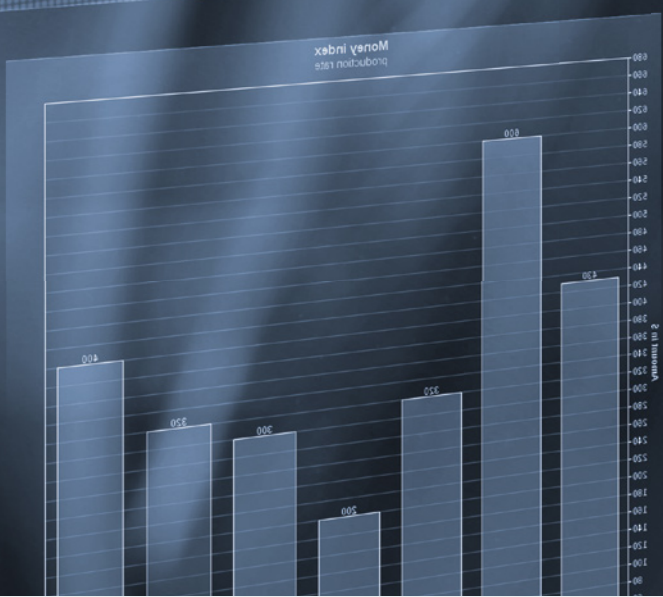


Alternatives

Liquid alternative strategies as an answer to the low interest rate environment

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“Investors can earn attractive risk-adjusted returns through an investment in a diversified portfolio of liquid alternative investment strategies. This can add an important element of return and diversification to investors’ overall portfolios.”

Dr. Wolfgang Mader, Raluca Cata, CFA, and Jurijs Gnusins



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Imprint

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Liquid alternative strategies as an answer to the low interest rate environment

After many years of persistent financial repression¹ coupled with heightened volatility in the capital markets, investors are increasingly challenging the role played by high rated government bonds as a core holding, and by equities as the main driver of returns in a portfolio. Consequently, numerous investors are looking for new sources of returns in their portfolios, which to date have been dominated by equity and interest rate risks. Liquid alternative investment strategies, which are frequently available in a UCITS²-compliant mutual fund format, (and which may also be referred to as absolute return strategies), can offer a viable means of enhancing the risk/return profile of a portfolio and, in some cases, offer a bond-like, or even bond-substitute, return profile.³

The following article provides an overview of the potential to add value by incorporating liquid alternative investments in a portfolio context, and of some of the available strategies and risk premiums. The characteristics of certain liquid alternative strategies are explained in the first section, along with those aspects that are most important for adding the greatest possible value through these strategies. In the second section, we take a closer look at each of the various liquid alternative strategies considered and at their respective risk premiums and performance characteristics. The third section focuses on how one might go about constructing a diversified portfolio of liquid alternative strategies and discusses a sample portfolio.

1. The advantages of liquid alternative strategies in an overall portfolio context

There is no commonly accepted definition of [liquid alternative strategies](#). However, if one were to distinguish these strategies by their alternative sources of return, one could define them as strategies that:

- operate independently of any benchmarks and aim to generate positive returns or “absolute returns”,
- are designed to generate returns from various non-traditional alternative return sources and
- differ from traditional ‘long-only’ equity or bond strategies in respect of their investment flexibility (for example with regard to the use of derivatives, leverage and investment in “short positions”).

These strategies are now well established within the asset management industry and their use is increasingly widespread. However, we may wish to distinguish those “long only” multi asset products or conventional bond funds aiming to generate absolute returns without the implementation of strategies designed to capture alternative risk premiums from truly alternative investment strategies.

The addition of a single alternative strategy, such as merger arbitrage, can benefit the overall portfolio by offering an additional source of return and diversification effects. As described by modern portfolio theory (and as a matter of realised experience), this benefit may be fur-

ther extended by incorporating several additional, different sources of return. A broadly diversified portfolio of liquid alternative strategies may represent an opportunity to include new sources of return within the strategic asset allocation, with a goal of generating more stable gains and reducing overall portfolio risk.

Investors looking for broad access to alternative risk premiums may be advised to invest in a [diversified portfolio incorporating various alternative liquid strategies](#). The goals of such a diversified “absolute return portfolio” are frequently two-fold:

- firstly, to generate a positive return within the absolute return portfolio over a market cycle while maintaining low levels of risk; and
- secondly, to add valuable return and diversification characteristics to the investor’s portfolio as a whole.

