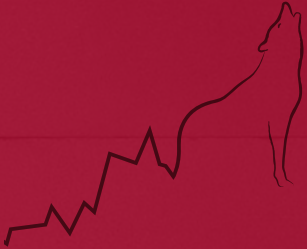


Lupus alpha

AlphaDossier 016 
Capital protection concepts
with a clear focus on
returns and loss limitation

Lupus alpha. Great minds developing innovative alpha strategies.

As an independent, owner-operated asset management company, Lupus alpha has been synonymous with specialised investment solutions for over 20 years. Lupus alpha is a pioneer in the European small- and mid-cap segment and is now one of the continent's leading providers of liquid alternative investment concepts and fixed-income strategies. More than 90 employees, including 35 portfolio management specialists, are committed to delivering above-average performance and a service fully tailored to the individual needs of our investors. We aim to provide sustained added value by developing active, innovative investment strategies for intelligent portfolio diversification for institutional investors.

Management summary

Stable income that generates **positive real returns over the long term** has been considered the domain of bonds for decades. Yet the turnaround in interest rates and soaring inflation are calling their effectiveness into question. Today, **equity strategies with capital protection** may offer more promising prospects.

The primary aim of capital protection concepts is to combine the opposing factors of risk and return to offer **attractive income with a limited risk of loss**. However, traditional systematic capital protection strategies are often impacted by cash locks. Experience shows that discretionary strategies are subject to uncertainty when it comes to investment decisions and costs. **Asymmetric strategies exploit the characteristic attributes of derivatives**, enabling them to avoid cash locks.

Lupus alpha's large and experienced Alternative Solutions team has been actively managing asymmetric capital protection concepts for more than 15 years. The oldest mutual fund deploying these capital protection concepts has already **proven its quality in every major crisis since 2007** and has fulfilled its promise to investors.

Today, investors can choose from **various mutual funds** with differences in equity market participation, capital protection ratio and sustainability requirements. Institutional investors can make **tailored allocations** based on their individual risk and/or ESG requirements – including **overlay solutions** for existing portfolios.

Contents

Current market environment: growing demand for capital protection	5
Different capital protection strategies: goals and challenges	8
Our approach: asymmetric participation in equity markets	14
Invest with Lupus alpha's tried-and-tested capital protection strategies	22



Current market environment: growing demand for capital protection

Stable income that generates positive real returns over the long term has been considered the 'natural' domain of bonds for decades. Yet the turnaround in interest rates and soaring inflation are calling their effectiveness into question. Equities with capital protection offer more promising prospects."

Alexander Raviol, Partner, Head of Portfolio Management Alternative Solutions

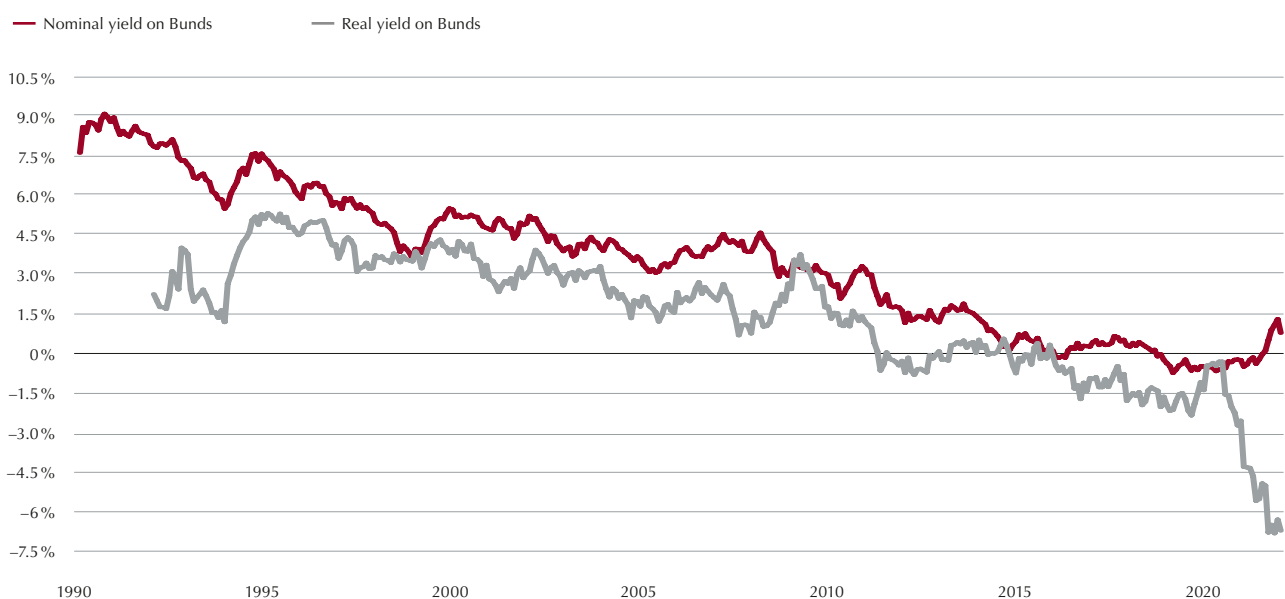
Low interest rates and the highest rates of inflation since the 1980s pose significant challenges for investors. Figure 1 shows the nominal and real yields on 10-year German Bunds. Until recently, falling interest rates made bonds a highly attractive investment with compelling diversification attributes for other asset classes – as well as limited risk – for several decades.

The current extremely high levels of inflation have raised the question of whether bonds can continue to generate sufficiently attractive returns as they have over the past few decades. In particular, this will apply if a scenario comes to pass in which interest rates remain above the stability target of two per cent not just temporarily but in the long term, even if they do not perhaps linger at the peak levels driven by external inflation drivers in 2022. At the same time, the accelerated turnaround in interest rates seen in 2022 has shown that even supposedly low-risk bond investments can suffer significant losses. Even the aforementioned diversification

attributes of bonds ceased to apply in this environment, with traditional 80/20 portfolios recording a far bigger loss than during the 2008/2009 financial crisis.

This means that real assets have an advantage over nominally fixed bonds in the medium and long term if inflation remains high for a sustained period. As a result, equities are and will remain a key component of strategic asset allocation. Their fundamental potential to provide protection against inflation could yet lend them even greater significance. However, the last few years have also shown that although equities offer good profit opportunities and strong long-term protection against inflation, they also involve substantial risks. The crash that followed the dotcom bubble in the early 2000s and the 2008/2009 financial crisis resulted in total losses of 50 per cent or more. Even 2020 – a positive year for the equity markets overall – showed that it is possible for pure equity investments to lose more than 30 per cent in just a few weeks (see figure 2).

1. Falling real yields on 10-year Bunds



Sources: Bloomberg, own calculations; observation period: 01.01.1990 to 29.07.2022

2. Slumps on the global equity market since 1990



Sources: Bloomberg, own calculations; observation period: 01.01.1990 to 29.07.2022

However, losses of this magnitude are difficult for many investors to tolerate, even if they are only temporary. This raises questions about the extent to which investors can generate sufficient returns with limited risk in the long term after adjusting for inflation, a question that has become even more pressing given that the bond and equity markets have been recording parallel losses in 2022. The answer lies in capital protection strategies. By combining a real investment (equity) with a reliable capital protection system with a track record of success stretching back over many years, investors can participate in the equity markets with limited risk even in the current environment of considerable uncertainty. When choosing a suitable capital protection strategy, however, it is important for investors to understand which system they are using so as to avoid the problems encountered by traditional capital protection concepts and to achieve their desired objectives in the long term. The following section discusses this in more detail.



Different capital protection strategies: goals and challenges

Systematic capital protection strategies are often impacted by cash locks. Discretionary strategies are subject to uncertainty when it comes to investment decisions and costs. Asymmetric strategies exploit the characteristic attributes of derivatives and can prevent both cash locks and ‘human error’.”

