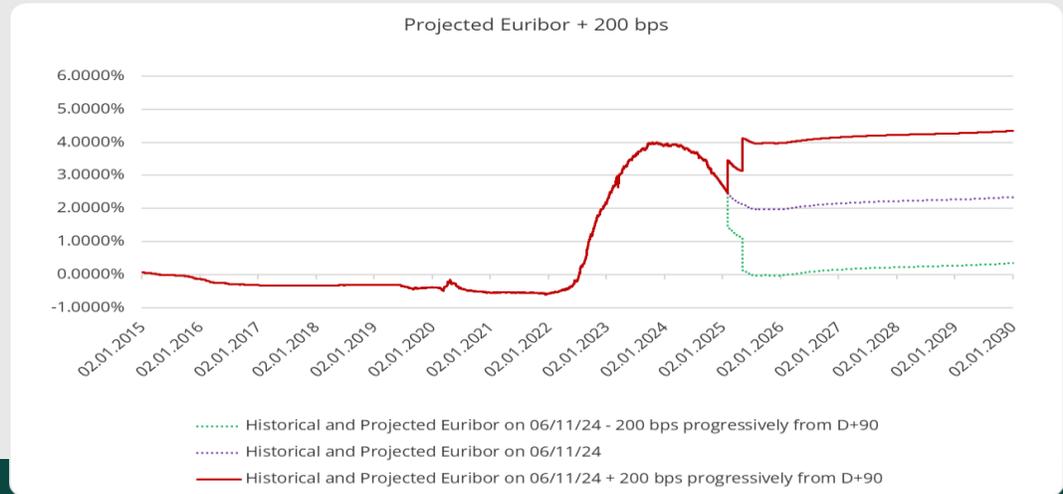
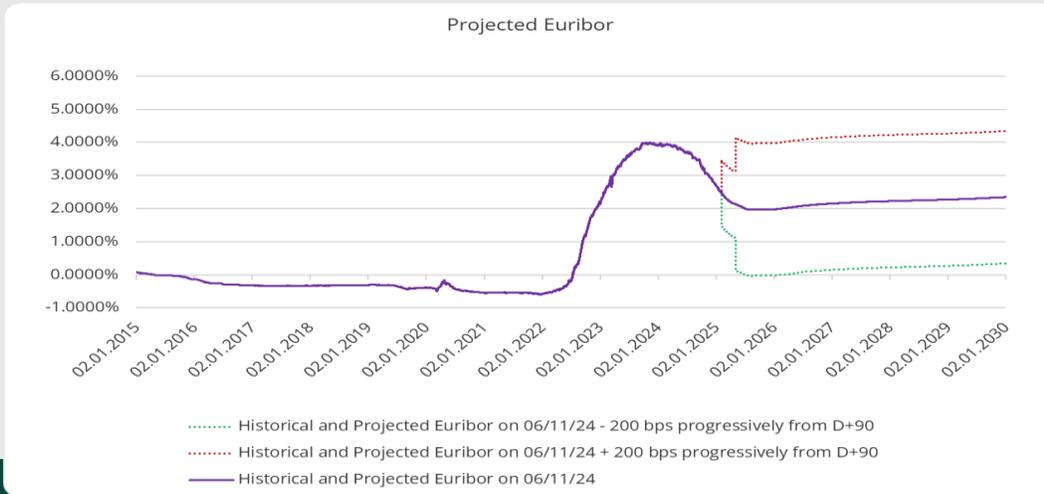
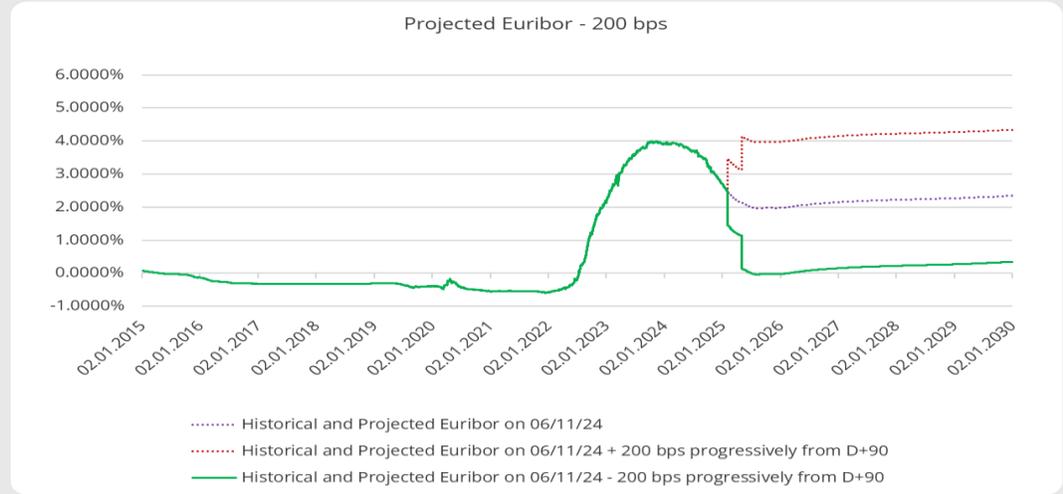
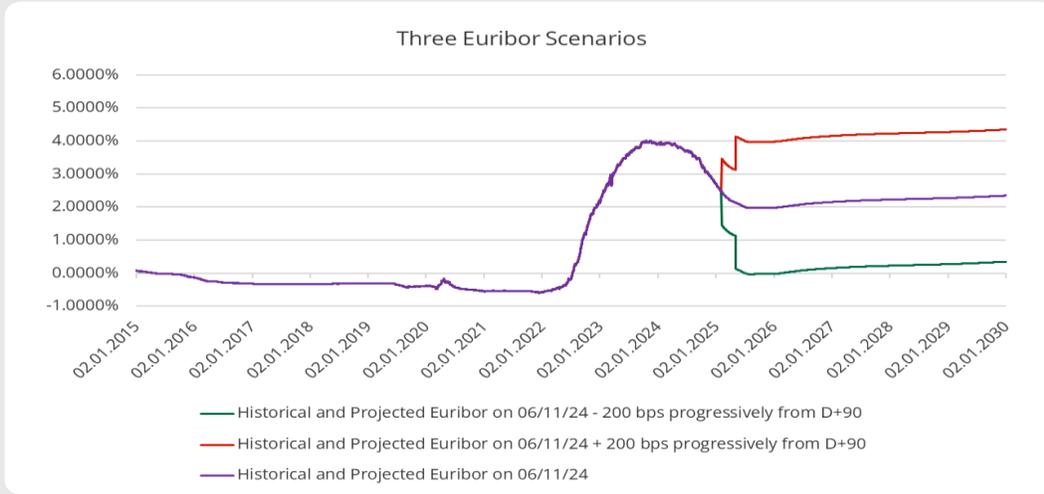
As such, all valuation variations (mark to market) of the swaps will be recorded in financial income (in other words, not deferred over time)