The return expectations are dependent on the risk budget and risk-return profile of an investor. For a typical European institutional investor we believe a bandwidth of [1.5% to 3.5% above EONIA](#)⁴ to be a realistic target⁵. Starting with a typical equity-bond portfolio and allocating 10% to a basket of liquid alternative investments instead of bonds can [increase portfolio return expectations by 0.1 to 0.3 percentage points](#) (depending on the structure of the absolute return portfolio) over the medium term.

The following [investment philosophy for absolute return portfolios](#) has proven its suitability for meeting the investment requirements of certain investors

- collecting different alternative risk premiums and
- focusing on risk management discipline and drawdown reduction
- in conjunction with broad market-neutrality vis-à-vis equity and interest rate risks.

Implementing this investment philosophy requires a [systematic procedure](#). The starting point is the definition of an individual strategy that specifies the investor’s desired risk/return targets and any additional investment criteria, which should govern the construction of the absolute return portfolio. Secondly the contin-

¹ Please refer to our publication entitled [“Financial Repression – It is Happening Already”](#) for a detailed explanation of financial repression.

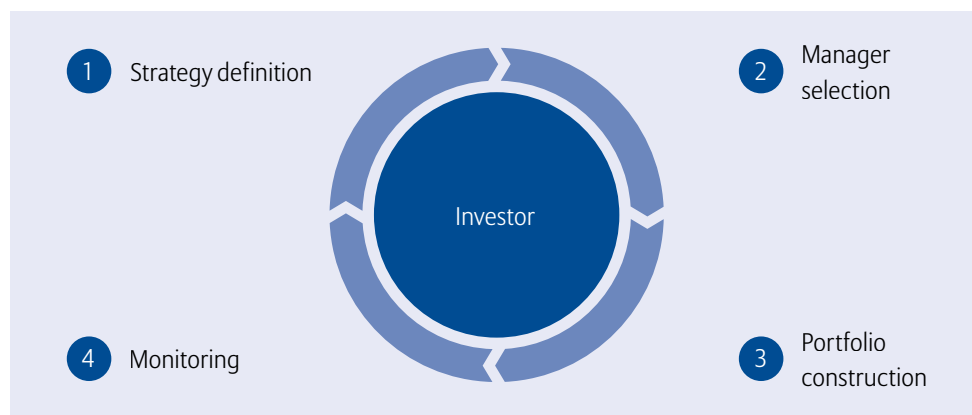
² UCITS (Undertakings for Collective Investment in Transferable Securities) are investment funds that are subject to the common legal framework prevailing in the European Union. They account for about 75% of all collective investments by retail investors in Europe. See EU Commission, http://ec.europa.eu/finance/investment/ucits-directive/index_de.htm. UCITS funds can be sold anywhere in the world, with the exception of the USA.

³ Please refer to the publication entitled [“The Case for Alternatives”](#) by Allianz Global Investors for initial insights into these strategies.

⁴ The return in question is a target over one market cycle. The Euro Overnight Index Average (EONIA) interest rate is computed as a weighted average of all actual overnight Euro interbank transactions.

⁵ A performance of the strategy is not guaranteed and losses remain possible.

Figure 1: Implementation process for a liquid alternatives portfolio



Source: AllianzGI Global Solutions.

uous research, analysis and review of investment managers and strategies (the manager selection step) ultimately produces a range of alternative investments suitable for inclusion within the portfolio (the “best fit” managers). The final elements are portfolio construction and monitoring the invested managers and portfolios on an ongoing basis.

2. Strategy universe: alternative sources of return and risk premiums

In order to enable investors to reap benefit from the full range of alternative strategies, they should ideally become familiar with the various strategies available and/or the **specific risk premiums and performance characteristics of these strategies**. Correctly understanding the investment universe is key to appropriate portfolio construction and best possible diversification.

One possible scheme for defining some liquid alternative investment strategies is set out at Figure 2:

The strategies in the “relative value” and “event driven” segments either take advantage of special company situations, valuation discrepancies on different markets and/or between different securities, or specialize in isolating alternative risk premiums (e.g. volatility, merger arbitrage). Directional market exposure (vis-à-vis equities or bonds) is not typically a main driver of returns for these strategies and return profiles are usually uncorrelated to overall market risk.