Stephan Steiger, CFA, CAIA, Portfolio Management Alternative Solutions

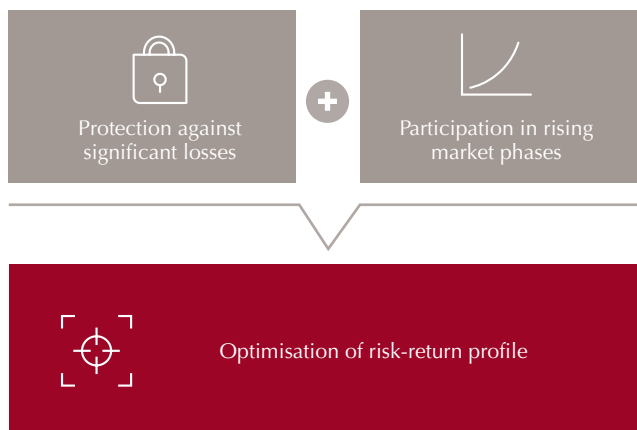
The aim of capital protection strategies is to ensure that an underlying (equity) portfolio achieves a positive performance while at the same time adhering to a predefined floor. The floor is derived directly from the investor’s risk tolerance, which in turn arises from regulatory or internal risk management guidelines.

In particular, it is possible to adhere to the floor by effectively limiting losses (“drawdowns”). Investors can generate a positive performance by participating more strongly in rising market phases than in falling ones. Both aspects must be intelligently combined to enable them to effectively fulfil their crucial role in optimising the risk-return profile of a portfolio.

Conflicting goals: risk vs. return

Combining loss limitation with effective participation in the equity markets is the biggest challenge for capital protection strategies. Investors are confronted with the equally important objectives of risk and return. High risk is usually rewarded with high expected returns while lower-risk investments are typically associated with low or even negative returns. The development of the bond market in

3. Factors in optimising the risk-return portfolio



Diagram, for illustrative purposes only. Source: Lupus alpha

recent years described at the start of this dossier offers a sobering example of this principle.

In this conflicting situation, a strategy’s success very much depends on the method of implementation chosen. Here we make a distinction between three different approaches. While their objective does not differ (limiting the loss of risk in falling markets while participating in rising markets), their methods and outcomes deviate significantly from each other.

4. Capital protection strategy in the interplay of risk and return



Diagram, for illustrative purposes only. Source: Lupus alpha

*General note for the entire document: loss avoidance, capital protection and adherence to the floor level cannot be assured or guaranteed at any time.

- **Systematic strategies** (e.g. Constant Proportion Portfolio Insurance [CPPI]) use a predefined, rule-based risk capital designed to generate the biggest return possible. They also use a dynamic approach that constantly switches between risk-free and high-risk investments. These reallocations are generally based on the current distance from the floor (simple version) or more complex risk models (more advanced versions).
- **Asymmetric strategies** harness the advantages of both of the aforementioned approaches. However, continuous optimisation of the risk-return profile also plays a key role in portfolio management. The choice of instruments to be used also has a distinct role to play. While some instruments have a linear payoff profile, other elements of the portfolio can change the way the portfolio behaves to benefit investors in both bull and bear market phases. Derivatives also play a central role here. In the case of a call option, for example, the buyer can only lose a certain amount (the premium paid on the option) but can theoretically earn an unlimited amount. We look closer at the workings of this attractive financial instrument in the next chapter, in an “In focus” section called “How does a call option work?”.

The advantage of such systematic approaches is that the “human factor”, prone to making emotionally-driven decisions (“irrational decisions”), can be excluded. One crucial disadvantage of this strategy is that systematic approaches don’t consider capital markets experience or pursue forward-looking strategies. This usually results in portfolio reallocations that incur enormous implicit and transaction costs. Another particular disadvantage of such strategies is the premature exhaustion of the available risk budget. Once this budget has been used up, investors are no longer able to participate in any subsequent rebound in prices (see “In focus” section on cash locks).

- **Discretionary strategies**, unlike systematic strategies, do not follow a clearly defined approach but instead rely on the opinions and experience of the relevant portfolio managers. These strategies allow a portfolio to be managed and market expectations to be taken into account according to a long-term strategy. The desired profile is generated by blending lower-risk and higher-risk securities. As these physical assets are traded on a regular basis, transaction costs have a central role to play here. The success of such a strategy depends almost entirely on the quality of the decisions made by the portfolio managers.

In summary, it is important to emphasise that each of these different approaches has advantages and disadvantages. Looking back over the last few years, however, we can generally say that strategies that rely on the physical purchase and sale of equities for risk management purposes have faced significant challenges due to falling returns and rising inflation/inflation expectations. At the same time – and particularly during the COVID-19 pandemic – investors learned the hard way what happens when your capital protection strategy does not work (both in terms of adhering to the floor and with a view to participating in subsequent recoveries).

Lupus alpha has already been pursuing a clearly defined asymmetric approach since 2007 that has since proved itself over a wide range of different market phases. We provide more details on this approach in the following sections.

In focus:
what is a cash lock?

The term “cash lock” is often used in connection with capital protection strategies and overlay solutions. But what exactly is a cash lock and what impact does it have on investors? In this context, the inevitable next question is how can investors effectively avoid a cash lock? Using the example of developments in the capital markets during 2020, let’s look more closely at how cash locks can cause problems for many traditional capital protection concepts. Amid the highly volatile environment created by the COVID-19 crisis, the exceptionally rapid and sharp decline in the equity markets (e.g. S&P 500 dropped by more than 30 per cent in just a few weeks – an all-time record), followed by a similarly fast, almost V-shaped countermovement as share prices surged by almost 70 per cent from their low point to their year-end price, caused a major headache for many capital protection concepts.

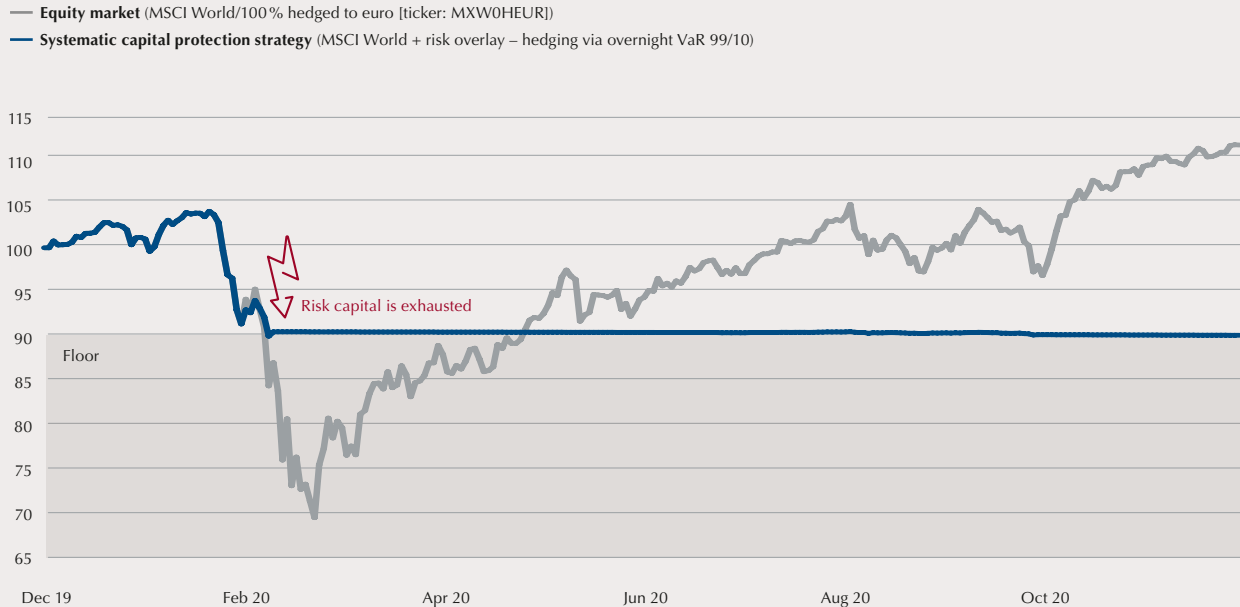
How does a cash lock come about?

