Lisbon School of Economics & Management
Universidade de Lisboa

MASTER OF SCIENCE IN

FINANCE

MASTERS FINAL WORK

PROJECT

PRIIP ANALYSIS: 10.04% P.A. BARRIER REVERSE CONVERTIBLE IN EUR ON KERING AND LVMH (2025 – 2026)

INÊS MAIA NUNES

JUNE - 2026

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SUPERVISION:
RAQUEL MEDEIROS GASPAR

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Abstract

This project analyses and values a 10.04% p.a. Barrier Reverse Convertible in EUR on Kering and LVMH, issued by Leonteq Securities AG in September 2025. The product is a structured financial instrument linked to the worst-performing of the two underlying assets and offers a fixed coupon payment, while exposing investors to losses if the worst-performing underlying asset falls below the 65% barrier level at maturity. The study begins with a detailed description and decomposition of the product, including the identification of its main risks, advantages, and disadvantages for investors.

The valuation process is performed using Monte Carlo simulation under both historical and implied volatility scenarios, allowing the estimation of the product's theoretical value at issuance and subsequent dates throughout the observation period. The analysis also evaluates the probability of barrier breach and examines the payoff distribution associated with the worst-of structure. In addition, alternative product designs are explored, namely the replacement of the worst-of put option with a best-of put option and the consideration of a structure linked to only one underlying asset.

Furthermore, the project includes a correlation sensitivity analysis and a Greek analysis, focusing on the behavior of Delta, Gamma, Cross-Gamma, Vega, and Rho. The results highlight the significant influence of volatility and correlation on the product's valuation and risk profile, particularly due to the worst-of mechanism, which increases the probability of adverse outcomes compared to simpler structures. Overall, this study contributes to a better understanding of the dynamics of barrier reverse convertibles and the trade-off between coupon payments and downside risk exposure.

Keywords: Structured Product; Barrier Reverse Convertible; Worst-of Put Option; Monte Carlo Simulation; Correlation Sensitivity; Greek Letters.

JEL Codes: G12; G13; G17.

Resumo

Este projeto analisa e avalia um *Barrier Reverse Convertible* com cupão de 10,04% p.a. em EUR sobre as ações da Kering e da LVMH, emitido pela Leonteq Securities AG em setembro de 2025. O produto consiste num instrumento financeiro estruturado indexado ao ativo subjacente com pior desempenho entre os dois ativos considerados, oferecendo um pagamento de cupão fixo, enquanto expõe os investidores a perdas caso o ativo com pior desempenho termine abaixo do nível da barreira de 65% na maturidade. O estudo inicia-se com uma descrição detalhada e decomposição do produto, incluindo a identificação dos seus principais riscos, vantagens e desvantagens para os investidores.

O processo de valorização é realizado através de simulação de Monte Carlo, considerando cenários de volatilidade histórica e volatilidade implícita, permitindo estimar o valor teórico do produto na data de emissão e em datas subsequentes ao longo do período de observação. A análise avalia igualmente a probabilidade de ocorrência de um dos ativos atingir a barreira e examina a distribuição de *payoffs* associada à estrutura *worst-of*. Adicionalmente, são exploradas estruturas alternativas ao produto, nomeadamente a substituição da opção *put worst-of* por uma opção *put best-of* e a consideração de uma estrutura associada a apenas um ativo subjacente.

Além disso, o projeto inclui uma análise de sensibilidade à correlação e uma análise dos gregos, focando-se no comportamento do Delta, Gamma, Cross-Gamma, Vega e Rho. Os resultados evidenciam a influência significativa da volatilidade e da correlação no valor e no perfil de risco do produto, particularmente devido ao mecanismo *worst-of*, que aumenta a probabilidade de resultados adversos quando comparado com estruturas mais simples. No geral, este estudo contribui para uma melhor compreensão da dinâmica dos *barrier reverse convertibles* e do equilíbrio entre os pagamentos de cupão e a exposição ao risco de perdas.

Palavras-chave: Produto Estruturado; Barrier Reverse Convertible; Opção Put Worst-of; Simulação de Monte Carlo; Sensibilidade à Correlação; Letras Gregas.

Códigos JEL: G12; G13; G17.

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I am deeply grateful to my family for all the support they have given me, both financially and emotionally, and for providing me with every opportunity to pursue the best education possible. To my grandfather, Marcos, thank you for always motivating me to strive for more and to push beyond my limits. To my aunt, Renata, thank you for your constant advice and for helping me shape the next steps of my future. To my cousin, Joana, thank you for being such a role model and for showing me, through your example, the value of determination and hard work.

My most heartfelt thanks go to my mother, Carla, for never allowing me to give up and for believing in me even during the most difficult moments. Thank you for your endless patience, for always standing by my side through every challenge and achievement. Your strength, unconditional love, and constant support have shaped the person I am today. I hope that one day I can become even half the person you are.

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Finally, I would like to dedicate this milestone to the brightest star in the universe, my grandmother Tina, who has always been, and will always remain, my strength and inspiration to continue pursuing my dreams. You are the reason I always believed in the importance of perseverance, kindness, and love. This achievement will forever be dedicated to you.

Glossary

ATM – At-the-Money

BRC – Barrier Reverse Convertible

GBM – Geometric Brownian Motion

KID – Key Information Document

LVMH – Moët Hennessy Louis Vuitton

PRIIP – Packaged Retail and Insurance-Based Investment Products

SRI – Summary Risk Indicator

ZCB – Zero-Coupon Bond

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1. Introduction

This project analyses a structured product classified as a 10.04% p.a. Barrier Reverse Convertible in EUR linked to the shares of Kering and LVMH, issued by Leonteq Securities AG. The product combines a fixed coupon component with exposure to the performance of two luxury-sector equities through a worst-of structure. While investors benefit from predefined coupon payments during the life of the product, they may incur losses at maturity if the worst-performing underlying asset closes below the 65% barrier level.

The main purpose of this study is to examine the structure, valuation, and risk characteristics of the product. The analysis begins with a detailed description of the product's main features and payoff mechanism, the issuer and the underlying assets, followed by a discussion of the principal risks associated with this type of investment, as well as the potential benefits and disadvantages from the investor's perspective.

The valuation of the product under consideration relies on Monte Carlo simulation under the Geometric Brownian Motion model, estimating the theoretical value of the product at issuance and at subsequent moments during its lifetime: two and four months after issuance. The results are then compared with observed market prices to evaluate the evolution of the product over time.

In addition, this project considers alternative product designs to analyze how changes in the original product structure would affect the product's behavior. This includes analyzing alternative payoff mechanisms, such as replacing the worst-of feature with a best-of structure and considering a product structure linked to a single underlying asset.

Finally, two sensitivity analyses are conducted. The first examines the impact of changes in the correlation between the underlying assets on the product's valuation, while the second evaluates the behavior of the option's Greek letters and their influence on the product's risk exposure. This analysis is further extended to assess the role of correlation in the behavior of the Greeks.

2. Literature Review

Structured products are hybrid financial instruments that combine traditional investment components – usually a fixed income one – with derivative contracts whose payoff depends on underlying assets. These products intend to customize risk-return profiles that usually are not achievable through other traditional financial instruments (Blümke, 2009). Since the 1990s, these products have gained popularity among retail investors seeking higher returns in a low-interest rate environment, while providing exposure to equities, indices, currencies, and commodities. However, with the increase in this type of product, they started to embed significant complexity (Henderson & Pearson, 2010). As a result, understanding the valuation and the embedded risks has become essential.

Among all types of structured products, Barrier Reverse Convertibles (BRCs) are structured products that pay a high fixed coupon in return for investors taking on downside risk. In practice, the investor receives regular interest payments, and at the same time agrees to take on possible losses if the underlying asset falls below a predetermined barrier (Deng, Husson & McCann, 2014). A BRC can be viewed as a bond combined with a short put option, and this short exposure is linked to the performance of the underlying assets. If the barrier is breached, the investor may receive the underlying asset instead of the full capital repayment, making BRCs attractive but risky. When no barrier event occurs, investors receive their full nominal amount with the coupon.

This type of product is often structured using a worst-of mechanism, where the product's payoff depends on the underlying asset with the weakest performance among a basket of assets (Bouzoubaa and Osseiran, 2010). In these structures, the investor is exposed not only to the individual risk of each underlying asset, but also to the correlation between them (Lindauer & Seiz, 2008), since a decline in only one asset may be sufficient to trigger a barrier event. As a result, worst-of BRCs generally offer high coupon payments compared to single-underlying structures, compensating investors for the additional downside risk embedded in the product. However, this feature also increases the probability of capital loss, because the final redemption amount is determined by the worst-performing asset, even if the remaining assets perform positively. Thus, correlation plays a crucial role in the valuation and risk profile of these products, as lower correlation between the underlying assets increases the likelihood that one asset will significantly underperform the others, worsening the expected payoff for investors.

3. Product Presentation

3.1. Product Description and Payoff

The product under analysis is the 10.04% p.a. Barrier Reverse Convertible in EUR on Kering and LVMH, issued by Leonteq Securities AG on September 16, 2025. This structured product has a short maturity of six months and a denomination of EUR 5,000, which is also the minimum trading lot. As stated in the Key Information Document (KID) in the appendix, this product offers a coupon amount of EUR 125.45 paid both on December 16, 2025, and March 16, 2026, regardless of the performance of the underlying assets during the lifetime of the product.

At the redemption, the product is linked to the performance of two underlying assets, which are Kering and LVMH, and the possibilities for the redemption of the product are as follows:

- If a barrier event has not occurred, the investor will receive the denomination;
- If a barrier event has occurred, the investor will receive a round number (i.e. conversion ratio) of the underlying asset with the worst performance. The conversion ratio represents the number of shares of the underlying asset that the investor is entitled to receive and is determined by dividing the product's denomination by the initial fixing price of the underlying asset.

At issuance, Kering traded at a price of EUR 238.90 whereas LVMH traded at a price of EUR 496.15. The corresponding 65% European knock-in barrier levels are EUR 155.29 and EUR 322.50, respectively, meaning that a fall below these levels would trigger the barrier event for the respective underlying. Since the barrier is European, it is observed only at maturity rather than continuously throughout the lifetime of the product.

The product can be decomposed into three different components. Firstly, a zero-coupon bond with a face value equal to the EUR 5,000 denomination, representing the issuer's obligation to return the principal at maturity, regardless of the underlying asset's performance. The second component is a short worst-of down-and-in put option based on the underlying assets – that only becomes viable when the price of at least one of the underlying assets reaches the barrier level, otherwise, the option never becomes active and expires worthless. Finally, the investor receives a guaranteed coupon of EUR 125.45 paid at the 3rd and 6th month, which functions as

the premium for writing the embedded put option.