“Macro strategies”, by contrast, involve conscious and dynamic exposure to directional market influences in an attempt to take advantage of short- and long-term trends, or macro-economic developments within, the global markets.

“Equity long/short” strategies often combine security selection with directional exposure to listed equities and equity linked instruments (e.g. indices and derivatives).

Figure 2: Liquid alternative (absolute return) strategy segments

Liquid alternative (absolute return) strategies			
Relative value	Event driven	Opportunistic/Directional	
		Equity long/short	Macro strategies
<ul style="list-style-type: none"> • Fixed income arbitrage • Credit arbitrage • Credit long/short • Yield curve arbitrage • Swap spread arbitrage • Convertible arbitrage • Volatility arbitrage • Equity market neutral 	<ul style="list-style-type: none"> • Merger arbitrage • Special situations • Event driven multi-strategy 	<ul style="list-style-type: none"> • Equity long/short sector • Equity long/short region • Equity long/short fundamental • Equity long/short quantitative 	<ul style="list-style-type: none"> • Global macro • CTA (managed futures)

Source: AllianzGI Global Solutions.

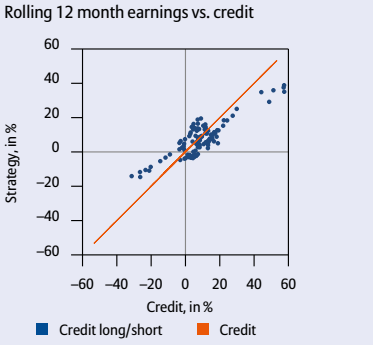
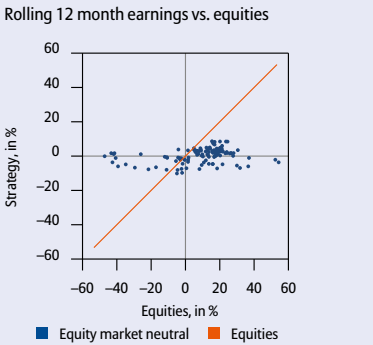
Due to these different sources of returns, an equity market neutral fund, for example, may be expected to perform differently to a managed futures strategy in different market environments.

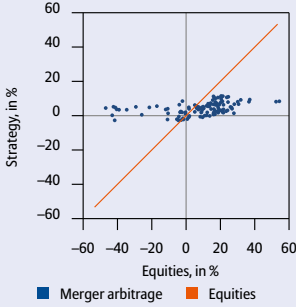

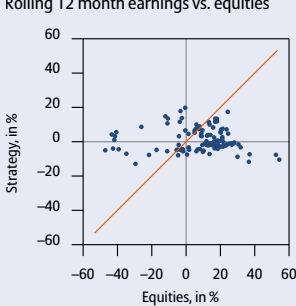
In order to explain the **different performance patterns** of the strategies in more detail, the box below presents the key characteristics of selected strategy types which are the more common or best recognised within the liquid alternative universe currently available to investors in a mutual fund format. We have attempted to highlight the typical source of returns for each strategy and the degree of correlation to the appropriate “long only” market:

Experience has shown that, among the sub-segments, equity market neutral, merger arbitrage and credit long/short can act as **risk reducers** in a portfolio context, while the global macro and managed futures segments can take on the **role of generating returns**.

⁶ Please also refer to the report: [„Market-neutral equity strategies – Generating returns throughout the market cycle“](#) by Allianz Global Investors.