Whenever an investor decides to adopt an investment approach with reduced risk, they start by defining their risk budget and/or minimum value limit. This specifies the degree of risk they are prepared to take. Systematic capital protection

models use this budget statically to determine risk positions and thus effectively limit losses. In such cases, a slump in the market forces them to “consume” their risk budget. The higher the targeted limitation of losses, the faster the budget is used up and the risk position is fully or partially reduced. This becomes problematic as soon as the entire risk budget is used up by a sudden decline in the market or phases of extreme volatility such as the historically rapid and sharp share price movements observed at the start of the COVID-19 pandemic. In this case, the portfolio is completely “thwarted” as it becomes fully decoupled from the market. Typically, all high-risk investments are liquidated or positions neutralised by taking opposing positions in derivatives (“hedges”) during such phases, thus achieving the desired objective of avoiding further losses. However, a decoupling of this nature can also mean that the portfolio cannot participate in any subsequent recovery phases that may occur in the market, as no return can be generated without “new” risk positions or budgets. Ultimately, the portfolio “falls” with the market until the risk budget is exhausted. However, any subsequent recovery will not have a significant impact on the portfolio. As a result, investors are

In focus:
what is a cash lock?

5. The impact of a cash lock on a systematic capital protection strategy in 2020



Source: Bloomberg, own calculations; observation period: 31.12.2019 to 30.12.2020

(almost) completely “trapped” by the minimum value limit until, for example, a new risk budget is defined at the start of the new financial year. This is known as a cash lock.

Figure 5 demonstrates this principle in the global equity markets (grey line: MSCI World index). Although the capital protection strategy deployed here (blue line: traditional CPPI model) fulfils its product promise of a maximum loss of ten per cent, it is “thwarted” from March 2020 onwards. As a result, investors cannot participate in the strong market recovery in the second half of the year.

Avoiding cash lock

Lupus alpha pursues a different approach with its capital protection strategy. This approach relies on the non-linear payoff profile of options, enabling the market exposure to be managed dynamically. The “built-in” asymmetry of these options can be used to avoid a cash lock. This gives portfolio managers the opportunity to continue using the risk capital available to ensure economic success.

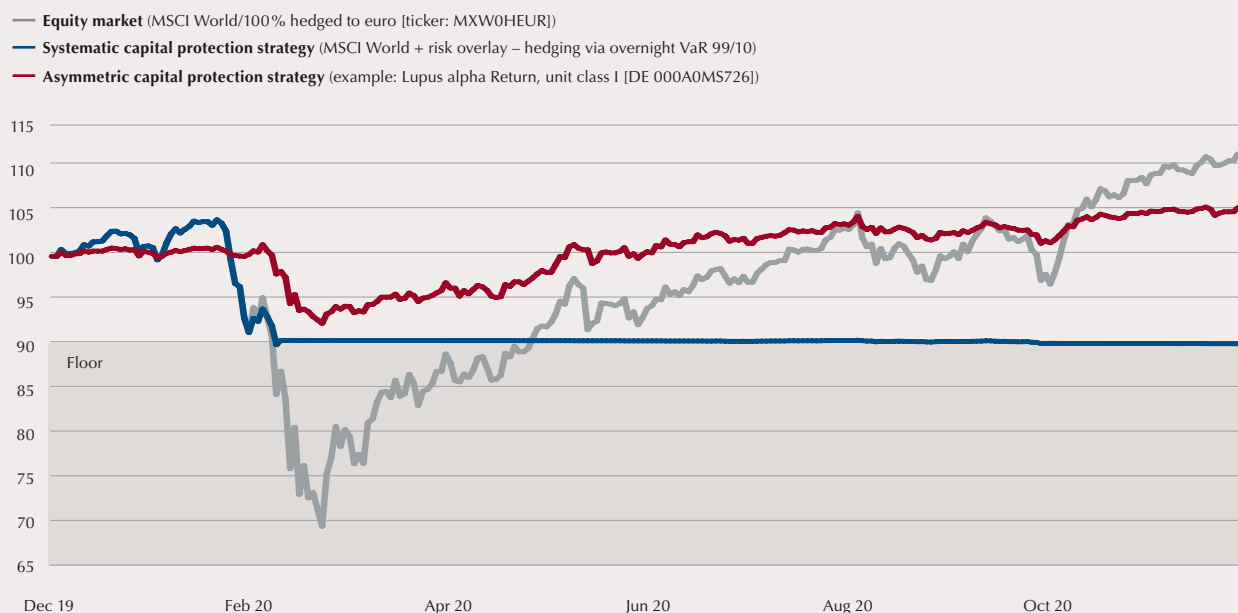
Derivatives have a key characteristic that portfolio managers use to avoid a potential cash lock. The derivatives used always have a maximum loss that is known in advance (the option premium paid), which in turn enables investors to participate in upward movements until the end of their term.

The value of this option is reduced during phases of sharp market decline and can expire worthless in the worst-case scenario. The maximum loss is then equivalent to the option premium paid, of which the investor is aware of in advance. If the market then recovers strongly and rapidly as it did in 2020, (call) options steadily gain in value again while simultaneously increasing their sensitivity to the market (the delta of the option). This asymmetrical approach clearly shows that, despite targeting limited losses, active management means that attractive participation in global markets is still possible – without the danger of a potential cash lock.

This way of implementing a capital protection strategy was once again proven to work extremely well during 2020. In addition to the traditional

systematic capital protection strategy illustrated in figure 5, figure 6 shows the performance of a tried and tested asymmetric strategy. In contrast to its traditional counterpart, the asymmetric strategy was able to participate in the market recovery from the second quarter onwards while still adhering to its floor. While other concepts remained at their floor, the asymmetric capital protection strategy ended the year with significant gains thanks to its attractive participation in the equity market.

6. Asymmetric strategy example avoids cash lock even in 2020



Source: Bloomberg, own calculations; observation period: 31.12.2019 to 30.12.2020



Our approach: asymmetric participation in equity markets

The Lupus alpha team has been successfully pursuing options-based asymmetric capital protection strategies for more than 15 years. The advantage of this is that options provide a way of automatically adapting the equity exposure, thus reducing the risk of misjudgements compared to discretionary approaches.”

Mark Ritter, CFA, CAIA, Portfolio Management Alternative Solutions

Lupus alpha has been successfully implementing a vast array of derivatives-based strategies for more than 15 years. Since 2007, capital protection strategies have formed an integral part of our product range, with Lupus alpha using a specially developed approach that enables it to draw on its large proprietary database. The aim of our approach is to actively manage our exposure in order to generate long-term returns while at the same time adhering to a predefined floor. These strategies are also designed to participate in income opportunities in the global equity markets on the one hand while reliably limiting the risk of loss* on the other. The floor level for individual mandates is geared towards the risk appetite of the investor in question, totalling 90 and 75 per cent respectively for our mutual funds on a calendar-year basis.¹

Lupus alpha's team and capital protection approach differs from other capital protection strategies in the market in three significant respects:

1. Using options for their flexibility and **"built-in" asymmetry**, thus avoiding one major flaw found in traditional capital protection concepts (the risk of a cash lock).
2. **Dynamically and actively** implementing the strategy and adjusting it to reflect the respective environment in the options market in order to keep the cost of the option structure as low as possible.
3. **Many years of experience:** Lupus alpha has been offering **capital protection concepts since 2007**. The core team managing these concepts has not changed during this time. The strength of our approach has been demonstrated in a variety of different market phases. Our experienced team can draw on a tried-and-tested technical infrastructure that incorporates our in-house trading desk and proprietary options database.

¹ Further information about the exact configuration of our funds is provided in the next chapter.

7. An experienced team and the principles underpinning our strategy



Many years of experience and deep expertise
A track record in capital protection strategies stretching back more than 15 years. Expertise in volatility and capital protection strategies delivering promising synergy effects.

Using derivatives

"We use the 'built-in' asymmetry of options. The resulting asymmetric profile means our portfolios participate more strongly in bull markets while being able to decouple themselves from bear markets."

Active approach

"We deliberately avoid taking a simple passive systematic approach. Dynamically adjusting our options strategy to reflect the relevant market environment enables us to keep hedging costs as low as possible."