The payoff of the structured product under analysis can be written as,

$$Payoff_T = \sum_{i=1}^{n} C_i + \begin{cases} D, \ if \ \min\left(\frac{S_i(T)}{S_i(0)}\right) > B \\ D \times \min\left(\frac{S_i(T)}{S_i(0)}\right), \ if \ \min\left(\frac{S_i(T)}{S_i(0)}\right) \leq B \end{cases} \quad (1)$$

where D is the denomination (EUR 5,000), C_i is the coupon payment made at month i, where $i \in \{3,6\}$; B is the barrier level (65% of the initial fixing level), $S_i(T)$ is the final fixing level of the underlying i (Kering or LVMH), $S_i(0)$ is the initial fixing level of the underlying i, and $\min\left(\frac{S_i(T)}{S_i(0)}\right)$ represents the worst performance.

Figure 1 shows the payoff profile at maturity for this structured product, divided into its three components: the principal (a zero-coupon bond), the guaranteed coupons, and the short down-and-in put option.

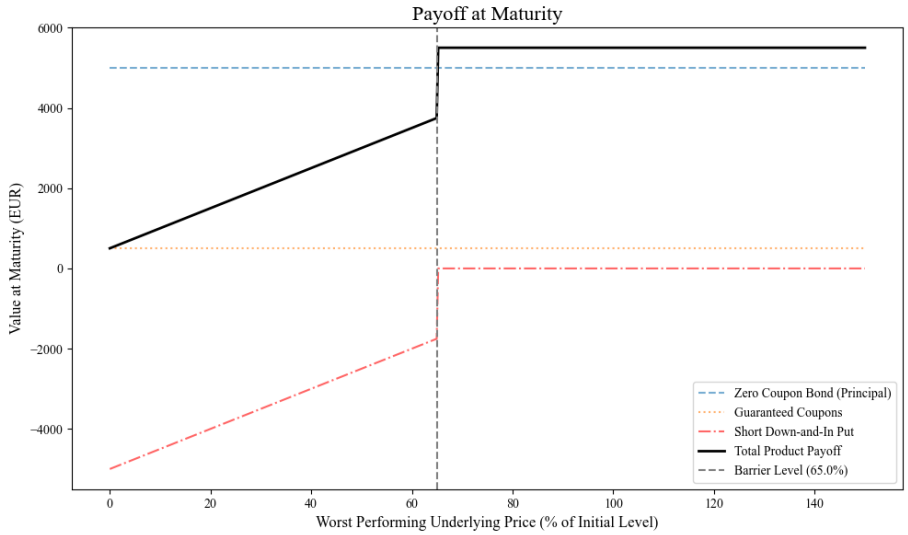


Figure 1 - Payoff at Maturity

As stated in the graph, as long as the worst-performing underlying asset stays above the 65% barrier level, the investor receives the full principal plus the coupons. However, if the underlying price falls below the 65% barrier level, the short-put option is triggered, causing the total payoff to drop sharply and track the performance of the underlying asset downward.

3.2. Issuer

Leonteq Securities AG is a Swiss fintech company with a leading marketplace for structured products, specialized in its engineering, issuance, and distribution. It operates internationally with offices and subsidiaries in 13 countries across Europe, the Middle East and Asia, and it is publicly traded on the SIX Swiss Exchange (Leonteq, 2025).

An important aspect to outline is the issuer's creditworthiness. This product is an unsecured obligation of Leonteq, meaning that investors rely entirely on the issuer's ability to meet its payments. The KID clearly states that the product is not protected by any guarantee or deposit insurance, so the issuer's financial strength is crucial. Reflecting this financial standing, Fitch Ratings assigned Leonteq Securities AG a long-term issuer default rating of BBB- with a stable outlook (Fitch Ratings, 2025).

3.3. Underlying Assets

As mentioned before, the two underlying assets referenced by the product under analysis are Kering and LVMH, both listed on the Euronext Paris and represent major players in the global luxury sector. It is important to describe the business profiles of the two companies: Kering as an international luxury group, and LVMH as the world's largest luxury brand.

Given that the product utilizes a worst-of mechanism, the relationship between these two underlying assets is a critical determinant of the investment's risk-return profile. Figure 2 shows the 6-month rolling historical correlation between the underlying assets.

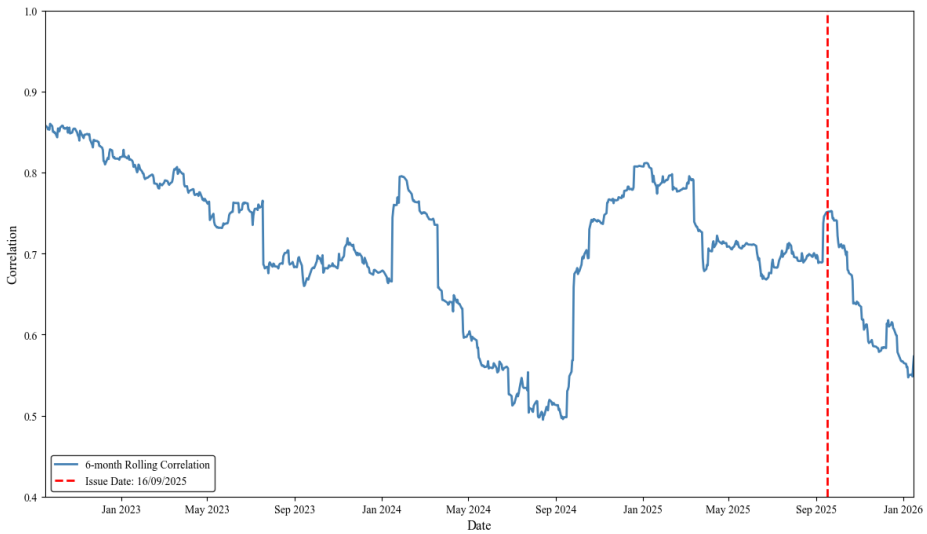


Figure 2 - 6-Month Rolling Correlation Between LVMH and Kering

The co-movement between the two luxury assets is analyzed using a 6-month rolling correlation, derived from the logarithms of daily returns, offering a smoothed perspective on the relationship between LVMH and Kering over time.

The analysis of the 6-month rolling correlation starts three years prior to the product's issuance, September 16, 2022, and concludes four months post-issuance, allowing for a comparison between the assets' long-term behavior and their immediate behavior since the issuance.

From the start of the observation in September 2022 through early 2024, the correlation between the underlying assets remained consistently high, predominantly staying within the 0.70 to 0.80 range, indicating that the two assets moved in high synchronization. However, a sharp decline occurred in mid-2024, where the correlation coefficient dropped toward 0.50. This represents a period where the two assets diverged, meaning their daily returns were much less likely to move in the same direction or magnitude. Following this period, the correlation trended back upward, reaching approximately 0.75 by September 16, 2025, the issuance date. In the following months post-issuance, the graph shows a renewed downward trajectory, ending the year near the 0.55 to 0.60 level.

Figure 3 shows the evolution of the underlying assets in percentage of their issuance date values.

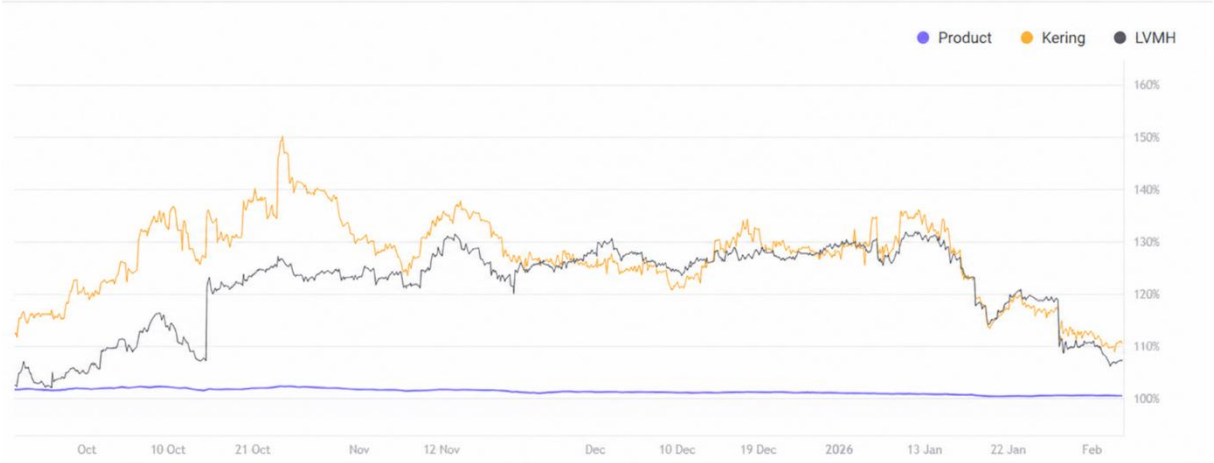


Figure 3 – Evolution of the Underlying Assets (Source: Leonteq)

Based on the performance data from Leonteq, both Kering (yellow line) and LVMH (black line) reflect a positive performance during the period under analysis, remaining above their initial prices, and it is possible to observe that Kering outperformed LVMH, peaking near 150% of its initial value in late October. However, in January both assets retraced toward the 108% - 112%

range. The structured product (blue line) appeared relatively stable, trading near its 100% par value throughout the observation period

3.4. Risks for Investors

Investing in the 10.04% p.a. Barrier Reverse Convertible linked to Kering and LVMH comes with risks that investors should consider before making a decision.

As stated in the KID, Leonteq assigned this product a Summary Risk Indicator (SRI) of 6 out of 7, categorizing it within the second-highest risk classification. This rating reflects a high probability that market movements may result in significant financial loss. However, it is important to note that this classification is based on the assumption that the product is held until the maturity date of March 16, 2026. Thus, the actual risk profile may deviate if the investor decides to redeem the product early. On the other hand, the SRI does not incorporate currency risk, which may impact the final return if the investor's currency differs from the settlement currency (EUR).

The main risks considered are:

- **Market Risk**: The investor is exposed to the market performance of the underlying assets, Kering and LVMH. If at least one of them reaches a final fixing level at or below the 65% barrier level, a barrier event is triggered. In this case, the investor receives a delivery of the underlying with the worst performance, which may be worth less than the initial investment.

- **Liquidity Risk**: The product has significant liquidity risk, as no formal mechanisms exist if the investor decides to exit the position before maturity. Investors may face difficulties in finding a counterparty in the secondary market, which can prevent an early exit if capital is needed urgently. Furthermore, even if a buyer is found, prevailing market conditions may necessitate selling the product at a discount relative to the initial investment or its theoretical fair value. For these reasons, the product is suitable primarily for investors who are able to commit their capital until the redemption date.