Figure 3: Features and main sources of return of selected liquid alternatives

Features	Exposure to traditional markets	Main sources of returns
<p>Credit Long/Short</p> <p>The long/short credit segment encompasses a broad diversity of credit strategies mainly implemented in the corporate bond market, via cash and derivative instruments. One common investment strategy is to benefit from price discrepancies between the securities of one or more issuers within the same sector or market segment. Strategies may vary in respect of credit-rating requirements, regional exposure and some may also take advantage of event driven opportunities within the corporate bond market.</p>	<p>Asymmetric to the directional credit market</p> <p>Fig. 3a: Sensitivity analysis of long/short credit strategies compared with the credit market</p> <p>Rolling 12 month earnings vs. credit</p>  <p>■ Credit long/short ■ Credit</p>	<p>Sources of return: security selection, credit spread, swap spread, credit basis, term structure spread, deal spread.</p> <p>The strategies can take advantage of these sources of return in markets mainly driven by fundamental data rather than sentiment.</p>
<p>Equity market neutral⁶</p> <p>Strategies involving both long and short exposure to the equity market in an effort to take advantage of the relative/different price development of single stocks. The strategy universe is very broad, containing quantitative and fundamental strategies that either focus on a specific market or sector, or are widely diversified across different sectors. Both top-down and bottom-up approaches may be employed.</p>	<p>Largely independent of the equity market</p> <p>Fig. 3b: Sensitivity analysis of equity market neutral strategies compared with equities</p> <p>Rolling 12 month earnings vs. equities</p>  <p>■ Equity market neutral ■ Equities</p>	<p>Sources of return: security selection, sector allocation, growth, value, quality, momentum, short-term equity market beta.</p> <p>Historically, these strategies have tended to produce the best results especially at times when equities have been driven by security-specific factors. Sector rotations triggered by technical and/or macroeconomic data normally pose a risk.</p>

Features	Exposure to traditional markets	Main sources of returns
<p>Merger arbitrage⁷</p> <p>These strategies collect merger risk premiums, i.e. the spread created by a merger, and thus may benefit from M&A activities. A typical merger arbitrage manager buys shares of the takeover target in a "cash deal" acquisition, and complements this position by a short position in the buyer's equities if an "asset deal" takes place.</p>	<p>Largely independent of the equity market</p> <p>Fig. 3c: Sensitivity analysis of merger arbitrage strategies compared with equities</p> <p>Rolling 12 month earnings vs. equities</p> 	<p>Sources of return: security selection, merger spread. A positive environment for these sources of return are market phases with increased M&A activity and favourable financing terms and conditions, and/or when companies have high level of cash on their balance sheet.</p>
<p>CTA (managed futures)</p> <p>These are predominantly systematic trading strategies aimed to identify and exploit trends on global liquid markets. Such strategies generally use futures or forwards to track all key asset classes and markets (equities, bonds, currencies, money market, commodities) and are very liquid and flexible as a result.</p>	<p>Long term: largely independent of the markets Short term: directional to the markets</p> <p>Fig. 3d: Sensitivity analysis of CTA strategies compared with equities</p> <p>Rolling 12 month earnings vs. equities</p> 	<p>As momentum is typically the main driver of returns, these strategies produce the best results in markets exhibiting trending behaviour. Since most CTA strategies adopt short positions in markets trending down for a certain period, they may benefit from market declines as well as rises and consequently have the ability to generate positive returns and may stabilise an overall portfolio in bear markets.</p>
<p>Global macro</p> <p>These strategies have the broadest opportunity set of all liquid alternatives. They typically invest in a broad global universe of asset classes, such as equities, bonds (especially government bonds), currencies and commodities, with the primary aim of taking advantage of changes and trends on the global financial markets. As these strategies normally operate in liquid markets, exposure can be adjusted quickly and flexibly to market conditions.</p> <p>Global macro strategy performance is often more volatile, and shows cyclical performance pattern.</p>	<p>Long term: largely independent of the markets Short term: directional to the markets</p> <p>Fig. 3e: Sensitivity analysis of global macro strategies compared with equities</p> <p>Rolling 12 month earnings vs. equities</p> 	<p>The sources of return are manifold and diverse: carry positions in currencies, term structure spreads, emerging market spread, credit spread, swap spread, equity and fixed income momentum etc. One key element distinguishing global macro strategies from CTA is that the former do not focus solely on momentum as the principal source of return, they can also adopt contrarian and tactical positions.</p> <p>Global macro strategies historically have performed best in markets driven by macro factors.</p>

⁷ Please also refer to the report: "[Benefiting from Merger Arbitrage](#)" by Allianz Global Investors.

Sources: Bloomberg, Merrill Lynch, AllianzGI Global Solutions. Exposure to traditional markets: Period of analysis from January 2005 to August 2015 in USD in percent. The credit market is represented by the BofAML US High Yield Masters Index, and the equity market by the MSCI World Net Return Index. Segment performance is based on the following HFRX indices: HFRX FI Credit Index, HFRX EH: Equity Market Neutral Index, HFRX ED: Merger Arbitrage Index, HFRX Macro/CTA Index, HFRX Macro: Systematic Diversified CTA Index.

