In *Focus* we comment on extraordinary market events and analyse capital market related special topics.

Liquid alternatives are a useful addition in the low interest rate environment – we look at their classification and implementation in a multi-asset context

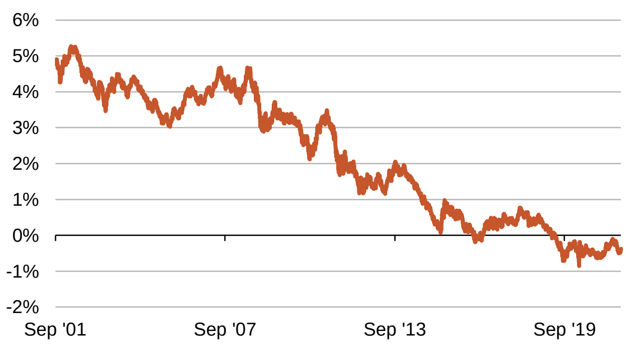
Bond yields have been falling for decades. As a result, c20% of bonds outstanding today are negative yielding, which poses two major challenges for investors. First, negative-yielding bonds result in a guaranteed loss for "buy-and-hold" investors, which – consequently – does not compensate for the risk of rising yields, at the very least, which could result in significant short-term losses. Second, the traditional hedging effect of bonds in equity market corrections is limited. The synchronisation (correlation) between equities and bonds has increased and the limited scope for further falling yields in the event of a crisis limits the potential price gain for bonds. Therefore, especially in defensive and – by implication – more bond-heavy strategies, it seems reasonable to consider alternative investments to at least partially replicate or complement the traditional characteristics of bonds. In addition to commodities and illiquid investments, liquid alternatives are regularly mentioned for this purpose. What does this involve? Which strategies should be distinguished and what challenges do investors face when pursuing this path? We shed light on sensible approaches and report on our experiences.

The hedging and diversification effect of bonds decreases

Diversification properties of bonds are no longer present in its original form

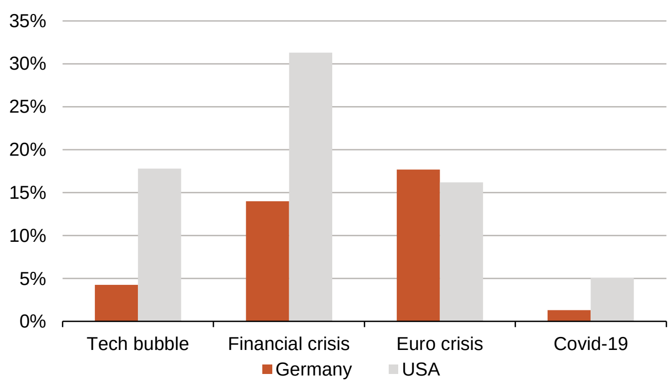
In the past, multi-asset strategies that invest predominantly in equities and bonds regularly benefited from the consistently rising prices of safe government bonds when equity prices fell. However, Figure 2 shows that government bonds – which are considered "safe havens" – have recently no longer been able to live up to this role: While US government bonds still generated a return of over 30% during the financial crisis, they gained only 5% in the COVID-19 crash in 2020[1] and did not come close to offsetting the equity market losses of over 40% in some cases.

Fig. 1: Structurally declining interest rates
Yield development of 10-year Bunds



Time period: 01/09/2001-01/09/2021, daily data
Source: Bloomberg

Fig. 2: Hedging effect of government bonds declines
Performance of 10-year German (Bunds) and US (Treasuries) government bonds in equity market corrections



Time period: Tech bubble: 24/03/2000-29/01/2001; Financial crisis: 13/07/2007-09/03/2009; Euro crisis: 18/02/2011-03/10/2011; Covid-19: 19/02/2020- 23/03/2020;
Source: Bloomberg

[1] Performance measured from the high of the American stock market (S&P 500) on 19/02 and low on 23/03.