- **Currency Risk**: This product is denominated and settled in Euro. If the investor does not belong to the eurozone and its payments are in a different currency, the final return will be subject to the exchange rate between the two currencies. More specifically, if the Euro depreciates against the investor's local currency, the final redemption amount will decrease,

potentially resulting in a loss.

- **Credit/Default Risk**: The investor bears the credit risk of the issuer, Leonteq Securities AG. If the issuer becomes insolvent or in the event of default, the investor could lose their entire investment. Holding a credit rating of BBB- (Fitch Ratings, 2025), Leonteq has a risk that adverse economic conditions could impact their capacity to meet financial obligations.

- **Pricing Risk**: The prices provided by Leonteq may not always represent the true market value of the product. These prices might differ from valuations generated by internal pricing models or from prices offered by other market participants, which could lead to a mispricing of the product at issuance and, consequently, to significant losses for the investor.

3.5. Advantages and Disadvantages for Investors

This structured product possesses several advantages that characterize it as a potentially attractive investment. More specifically:

- **10.04% Fixed Coupon Rate**: This product provides an income stream through a 10.04% p.a. coupon rate, paid regardless of the market performance of the underlying assets, provided that neither of them breaches the predefined barrier level.

- **Short-Term Tenor**: The product features a brief maturity period of 6 months. This short tenor limits the investor's exposure to broader market volatility, systemic economic shocks, or sector-specific downturns, mitigating the long-term uncertainty associated with more extended investment horizons.

- **Exposure to Sector-Leading Underlying Assets**: The product is linked to Kering and LVMH, two of the most important companies within the global luxury goods sector. Having these high-quality firms as underlying assets potentially reduces the risks associated with company-specific failures compared to investments in more volatile or lesser-known corporations.

However, this structured product also carries inherent disadvantages that necessitate careful consideration by potential investors. Namely:

- **Capital Risk and Downside Exposure**: The investor's capital is fully at risk, as the protection mechanism is conditional. If a barrier event occurs – meaning either Kering or

LVMH closes at or below 65% of its initial fixing level – the investor is exposed to the full downside performance of the worst-performing underlying. This worst-of mechanism means that even if one of the assets performs exceptionally well, a significant decline in the other asset will dictate the final redemption value, resulting in a loss.

- **Sector Correlation and Reduced Diversification**: The underlying assets operate in the same industry, thus their stock prices often have high correlation and may be impacted simultaneously by the same economic shocks, increasing the likelihood of a barrier event.

- **Complexity of The Product**: As stated in the KID, this product is not simple and may be difficult to understand. This structured product is intended for retail investors who have some knowledge of the financial instrument or moderate experience of financial markets.

4. Product Valuation

This chapter presents the valuation of the structured product under analysis. The valuation is performed using Monte Carlo simulation and is based on market data collected at issuance, with the objective to estimate the theoretical value of the product and analyze how its different components contribute to the overall valuation.

4.1. Variable Inputs

This section describes the main variables used in the valuation process. These inputs are required to model the behavior of the underlying assets and estimate the product's theoretical value. Key variables include volatility, correlation, risk-free rate and dividend yields, and the issuer funding cost.

4.1.1. Volatility

An important variable when analyzing structured products is volatility. This metric measures the uncertainty of the underlying assets and, more specifically, as volatility increases, the chance that the underlying assets will do very well or very poorly increases (Hull, 2022). For the valuation of this product two volatility measures are considered: the historical and the implied volatility.

The historical volatility is computed based on historical data of the underlying assets, obtained from Bloomberg. The volatilities are estimated using the logarithm of daily returns for the period between September 8, 2000, and September 8, 2025 (the initial fixing date), yielding a historical volatility of 30.20% for LVMH and 33.35% for Kering. This data establishes Kering as the worst-performer candidate, as its superior historical volatility levels relative to LVMH increase the statistical probability of a barrier breach.

The implied volatility is used to evaluate the market's opinion and expectations about the volatility of a specific underlying asset in the future. As stated by Hull (2022), whereas historical volatilities are backward looking, implied volatilities are forward looking. For this analysis, implied volatilities are retrieved from the Bloomberg Terminal using the OMON function. This data is extracted from At-The-Money (ATM) put options on the underlying assets, observed on the initial fixing date and with maturities close to the product's redemption. The results yielded implied volatilities of 31.74% for LVMH and 42.00% for Kering.

4.1.2. Correlation

As this structured product involves two underlying assets, calculating the correlation between them is crucial to understanding their behavior in the context of a worst-of structure. For this study, the historical correlation between the two underlying assets is estimated through the logarithm of daily returns for LVMH and Kering between the same period as the estimates for the historical volatilities, September 8, 2000, and September 8, 2025.

The resulting value of 0.69 indicates that while these luxury underlying assets tend to move together, they are not perfectly synchronized. In the context of a worst-of mechanism, this is important because the probability of a barrier event is higher, since the barrier is triggered if at least one of the underlying assets falls below the 65% barrier level. Even with a relatively high positive correlation, the assets are not perfectly synchronized, which increases the likelihood that one asset may underperform significantly while the other remains relatively stable.

4.1.3. Risk-free Rate and Dividend Yield

The risk-free rate (r) is assumed based on the German Bund Yield for a maturity of 6 months, at issuance. This proxy is selected to align with the 6 months maturity of the structured product, and the correspondent rate is obtained from the Bloomberg Terminal, observed on the initial fixing date, with a value of 1.874%.

The annualized dividend yields (q) are also obtained from the Bloomberg Terminal based on the year 2025, with a value of 2.21% for LVMH and 1.91% for Kering.

4.1.4. Issuer Funding Cost

The issuer funding cost (fc) represents the risk-free interest rate plus an additional spread that compensates the investors for the issuer's credit risk.

To estimate Leonteq's credit risk, a yield curve for European financial companies with a BBB credit rating is selected from the Bloomberg Terminal as a proxy. On the initial fixing date, the corresponding credit spread is 2.677%. Adding this spread to the risk-free rate of 1.874% results in an issuer funding cost of 4.552%.

4.2. Product Valuation

The valuation of this type of product requires a technique that can appropriately model path dependency, correlations, and volatility dynamics – the Monte Carlo Simulation. Glasserman (2004) shows that Monte Carlo simulation can accurately capture whether and when a barrier is breached, by generating many possible price paths, making this valuation method suitable for pricing this structured product.

To ensure that the stock returns reflect the correlation between LVMH and Kering it is necessary to apply the Cholesky decomposition. Firstly, it is important to note that the correlation between the two assets can be represented by the following matrix,

$$R = \begin{bmatrix} 1 & \rho \\ \rho & 1 \end{bmatrix} \quad . \tag{2}$$

The Cholesky decomposition decomposes a symmetric matrix into the product of a lower triangular matrix L and its transpose L^T, transforming uncorrelated standard normal variables into correlated ones. Applying this method to the previous matrix R, we get

$$R = LL^T \quad . \tag{3}$$

By solving the previous equation, it is possible to find the lower triangular matrix L

$$L = \begin{bmatrix} 1 & 0 \\ \rho & \sqrt{1-\rho^2} \end{bmatrix} \quad . \tag{4}$$

Let Z_1 and Z_2 be two uncorrelated standard normal variables. Transforming these into two new correlated variables, ϵ_1 and ϵ_2, using the L matrix:

$$\begin{bmatrix} \epsilon_1 \\ \epsilon_2 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ \rho & \sqrt{1-\rho^2} \end{bmatrix} \begin{bmatrix} Z_1 \\ Z_2 \end{bmatrix} \quad , \tag{5}$$

this results in

$$\epsilon_1 = Z_1 \quad , \tag{6}$$

$$\epsilon_2 = \rho Z_1 + \sqrt{1-\rho^2}\, Z_2 \quad . \tag{7}$$

These correlated variables are then plugged into the Geometric Brownian Motion (GBM) model. This is a stochastic process defined in continuous time used to model asset price dynamics, that assumes the logarithm of the asset price evolves according to a Brownian motion with a constant drift term. Following a Markov process, the GBM is a stochastic process where only the present value of a variable is relevant for predicting the future, and the historical information of the variable and the way that the present has emerged from the past are irrelevant (Marathe, 2005).

The GBM formula to evolve the stock prices is given by

$$S_t = S_{(t-1)} e^{\left(r - q - \frac{\sigma^2}{2}\right)\delta t + \sigma\sqrt{\delta t} * \epsilon_i} \quad , \tag{8}$$

where S_t is the stock price at time t; r is the risk-free rate; q is the annualized dividend yield; σ is the historical or implied volatility discussed in Section 4.1.1; δt is the time step $\frac{1}{252}$; ϵ_i is the correlated normal variable discussed previously in this Section (ϵ_1 for LVMH and ϵ_2 for Kering); the term $\left(r - q - \frac{\sigma^2}{2}\right)$ represents the drift; and the term $\sigma\sqrt{\delta t} * \epsilon_i$ represents the random shock.

The price paths are simulated for both underlying assets and for the two different volatility levels in Figure 4.

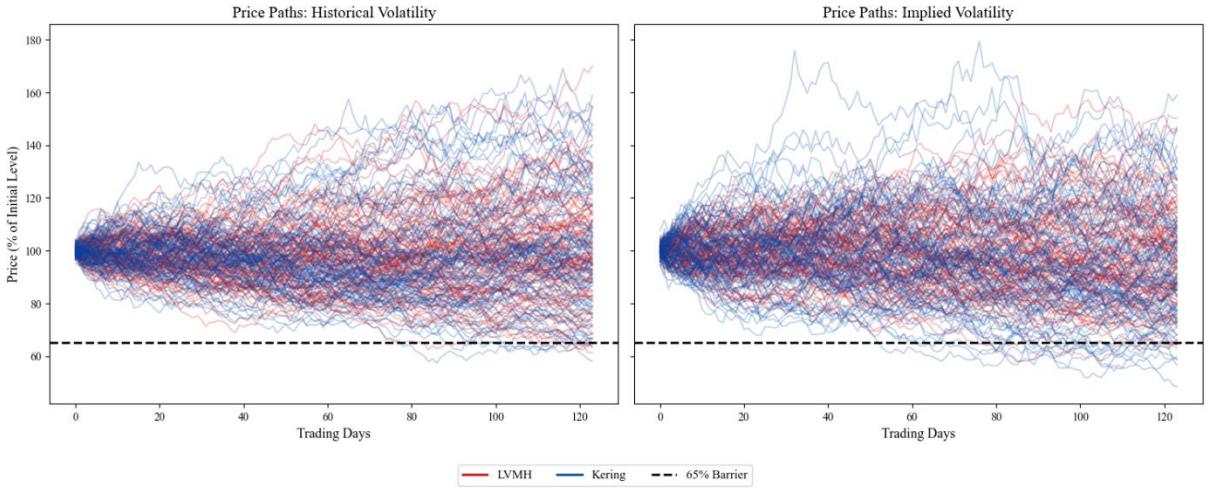


Figure 4 – LVMH and Kering Price Paths Simulation

The dashed line represents the 65% barrier level, and the price paths are simulated as a percentage of the initial levels of the underlying assets. In both scenarios, Kering breaches the barrier more frequently than LVMH, particularly under implied volatility where the dispersion of paths is greater. For paths remaining above the barrier, the investor receives the denomination plus the coupon; otherwise, the payoff depends on the worst-performing underlying asset.