3. Constructing a diversified liquid alternatives portfolio

Investors can select strategies from the universe of alternative investment strategies that best suit the risk-return goals of their portfolios. A different blend of strategies may be employed depending on whether investors are seeking an asymmetric return profile, to earn a market neutral return or to generate returns in a specific market environment/set of circumstances. Historical experience of portfolio performance suggests that adding opportunistic directional strategies (such as CTA, global macro) to a core portfolio of market neutral and asymmetric profiles (such as merger arbitrage, equity market neutral, credit long/short) may produce strong results within the context of a balanced portfolio.

A robust absolute return portfolio can be structured and monitored via a clearly defined process:

1. **Strategy definition:** Defining the investment objectives in respect of the risk-return profile and any restrictions is a key step for **realistically outlining the investor's expectations** and specifying the permissible choice of strategies.
2. **Manager selection:** The aim of the manager selection process is to identify **the most suitable funds** for the defined strate-

gy segments. Managers need to be identified who are experienced in implementing the chosen strategy or well placed to exploit the selected risk premiums, who exhibit stable performance over time and some differentiation from others in the same strategy segment. A rigorous qualitative manager due diligence is particularly important when selecting alternative strategies.

3. **Portfolio construction:** In addition to the primary aim of generating returns while reducing overall risk, attention must also be paid to **avoiding risk clustering** in an absolute return portfolio. When building the portfolio, quantitative tools such as forward looking modelling, optimization and risk breakdown should be enhanced by qualitative considerations such as predetermined built-in constraints to optimization and scenario analysis, as further outlined on p. 10.
4. **Monitoring: Ongoing quantitative and qualitative monitoring** at individual manager/investment level is essential to compare realised performance with the expected risk-return profile and performance patterns of each strategy, to evaluate any performance outliers and to make any necessary changes to the portfolio in good time.



Portfolio construction

Experience has shown the importance of employing both quantitative and qualitative analysis when building a portfolio to enable full consideration of the characteristics of alternative investment strategies.

- **Forward looking modelling of the individual strategies and their interdependencies:** Historical returns are helpful but not sufficient for a realistic estimation of possible future risks. Some strategies have short track records that do not yet cover a full market cycle, or have not yet experienced particularly difficult market conditions, which is why expert assessment based on in-depth understanding of a strategy's risk premiums and long-term risk-return profiles is essential.
- **Robust optimization focusing on extreme risks:** The robust optimization technique reduces the influence of the individual assumptions on the portfolio result; it thus may reduce modelling risk. As the distribution of returns from a number of alternative strategies is characteristically skewed to the left, the risk that needs to be reduced should be the risk of extreme loss; for example, the risk of average loss must be reduced in the 5% worst cases (also known as 95% conditional value at risk). Additional constraints can also be included within the optimization framework in order to incorporate any qualitative assessments and to reduce individual strategy risks.
- **Analysing the contributions to risks and returns at segment and individual strategy level** during the optimization process assists in the avoidance of severe risk clustering. This should go beyond a naive "risk parity" approach based on an estimation of stable correlations and include all factors contributing to risk.
- **Qualitative scenario analysis** based on manager assessments of pre-defined risk scenarios round off the portfolio construction process.

This analysis can help in the construction of a portfolio that – on a forward looking basis – should be able to meet the investor's risk-return targets. A back test prior to implementation should also be conducted to check whether the portfolio would have met its defined targets historically and should include time periods exhibiting a broad variety of market conditions.

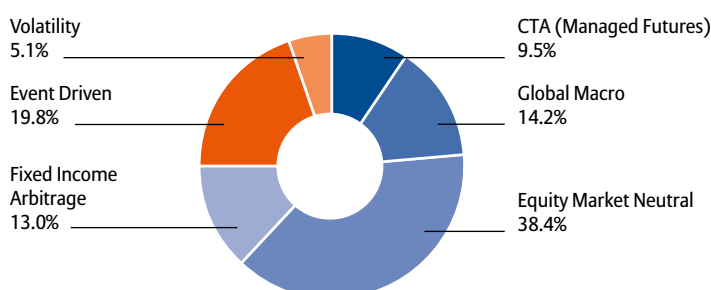
⁸ Back testing of a hypothetical portfolio rebalanced once a year on the basis of the weights given in figure 4 and monthly performance data of the following indices: LuxHedge CTA/Managed Futures UCITS Index, LuxHedge Global Macro UCITS Index, LuxHedge Equity Market Neutral UCITS Index, LuxHedge Fixed Income Arbitrage UCITS Index, LuxHedge Event Driven UCITS Index, LuxHedge Volatility Arbitrage UCITS Index. Since this approach is carried out at the index level, the manager selection component of the overall process cannot be taken into account. Our experience shows that a considerably more attractive risk/return profile can be achieved through appropriate manager selection.