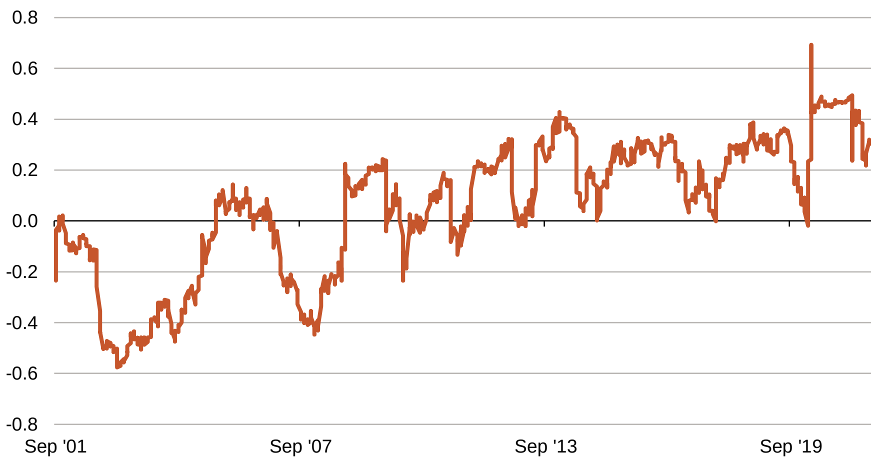
The fact that these bonds did not offset the equity market losses is mainly due to the lower interest rate level and the resulting lower buffer effect of the interest coupons, as well as the reduced scope for further interest rate declines from the current level.

Equal development of equities and bonds is also likely in the future

In the future, it is to be expected that this correlation between equities and bonds will continue in this vain. Government bonds will have a hard time significantly alleviating losses on the stock market. In an environment characterised by a normalisation of central bank policy and a return to a higher level of inflation, government bonds and equities are likely to behave in parallel[2]. The increasing synchronisation of corporate bonds with equities, shown in Figure 3, also underscores the fact that both asset classes are suffering losses at the same time and that familiar diversification benefits from the past are only present to a limited extent.

Fig. 3: Increasing synchronisation of corporate bonds with equities

Correlations between Stoxx Europe 50 (SX5R) and iBoxx Euro Corporates Overall Index (QW5A) Index based on one-year rolling weekly data



Time period: 01/08/2001-01/09/2021, daily data
Source: Bloomberg

Multi-asset strategies with higher bond ratios are particularly affected by the lack of a hedging effect. Consequently, there is a need for components that act as a stabiliser when the equity markets become more turbulent or rising interest rates lead to price losses on bonds.

Alternative sources of return are gaining importance

Strategies that enable a more independent development of returns in such an environment can be found in the broad spectrum of alternative asset classes. These can generally be divided into liquid and illiquid investments. The risk and return drivers of both illiquid and liquid alternative investment strategies differ – at least in part – from those of traditional asset classes, which is why selected alternative investments are increasingly being used for diversification purposes.

Examples of illiquid investments are private equity, private debt, hedge funds, collectibles (eg art, vintage cars, etc), real estate and infrastructure. Due to the complexity of valuation, these investments are usually only rarely priced, which is why they are not suitable for use in liquid investment strategies – they lack liquidity. Pension funds that are not dependent on daily price fixing due to a long-investment

[2] See also Berenberg Markets Focus "Stronger synchronisation of equities and government bonds is also likely to shape the coming years", August 2021

horizon take advantage of the additional illiquidity premium and have accordingly increased their share at the expense of fixed-income segments – from 7% to over 26% in recent years.[3]

The area of more liquid investments in the alternative space mainly includes commodities and liquid alternatives. From an investor's perspective, commodities fall into two categories: hedging investments, such as precious metals (eg gold), and investments with cyclical characteristics, such as industrial metals. As with the aforementioned illiquid strategies, liquid alternatives have different risk/return profiles and are suitable as investment alternatives or for portfolio diversification.

Liquid alternatives as an investment alternative?