Diagram, for illustrative purposes only. Source: Lupus alpha

Using derivatives for maximum flexibility

We use a derivatives structure to implement our investment strategy to make it as dynamic and flexible as possible using options and futures on selected international equities and equity indices. The corresponding derivatives are traded exclusively on the stock exchange to exclude counterparty risks, keep implementation costs low and ensure maximum liquidity as well as flexibility. Our positions are spread across the USA, Europe and Asia, with weighting based on the MSCI World's regional allocation. The attractiveness of the options structure within these regions is analysed and positions are chosen based on the outcomes of this analysis, taking trading costs into account (for more details, please see the next section entitled "Active approach for a cost-optimised derivatives investments").

Options: asymmetric profile “automatically” built in

The crucial advantage when using options is that they “automatically” adapt to the market situation at any given moment (see “In focus” section entitled “How does a call option work?”). This enables our portfolio managers to build a portfolio with an asymmetric or convex risk-return profile. That means that it loses less and less in the event of market declines but participates disproportionately strongly in upturns.

Another benefit of using derivatives is the exceptionally high degree of flexibility mentioned previously. For example, individual changes to the investment horizon or cash flow requirements can be taken into account extremely quickly and cost-effectively in consultation with the investor.

Only a small part of the capital invested is actually required to implement the derivatives-based strategy, for option premium payments for example. This means that the majority of the capital provided is invested in a basic portfolio of liquid EUR bonds with very high credit ratings and low interest rate sensitivity – taking sustainability criteria into account as required. This bond portfolio provides a broadly diversified way of storing capital, offers an ongoing interest yield and also serves as collateral for the derivatives used.

More upside and less downside participation

The result is an asymmetric risk-return profile. Our aim is to reduce participation in weak market phases (i.e. by losing less than the market) and increase participation in strong market phases (i.e. gain as much upside as possible). At the same time, a cash lock can also be avoided in challenging environments.

In focus: how does a call option work?

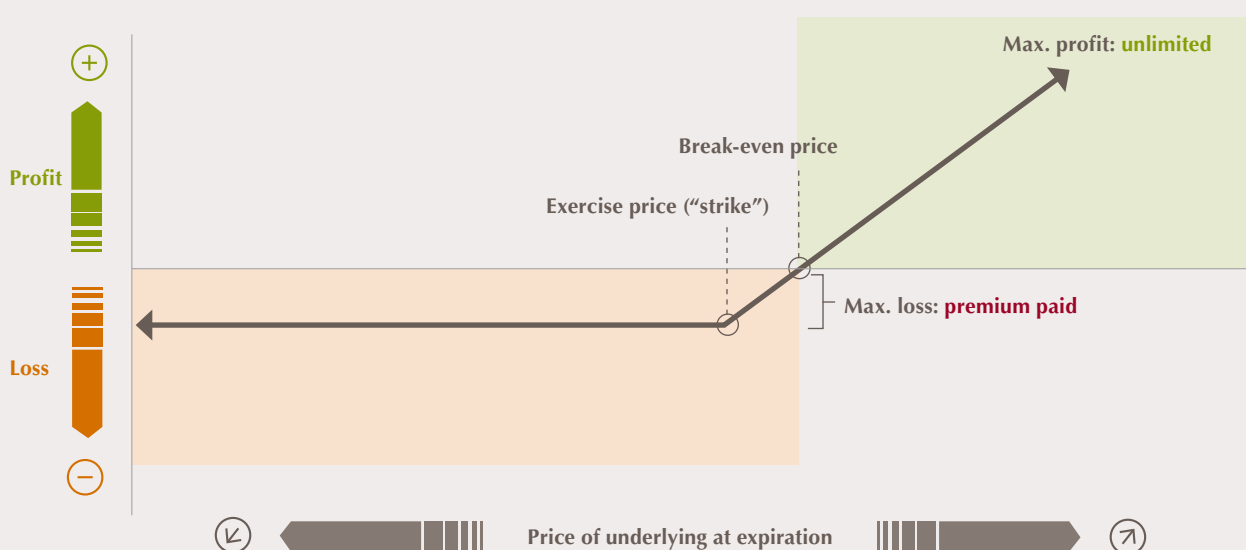
The owner of an option has the right, but not the obligation, to buy (known as a call option) or sell (known as a put option) a particular underlying asset such as a stock or equity index at a specific point in the future. The right to buy (call option) an underlying asset at a later point in time at a price agreed today enables the owner to participate in any rises in the price of this underlying without holding it. In return, the counterparty in this transaction is required to pay an option premium for this right.

The example of a call option is used below to demonstrate how advantageous an asymmetric profile can be when using options in the context of a portfolio.

Advantage for the investor (buyer of a call option)

The main advantage for the buyer of such an option is that while they can participate in any rises in the price of the underlying asset to a (theoretically) unlimited extent, they can only lose the option premium they have paid. As a result, they are aware of the maximum loss before the option expires. Options automatically offer the asymmetric or convex payoff profile (see figure 9) that investors in capital protection concepts expect: participation in rising markets combined with calculable losses.

8. Diagram of call option with clearly limited risk of loss



Diagram, for illustrative purposes only. Source: Lupus alpha

When does the option generate a profit?

If the price of the underlying asset rises above the option's exercise price, it makes sense for the buyer to exercise their option. However, the option has not yet reached the "profit zone". First, the price of the underlying asset has to rise high enough to offset the option premium paid at the outset. This means that the decisive factor at the end of an option's term is whether the price of the underlying asset has climbed high enough for the buyer to get back (i.e. to earn or offset) the option premium they paid at the start as well as generating additional profit.

Variable delta holds the key to participation

Another characteristic that is helpful for the buyer of a call option is variable sensitivity to the equity market, which is measured by what is known as the "delta" of an option. As one of the "option Greeks", delta measures the extent to which the value of an option changes when the price of the underlying asset changes. In the case of call options, the (positive) delta rises in line with the price of the underlying, i.e. the higher the price, the higher the sensitivity or responsiveness of the option. This means that investors automatically participate more strongly in rising markets (increasing sensitivity) than in falling ones (decreasing sensitivity).