The Monte Carlo simulation method is performed using 100,000 random paths in Python, allowing for the computation of the payoff of the instruments that decompose the product under study. The payoff is given by Equation (1).

Once the payoff for the 100,000 simulated paths is computed, the payoff of each instrument is averaged and discounted to the present value using the issuer's funding cost (fc) to obtain the products' theoretical value,

$$E[Payoff_{ZCB}] = 5{,}000 \times e^{fcT} \tag{9}$$

$$E[Payoff_{Guaranteed\ Coupons}] = \sum_{i=1}^{n} C_i \times e^{-fct_i} \tag{10}$$

where C_i is 125.45 EUR and t_i are the payment dates (3 and 6 months).

$$Payoff_{Short\ Put} = \begin{cases} 0, \ if \ \min\left(\frac{S_i(T)}{S_i(0)}\right) > B \\ 5{,}000 \ \times \left(\min\left(\frac{S_i(T)}{S_i(0)}\right) - 1\right), \ if \ \min\left(\frac{S_i(T)}{S_i(0)}\right) \leq B \end{cases} \tag{11}$$

Thus, calculating the payoff for the 100,000 paths and considering N the number of paths, the

expected payoff of the short put is given by,

$$E[Payoff_{Short\ Put}] = \sum_{i=1}^{N} \frac{1}{N} Payoff_{Short\ Put} \times e^{-cT} \quad . \tag{12}$$

The theoretical value of the structured product is achieved by adding the present values of the three components. It is important to note that all values are expressed as a percentage of the initial investment of 5,000 EUR. Moreover, the product valuation is analyzed for the two possible scenarios: the scenario of a barrier event; and the scenario where no barrier event occurs.

4.2.1. Product Valuation at Issuance

Tabel 1 contains the main metrics derived from the simulations of the product's value at issuance.

Probability	Historical Volatility	Implied Volatility
No Barrier Event	93.56	89.06
Barrier Event	6.44	10.94
LVMH is Worst Asset	48.13	46.67
Kering is Worst Asset	51.87	53.33

Table 1 – Simulation Probabilities at Issuance

The probability of a barrier event is 6.44% under historical volatility and 10.94% under implied volatility. Under both volatility measures, Kering shows a slightly higher probability of becoming the worst-performing asset, although the probabilities remain close for both assets. This reflects the strong correlation between the underlying assets, which tend to move in the same direction, while Kering's relatively higher volatility increases the likelihood of larger downside movements.

Table 2 shows the theoretical value of the product at the issuance date of September 16, 2025, decomposed into its components under the two volatility scenarios.

Volatility Scenarios	Instruments							Theoretical Value
	Scenario Barrier Not Breached			Scenario Barrier Is Breached				
	ZCB	Guaranteed Coupons	Total	ZCB	Guaranteed Coupons	Short Put	Total	
Historical	97.75	4.93	102.68	97.75	4.93	-40.57	62.11	100.07
Implied	97.75	4.93	102.68	97.75	4.93	-42.41	60.27	98.04

Table 2 – Product's Valuation at Issuance

The ZCB and the Guaranteed Coupons have consistent present values, as these cash flows are independent of the barrier event. Therefore, under both volatility measures, the no-barrier event scenario has a total value of 102.68%. In contrast, if the 65% barrier is breached by either LVMH or Kering, the short put generates a significant loss, with a present value of -40.57% under historical volatility and -42.41% under implied volatility. As a result, the total product value in the barrier-breach scenario falls to 62.11% and 60.27%, respectively.

The final theoretical value of the product is achieved by synthetizing the two divergent outcomes utilizing a probability-weighted following formula,

$$Theoretical\ Value = (V_{Barrier\ Not\ Breached} \times P_{Barrier\ Not\ Breached}) + (V_{Barrier\ Breached} \times P_{Barrier\ Breached}) \quad (13)$$

where $V_{Barrier\ Not\ Breached}$ accounts for the total value of the product when there is no barrier event; $V_{Barrier\ Breached}$ is the total value of the product when there is a barrier event; $P_{Barrier\ Not\ Breached}$ stands for the probability of no barrier event; and $P_{Barrier\ Breached}$ is the probability of having a barrier event. Thus, the total theoretical value utilizing historical volatility is nearly at par, with a value of 100.07%, and under the implied volatility measure is trading at a discount, with a value of 98.04%.

The histograms presented in Figure 5 illustrate the simulated payoff distribution of the short worst-of put option at maturity under both the historical and implied volatility scenarios.

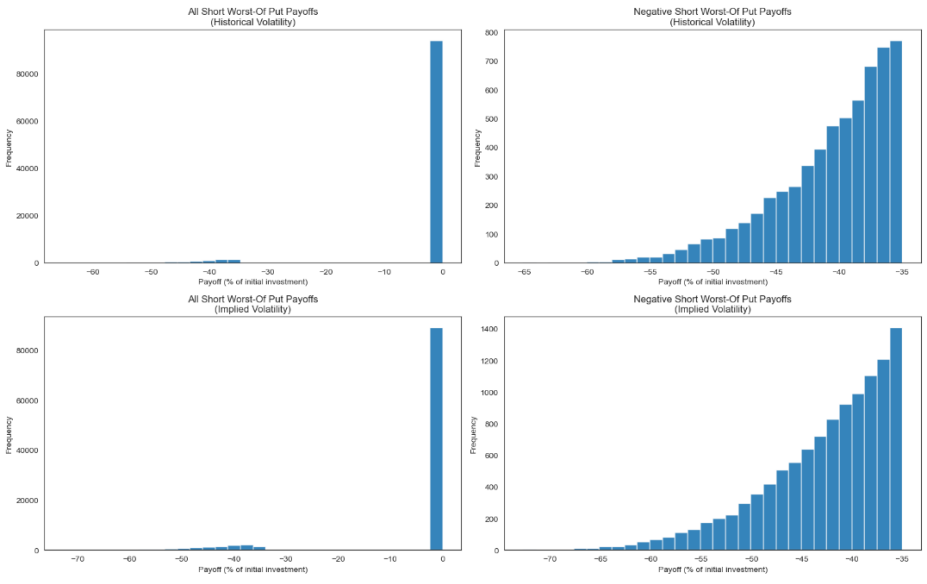


Figure 5 – Short Worst-of Put Payoff Distribution

The left images present all simulated payoffs and show a concentration of values around zero, since in most simulations the underlying assets remain above the 65% barrier. In these cases, the knock-in condition is not triggered, and the embedded put option expires worthless, meaning the investor does not incur loss from this component.

The right images show only the negative payoff outcomes, which occur when the barrier level is breached and the worst-performing asset finishes below its initial level. In these scenarios, the short worst-of put option becomes active, generating losses between -35% and -45% of the initial investment.

Comparing the two volatility scenarios, the implied volatility case produces a wider and more dispersed distribution of losses, reflecting the higher probability of large downward movements in the underlying assets. Overall, the results highlight the asymmetric risk profile of the product: most scenarios produce no loss from the option, but significant losses may occur when the barrier is breached.

4.2.2. Product Valuation After Issuance

As stated previously in this study, the structured product under analysis is available in the market since its issuance date on September 16, 2025. The objective of this section is to analyze the evolution of the theoretical value of the product over two different periods of time and compare it with its actual market prices.

To compare the theoretical value of the product with its market prices, it is necessary to analyze how the underlying assets and the product itself have been evolving in the market since the issuance date. Figure 6 shows the evolution of the product.

Figure 6 – Evolution of the Product (Source: Leonteq)

When observed independently from the underlying assets, the product reveals more pronounced

variations over time, which are not as apparent when compared directly with the underlying assets (compare with Figure 3 in Section 3.3.). After issuance, the product initially increased to values slightly above 102% in October 2025, before following a gradual downward trend with moderate fluctuations. By the end of the observation period, the product was trading close to its par value.

For purposes of comparison with the market values, the product's value is determined at two extra dates: November 16, 2025, and January 16, 2025. For the valuation of the product is considered the same approach as before with updated parameter values in terms of maturity.

Table 3 contains the main metrics derived from the simulations of the product's value both at the 2 and 4 months after the issuance date.

Probability	2 Months After Issuance		4 Months After Issuance	
	Historical Volatility	Implied Volatility	Historical Volatility	Implied Volatility
No Barrier Event	99.98	99.77	100	99.99
Barrier Event	0.02	0.23	0	0.01
LVMH is Worst Asset	65.57	61.06	51.11	49.35
Kering is Worst Asset	34.43	38.94	48.89	50.65

Table 3 – Simulation Probabilities 2 and 4 Months After Issuance

The probability of a barrier event decreases over time, consistent with the declining value of the short put option. As the product approaches maturity and the underlying assets remain above their initial levels, the likelihood of the worst-performing asset breaching the barrier becomes increasingly remote. The probabilities of each asset being the worst performer gradually converge toward 50%, reflecting their similar characteristics and correlation. Although LVMH is more likely to be the worst-performing asset two months after issuance, this difference diminishes over time, and by the four months mark the probabilities are almost evenly distributed between the two assets.

Table 4 presents the results of the valuations of the product across the different periods of time.

Valuation at	Volatility Scenarios	Instruments							Theoretical Value	Market Value
		Scenario Barrier Not Breached			Scenario Barrier Is Breached					
		ZCB	Guaranteed Coupons	Total	ZCB	Guaranteed Coupons	Short Put	Total		
Issuance	Historical	97.75	4.93	102.68	97.75	4.93	-40.57	62.11	100.07	100
	Implied	97.75	4.93	102.68	97.75	4.93	-42.41	60.27	98.04	100
2 Months After	Historical	98.49	3.30	101.79	98.49	3.30	-37.48	64.31	101.78	101.46
	Implied	98.49	3.30	101.79	98.49	3.30	-38.58	63.21	101.70	101.46
4 Months After	Historical	99.24	1.66	100.90	99.24	1.66	0	100.90	100.90	100.68
	Implied	99.24	1.66	100.90	99.24	1.66	-37.98	62.92	100.90	100.68

Table 4 – Product Valuation Across Different Periods

The value of the ZCB increases in both volatility scenarios as the product approaches maturity, converging toward its redemption value due to the shorter discounting period. In contrast, the value of the Guaranteed Coupons declines over time, as fewer payments remain to be discounted.