The outcome of this process can be illustrated with the aid of a hypothetical sample portfolio of liquid alternative strategies presented below (see figure 4). The portfolio is characterized by broad diversification across several segments: risk-reducing segments, such as equity market neutral, fixed income arbitrage and event driven, are complemented by return-generating CTA, global macro and volatility segments.

The attractive risk characteristics of such a diversified hypothetical sample absolute

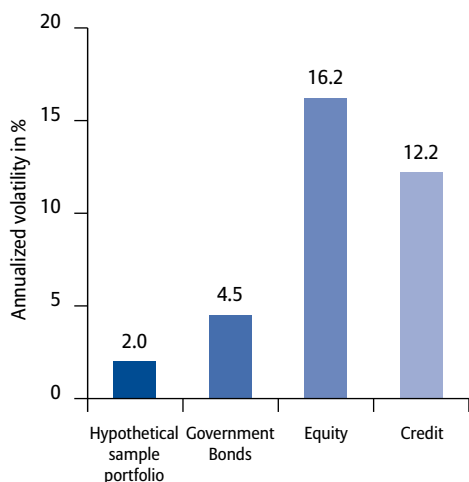
return portfolio can be clearly illustrated with the aid of several common risk indicators. Assuming the typical performance of representative indices⁸ for each individual segment, between June 2008 and October 2015⁹ this portfolio would have realised an annualised volatility of 2.0%. In the same period, the volatility of European government bonds¹⁰ was 4.5% p.a. – more than twice as high. Both equity and credit markets were much more volatile, at 16.2% p.a. and 12.2% p.a., respectively (see figure 5).

Figure 4: Hypothetical sample absolute return portfolio of liquid alternative strategies (weights in %)



Source: AllianzGI Global Solutions. This is for guidance only and not indicative of future allocation.

Figure 5: Volatility



Past performance is not indicative of future performance. Sources: Bloomberg, LuxHedge, Merrill Lynch, AllianzGI Global Solutions.

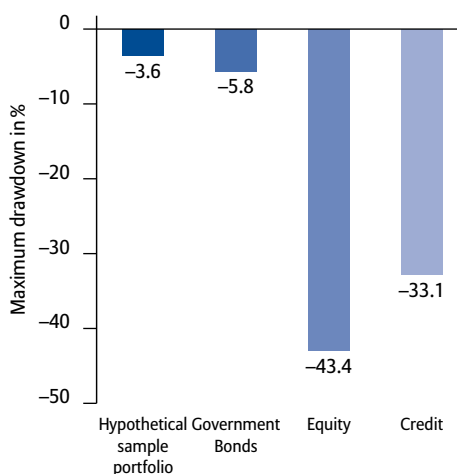
If the maximum drawdown (i.e. the highest loss from the maximum and minimum values within the time period under review) is taken as a measure of risk, the low-risk nature of the hypothetical sample absolute return portfolio becomes even more evident. While equities suffered a maximum drawdown of -43.4% over a 9-month period during the financial crisis (from June to February 2009) in the period under review, the portfolio would have sustained a maximum loss of only -3.6 (from June to October 2008) and recovery would have set in as early as 5 months later (see figure 6). If the maximum drawdown of the hypothetical sample portfolio is broken

down into the contributions of each individual segment, it also becomes clear that none of the segments would have dominated with a disproportionate loss. Although some segments generated relatively high losses, an allocation with relatively high weights in risk-reducing strategies would have ensured that high risk clustering was avoided. At the same time, the role of CTAs, illustrated in section 2, is clearly shown. The CTA strategies, which benefited considerably from falling markets in 2008, would have been responsible for mitigating the drawdown of the portfolio (see figure 7).