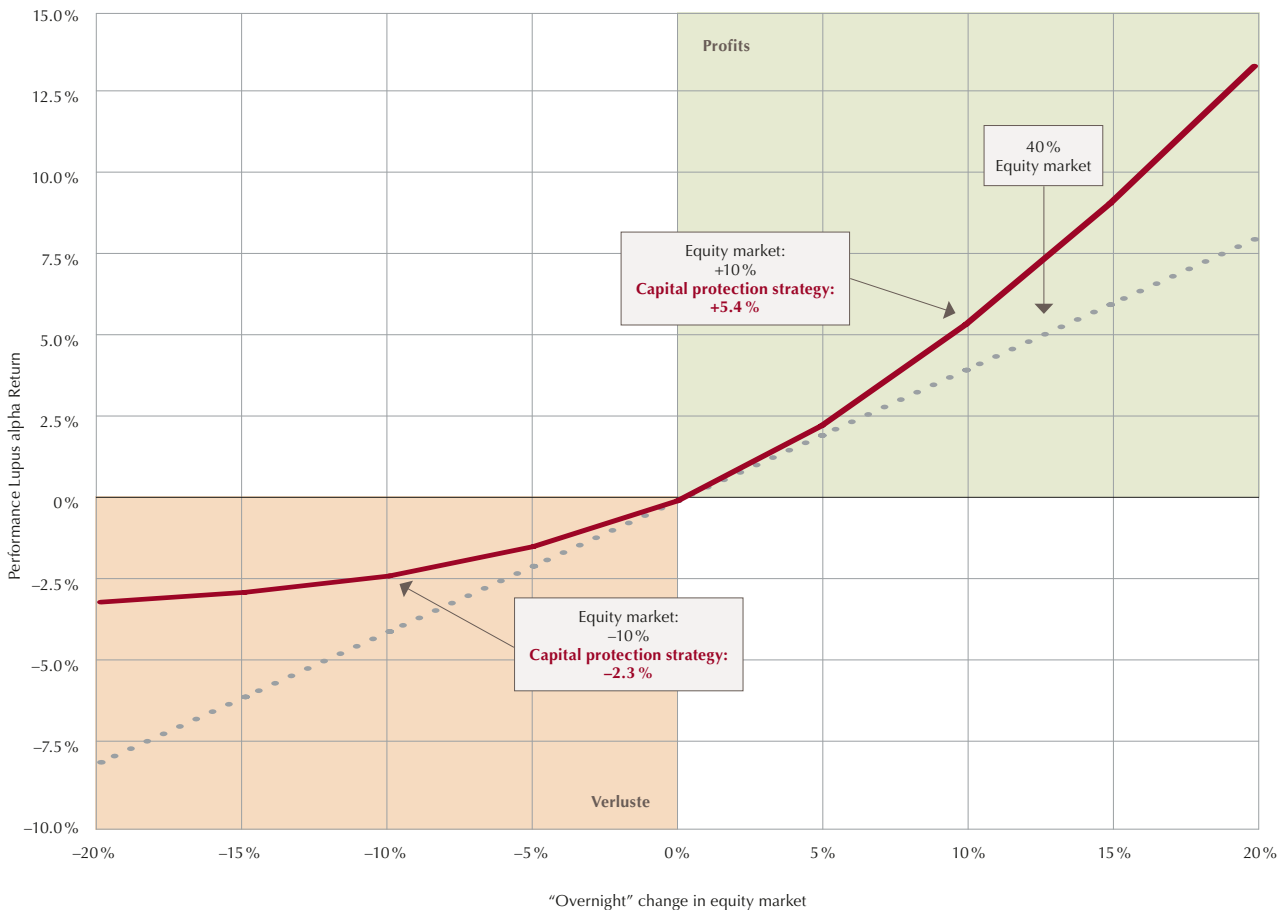
Figure 9 illustrates how such a profile works using the example of Lupus alpha Return, a mutual fund with a capital protection strategy and a floor of 90 per cent*. It depicts the results of a stress test at a specific point in time. As part of this stress test, the fund’s portfolio was subjected to several tests with different price change scenarios (with one strong “overnight” share price movement) with an effective date of 31.03.2022. The x-axis shows the degree of market stress, from –20 per cent to +20 per cent, while the y-axis shows the resulting strategy performance (red line). An investment with a simple 40 per cent equity ratio (dotted line) is also shown for comparison. This linear equity investment serves as a guide. If, for example, the equity market loses 20 per cent overnight, a 40 per cent equity investment suffers a loss of eight per cent. Conversely, an equally large rise in the market results in an eight per

cent gain. While a direct investment in the equity market follows a linear progression that corresponds to the equity ratio, Lupus alpha’s capital protection strategy* shows a clearly asymmetric (convex) pay-off profile, with losses that are considerably lower than gains in absolute terms. The more extreme the downward market movement, the lower the sensitivity becomes and the flatter the fund price’s development. The reverse is also true: the stronger the market upturn, the higher the participation. Overall, this results in the desired call-like profile.

Active approach for a cost-optimised derivatives investment

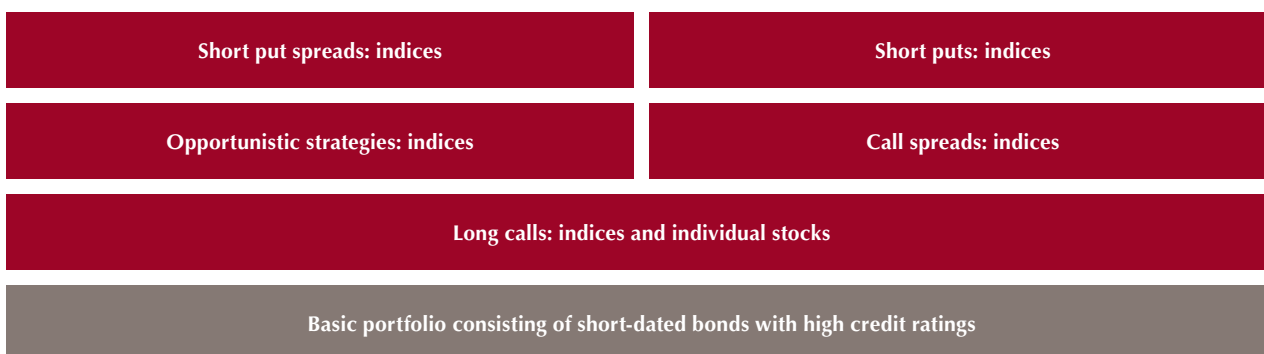
The challenge now is to achieve the desired payoff profile as cost-effectively as possible. One crucial factor here is to actively manage the strategy’s

9. The asymmetric payoff profile of our capital protection strategy



Source: Lupus alpha; as of 29.07.2022

10. Building blocks of Lupus alpha's capital protection strategy



Diagram, for illustrative purposes only. Source: Lupus alpha

derivatives components, as the extremely dynamic nature of the options and volatility markets means that static implementation is not practical. The situation over the past three years provides a good example of the changes in the options market. While index options in particular were cheap prior to the COVID-19 crisis, they became significantly more expensive during and directly after the upheaval triggered by the pandemic, trading at multi-year highs. Despite a slight decline from these peaks, the cost of these options is still above the long-term average. This example shows that a static implementation based solely on the past is not ideal. To adapt as effectively as possible to the current environment, the portfolio managers of a successful capital protection strategy must have a comprehensive set of individual derivatives components at their disposal. The long-call position is particularly worth highlighting in light of the asymmetric payoff profile at overall fund level. Although this provides the foundation for the strategy, it can be supplemented by a variety of additional building blocks depending on the environment (see figure 10).

A specific structure is implemented in each region depending on the current local situation in the volatility market, and this structure is used to build the desired asymmetric profile of the overall portfolio. As mentioned previously, the important factor here is that every derivative used is an exchange-traded contract with the maximum possible transparency

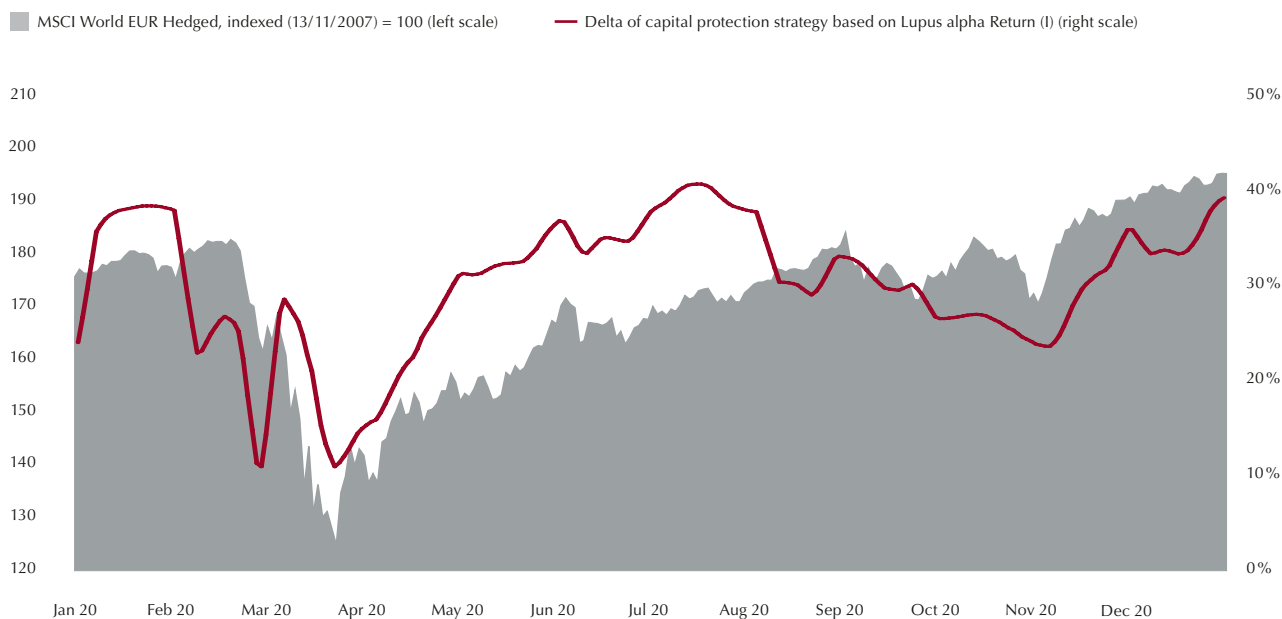
and liquidity. Large regional equity benchmarks such as the S&P 500, EURO STOXX 50, Nikkei 225 or the Hang Seng Index are taken into consideration as the underlying indices. Individual stock selection focuses on highly liquid large caps from the USA and Europe.

