« An ounce of prevention is worth a pound of cure »
(Benjamin Franklin, 1736)

IDS Capital UK: A dynamically hedged equity portfolio in a world of low returns
White paper – spring 2016

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As expected real rate of returns have declined in recent years alongside wide markets swings, Investors will increasingly search for new alternatives to manage their wealth, preserve their purchasing power and achieve their financial goals.

Investment Management will be viewed as a service providing industry only to the extent that it can demonstrate a capacity to continuously add value through the design of meaningful investment solutions to allow investors to meet the evolving challenges of today's world.

General Description:

As volatile markets continue to batter investor portfolios and confidence, investment advisors are increasingly seeking out substitute investment solutions to offer comfort to their clients. After the painful experience of the last few years for worldwide investors, people are indeed increasingly seeking products that can offer some degree of capital protection and stability of incomes.

Unfortunately, investment options currently available are limited with most individuals left with the choice between "safe strategies with limited upside potential and risky strategies offering no security with respect to minimum levels of replacement income" (See Lionel Martellini (EDHEC Business School), *"New Challenges in Institutional and Individual Money Management", 2016*). As augmented by Professor Martellini, this approach "fails to account for investors' main risk, namely the risk of not achieving their meaningful goal", whether liability, expenses or capital replacement driven.

The environment:

After some years of nice economic growth and credit excesses, the sudden stop experienced in 2008 was a good reminder that numbers cannot be extrapolated indefinitely. Today, the world economy is substantially weaker, and although a gradual recovery has occurred, the future level could be much lower than before. Consequently, investment returns should follow the same path.

The potential resurgence of inflation should also be considered seriously by investors, following the very large deficits resulting of the various government stimulus packages and the increasing scarcity of natural reserves. As such, in order to preserve current purchasing power for the consumer real returns need to be factored into expected return projections of investment portfolios.

The Yale endowment fund has provided the following expected real returns for the long term (table 1). They reflect Yale's average expectations, regardless of the timing of their investments. Obviously the numbers compare well in regard to the recent performance of world markets (10 years).

Table 1: Yale Endowment fund 2014 report

	Target Allocation	Expected real return	Real weighted expected return	Volatility
Absolute Return	20.0%	5.3%	1.1%	12.9%
Domestic Equity	6.0%	6.0%	0.4%	20.0%
Fixed Income	5.0%	2.0%	0.1%	8.0%
Foreign Equity	13.0%	7.5%	1.0%	22.5%
Natural Ressources	8.0%	6.3%	0.5%	20.5%
Private Equity	31.0%	10.5%	3.3%	26.8%
Real Estate	17.0%	6.0%	1.0%	17.5%
Cash	0%	0%	0.0%	0.0%
			7.3%	

As one can observe, the expected returns are nevertheless relatively low and do not mean much if they are not put into perspective with the expected target spending level or ultimate financial goal of the investor. Moreover not all asset classes presented fit all investors.

Traditional portfolios will generally comprise of allocation to fixed income, equities, and absolute return investments. One has to consider an important additional natural allocation to real assets as many investors own their homes and potentially other real estate assets. Consequently, a traditional portfolio mix as presented in table 2 would result in a total expected return for the investor of a just over **5% per annum over the long term,** mostly dependent on the return of the private equity portfolio.

Table 2: Illustration of the expected return of a typical traditional portfolio

Adjusted	Target Allocation	Expected real return	Real weighted expected return	Volatility
Absolute Return	15.0%	5.3%	0.8%	12.9%
US Equity	15.0%	6.0%	0.9%	20.0%
Fixed Income	35.0%	2.0%	0.7%	8.0%
RoW Equity	15.0%	7.5%	1.1%	22.5%
Natural Ressources	2.0%	6.3%	0.1%	20.5%
Private Equity	10.0%	10.5%	1.1%	26.8%
Real Estate	8.0%	6.0%	0.5%	17.5%
Cash	0%	0%	0.0%	0.0%
			5.2%	

Source: IDS Capital UK Ltd (allocation), Yale 2014 report (expected real return)

RoW means rest of the world

Importance of timing:

One additional factor comes into play for traditional investors: Timing. While the figures shown above reflect the reality for a portfolio that is invested regularly (such as endowment or pension funds), private investors generally invest much of their portfolio at once. In this instance, the timing of the investments plays a crucial role in the future returns of a portfolio. Imagine if an investor had invested substantially all of his assets on 1 January 2008. The losses would have been very large and would have taken multiple years to be recovered, if yet recovered. More recent examples illustrate the fundamental influence of timing.