Liquidity, regulation and transparency as key differentiators from hedge funds

Compared to traditional investment strategies, liquid alternatives generally make use of a larger toolbox of investment instruments and trading strategies, which enables an investor to profit from both rising and falling prices in various asset classes. In addition, leverage can be used to generate returns that diverge from traditional asset classes. Since the 1950s, such strategy building blocks have been implemented for large professional investors in the form of hedge funds in the US. The main distinguishing feature between liquid alternatives and hedge funds is that the former – as a result of the regulated fund framework Undertakings for the Collective Investment in Transferable Securities (UCITS) – is much more strictly regulated to protect investors, thereby increasing the degree of transparency. Due to explicit position limits, it is not possible – for instance – to invest more than 10% of the fund volume in one position or to make investments in unlisted or unregulated investments. In contrast to hedge funds with monthly or quarterly liquidity – as well as substantial notice periods – liquid alternatives are largely tradable on a day-to-day basis, are usually less expensive and are not restricted to certain groups of investors. Therefore, for investors who are denied access to hedge funds, they represent a useful alternative and are also suitable as a targeted supplement to traditional asset classes.

Broad universe of liquid alternatives strategies

In our view, investors should approach liquid alternatives from two different perspectives.

One perspective focuses on their use in a multi-asset context and distinguishes hedging from diversifying strategies. The former offer negative correlations to risky assets in times of stress and, as is traditionally the case with government bonds, aim to generate positive returns in times of crisis. The latter aim to improve the risk/return profile of traditional investments with the lowest possible correlation. In the following overview, in Table 1 (overleaf), we present what we consider to be the most relevant alternative strategies and describe the objectives of each.

The second perspective, in Figure 4 (overleaf), is devoted to the risk/return profile of the strategies and is suitable for a basic classification, also in relation to conventional asset classes. While the defensive risk/return profiles largely have the character of traditional bond investments and the strategies with a grey background can be compared more with balanced multi-asset portfolios – offensive strategies appear to be most comparable with equities.

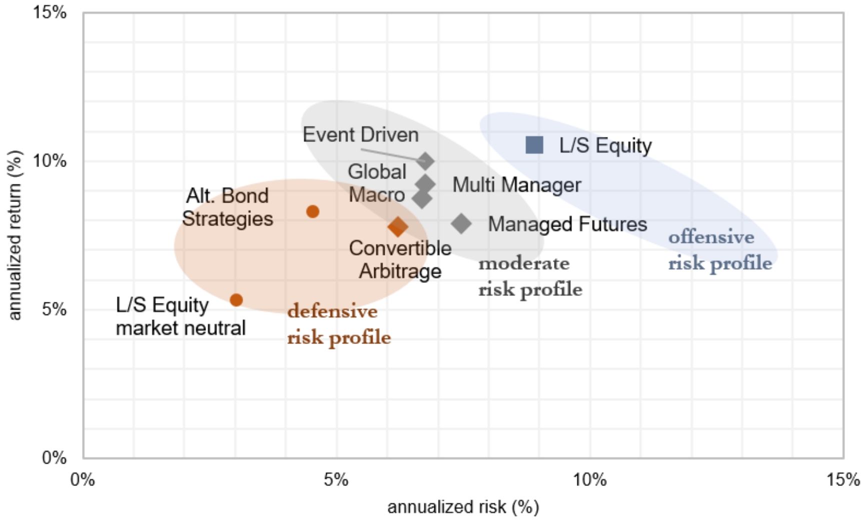
[3] Global Pension Assets Study 2021 by Willis Towers Watson