The value of the short worst-of put option also decreases significantly over time, reflecting the strong positive performance of the underlying assets since issuance. Two months after issuance, LVMH and Kering were trading approximately 25.82% and 33.61% above their initial levels, respectively, while four months after issuance they remained well above their starting values, with increases of 22.74% and 23.19%. Consequently, the contribution of the short put option moves close to zero over time. Under the historical volatility scenario, its simulated value becomes effectively zero four months after issuance, as the probability of the worst-performing asset falling below the 65% barrier becomes extremely small.

It is important to state that, according to Leonteq's product report (Leonteq, 2025), the barrier level was never breached during the observation period. Therefore, no barrier event occurred, and the product remained above the predefined barrier threshold throughout its lifetime.

5. Alternative Product Designs

This chapter examines alternative product designs to assess how changes in the product structure affect its valuation and risk profile. Two alternative structures are considered: a best-of put option, and a single-underlying structure. By modifying key features of the original product, it is possible to evaluate the importance of the worst-of mechanism and compare the resulting probabilities of barrier breach and theoretical values.

5.1. Best-of Put Option

A best-of put option is defined as an option whose payoff depends on the best-performing underlying asset. In this case, the investor's payoff depends on the performance of the strongest underlying asset rather than the weakest one. Under the valuation framework previously described the payoff of the best-of put option can be expressed as,

$$Payoff_{Best-Of\ Put\ Option} = \begin{cases} 0, \ if \max\left(\frac{S_i(T)}{S_i(0)}\right) > B \\ 5{,}000 \times \left(\max\left(\frac{S_i(T)}{S_i(0)}\right) - 1\right), \ if \max\left(\frac{S_i(T)}{S_i(0)}\right) \leq B \end{cases} . \quad (14)$$

In this case, a barrier event occurs only if even the best-performing asset falls below the barrier level, which implies that both underlying assets must experience a substantial decline. This makes the barrier event significantly less likely than in the original worst-of structure, as shown in Table 5, and therefore reduces the expected value of the derivative component (compare with Table 1).

Probability	Historical Volatility	Implied Volatility
No Barrier Event	98.78	97.81
Barrier Event	1.22	2.19
LVMH is Best Asset	50.85	53.28
Kering is Best Asset	49.15	46.72

Table 5 – Simulation Probabilities at Issuance: Best-of Put Option

The probability of a barrier breach decreases substantially, reaching 1.22% under the historical volatility scenario and 2.19% under the implied volatility scenario. As for the probability of each underlying asset being the best performer, the results remain relatively balanced between the two of them. Overall, these results suggest that although the influence of each asset on the downside risk remains similar, the best-of structure significantly reduces the likelihood of a barrier event compared to the original worst-of product.

The valuation results obtained under this alternative structure are presented in Table 6, that can be compared with those in Table 2, for the worst-case setting.

Volatility Scenarios	Instruments							Theoretical Value
	Scenario Barrier Not Breached			Scenario Barrier Is Breached				
	ZCB	Guaranteed Coupons	Total	ZCB	Guaranteed Coupons	Short Put	Total	
Historical	97.75	4.93	102.68	97.75	4.93	-38.37	64.31	102.21
Implied	97.75	4.93	102.68	97.75	4.93	-39.19	63.49	101.82

Table 6 – Product's Valuation at Issuance: Best-of Put Option

The ZCB and the guaranteed coupon components remain unchanged because they are independent of the option's structure. The theoretical value stays very close to the no-barrier event value, which indicates that the short best-of put option contributes only a limited expected cost at issuance. This happens because a barrier event under this condition is much more restrictive: for the best-of mechanism to work, even the best-performing underlying asset must fall below the barrier level, which effectively requires both assets to perform very poorly simultaneously.

The histograms presented in Figure 7 illustrate the simulated payoff distribution of the short best-of put option at maturity under both the historical and implied volatility scenarios.

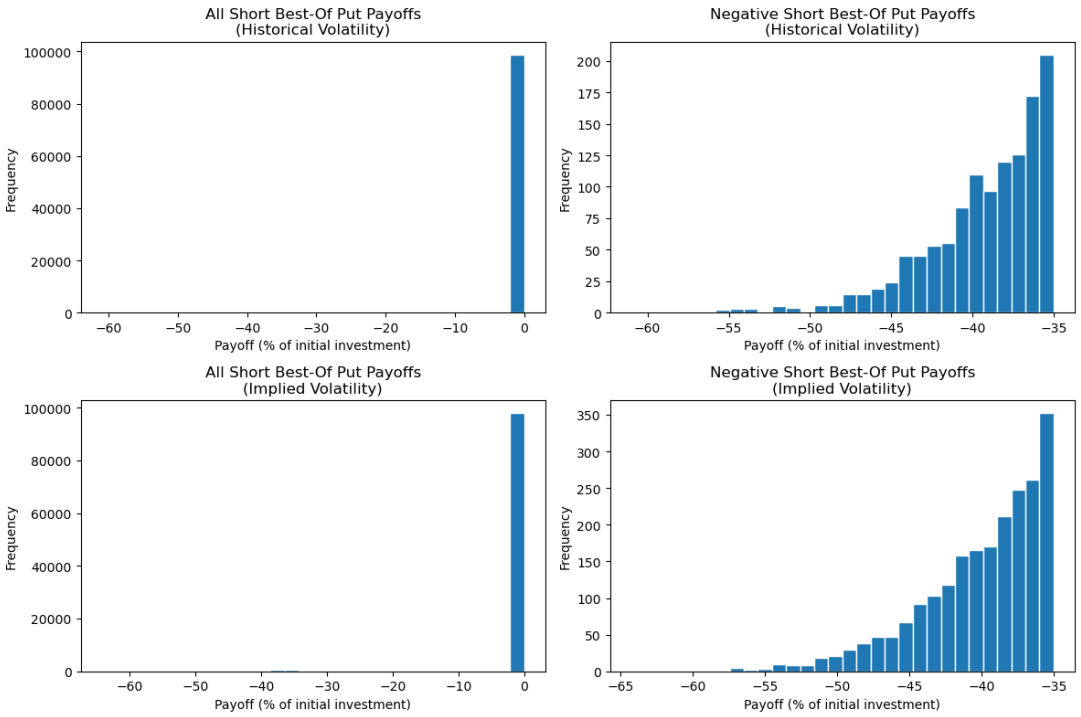


Figure 7 – Short Best-of Put Payoff Distribution

The left images present all simulated payoffs and show an even stronger concentration of values around zero than in the worst-of structure (compare with Figure 5). The right images display

only the negative payoff outcomes, which occur in the relatively rare scenarios where the barrier is breached and even the best-performing asset finishes below its initial level. In these cases, the short best-of put becomes active, generating losses mostly between approximately -35% and -45% of the initial investment, with a limited number of observations extending to slightly more severe values.

Comparing the two volatility scenarios, the implied volatility case again produces a wider and more dispersed distribution of negative payoffs, reflecting the higher likelihood of larger downward movements in the underlying assets. Overall, the best-of mechanism substantially reduces the frequency of loss events, but when losses do occur they remain significant, as they are associated with severe simultaneous declines in both underlying assets.

5.2. One Underlying Asset

This section analyses an alternative product structure where the product is linked to only one underlying asset, either LVMH or Kering, instead of being based on a worst-of mechanism. Therefore, the payoff depends exclusively on the final performance of the selected asset relative to its initial fixing level. Under the framework previously described the payoff of the product in this single-underlying structure can be expressed as,

$$Payoff = \sum_{i=1}^{n} C_i + \begin{cases} 5{,}000, \ if \ \frac{S_i(T)}{S_i(0)} > B \\ 5{,}000 \times \frac{S_i(T)}{S_i(0)}, \ if \ \frac{S_i(T)}{S_i(0)} \leq B \end{cases} . \quad (15)$$

In this case, a barrier event occurs if the final fixing level of the selected underlying asset is at or below the 65% barrier level. If the barrier is not breached, the investor receives the full denomination plus the guaranteed coupons. If the barrier is breached, the investor is exposed to the negative performance of that single underlying, receiving the denomination adjusted by its final performance, in addition to the coupons.

Table 7 shows that the probability of a barrier breach is consistently lower for LVMH than for Kering across both volatility scenarios.

Probability	LVMH		Kering	
	Historical Volatility	Implied Volatility	Historical Volatility	Implied Volatility
No Barrier Event	97.81	96.4	94.72	90.41
Barrier Event	2.19	3.6	5.28	9.59

Table 7 – Simulation Probabilities at Issuance: One Underlying Asset

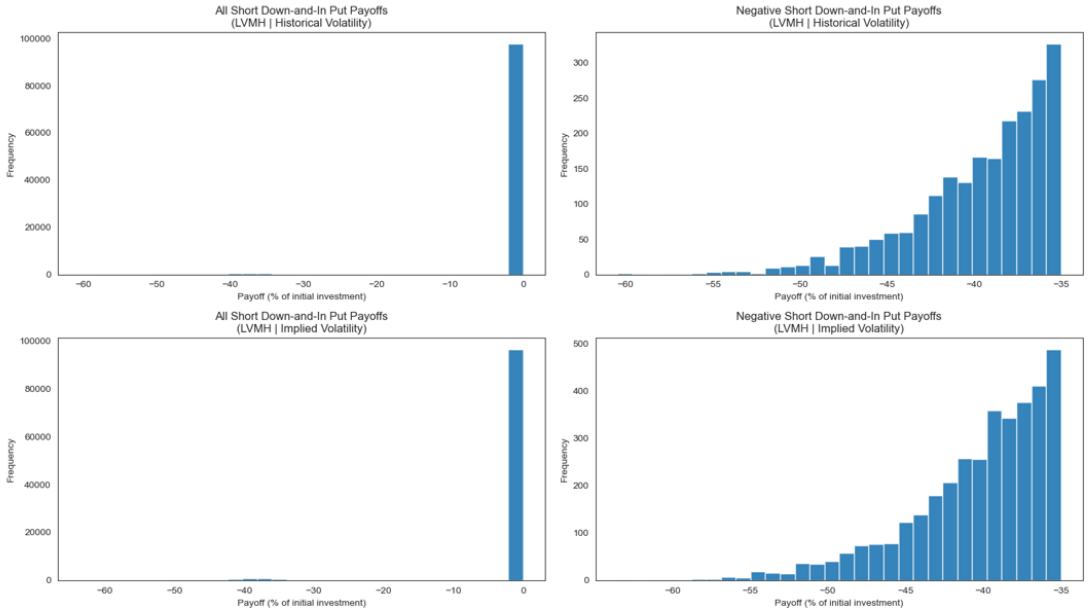
As shown in Table 8, the short put losses in the barrier event scenario are more severe for Kering. While LVMH exhibits losses around 39% to 40%, Kering reaches more negative values, particularly under implied volatility, indicating that not only is a barrier breach more likely for Kering, but the associated losses are also larger. As a consequence, the theoretical value of the product is higher for LVMH in all cases.