Technical solutions:

Include in the swap a floor replicating that of the financing, but this has a cost. See simulations.

Opt for a hedging with a Cap, which cannot generate negative valuation in the event of negative rates.

Euribor curves used for simulations of financial costs



Product sheets

Rate swap (fixed versus variable rate payer):

Firm commitment to pay a flow at a fixed rate at a fixed frequency and for a specified duration, in exchange for a flow received corresponding to the variable rate. The periodicity of the variable rate index determines the number of payments per year. The net of the two flows can be positive or negative in each period.

Benefits:

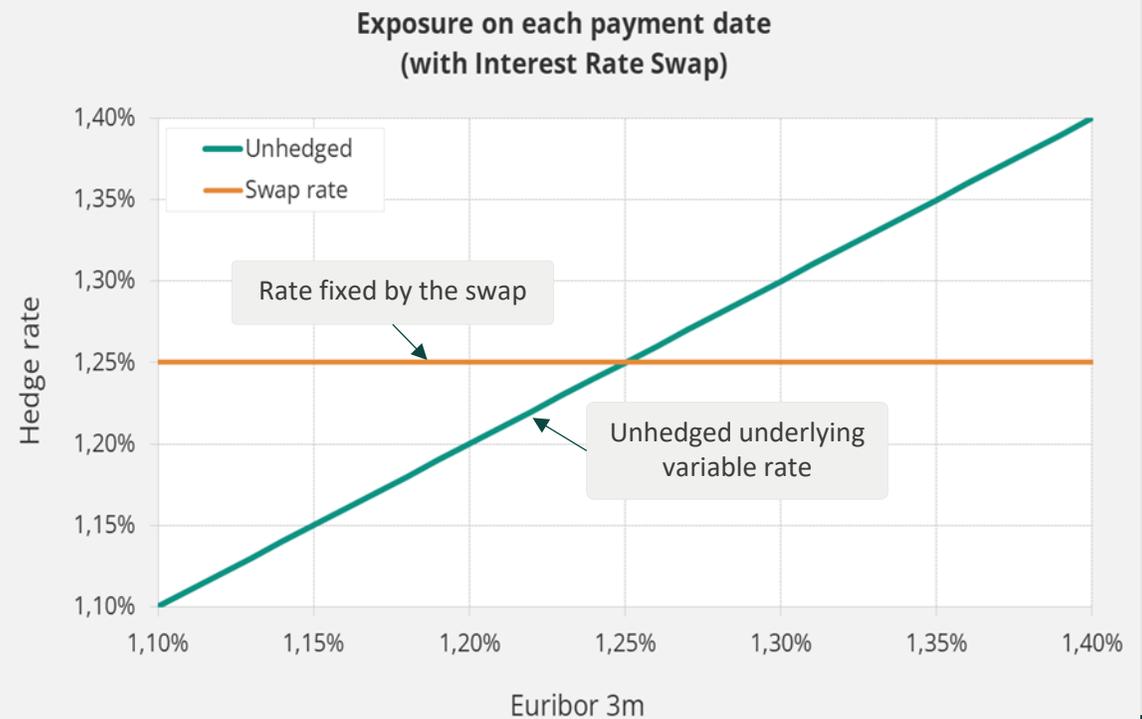
- Zero cost (no premium to pay)
- Financial charges are known in advance

Disadvantages:

- No opportunity to benefit from favorable rate movements;
- Risk of unlimited loss in the event of early termination.
- Simple but risky product in the event of reduction of the underlying exposure (debt reduction for example) or unwinding of the hedge in a negative valuation scenario (mark to market).

To be reserved for the incompressible part of the exposure (risk of negative valuation). **Illustrative graph:** not updated data

Product which no longer guarantees a financing rate in a context of negative rates for financing whose index (Euribor or other) is "floored".



Product sheets

Buying rate cap:

Right to receive a flow if the underlying rate index (hedged) is higher than the strike price of the cap (strike). The flow received will then correspond to the difference between the variable rate and the fixed rate, multiplied by the notional. In the context of financing, this flow has the effect of canceling what should have been paid on the underlying beyond the strike price of the cap.

Benefits:

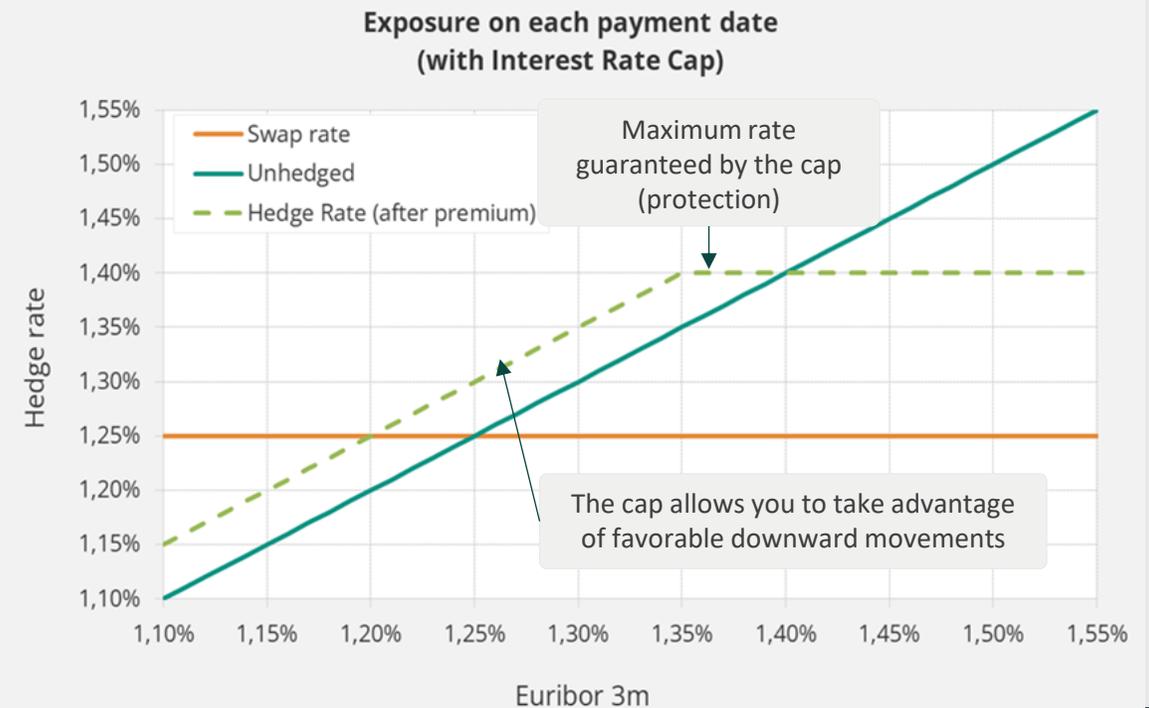
- Opportunity to take advantage of a low rate if it remains below the cap exercise price;
- Total flexibility to resell the hedge in the event of a change in the underlying;
- No risk of loss beyond the premium paid.

Disadvantages:

- Premium to be paid: depends on the characteristics of the option (amount, duration, more or less favorable exercise price, etc.)

Illustrative graph: not updated data

Recommended product in the current context.
This product takes into account the floors on financing



Product sheets

Tunnels/Collars of options:

Firm commitment to pay a flow at a fixed rate at a fixed frequency and for a specified duration, in exchange for a flow received corresponding to the variable rate.

The periodicity of the variable rate index determines the number of payments per year.

The net of the two flows can be positive or negative in each period.

Benefits:

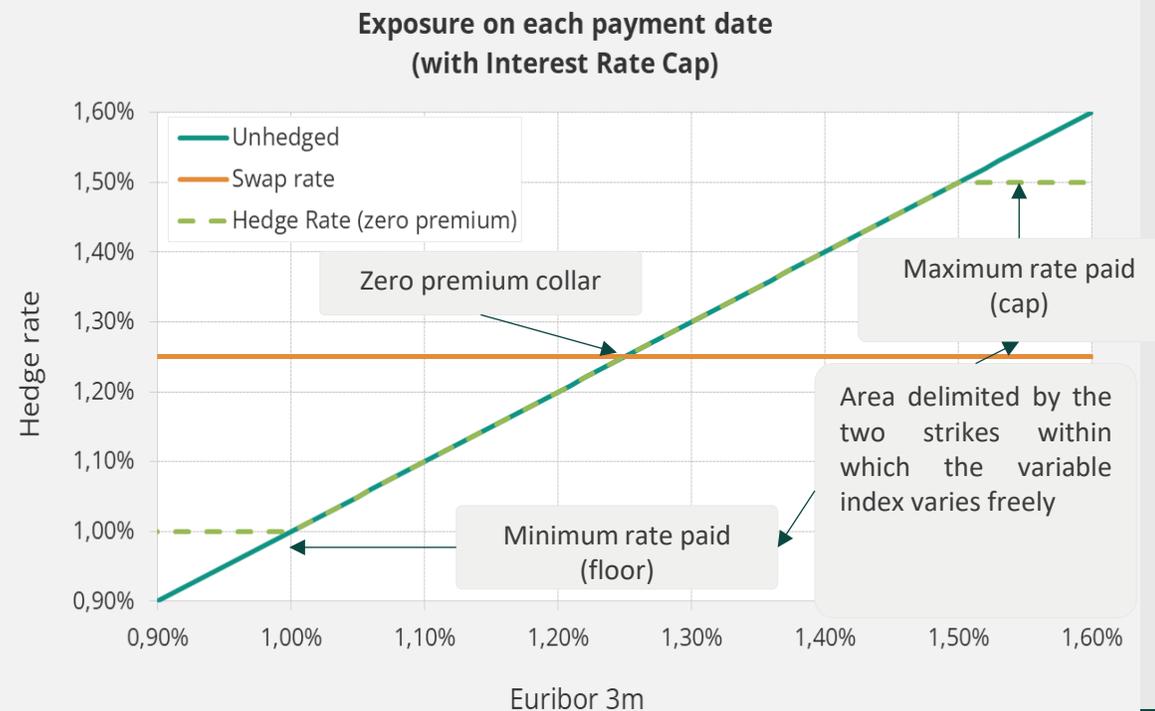
- Protection beyond the course of exercise of the cap;
- Opportunity to benefit from a drop in the index to the floor level;
- Financing the option purchased by the option sold.

Disadvantages:

- Risk of loss in the event of early unwinding and a drop in rates (as with a swap).

To be reserved for the incompressible part of the exposure (risk of negative valuation). **Illustrative graph:** not updated data

Product which no longer guarantees a financing rate in a context of negative rates for financing whose index (Euribor or other) is "floored".



Product sheets

Cap with deactivating barrier:

Right to receive a flow if the underlying rate index (hedged) is higher than the strike price of the cap (strike). The flow received will then correspond to the difference between the variable rate and the fixed rate, multiplied by the notional. In the context of financing, this flow has the effect of canceling what should have been paid on the underlying beyond the strike price of the cap. If the underlying rate crosses a so-called deactivating barrier, the product deactivates and no flow is then exchanged.

Benefits:

- Protection au-delà du cours d'exercice du cap
- Opportunité de profiter d'une baisse de l'indice de référence
- Stratégie moins couteuse qu'un cap classique

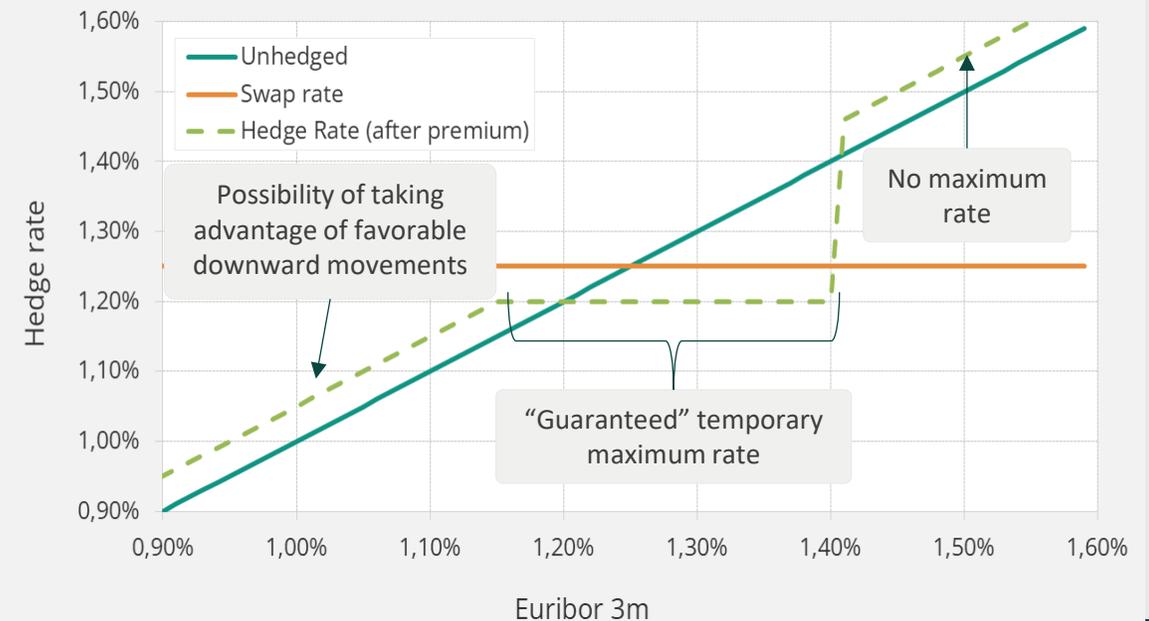
Disadvantages:

- Risk of loss in the event of early unwinding and a drop in rates (as with a swap).

Illustrative graph: not updated data

Product that does not provide any guaranteed ceiling rate. This is not a hedging product.

Exposure on each payment date
(with Interest Rate Cap)



Product sheets

Cap with activating barrier:

Right to receive a flow if the underlying (hedged) rate index is higher than the so-called knock-in barrier. The flow received will then correspond to the difference between the variable rate and the fixed rate, multiplied by the notional. In the context of financing, this flow has the effect of canceling what should have been paid on the underlying beyond the price of the activating barrier. As long as the underlying rate remains below the knocking barrier, no flows are exchanged.

Benefits:

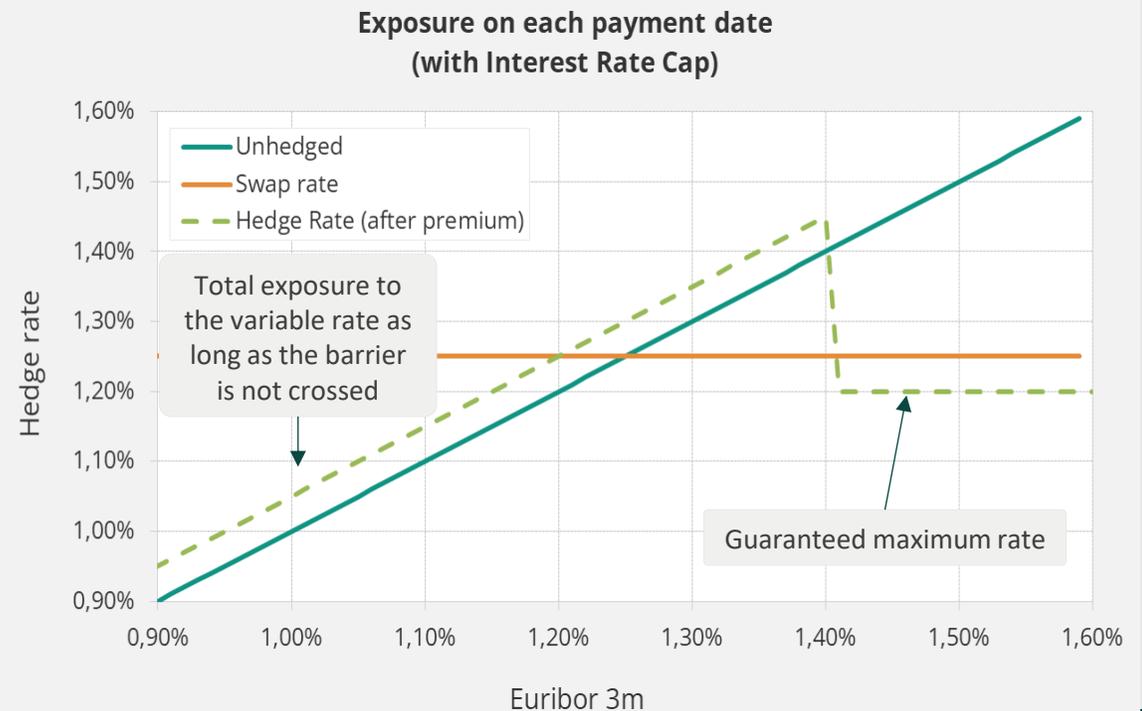
- Protection beyond the activation barrier at the strike of the cap;
- Opportunity to benefit from a drop in the benchmark index
- Less expensive strategy than a classic cap.