A portfolio that “automatically” adjusts its equity market participation

These instruments are used to create a global portfolio that participates asymmetrically in the performance of the equity markets. The target average equity ratio is a key parameter for investors. The ratio amount is dependent upon the level of risk capital available. As a rough guideline, an average equity ratio of 40 per cent can be expected for a floor of 90 per cent. Figure 11 shows an example of how the equity ratio of our capital protection strategy varies based on a mutual fund (Lupus alpha Return).

By way of background, the equity ratio of this product is around 40 per cent on average. In phases of acute market stress, the equity exposure of the options is “automatically” reduced and the overall portfolio adjusts without any active management. The best example of this was the phase during the peak of the COVID-19 crisis in March 2020, when the delta or equity sensitivity of the overall portfolio fell to around ten per cent as part of the enormous

11. Technical “automatic” adjustments in equity market participation (2020)



Sources: Bloomberg, own calculations; observation period: 01.01.2020 to 30.12.2020

market decline before climbing back to more than 40 per cent when the market recovered by the end of 2020.

Making experience, specialisation and integrated processes count

Lupus alpha has been managing options-based strategies for institutional investors for more than 15 years. We offer innovative concepts and tailored components that enable you to achieve your long-term investment goals. As a result, Lupus alpha is one of the largest and most experienced providers of options-based strategies in Germany.

We have spent many years building up and demonstrating the expertise required to implement options-based strategies, including a quantitative analysis team with a proprietary volatility database that forms the core of our professional research. We also have an experienced and highly specialised portfolio management team, methodically sound and experienced risk management and complete control over all trading processes.

At Lupus alpha, our portfolio managers, quantitative analysts and trading desk work closely together on portfolio implementation, ensuring that all relevant information can be bundled together and used in the investment decision-making process.

12. Lupus alpha's capital protection strategy team*

Alternative Solutions, head: Alexander Raviol



Alexander Raviol
Head of Alternative Solutions



Stephan Steiger, CFA, CAIA
Portfolio Manager



Mark Ritter, CFA, CAIA
Portfolio Manager



Marvin Labod
Portfolio Manager
Head of Quantitative Analysis



Tobias Meyer, CFA
Portfolio Manager

Quantitative Analysis, head: Marvin Labod



Marvin Labod
Portfolio Manager
Head of Quantitative Analysis



Ben Wottge, CAIA
Quantitative Analysis



Santiago Rojas, CAIA
Quantitative Analysis

Portfolio Implementation



Heiko Felzmann
Portfolio Implementation



Reiner Hessler
Portfolio Implementation



Alexander Pril
Portfolio Implementation



Invest with Lupus alpha's tried-and-tested capital protection strategies



“Investors can draw on our many years of experience in capital protection strategies to meet their requirements in a variety of ways, either in the form of mutual funds with different capital protection levels* or in the context of individually designed portfolio or overlay mandates.”



Marvin Labod, Portfolio Management Alternative Solutions

Our capital protection strategy products and services can generally be divided into two groups: efficient, easily accessible mutual fund products and tailored mandates, as well as risk overlays for existing portfolios. While all of these implementation methods share the characteristics set out in the

previous chapter, the specific configuration of each method differs. Over the next few pages, we will look more closely at the individual product groups and explain more about their strategy, key components and history.

13. Lupus alpha's capital protection strategies: investment opportunities

Mutual funds Capital protection	Lupus alpha Return	Lupus alpha Equity Protect
Concept	 <p>A flexible derivatives concept that can adapt to the ever-changing conditions in the options market while striving to adhere to a floor</p>	 <p>A flexible derivatives concept that provides investors with capital-protected access to global equity markets</p>
Market exposure	risk-reduced	full
Capital protection level	Losses limited to 10 % per calendar year*	Losses limited to 25 % per calendar year*
Implementation method	Mutual or special fund	Mutual or special fund

Overlay mandate/ custom solutions	Client-specific capital protection concepts	Client-specific portfolio overlay
Concept	 <p>Applying our tried-and-tested capital protection strategies to individual client requirements</p>	 <p>A dynamic overlay concept that optimises the risk-return profile of an existing portfolio while simultaneously minimising costs</p>
Market exposure	customised	customised
Capital protection level	customised	customised
Implementation method	special fund	customised

Diagram, for illustrative purposes only. Source: Lupus alpha

Lupus alpha Return

Lupus alpha Return provides investors with a chance to participate in the return opportunities of global equity markets in an attractive way. Diversifying sources of return and actively managing portfolio risk allows investors to limit their risk of loss and optimise their risk-return profile. Exchange-traded derivatives are used to implement this strategy, with a basic portfolio consisting of a liquid portfolio of bonds with high credit ratings.

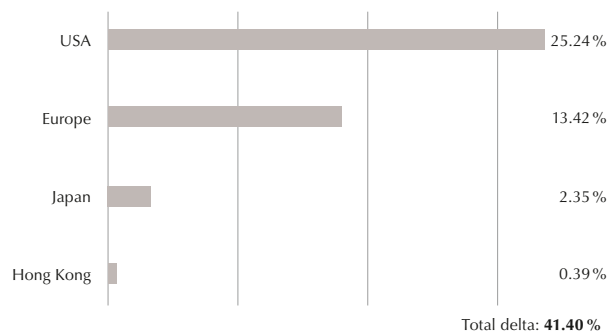
Market exposure of the product

Although the portfolio is managed on a global level, it generally focuses on the two core markets USA and Europe. Depending on the market environment, the Hang Seng Index as well as the Nikkei 225 are also added to the mix to enable investors to profit from global opportunities. While incorporating other markets into the strategy is feasible in principle, it is not currently attractive due to the lack of liquidity in traded derivatives. As a result, our experienced portfolio managers constantly monitor the markets to ensure they can make adjustments and optimise the portfolio at any time.

Instruments used in the product

The Lupus alpha Return strategy uses various components to generate a long call profile that is

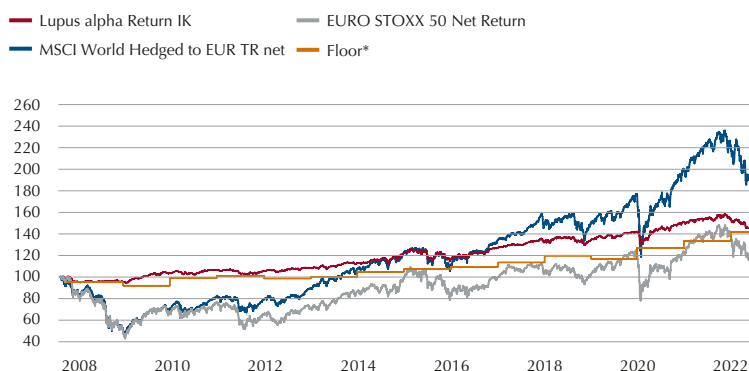
14. Lupus alpha Return: contribution to equity exposure



Sources: Bloomberg, own calculations; as of 29.07.2022

as cost-effective as possible. Long call options on indices and individual stocks (large caps from Europe and the USA only) are used to create a long equity exposure (i.e. a positive delta) to various markets. These positions enable investors to participate in rising equity markets. The strategy also trades what is known as “short put spreads” to exploit inefficiencies in the pricing of index puts. This component generates additional income that is used to finance the aforementioned long calls. The strategy can also sell puts on indices in core European and US markets or set up call spreads to finance the desired long call profile.