Underlying Asset	Volatility Scenarios	Instruments							Theoretical Value
		Scenario Barrier Not Breached			Scenario Barrier Is Breached				
		ZCB	Guaranteed Coupons	Total	ZCB	Guaranteed Coupons	Short Put	Total	
LVMH	Historical	97.75	4.93	102.68	97.75	4.93	-39.25	63.43	101.82
	Implied	97.75	4.93	102.68	97.75	4.93	-39.99	62.69	101.24
Kering	Historical	97.75	4.93	102.68	97.75	4.93	-40.95	61.74	100.52
	Implied	97.75	4.93	102.68	97.75	4.93	-42.77	59.91	98.58

Table 8 – Product's Valuation at Issuance: One Underlying Asset

The payoff distributions shown in Figure 8 provide further insight into the product's risk profile.

(a) LVMH



(b) Kering

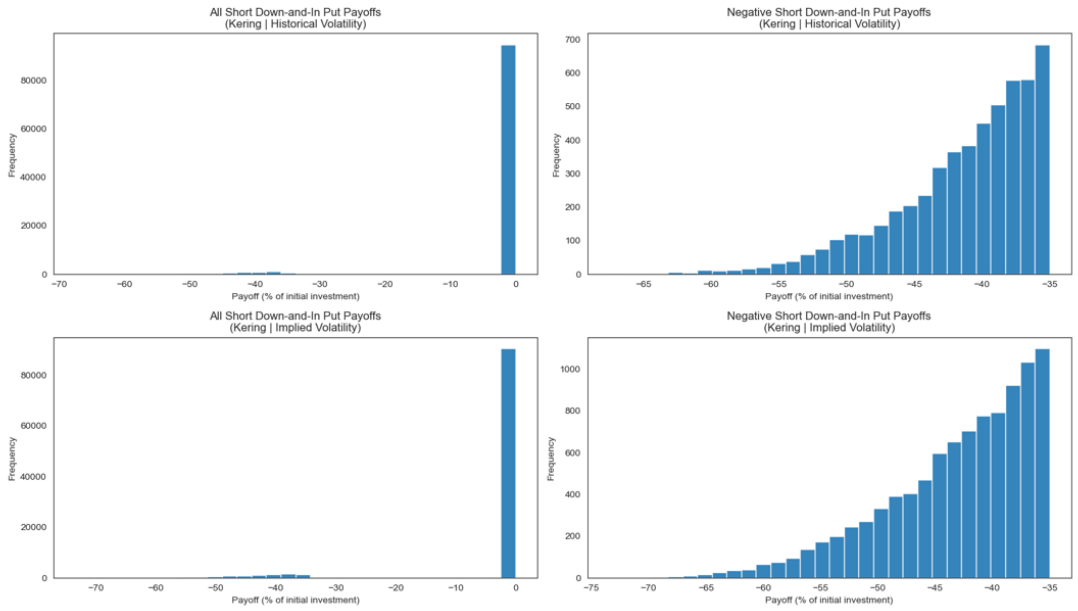


Figure 8 – Short Down-and-In Put Option Payoff Distribution

Across all scenarios, the large spike at zero reflects that the barrier is not breached in most simulations. In these cases, the embedded short put option expires worthless, and the investor is not exposed to downside risk, explaining the high probability of no-loss scenarios. When the barrier is breached, however, the payoff becomes negative and spreads across a range of values, forming a left-skewed distribution. These losses result from the activation of the short down-and-in put, which exposes the investor to declines in the underlying asset.

Comparing the two assets, the left tail is significantly heavier for Kering, particularly under implied volatility. This indicates a higher probability of large losses, as well as greater dispersion in negative outcomes. In contrast, LVMH shows a more concentrated and less extreme loss distribution, reflecting its lower volatility and reduced downside risk.

5.3. Comparative Analysis

This section summarizes and compares the valuation results obtained across the different product structures analyzed previously, including the original worst-of mechanism, the best-of alternative, and the single-underlying structures. Tables 9 and 10 focus on the probabilities of barrier events and on the contribution of each component to the theoretical value of the products, respectively.

Product Design		Historical Volatility		Implied Volatility	
		No Barrier Event	Barrier Event	No Barrier Event	Barrier Event
Worst-of		93.56	6.44	89.06	10.94
Best-of		98.78	1.22	97.81	2.19
One underlying	LVMH	97.81	2.19	96.4	3.6
	Kering	94.72	5.28	90.41	9.59

Table 9 – Probabilities of Barrier Breach at Issuance: All Structures

Product Design	Volatility Scenarios		Instruments							Theoretical Value
			Scenario Barrier Not Breached			Scenario Barrier Is Breached				
			ZCB	Guaranteed Coupons	Total	ZCB	Guaranteed Coupons	Short Put	Total	
Worst-of	Historical		97.75	4.93	102.68	97.75	4.93	-40.57	62.11	100.07
	Implied		97.75	4.93	102.68	97.75	4.93	-42.41	60.27	98.04
Best-of	Historical		97.75	4.93	102.68	97.75	4.93	-38.37	64.31	102.21
	Implied		97.75	4.93	102.68	97.75	4.93	-39.19	63.49	101.82
One Underlying	LVMH	Historical	97.75	4.93	102.68	97.75	4.93	-39.25	63.43	101.82
		Implied	97.75	4.93	102.68	97.75	4.93	-39.99	62.69	101.24
	Kering	Historical	97.75	4.93	102.68	97.75	4.93	-40.95	61.74	100.52
		Implied	97.75	4.93	102.68	97.75	4.93	-42.77	59.91	98.58

Table 10 – Product's Valuation at Issuance: All Structures

The original worst-of structure presents the highest probability of barrier breach, while the best-of structure significantly reduces this probability because both underlying assets must perform poorly simultaneously. The single-asset structure produces intermediate results, with the Kering-linked product showing a higher probability of barrier event than the LVMH-linked structure due to its higher volatility. Consequently, structures with lower probabilities of barrier breach remain closer to the full repayment scenario, while structures with higher probabilities of barrier breach are more exposed to losses associated with the short put component.

6. Correlation Sensitivity Analysis

One of the most important features of this structured product is the correlation between the underlying assets, since its value is highly influenced by the relationship between them. By conducting a correlation sensitivity analysis, it is possible to examine how the value of the structured product responds to variations in the correlation levels. In order to perform this, different levels of correlation are considered:

$$\rho = \{-1, -0.75, -0.5, -0.25, 0, 0.25, 0.5, 0.75, 1\} \quad . \tag{16}$$

This analysis follows the methodology used in the Monte Carlo valuation of the product and keeps all other inputs unchanged. For each correlation level, the simulation generates correlated

shocks through the Cholesky decomposition and inserts them into the GBM model for the two underlying assets. For each simulated path, the product payoff is computed using the same contractual redemption rule, and the payoff remains the sum of the three components of the structured product.

Figure 9 illustrates the sensitivity of the value of the put option part of the product, the probability of the worst performer underlying asset, and the probability of the barrier event.

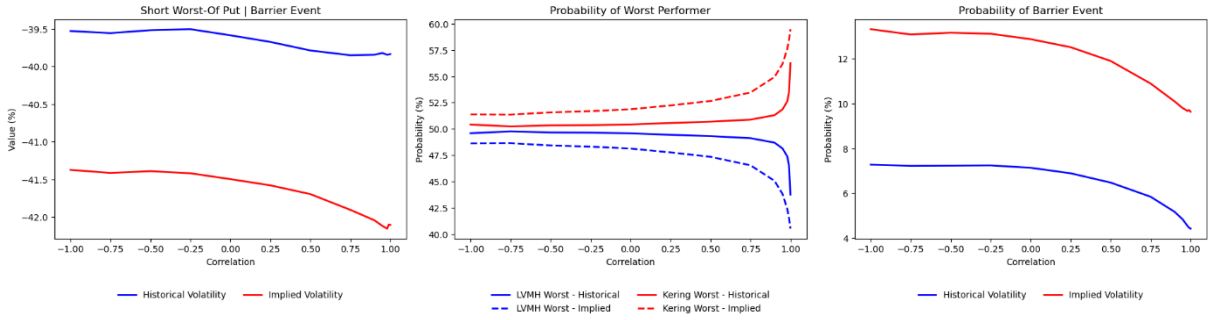


Figure 9 – Correlation Sensitivity Analysis Metrics

The first graph shows that the conditional value of the short worst-of put option, case the barrier is breached, remains relatively stable across different correlation levels, with losses around -39% to -42% of the initial investment. This occurs because, once the barrier is breached, the payoff depends mainly on the magnitude of the worst-performing asset's decline rather than on the correlation itself.

However, correlation has a clearer impact on the probabilities associated with the product's outcomes. As illustrated in the second graph, the probability of each asset being the worst performer remains close to 50% for most correlation levels, reflecting the almost symmetric role of LVMH and Kering in this type of structure. Only when correlation approaches extreme values do these probabilities diverge, as the assets tend to move more synchronously.

Moreover, the probability of a barrier event decreases as correlation increases. When the assets are weakly correlated, their price paths are more independent, increasing the likelihood that one asset significantly underperforms the other and breaches the barrier level. Conversely, higher correlation implies more similar movements between the assets, reducing dispersion and therefore lowering the probability that the worst-performing asset falls below the barrier level. Overall, the correlation sensitivity analysis indicates that correlation mainly affects the likelihood of adverse scenarios rather than the magnitude of losses once such scenarios occur.

7. Greek Analysis

We now go on and have a look at how the value of a structured product responds to variations in its key input parameters. By adjusting one parameter at a time while keeping the others fixed, this approach allows for the assessment of the impact of individual risk drivers on the product's value. A formal and widely used framework for conducting sensitivity analysis is given by the Greek letters, which quantify the marginal sensitivity of the product's value to small changes in the underlying parameters and therefore are measures of the product's exposure to different sources of risk.