Disadvantages:

- Greater exposure to the upward risk of the variable rate than a traditional cap

Illustrative graph: not updated data

We do not recommend this product because most often bank margins degrade its performance.



Product sheets

Cap Spread:

Right to receive a flow if the underlying rate index (hedged) is higher than the strike price of the cap (strike). The flow received will then correspond to the difference between the variable rate and the fixed rate, multiplied by the notional. In the context of financing, this flow has the effect of canceling what should have been paid on the underlying beyond the strike price of the cap. If the underlying rate crosses the strike price of the cap sold, the exposure to the underlying rate is almost total (restated for the difference between the 2 strike prices).

Benefits:

- Protection beyond the exercise price of the cap purchased;
- Opportunity to benefit from a drop in the benchmark index
- Less expensive strategy than a classic cap (partial financing of the option purchased by the option sold).

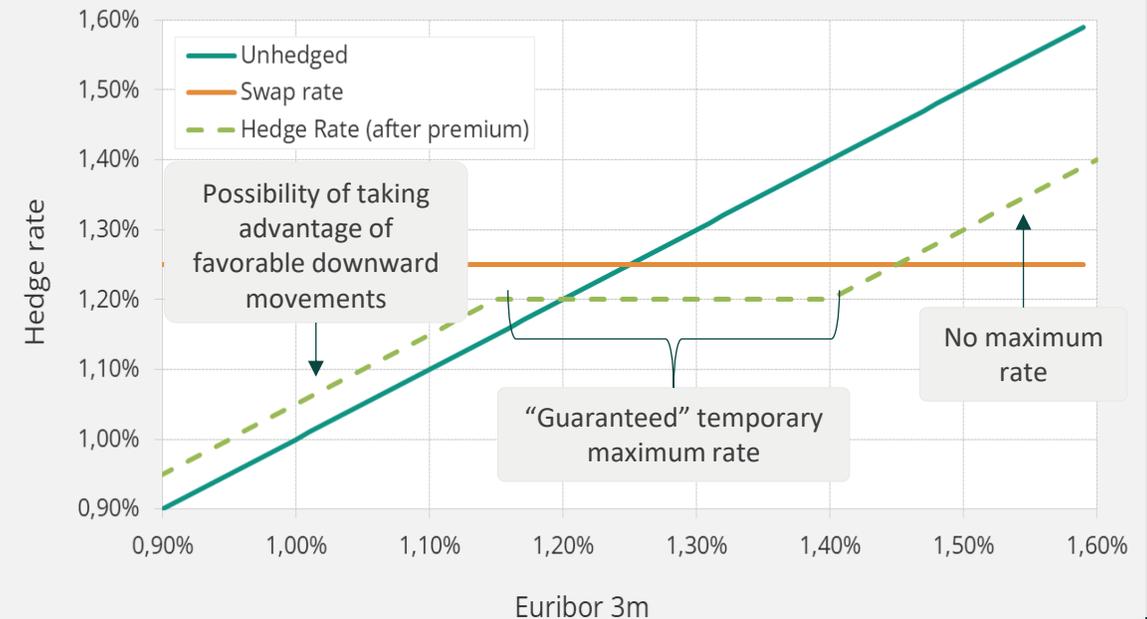
Disadvantages:

- Greater exposure to the upward risk of the variable rate than a traditional cap

Illustrative graph: not updated data

We do not recommend this product because it does not provide a guaranteed maximum rate. This is not a hedging product.

Exposure on each payment date
(with Interest Rate Cap)



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