15. Lupus alpha Return: performance since launch²



Key performance indicators and risk figures

	La Return IK	MSCI World	EURO STOXX 50
Calendar year	-6.40%	-12.93%	-12.00%
5 years p.a.	2.65%	7.80%	3.79%
Since launch	47.82%	105.27%	28.00%
Since launch p.a.	2.67%	4.98%	1.68%
Volatility p.a.	4.95%	17.13%	23.06%
Sharpe ratio ³	0.50	0.28	0.06
Max. drawdown	-9.34%	-55.40%	-58.06%

³ $r = 0.22\%$

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Performance	-3.16%	7.97%	1.77%	-2.47%	4.41%	4.65%	5.15%	2.13%	3.61%	5.67%	-2.47%	8.50%	5.48%	6.25%

² The gross performance (BVI method) takes into account all costs incurred at fund level. The figures disclosed are historical. Past performance is not a reliable indicator of future results. Sources: Bloomberg, own calculations; observation period: 10.10.2007 to 29.07.2022

Product history and track record

Lupus alpha's capital protection strategy was developed in 2007 and has been used by the Lupus alpha Return mutual fund since then. There have been no significant changes to this investment approach during this time, and even the core management team has been working together since 2007. The success of our approach has been proven over the past 15 years. Despite the market turbulences of recent years (the Lehman/global financial crisis in 2008/2009; the Euro crisis in 2011; the US trade dispute, Brexit and Italy in 2018; and COVID-19 in 2020), the strategy has met all of its investment goals and adhered to its minimum portfolio value throughout.

Lupus alpha Return: significance for investors

All in all, this approach has demonstrated its reliability without exception for one-and-a-half decades and has even exceeded the expectations placed upon it during challenging market phases (e.g. during the COVID-19 crisis). We expect the success of this strategy to continue in the future. We are also confident that in Lupus alpha Return, we can provide risk-conscious investors with a tried-and-tested

16. Lupus alpha Return: investor significance at a glance



Return

- 2.65 % p.a. (last 5 years)⁴
- Participation in global equity and volatility markets



Risk limitation

- Volatility 4.95 % (last 5 years)⁵
- Max. drawdown: 9.34 %
- Floor* maintained since 2007 launch



⁴ The return generated over the past 10 years (29.07.2012–29.07.2022) is +3.40 per cent p.a.

⁵ The volatility realised over the past 10 years (29.07.2012–29.07.2022) is 5.41 per cent p.a. Sources: Bloomberg, own calculations; as of 29.07.2022

“all-weather investment” that offers significant diversification potential.

Invest sustainably – with Lupus alpha Sustainable Return

For investors with particular sustainability requirements, Lupus alpha offers Lupus alpha Sustainable Return, a mutual fund that pursues the aforementioned strategy while employing a sustainability methodology geared towards the Austrian Catholic Church's ethical investment guidelines⁶, otherwise

⁶ <https://www.katholisch.at/finanko>.

In focus:

Lupus alpha Sustainable Return ESG methodology

Lupus alpha Sustainable Return combines Lupus alpha's tried-and-tested capital protection strategy with extensive sustainability criteria. The equity exposure for this product is built up using physical shares, with derivatives only used for hedging purposes.

Both the equities and bonds used in this product pass through our specially developed ESG filter. A selection of what are known as principal adverse impacts (PAIs), i.e. the adverse

effects on sustainability indicators, are also explicitly considered to ensure, among other things, that the product meets the high ESG minimum standards. The voting rights arising from the equities within the portfolio are also actively exercised.

Detailed information about the ESG methodology we use can be found here:



known as the FinAnKo guidelines (see “In focus” section entitled “Lupus alpha Sustainable Return ESG methodology”). **This product is classified by Lupus alpha as compliant with Article 8 of the Sustainable Finance Disclosure Regulation (Regulation [EU] 2019/2088 – SFDR).**

Who should choose this product?

Lupus alpha Return is an excellent choice for investors who are looking for stable income yet are not prepared to bear the full risk associated with the equity market or suffer significant losses. The fund is designed to offer stable long-term returns by managing equity exposure within a range of 0–80 per cent (40 per cent on average) while at the same time limiting losses to ten per cent in any calendar year*. The capital protection strategy pursued by this product has one clear objective for investors: stress-free equity investment.

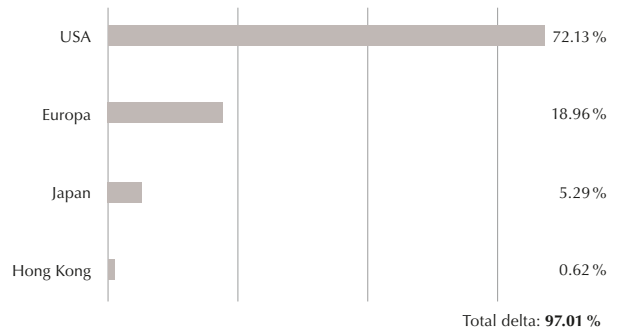
Further information about Lupus alpha Return can be found here:



Lupus alpha Equity Protect

Lupus alpha Equity Protect provides investors with the chance to participate fully in the return

17. Lupus alpha Equity Protect: contribution to equity exposure



Sources: Bloomberg, own calculations; as of 29.07.2022

opportunities of global equity markets. Diversifying sources of return and actively managing portfolio risk allows investors to limit their risk of loss and optimise their risk-return profile. Equities and exchange-traded derivatives (futures, options) are used to implement this strategy.

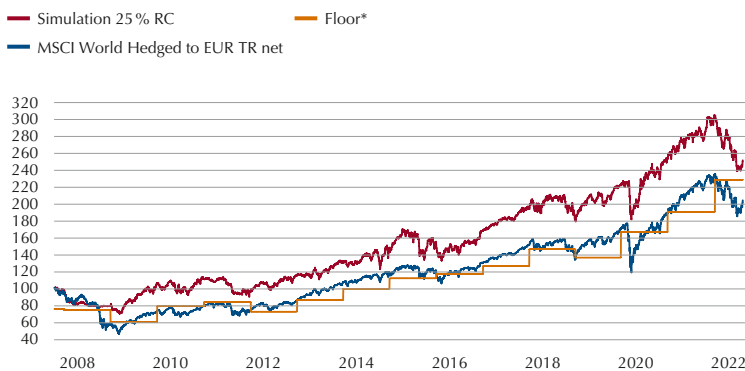
Market exposure of the product

Lupus alpha Equity Protect invests globally with a focus on equity markets with efficient derivatives markets and high liquidity. As a result, it currently concentrates on the USA (S&P 500) and Europe (STOXX LARGE). However, our experienced team constantly keeps track of global markets to ensure that they can make regional adjustments at any time.

Instruments used in the product

This strategy uses equities (at least 50 per cent of fund

18. Simulation⁷: capital protection with 25 % risk capital (= 75 % floor*)



Key performance indicators and risk figures

	Simulation 25% RC	MSCI World
Calendar year	-17.30%	-12.93%
5 years p.a.	6.66%	7.82%
since launch	153.20%	105.27%
since launch p.a.	6.47%	4.98%
Volatility p.a.	15.28%	17.09%
Sharpe ratio ⁸	0.41	0.28
Max. drawdown	-31.69%	-55.40%

⁸ r = 0.22 %.

Simulation 25% RC	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Annual performance	-19.52%	32.58%	6.08%	-13.52%	19.69%	15.52%	12.37%	4.80%	7.97%	16.00%	-6.69%	22.43%	14.57%	19.96%

⁷ As Lupus alpha Equity Protect was only launched in November 2021 and does not yet have a 12-month track record at the time this document was prepared, at this point we are referring to a simulation of our capital protection strategy with risk capital of 25%. Sources: Bloomberg, own calculations; observation period: 10.10.2007 to 29.07.2022

volume) and equity derivatives. The basic portfolio is completed by long-dated bonds with high credit ratings. The equity portfolio currently consists of around 40–80 individual stocks.

Product history and track record

Although Lupus alpha Equity Protect was only launched in November 2021, the success of this strategy has already been proven in early market phases – as underlined by the simulation (see figure 18).

Lupus alpha Equity Protect: sustainable in accordance with Article 8 SFDR

This product is classified by Lupus alpha as compliant with Article 8 of the Sustainable Finance Disclosure Regulation (Regulation [EU] 2019/2088 – SFDR). It incorporates several of the SFDR's principal adverse impacts (PAIs) as well as additional ESG minimum standards (see figure 19).