Since the option's payoff depends on the performance of Kering and LVMH, its sensitivities are estimated with respect to both underlying assets. In this analysis, five Greek letters are considered. Delta (Δ) represents the sensitivity of the product's value to small changes in the price of the underlying asset. Gamma (Γ) measures how this sensitivity itself varies as the underlying price changes. Cross-Gamma (Γ_{ij}) captures the interaction between the two underlying assets, measuring how the sensitivity of Delta of one asset changes when the price of the other asset moves. Vega (ν) reflects the responsiveness of the product's value to variations in the volatility of the underlying asset, and Rho (ρ) captures the impact of changes in the risk-free interest rate on the product's valuation.

Greeks can be estimated using Monte Carlo simulation by pricing the option twice: first using the original inputs parameters to obtain $\hat{f}$, and then again after applying a small change Δx to the variable linked to the Greek, giving $\widehat{f^*}$. The sensitivity is then approximated using the following formula,

$$\frac{\widehat{f^*}-\hat{f}}{\Delta x} \quad . \tag{17}$$

Delta measures the sensitivity of the product value to a 1% change in the price of each underlying asset, indicating how much the product is expected to gain or lose following a small movement in the underlying prices. Gamma measures the rate of change of Delta, capturing how the product's sensitivity to the underlying assets evolves after a 1% change in their prices. Cross-Gamma extends this analysis by examining the interaction between the two underlying assets, measuring how the Delta with respect to one asset changes when the price of the other asset varies by 1%. Vega evaluates the sensitivity of the product value to a 1% increase in the

volatility of the underlying assets, considering the implied volatility scenario, and therefore reflects the impact of changes in market uncertainty on the product's valuation. Finally, Rho measures the sensitivity of the product value to a 1% increase in the risk-free interest rate.

Firstly, the Greek letters are computed for the product at issuance, as presented in Table 11. Overall, the values presented indicate that the product's risk profile is mainly driven by the downside exposure embedded in the worst-of structure.

Greeks at Inception		
Greek Letters	LVMH	Kering
Delta	0.75	4.54
Gamma	-0.02	-0.18
Cross-Gamma	2.33	4.85
Vega	-5.72	-13.37
Rho	7.08	

Table 11 – Greek Letters at Inception

Delta is positive for both assets, indicating that the product's value increases when the prices of the underlying assets rise. Gamma is negative for both underlying assets, reflecting that the rate of change of Delta decreases as the price of the underlying assets increases.

Cross-Gamma values are positive, indicating that changes in the price of one underlying asset affect the Delta of the other asset, reflecting the interaction between Kering and LVMH embedded in the product structure.

Vega registers negative values, reflecting that an increase in implied volatility decreases the value of the product. Finally, Rho is positive, indicating that the product benefits from increases in the risk-free rate. A higher risk-free rate increases the drift term in the GBM model, leading to higher expected values of the underlying assets and, consequently, reducing the probability of barrier breach.

As seen in the previous analysis, this product exhibits a very low probability of barrier breach scenarios, which limits the sensitivity of the structure to small variations in the underlying asset's variables captured by the Greek letters. In this sense, this analysis is further extended to evaluate the role of correlation in the behavior of the Greeks, computing them at issuance across the different correlation levels considered in the correlation sensitivity analysis, as shown in Figure 10, allowing for an assessment of how the product's sensitivities evolve as the relationship between Kering and LVMH changes.

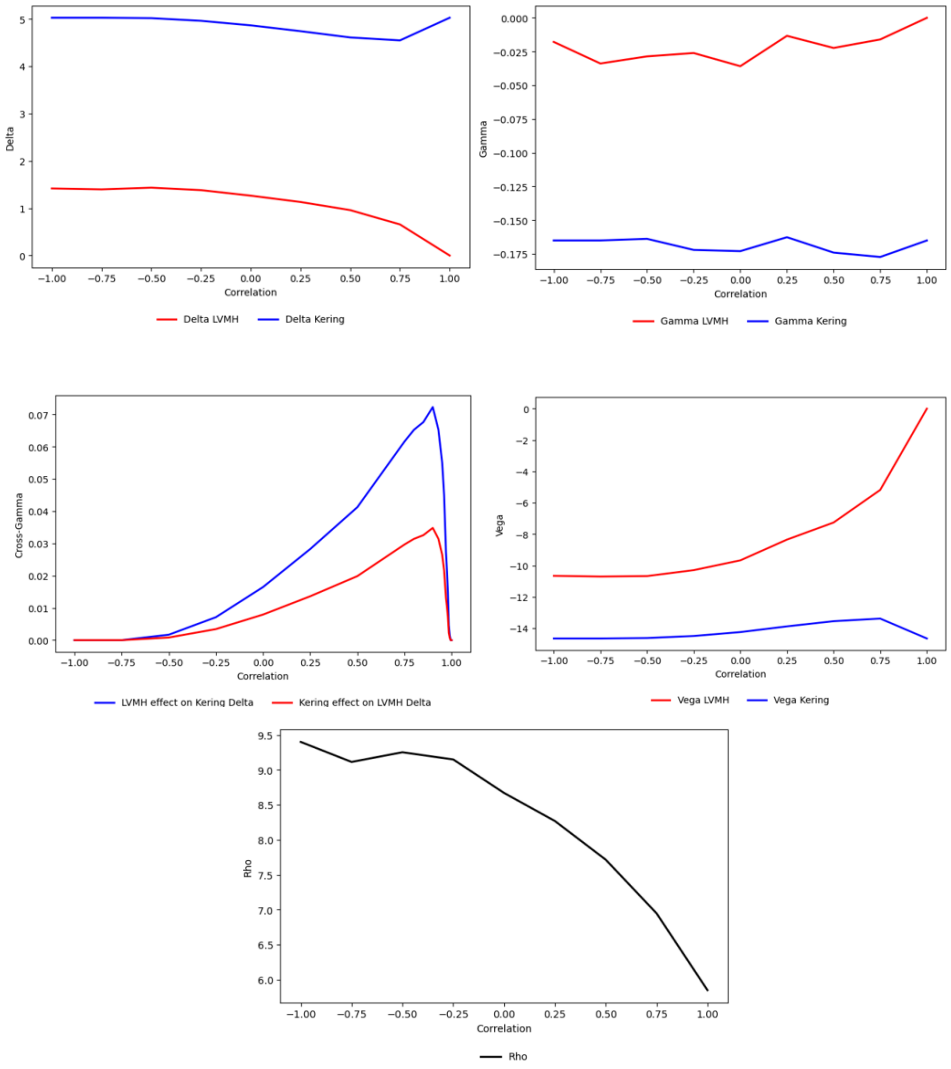


Figure 10 – Evolution of the Option's Greek Letters Over Correlation

The correlation analysis shows that the behavior of the Greek letters is significantly influenced by the dependence structure between Kering and LVMH. Delta generally increases with correlation, indicating that the product value becomes more responsive to changes in the underlying prices when the assets move more closely together. Gamma remains negative across all correlation levels, varying moderately with correlation, but its magnitude tends to become slightly larger as correlation rises, especially for Kering.

Regarding Cross-Gamma, as the correlation between the underlying assets increases, the interaction between the two assets becomes more pronounced. The sharp decrease observed as correlation approaches one is associated with the convergence of the two underlying assets dynamics, which reduces the incremental impact of one asset's movements on the Delta of the other.

Vega remains negative for all correlation levels, reflecting that higher implied volatility continues to reduce the value of the product. Finally, Rho remains positive across all correlation scenarios, confirming that higher risk-free rates positively affect the product value through the drift component of the GBM model.

8. Conclusion

The main objective of this project was to analyze the 10.04% p.a. Barrier Reverse Convertible in EUR on Kering and LVMH, issued by Leonteq Securities AG, through its valuation, evolution over time, structural alternatives, and sensitivity analysis.

The valuation results obtained through Monte Carlo simulation showed that the theoretical values remained relatively close to the observed market values throughout the observation period, although some deviations were observed across the different valuation dates. These differences may be associated with the assumptions adopted in the model, particularly regarding volatility, correlation, and market dynamics.

The analysis also highlighted the importance of the worst-of mechanism on the product's downside risk, since the payoff depends on the worst-performing underlying asset, increasing the probability of a barrier breach compared to structures based on a best-of option or on a single underlying asset. Nevertheless, the simulated probabilities of barrier breach remained relatively low under both historical and implied volatility scenarios, which is consistent with the actual evolution of the product, as neither Kering nor LVMH ever touched the 65% barrier level during the observation period and the product reached its maturity on March 16, 2026, without triggering a barrier event. Moreover, the alternative product structures produced more favorable valuation results, generating higher theoretical values and lower downside risk, highlighting how the original worst-of feature increases the product's exposure to adverse scenarios and reduces the likelihood of positive payoffs for investors.

The correlation sensitivity analysis confirmed the strong dependence of the product on the relationship between Kering and LVMH, showing that higher levels of correlation reduce the likelihood of one underlying asset significantly underperforming the other, leading to lower probabilities of barrier breach and more synchronized movements between the two assets.

The Greek analysis further showed that the product's sensitivities are also influenced by volatility, interest rates, and correlation. The analysis revealed that, as correlation increases, the

sensitivities become more significant, particularly for Delta and Cross-Gamma. Vega remains negative, indicating that increases in volatility reduce the product's value, while Rho is positive, reflecting the positive effect of higher interest rates.

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Appendix

Figure A.1. – Key Information Document

Key Information Document (**"KID"**)

Purpose
This document provides the investor with key information about this investment product. It is not marketing material. The information is required by law to help the investor understand the nature, risks, costs, potential gains and losses of this product and to help the investor compare it with other products.

Product

10.04% p.a. Barrier Reverse Convertible in EUR on Kering and LVMH

Swiss Securities Number: 147672861 | ISIN: CH1476728618
Issuer: **Leonteq Securities AG, Guernsey Branch, St. Peter Port, Guernsey**
PRIIP Manufacturer: **Leonteq Securities AG** | The PRIIP Manufacturer is part of the Leonteq Group. | www.leonteq.com | Call +41 58 800 1111 for more information | Competent Authority: Not Applicable. The PRIIP Manufacturer is domiciled in Switzerland and is subject to prudential supervision by the Swiss Financial Market Supervisory Authority ("FINMA"). FINMA is not considered a competent supervisory authority under EU Regulation 1286/2014 on Key Information Documents for Packaged Retail and Insurance-based Investment Products (PRIIPs). | Date of production of the KID: 10.09.2025

The investor is about to purchase a product that is not simple and may be difficult to understand.

1. What is this product?

Type
This product is a Swiss Uncertificated Security under Swiss law.

Term
The term of the product ends on the Redemption Date, unless the product has been terminated early.