This is the new world we are living in, and investors need to adapt to the new reality at the risk of seeing substantially lower purchasing power for the current and future generations.

Investors need to adapt to the new world

How can investors adapt to the new environment and manage to preserve and grow capital and purchasing power? Cash is not the solution. While reward for risk taking may be lower in the future, risk taking is still key - But measured risk taking. M. C. Asness, a well-known investor put it clearly during an intervention at a large conference (2007): “An ounce of prevention is worth a pound of cure”, quoting Benjamin Franklin’s speech in 1736.

Evidence shows that future excess return will not be made in periods of rising markets where passive indexed investments are adequate. It is rather in difficult declining markets that a difference will be made by emphasizing capital protection strategies and the usage of meaningful dynamic portfolio strategies. The last downturns have perfectly highlighted the value of capital protection and measured risk allocation as many years of returns were wiped out in very short periods.

Since 2009, we have definitely seen a change of attitude from investors. Obviously the reduced cash returns are having a big effect on what people can do and the returns that one can expect. Given the extremely low return levels if not negative on a real basis for many, investors searching for better opportunities are tempted to increase the risks they take by turning back to corporate bonds, equities, private loans and real estate or to reduce costs to the extreme, all in all allowing them to gain a few extra percentage points on their return expectations towards achieving their goals.

In a world of low returns, Investors' main risk is the drawdown risk…

In this world of low return and the new reality in which Investors have to navigate, a lot of emphasis and research point to strategies and patches to marginally increase the expected rate of return that can be extracted from investments. Whether, it is from income generating structured strategies or by reducing the fees paid to advisors, Investors are searching for ways to increase their participation to capital growth in an increasingly volatile world.

It is surprising that the increasing risk of suffering drawdowns is rarely mentioned as a main focus in a low return world. Simple math would however demonstrate that the recovery period necessary at even the enhanced rates of returns contemplated by Investors would be protracted, with the risk that Investors spendmost of their time recovering from drawdowns rather than actually growing capital.

The equity opportunity:

Over the remainder of this paper, we will seek to propose a potential solution to Investors using the equity asset class, and taking into account the need to grow capital while limiting the risk of lengthy capital recovery periods.

As such, we have tried to isolate the advantages of all investment strategies and seek achieving both capital growth in rising markets and protection in more difficult situations. We have also looked at mitigating most of the disadvantages of common hedging strategies[1].

We will begin by identifying the elements of a resilient "capital growth" equity oriented portfolio. Then, we will discuss the essential need for a systematic multi-factor meaningful dynamic risk overlay.

[1] For more information on the benefits and drawbacks of different hedging techniques, please refer to appendix A.

A bridge between alternative and traditional investment strategies

The aim of this section is to present the features and outputs of combining an active long-only allocation together with an equity hedge fund portfolio augmented with the benefit of a passive index allocation. Finally combining the latter with a dynamic multi-asset/factors hedging overlay. The objective consisting in proposing a portfolio which limits the downside during bear equity markets while preserving positive performance during bull equity markets. By the simple rule of compounding, this should result in a more robust approach towards achieving one's goals.

Taking advantage of dispersion and behavioural finance to maximize exposure time

If we start off with the well documented idea that passive index investments are likely to be the most appropriate in periods of rising markets, how can we improve the risk return profile of the distribution to maximize the capture over the period?