Both the equity and individual stock options as well as the bonds used in this product pass through our specially developed ESG filter that ensures, among other things, that the product meets the ESG minimum standards.

[Detailed information about the ESG methodology we use can be found here:](#)











Who should choose this product?

This product is aimed at investors with high return expectations who are fundamentally prepared to take on the full risk of the equity markets while still wanting to be protected against extreme price declines. By managing its exposures, the fund is designed to outperform the global equity market (benchmark: MSCI World) in the long term and limit losses to 25 per cent within any calendar year.

[Further information about Lupus alpha Equity Protect can be found here:](#)



19. Lupus alpha Equity Protect sustainability features

Investable companies excluded for:	
Violations of the UN Global Compact 	Production of controversial or nuclear weapons 
Involvement in very serious controversies 	
Exclusion of investable companies with revenue of more than:	
from armaments and weapons  5 %	from nuclear power incl. uranium mining  5 %
from coal mining and coal-based power generation  10 %	from fracking and oil sands  0 %
from tobacco  5 %	
Consideration of PAIs	

Client-specific capital protection concepts

Individual capital protection levels*: we are in a position and have the necessary experience to adapt our tried-and-tested capital protection concepts to fulfil the individual requirements of our clients. We can customise the return expectations together with both the capital protection level (e.g. the minimum portfolio value*) and the instruments used to meet your specific needs.

Allocations tailored to individual risk and/or ESG requirements: to achieve this, we work closely with the investors to create a personalised mandate that satisfies their needs with regard to time horizon, expected returns, risk budget and ESG requirements.

[Your dedicated contact \(see page 29\) will be glad to discuss your requirements in more detail.](#)

Client-specific portfolio overlay

Risk overlay strategies offer institutional investors the opportunity to successfully implement their strategic asset allocation and select a specific degree of protection at portfolio level. Based on your portfolio holdings, our experienced specialists can implement efficient risk management strategies that aim to comply with your specific risk-return requirements.

The portfolios to which these risk overlays are applied range from pure equity portfolios all the way to comprehensive master funds containing global government bonds, corporate bonds and equities.

Static CPPI models with roots stretching back to the 1980s are still widespread and their continued development is managed using value-at-risk or expected shortfall models. These models have several disadvantages, including the problem of cash locks (see “In focus” section on cash locks on page 11).

At Lupus alpha, we use our extensive derivatives expertise to strike out in new directions. Our knowledge of options and how to use them is the cornerstone of our risk overlay strategy, enabling us to adapt an existing portfolio to reflect the risk-bearing capacity of an investor and thus achieve a superior risk-return ratio in the long term. Our model overcomes the shortcomings of the aforementioned CPPI models and uses all of the opportunities and information available.

Every approach can be tailored to your specific requirements. To ensure that our wide range of options products can be precisely geared to meet your needs, we use systems associated with our comprehensive volatility database that have been specially developed and are constantly being improved for this purpose. This enables us to react quickly and efficiently to all kinds of enquiries as well as unforeseen market developments.

Your dedicated contact (see opposite) will be glad to discuss your requirements in more detail.

Would you like further information about the allocation of capital protection strategies?

Get in touch with your dedicated contacts:



Ralf Lochmüller
Managing Partner, CEO
ralf.lochmueller@lupusalpha.de



Dr. Markus Zuber
Partner, CSO
markus.zuber@lupusalpha.de



Dejan Saravanja
Senior Relationship Manager
Institutional Investors
dejan.saravanja@lupusalpha.de



Benjamin Wendel
Senior Relationship Manager
Institutional Investors
benjamin.wendel@lupusalpha.de



Laurin Regel
Relationship Manager
Institutional Investors
laurin.regel@lupusalpha.de



Oliver Böttger
Partner, Senior Relationship Manager,
Head of Wholesale Sales
oliver.boettger@lupusalpha.de



Saskia Bernhardt
Senior Relationship Manager
Wholesale Investors South
saskia.bernhardt@lupusalpha.de



Matthias Schneider
Senior Relationship Manager
Wholesale Investors North
matthias.schneider@lupusalpha.de



Rachel-Bel Bongsi
Client Services
rachel-bel.bongsi@lupusalpha.de



Anke Floeth
Client Services
anke.floeth@lupusalpha.de

You can reach the
Clients & Markets team
at Lupus alpha by calling

+49 69 365058-7000.

Disclaimer:

***General note for the entire document: loss avoidance, capital protection and adherence to the floor level cannot be assured or guaranteed at any time.**

This fund information is provided for general information purposes only. This information is not designed to replace the investor's own market research, nor any other legal, tax or financial information or advice. The information presented does not constitute a solicitation activity, an invitation to buy or sell, nor an ancillary investment service such as investment research or financial analysis within the meaning of Section B(5) of Annex II, nor does it qualify as investment advice within the meaning of Section A(5) of Annex I of MiFID II (as it does not amount to an objective and independent explanation of a recommendation within the meaning of article 36,1.a) of the Delegated Regulation (EU) 2017/565 of 25 April 2016) and should not be treated by recipients as such. It does not contain any key information enabling to make important economic decisions and may differ from information and estimates provided by other sources or market participants. We accept no liability for the accuracy, completeness or topicality of this information. All statements are based on our assessment of the present legal and tax situation. All opinions reflect the current views of the portfolio manager and can be changed without prior notice.

Full details of our funds and their licenses of distribution can be found in the relevant current sales prospectus and, where appropriate, Key Investor Information Document, supplemented by the latest audited annual report and/or half-year report. The relevant sales prospectus and Key Investor Information Documents prepared in German are the sole legally binding basis for the purchase of funds managed by Lupus alpha Investment GmbH. You can obtain these documents free of charge from Lupus alpha Investment GmbH, P.O. Box 11 12 62, 60047 Frankfurt am Main, Germany, upon request by calling +49 69 365058-7000, by e-mailing info@lupusalphade.de or via our website www.lupusalphade.de. In addition, the exclusive legally binding basis for the acquisition of units in the funds managed by Monega Kapitalanlagegesellschaft mbH is the respective valid sales prospectus and the Key Investor Information, which are written in German. These can be obtained free of charge from Monega Kapitalanlagegesellschaft mbH, Stolkgasse 25–45, 50667 Cologne, Germany, telephone +49 221 39095-0, fax +49 221 39095-400, e-mail: info@monega.de, website: www.monega.de.

If funds are licensed for distribution in Austria, the respective sales prospectus, Key Investor Information Document and the latest audited annual report or half-year report are available from the Austrian paying and information agent UniCredit Bank Austria AG, based at Rothschildplatz 1, 1020 Vienna, Austria. Fund units can be obtained from banks, savings banks and independent financial advisors.

Neither this fund information nor its contents or a copy thereof may be amended, reproduced or transmitted to third parties in any way without the prior written consent of Lupus alpha Investment GmbH. By accepting this document, you declare your consent to comply with the aforementioned provisions. Subject to change without notice.

Unless otherwise specified, all indicated performance data show the gross performance (BVI method): the gross performance considers all costs incurred at fund level (e.g. management fee) and assumes reinvestment of any distributions. Costs incurred at customer level such as sales charge and securities account costs are not included.

Please note: past performance is not a reliable indicator for the future performance.

Lupus alpha's information providers, MSCI ESG Research LLC and its affiliates (the "ESG parties"), obtain their information from sources they believe to be reliable. However, none of the ESG parties guarantees the authenticity, accuracy and/or completeness of the data contained herein. None of the ESG parties makes any express or implied warranties of any kind, and the ESG parties hereby expressly disclaim all warranties of merchantability and suitability for a particular purpose with respect to the data contained herein. None of the ESG parties shall be liable for any errors or statements made in connection with the data contained herein. Without limiting the foregoing, none of the ESG parties shall be liable for any direct, indirect, negligent, grossly negligent or other damages (including lost profits), even if advised of the possibility of such damages. As of November 2022.

Lupus alpha Investment GmbH
 Speicherstrasse 49–51
 D-60327 Frankfurt am Main
 Telephone: +49 69 365058-7000
 Fax: +49 69 365058-8000
 E-mail: info@lupusalphade.de

www.lupusalpha.de

THE ALPHA WAY TO INVEST

Lupus alpha