Objectives
Objective of the product is to provide the investor with a specified entitlement according to predefined conditions. This product offers the investor a Coupon Rate regardless of the performance of the Underlyings during the lifetime. The possibilities for the redemption of the product are as follows:

- If a Barrier Event has NOT occurred, the Investor will receive the Denomination.
- If a Barrier Event has occurred, the Investor will receive a round number (i.e. Conversion Ratio) of the Underlying with the Worst Performance per Product. Any potential fractional Conversion Ratio entitlements (Fractions of the Underlying) will be paid in cash, based on the Final Fixing Level.

A Barrier Event shall be deemed to occur if at least one of the Underlyings' Final Fixing Levels is at or below the respective Barrier Level.
The investor might incur a loss in case the sum of the value of the delivered Underlying on the Redemption Date, the Fractions of the Underlying and the coupon payment is below the purchase price of the product. Different from a direct investment in the Underlyings, the investor will not receive any dividend payments nor any further entitlements resulting from the Underlyings (e.g. voting rights).

Currency of the product (Settlement Currency)	Euro ("EUR")	**Minimum Investment / Minimum Trading Lot**	EUR 5'000.00
Issue Date	16/09/2025	**Initial Fixing Date**	08/09/2025
Last Trading Day	09/03/2026	**Redemption Date**	16/03/2026
Final Fixing Date	09/03/2026	**Denomination**	EUR 5'000.00
Issue Price	100.00%	**Initial Fixing Level**	Official close of the respective Underlying on the Initial Fixing Date on the Related Exchange.
Final Fixing Level	Official close of the respective Underlying on the Final Fixing Date on the Related Exchange.	**Coupon Rate**	10.04% p.a. of the Denomination
Coupon Amount and Coupon Payment Date	EUR 125.45 paid on 16/12/2025 EUR 125.45 paid on 16/03/2026	**Settlement Type**	Cash Settlement or Delivery of Underlying
Quoting in consideration of accrued interest	no (clean prices); the investor pays accrued interest additionally when purchasing the product	**Worst Performance**	For each Underlying the performance is calculated by dividing its Final Fixing Level by the respective Initial Fixing Level. The Worst Performance corresponds to the lowest of all such calculated values.

Underlying	Type	Related Exchange	Bloomberg Ticker	ISIN	Initial Fixing Level (100%)*	Barrier Level (65.00%)*	Conversion Ratio
KERING	Share	Euronext Paris	KER FP	FR0000121485	EUR 238.9000	EUR 155.2850	20.9293
LVMH MOET HENNESSY LOUIS VUITTON	Share	Euronext Paris	MC FP	FR0000121014	EUR 496.1500	EUR 322.4975	10.0776

*levels are expressed in percentage of the Initial Fixing Level

The product terms provide that if certain exceptional events occur (1) adjustments may be made to the product and/or (2) the Issuer of the product may terminate the product early. These events are specified in the product terms and principally relate to the Underlying(s), the product and the Issuer of the product. For instance, these exceptional events are including but not exclusively limited to the cessation of an Underlying, tax events and the discontinuation of the Issuer's ability to carry out the necessary hedging transactions. In the event of termination, the redemption amount may possibly be significantly below the purchase price. Even a total loss of the investment is possible. The investor also bears the risk that the product will be terminated at an unfavorable point in time and the investor might only be able to reinvest the redemption amount on less favorable terms.

Intended retail investor

- The product is aimed at retail investors who intend to form private assets and have a very short-term investment horizon.
- The investor can bear losses up to the total loss of the investment amount and attaches no importance to products with capital protection.
- KNOWLEDGE & EXPERIENCE: Investors who have some knowledge of the financial instruments in question or moderate experience of financial markets.

ID: bd4914a0-7c45-4661-aad7-43d2e607491a / Price Request ID: d542012b-5622-4d24-80fc-9ddb76ccd934

2. What are the risks and what could the investor get in return?

Risk Indicator

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The risk indicator assumes the investor keeps the product until the Redemption Date. The actual risk can vary significantly if the investor cashes in at an early stage and the investor might get back less. The investor may not be able to cash in early.

The summary risk indicator is a guide to the level of risk of this product compared to other products. It shows how likely it is that the product will lose money because of movements in the markets or because the Issuer is not able to pay the investor.
We have classified this product as 6 out of 7, which is the second-highest risk class.
This rates the potential losses from future performance at a high level, and poor market conditions are very unlikely to impact the capacity of the Issuer to pay the investor of the product.
The investor shall be aware of the currency risk. If the investor receives payments in a different currency, the final return that the investor gets will depend on the exchange rate between the two currencies. This risk is not considered in the indicator shown above.
This product does not include any protection from future market performance so the investor could lose some or all of its investment.
In the case of delivery of the Underlying price losses may arise even after the Final Fixing Date until the Underlying is credited to the investors securities account.
If the Issuer is not able to redeem the investor what is owed, the investor could lose the entire investment.
For detailed information about all risks please refer to the risk sections of the legal documentation as specified in the section 'Other relevant information' below.

Performance Scenarios
What the investor will get from this product depends on future market performance. Market developments in the future are uncertain and cannot be accurately predicted.
The scenarios shown are illustrations based on results from the past and on certain assumptions. Markets could develop very differently in the future.

Recommended holding period:		**16/03/2026**
Example Investment:		**EUR 10'000**
Scenarios		**If the investor exits after 16/03/2026**
Minimum	The investor is entitled to receive back at least EUR 500. The return is only guaranteed if the product is redeemed at maturity and the Issuer is able to fulfill its obligations under the product (see "Section 3 "What happens if the Issuer is unable to pay out?").	
Stress	What the investor might get back after costs	EUR 3520
	Percentage return	-64.76%
Unfavourable	What the investor might get back after costs	EUR 10470
	Percentage return	4.72%
Moderate	What the investor might get back after costs	EUR 10470
	Percentage return	4.72%
Favourable	What the investor might get back after costs	EUR 10470
	Percentage return	4.72%

The figures shown include all the costs of the product itself, but may not include all the costs that the investor pays to the advisor or distributor. The figures do not take into account the investor's personal tax situation, which may also affect how much the investor gets back.
The stress scenario shows what the investor might get back in extreme market circumstances.
The scenarios shown represent possible outcomes calculated based on simulations.
This product cannot be easily cashed in. If the investor exits the investment earlier than the recommended holding period the investor may have to pay extra costs.

3. What happens if the Issuer is unable to pay out?

The investor is exposed to the risk that the Issuer might be unable to fulfil its obligations in respect of the product e.g. in the event of insolvency (inability to pay / over-indebtedness) or administrative order. A total loss of the investor's capital invested is possible. The product is a debt instrument and as such is not covered by any deposit protection scheme.

4. What are the costs?

The person advising the investor on the product or selling this product to the investor may charge the investor other costs. If so, this person will provide the investor with information about these costs and how they affect the investor's investment.

Cost over time
The tables show the amounts that are taken from the investor's investment to cover different types of costs. These amounts depend on how much the investor invests, how long the investor holds the product and how well the product does. The amounts shown here are illustrations based on an example investment amount and different possible investment periods.
We have assumed:
- The investor would get back the amount that the investor invested (0% annual return).
- EUR 10'000 is invested

	If the investor exits after the recommended holding period
Total costs	EUR 60
Cost impact (*)	0.6%

(*) This illustrates the effect of costs over a holding period of less than one year. This percentage cannot be directly compared to the cost impact figures provided for other products.
We may share part of the costs with the person selling the investor the product to cover the services it provides to the investor. It will inform the investor of the amount.

Composition of Costs

One-off costs upon entry or exit		**If the investor exits after 16/03/2026**
Entry costs	0.6% of the amount the investor pays in when entering this investment. These costs are already included in the price the investor pays.	Up to EUR 60
Exit costs	Exit costs are stated as EUR 0 in the next column as they do not apply if the investor keeps the product until the recommended holding period.	EUR 0

5. How long should the investor hold it and can the investor take money out early?

Recommended holding period: 6 months 6 days (until Redemption Date 16/03/2026)

The objective of the product is to provide the investor with the redemption profile described under "1. What is this product?" above. This only applies if the product is held until maturity. It is not always appropriate to compare the performance or cost figures of this product with other products with different recommended holding periods.

There are no possibilities to take the investor's money out early other than to sell the product off-exchange.

Under normal market conditions, the price at which the investor may sell the product will depend on the market parameters prevailing at the time, which could put the invested amount at risk.

In unusual market situations, or in the event of technical faults/disruptions, a purchase and/or sale of the product can be temporarily hindered, or may not be possible at all.

6. How can the investor complain?

Any complaint regarding the person advising on, or selling, the product on the relevant website can be submitted directly to that person.

Any complaint regarding the product or the conduct of the Issuer of this product can be submitted to the following address: Leonteq Securities AG, Europaallee 39, 8004 Zurich, Switzerland, kid@leonteq.com, www.leonteq.com.

7. Other relevant information

Any additional documentation in relation to the product and in particular the final terms or the pricing supplement and the issuance and offering programme (including any supplements hereto) are published on the website: www.leonteq.com. In order to obtain more detailed information – and in particular details of the structure of and risks associated with an investment in the product – the investor should read these documents.

Furthermore, Leonteq Securities AG created the KID after having made certain assumptions and exercised certain discretion with respect to calculations of key figures and performance scenarios and is going to reassess and adapt its assumptions as it deems appropriate from time to time.

The Product is not classified as sustainable. No representation as to the sustainability – within the meaning of Regulation (EU) 2020/852 (Taxonomy Regulation) and Regulation (EU) 2019/2088 (Sustainable Finance Disclosure Regulation) or any other sustainability-related law or regulation – of the Product or any Underlying is provided. Any reference to sustainability-related terms in relation to the Product or any Underlying shall not imply the provision of any such representation by the Issuer, the Lead Manager or the Guarantor, as applicable. It is furthermore specified that the Product is not aimed at clients with specific needs regarding sustainability preferences pursuant to Art. 2 No. 7 of the MiFID II Delegated Regulation (EU) 2017/565.

AT DISCLOUSE

This project was developed with strict adherence to the academic integrity policies and guidelines set forth by ISEG, Universidade de Lisboa. The work presented herein is the result of my own research, analysis, and writing, unless otherwise cited. In the interest of transparency, I provide the following disclosure regarding the use of artificial intelligence (AI) tools in the creation of this project.

I disclose that AI tools were employed during the development of this project as follows: AI tools was used to assist with language and grammar revision in parts of the written text, as well as to support the development and programming of Python codes used throughout the analysis.

Nonetheless, I have ensured that the use of AI tools did not compromise the originality and integrity of my work. All sources of information have been appropriately cited in accordance with academic standards. I understand the importance of maintaining academic integrity and take full responsibility for the content and originality of this work.

Inês Maia Nunes

June, 2026