⁹ Longest period with available data for all indices

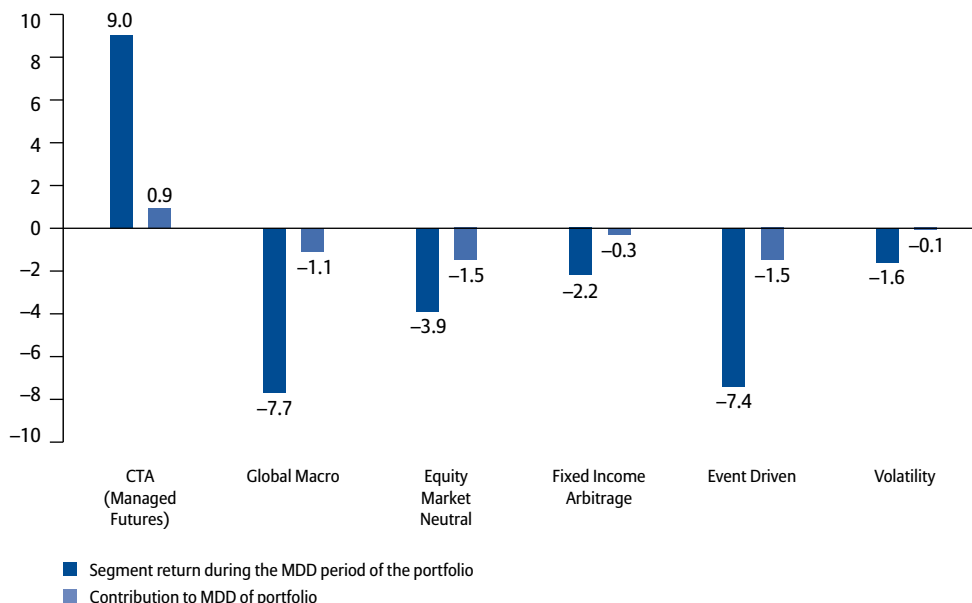
¹⁰ In the following, European government bonds are represented by the BofA ML EMU Direct Government Index, the equity market (equities) by the MSCI Europe Net Total Return EUR-hedged Index and credit market by BofA ML EMU Credit (credit).

Figure 6: Maximum drawdown



Past performance is not indicative of future performance. Sources: Bloomberg, LuxHedge, Merrill Lynch, AllianzGI Global Solutions.

Figure 7: Contributions of each segment to maximum drawdown of hypothetical sample portfolio in %



Past performance is not indicative of future performance. Sources: Bloomberg, LuxHedge, Merrill Lynch, AllianzGI Global Solutions.

Apart from a reduced volatility and low potential loss, the hypothetical sample absolute return portfolio would also have been largely independent of equities and fixed-income securities. This can be ascertained based on the low betas (approx. 0.06 to government bonds, 0.09 to equities and 0.11 to investment-grade credit) (see table 1).

4. Conclusion

Investors can earn attractive risk-adjusted returns through an investment in a diversified portfolio of liquid alternative investment strategies. This can add an important element of return and diversification to investors' overall portfolios. Consequently, many investors may wish to include liquid alternatives as a core holding in their portfolios. Others may want to use them as a strategic/satellite element to expand the sources of return.

Given the heterogeneous nature of the available strategies, in-depth understanding of alternative risk premiums and intelligent portfolio construction are key to producing the best results. Furthermore, an investment process in which the strategy definition, manager selection, portfolio construction and monitoring phases are specifically tailored to alternative investments should help to ensure that the idiosyncratic elements and risks of each strategy are comprehensively assessed.

Dr. Wolfgang Mader
 Raluca Cata, CFA
 Jurijs Gнусins

Table 1: Sensitivity

Hypothetical sample portfolio	Market exposure (beta)
Government bonds	0.06
Equities	0.09
Credit	0.11

Past performance is not indicative of future performance. Sources: Bloomberg, LuxHedge, Merrill Lynch, AllianzGI Global Solutions. Monthly figures from 30/05/2008 to 30/10/2015 in EUR. Market exposure calculated on the basis of the following EUR-hedged indices: BofA ML EMU Direct Government Index (government bonds), MSCI Europe Net Total Return Index (equities), BofA ML EMU Credit (credit).

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