Table 1: Description and objectives of alternative strategies

Strategy	Description	Objective
Hedging strategies		
Long Volatility	Hedging strategies that use futures, swaps and options on (volatility) indices and individual securities to profit from rising volatility.	Negative correlation to the equity market and thus positive returns, especially in periods of stress.
Managed Futures	Predominantly model-driven concepts that participate in trend development across various asset classes. Investing is usually done via derivative instruments, such as futures.	Positioning on rising and falling prices enables positive returns – even in persistently negative market phases. Corresponding potential to reduce portfolio volatility.
Diversifying strategies		
Long/Short Equity (market neutral)	A combination of long and short positions in equities to profit from rising and falling prices.	Generate positive returns independent of stock market movement. Market-neutral strategies represent a defensive variant that almost completely eliminate market risk.
Event Driven (Merger Arbitrage, among others)	Exploiting temporary capital market inefficiencies in the pricing around corporate actions of listed companies (ie takeovers, IPOs, share buybacks).	Generating positive returns by exploiting relative mispricing in the context of corporate actions.
Global Macro	Very flexible investing based on macroeconomic assessments of economic and political conditions via derivative instruments into all liquid markets (mostly global equity, bond, currency and commodity markets).	Positive returns and diversification characteristics independent of the prevailing market environment due to flexible and partly contrarian positioning.
Convertible Arbitrage	In the classic sense, market-neutral investing via purchase (long) of the convertible bond and sale (short) of the share of the same company.	Exploit inefficiencies in price and volatility between convertible bonds and shares of the same company to generate returns independent of the general market trend.
Alternative Bond Strategies (Long/Short Credit)	A combination of traditional investments in interest rates or bond markets that are specifically supplemented with hedges of credit, interest rate or currency risk.	Achieve absolute, low-correlated returns with reduced risk of loss compared to traditional bonds.
Multi-Strategy / Multi-Manager	A combination of various (above-mentioned) individual strategies or managers in one investment product, sometimes in the form of funds of funds.	Diversified market access to alternatives investment strategies without costly/time-intensive selection of individual strategies.

Fig. 4: Alternative strategies in the risk-return profile

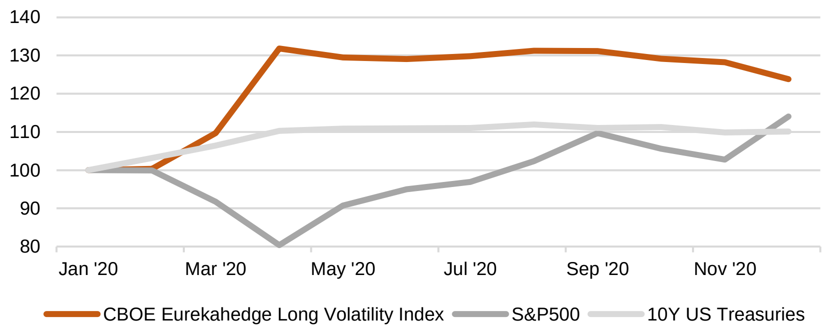
Annualized returns and volatilities over the last 30 years based on HFR data[4]



Time period: 01/08/1991 to 01/08/2021, monthly data in USD.
Source: HFR, Bloomberg, own calculations

Long volatility strategies are deliberately not shown in Figure 4, as a long-term risk/return analysis of largely positive market phases would give the wrong impression. As can be seen in Figure 5, such strategies[5] offer added value to hedging, particularly in pronounced stress phases. This was also the case in 2020, when the stock market corrected significantly in March in the wake of the COVID-19 crisis.

Fig. 5: Long volatility strategies compared to equities and government bonds



Period: 01/01/2020 to 31/12/2020, value development indexed to 100, monthly data in USD
Source: CBOE, Bloomberg, own calculations

What to consider when looking for the right manager?

Once the strategies have been classified based on the two perspectives described, the question of implementation arises. To integrate the appropriate strategy into an existing portfolio, six steps are important in our view – which we describe in more detail in the following sections. First, it is important to be aware of the particular challenges involved in the product selection of liquid alternatives; in the next step, two overarching implementation variants can be distinguished. Next, it is important to clarify the objective that the strategies should fulfil. Ideally, this objective should

[4] The data comes from HFR, one of the leading providers of hedge fund data. The advantage of using a hedge fund database over a liquid alternatives database is that hedge fund data has been collected for much longer and is therefore more representative. However, there are two disadvantages of the HFR database. On the one hand, many of the strategies included are not available in the regulated European (UCITS) framework, and on the other hand, due to survivorship bias, the returns are systematically positively overestimated and the risk underestimated.

