## **Worst-of Autocallable Certificate**

## 1. Termsheet

Notional	EUR 1 000
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Valuation date T <sub>o</sub>	31 Dec 2024
Settlement currency	EUR
Maturity date	15 Feb 2026 (T = 1.13 years)
	<b>1. Equity index,</b> $S_t$ : S&P 500 (ticker: ^GSPC).
Underlyings	<b>2. Short-rate,</b> $r_t$ : Euro short-term rate ( $\P$ STR) (modelled as a one-factor short-rate process).
Initial levels on T <sub>0</sub>	$S_0 = 5,881.63$ (Index level).
	$r_0 = 2.90\%.$
Knock-out	2 Jun 2025 and 2 Dec 2025 (following-business-day convention,
observation dates	TARGET2 calendar).
Knock-out barriers	Equity barrier, $B_S=95\%*S_0=5{,}587.55$ . Short-rate barrier, $B_r=95\%*r_0=2.76\%$ .
Autocall payoff	On an observation date, if <b>both</b> underlying levels ≥ their barrier, the note redeems at 100 % of notional and terminates. Otherwise, it continues.
Final payoff and conditional coupon	At maturity, the noteholder receives:  • A conditional coupon of 15% of notional (i.e. notional + coupon = 115% of notional) if $S_T \geq B_S$ and $r_T \geq B_r$ .  • Otherwise, the note redeems at notional multiplied by the poorer performance of the two underlyings. $ \begin{cases} 1.15, & \text{if } S_T \geq B_S \text{ and } r_T \geq B_r \\ \min\left(\frac{S_T}{S_0}, \frac{r_T}{r_0}\right), & \text{otherwise} \end{cases} $

Notional	EUR 1 000
Discounting curve	Flat risk-free rate: $r_f=3.60\%$ (continuously compounded, act/365).
Equity volatility	$\sigma_{ m S}=15\%$ (annualized).
Asset correlation	ho=0.00 (applied to Brownian drivers).
Short-rate model parameters (HW)	$\kappa = 0.5602,  \theta = 4.32\%,  \sigma_r = 0.92\%.$
Day-count / convention	act/365 fixed for both accrual and discounting.