[5] CBOE Eurekahedge Long Volatility Index: Equal weighted index of long volatility strategies.

be quantifiable and should allow success to be assessed on an ongoing basis. The next step is the selection of managers and portfolio construction, followed by the embedding of the strategy into the existing multi-asset portfolio. Finally, specific features in the management of the strategies are briefly discussed.

1. Special challenges in product selection

Complexity and lack of comparison are among the challenges

In addition to the advantages mentioned, liquid alternatives raise questions that investors are not familiar with compared to when selecting equity and bond funds.

> *Complexity:* Since the strategies use leverage by means of derivatives and can bet on both rising and falling markets, the product construction is complex. In addition, the respective investment processes and risk management systems are very individual, which requires comprehensive examination and analysis before an investment is made.
>
> *Comparability and assessment:* Liquid alternatives are difficult to compare with each other, as the liberties are much broader than in traditional investment approaches. The majority of strategies pursue the goal of achieving positive investment results in all market phases. Therefore, comparing returns or risk with equity indices, such as the S&P 500, does not help to assess performance. Accordingly, own models or comparison groups have to be built.

2. Different implementation variants

Multi-strategy/multi-manager or individual strategies as a fundamental decision for product selection

At first glance, the various strategy types in the realm of alternative strategies result in a wide range of possible combinations for the integration into a multi-asset approach. First, however, an overriding decision must be made. Should multi-strategy or multi-manager approaches be used, or is the individual composition of a portfolio from single strategies the aim?

Investors in multi-strategy or multi-manager approaches benefit from professional expertise as a complete package is offered – from selection and weighting to monitoring, rebalancing and risk management. This is accompanied by access to strategies that are in part not investable on an individual basis, as well as increasing negotiating power in terms of fees towards the providers of the selected sub-strategies as the investment volume increases.

In the case of individual composition, on the other hand, the investor retains control over the selection of strategies and managers, as well as all further downstream steps in the investment process. This allows for a more individual adjustment to the investor's own investment objectives and the given asset allocation, although it does require the corresponding expertise and a higher effort in the selection and ongoing management. In return, however, the degree of transparency can be increased and the cost burden can be reduced by eliminating the need for an intermediary.

3. Specification of the investment objective

Targeted substitution for equity or bond risks possible

Once this fundamental decision has been made, it is then necessary to decide on the objective of alternative investments in the overall portfolio context. If additional diversification at portfolio level is desired, multi-strategy and multi-manager approaches can improve the profile (see Figure 4). “Financing" from the equity and bond quota is conceivable here. If specific equity or bond profiles are to be optimised over and above the diversification of the overall portfolio, it makes more sense to use complete flexibility and control and to generate the desired return/risk profile yourself by putting together individual strategies. Three variants can be distinguished here.

a. In order to take account of the reduced hedging effect of government bonds, the use and combination of long volatility strategies and managed futures strategies is appropriate, depending on the desired risk/return profile. Both have a hedging effect, particularly in times of crisis.

b. In the current low interest rate environment, four strategies are suitable for replicating the return profiles previously associated with bonds without being directly exposed to interest rate risk. In the defensive segment, market-neutral equity strategies and alternative bond strategies are particularly suitable. Event-driven strategies – which exploit arbitrage opportunities as neutrally as possible within the framework of capital market measures – have a similar profile, with a somewhat more offensive orientation. In principle, convertible arbitrage strategies also pursue a market-neutral collection of premiums, but only a few strategies are currently available on the market in the form of liquid alternatives.

c. If the aim is to diversify the equity exposure in order to reduce volatility and minimise drawdowns, long/short equity strategies can be used. Compared to a complete direct investment in equities, the possibility of profiting from falling prices through short positions and the reduced market risk – especially in times of crisis – help to preserve capital.

Depending on which of the three objectives is in the foreground, the resulting allocations differ. If the focus is on hedging against equity market corrections, the portfolio's risk/return profile improves even with a low allocation of hedging strategies. In order to take account of the lower interest rate level and the increased correlation between bonds and equities – particularly in defensive multi-asset mandates – a combination of hedging and diversifying strategies is sensible. Here, the allocations should be chosen specifically with a focus on the bond allocation to achieve an effect on the overall performance of the portfolio, but without significantly changing the originally intended risk profile of the portfolio.

4. Manager choice / manager selection

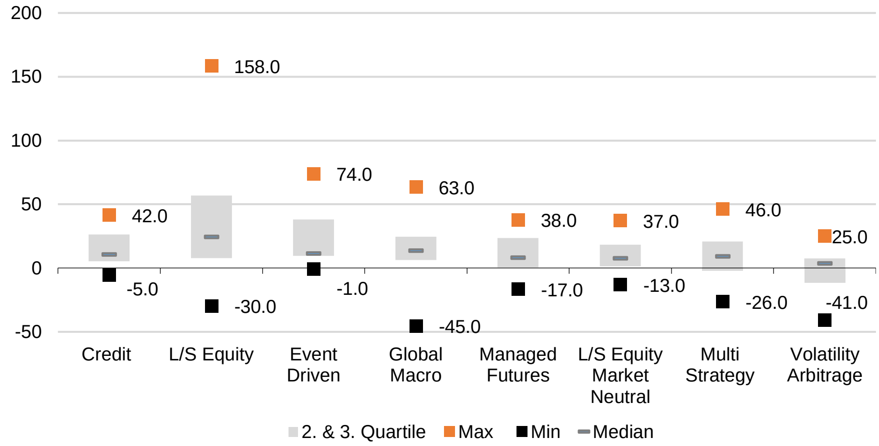
Structured approach necessary due to high performance dispersion

Compared to traditional investment approaches, extensive flexibility and greater room for manoeuvre ensure that the investment ideas and their implementation are decisive for performance. The broad market trend plays a rather subordinate role. Accordingly, however, it is evident that only a few managers are able to convince across all market phases and generate sustainable excess returns (alpha). The dispersion between very good and bad managers within the UCITS fund universe (as shown in Figure 6) is, therefore, enormous and increases proportionally to the flexibility within the strategy type. Accordingly, L/S Equity and Global Macro show the largest discrepancies between the best and worst managers. For the former, it is wide-ranging flexibilities in equity ratios, but also differences in styles, regions and market capitalisations across managers. For Global Macro managers, it is the extensive flexibility in asset classes, regions and instruments – on both the long and short side – that leads to large performance differences.

Higher degrees of freedom result in greater differences in performance

Fig. 6: Dispersion between liquid alternatives strategies

Five-year returns of the corresponding UCITS fund universes



Time period: 01/06/2016 to 31/05/2021, return data in percent of the base currency of UCITS funds
Source: Kepler - Absolute Hedge, own calculations

A combination of qualitative and quantitative analyses is crucial for the selection success

In order to identify good managers from the universe of over 300 strategies, it is advisable to consider qualitative and quantitative criteria in the assessment of funds. The latter refer to past performance and includes an analysis of performance, volatility, distribution of returns (including skewness and kurtosis), correlations and behaviour in loss phases. Historical performance is even more meaningful if a manager has been able to prove himself over a complete cycle and in difficult market phases (eg the 2008 Global Financial Crisis, the Taper Tantrum of 2013 or the COVID-19 crash of 2020). Qualitative analyses are mainly based on interviews with portfolio managers or other members of the investment or risk management team. It is particularly important to understand the personality of a manager, team structures and the investment process, as well as to evaluate risk management approaches. The results of the quantitative and, above all, qualitative analysis help an investor to assess whether the success factors are given by the investment approach and appear to be repeatable or whether chance has made a decisive contribution to this success.

5. Portfolio construction

Knowing alpha sources and understanding correlation properties for robust portfolio construction

When putting together a liquid alternatives portfolio, it is important to combine the strengths and capabilities of individual managers – which were identified during the manager selection process – in a way that is promising and in line with the investment objectives set. Consequently, approaches should not only be compared with each other, but analyses should also be developed to assess the added value of strategies in the context of an existing portfolio – taking into account the investments already used in that portfolio. Strategies should be combined in such a way that minimises the occurrence of simultaneous phases of loss.

Diversification between alternative strategies and against traditional asset classes is crucial

In order to achieve the desired diversification effects in the overall context of a multi-asset portfolio – in contrast to bonds and equities – alternative strategies should not replicate the risk/return profiles of the conventional asset classes, but should complement them in a targeted manner. Long/short equity strategies can serve as an example here, which should initially focus on different styles, segments, regions or market capitalisations for diversification among themselves. To achieve the diversification effect from a pre-existing pure-equity component, the same equity style should not be chosen as the focal point, but – rather – the focal point should be deliberately thought out and invested in a contrary way.

As with traditional asset classes, it is also essential to ensure sufficient diversification within alternative strategies. This is possible via strategies, as well as via the selected individual manager, in order to be able to compensate for temporarily disadvantageous market phases of a strategy or a respective manager's approach.

6. Management of a portfolio with liquid alternatives

Active management is also an important factor in alternative strategies

In addition to the risk-adequate composition and scaling of the positions, the ongoing management of a liquid alternatives portfolio should ensure the rebalancing of the portfolio and the adequate risk management of it. The former relates – in particular – to long volatility profiles, which increase significantly in value during turbulent market phases. The realisation of these gains provides liquidity precisely when risk assets – such as equities or corporate bonds – have experienced a price correction and it appears opportune to increase them in the portfolio context.

Risk management at the level of the individual strategies and managers involves the ongoing review and questioning of the quantitative and qualitative criteria that are decisive for the selection. A sale may be triggered by more attractive strategies in the same segment or may become necessary for reasons inherent in the strategy. For example, changes in the portfolio management team, inexplicable developments in the returns profile or adjustments to the investment approach make a fundamental reassessment of the selected manager necessary. Experience has shown that an investment horizon of at least three years is necessary to assess the results – in order to give the selected manager the opportunity to fully showcase their returns and diversification potential.

Conclusion: mastering product selection and generating added value for the portfolio with liquid alternatives

For successful integration into multi-asset approaches – alongside a basic understanding of the strategies, their instruments and flexibility – access to managers for a comprehensive review is crucial. This provides the basis for a correct classification of the strategies. A sound investment process and a portfolio construction oriented towards the rest of the portfolio complete the necessary steps for a successful integration of liquid alternatives.

In the current environment of historically low interest rates, alternatives are in demand that offer stabilisation and hedging in equity market corrections, as well as the necessary diversification in an environment of rising interest rates. The targeted use of liquid alternatives as liquid, regulated and transparent strategies can sustainably improve the risk/return profile of a multi-asset strategy. Strategies with a hedging character and strategies with a defensive profile appear to be particularly interesting as partial substitutes for traditional bond profiles, especially within the framework of more defensive multi-asset strategies.

PUBLISHING INFORMATIONS

The following publications are part of the series Berenberg Markets:

- Monitor
- ► Focus
- Investment Committee Minutes

www.berenberg.de/en/publications

PUBLISHER

Prof Dr Bernd Meyer, CFA | Chief Strategist Wealth and Asset Management

AUTHORS

Christoph Netopil
Portfolio Manager Multi Asset – Defensive & Total Return Strategies
Fund manager of the mutual fund Berenberg Multi Asset Defensive and responsible for approaches with total return characteristics. In addition, management of special mandates with a focus on derivatives and fixed floor value.
+49 69 91 30 90-228 | christoph.netopil@berenberg.de

Tobias Schäfer
Fund Selector and Portfolio Manager
Responsible for fund and ETF selection as well as fund-based asset management strategies in the Multi Asset space of Wealth and Asset Management
+49 69 91 30 90-467 | tobias.schaefer@berenberg.de

IMPORTANT NOTICES

Date 30/09/2021

Joh. Berenberg, Gossler & Co. KG
Neuer Jungfernstieg 20
20354 Hamburg (Germany)
Phone +49 40 350 60-0
Fax +49 40 350 60-900
www.berenberg.com
MultiAssetStrategyResearch@berenberg.de