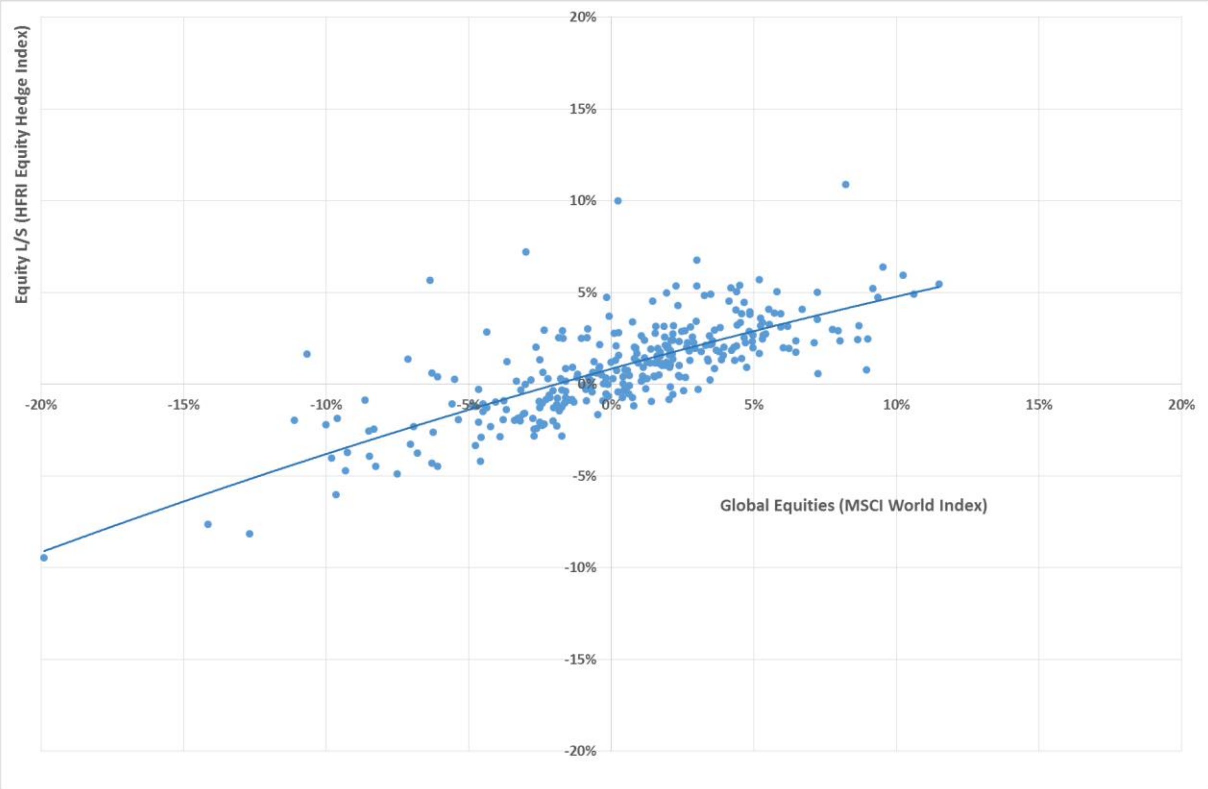
Taken from a risk of loss angle, Investors could be looking first at strategies allowing an upward parallel shift of the passive return distribution, using an approach seeking to exploit fundamental dispersion among equity returns. Such approach requires specialised skills usually found in Active stock pickers whether long-only or long short with a specialist focus. Given their long and short focuses, fundamental equity market neutral strategies would not only have the additional benefit in an environment of increased dispersion-typical of a higher risk environment-but also the ability generate enlarged profits from the short book, at a time when passive strategies would be subject to potential losses.

Unfortunately, history has shown us that equity hedge funds do tend to lose their advantage in case of substantial market dislocations and do suffer occasionally tail-end risks.

The graph below illustrates the average profile of equity long short strategies. The combination of passive, index based strategies with the below intuitively produces a better risk return profile.

While this results in an already improved profile, in case of severe corrections, the average behaviour of Active managers in such situation is usually to substantially reduce the risks of their portfolios, leading to a classical, limited rebound potential once the market settles and starts a new rising cycle (See HFRI equity hedge index in 2001 and 2009). This behaviour can be partially compensated by the added advantage of holding both active and passive exposures (it allows to increase the comingled portfolio sensitivity in "rebounds", while benefiting from the additional expected return allowing the upward translation of the return distribution).

While improved, the resulting portfolio could be characterized by a high level of volatility and potential drawdowns at the tails.



Source: Bloomberg, data: Jan 1990 – Feb 2016

Reducing volatility using systematic factors exposure management through a systematic dynamic overlay

On the one hand, "academic research finds that attempts to time the market are futile since without the benefit of perfect foresights, return are diluted at the top and bottom of the cycle by investing/exiting too early or too late"[2]. On the other hand additional studies have demonstrated the incremental value of associating momentum strategies to value and/or contrarian oriented portfolios[3].

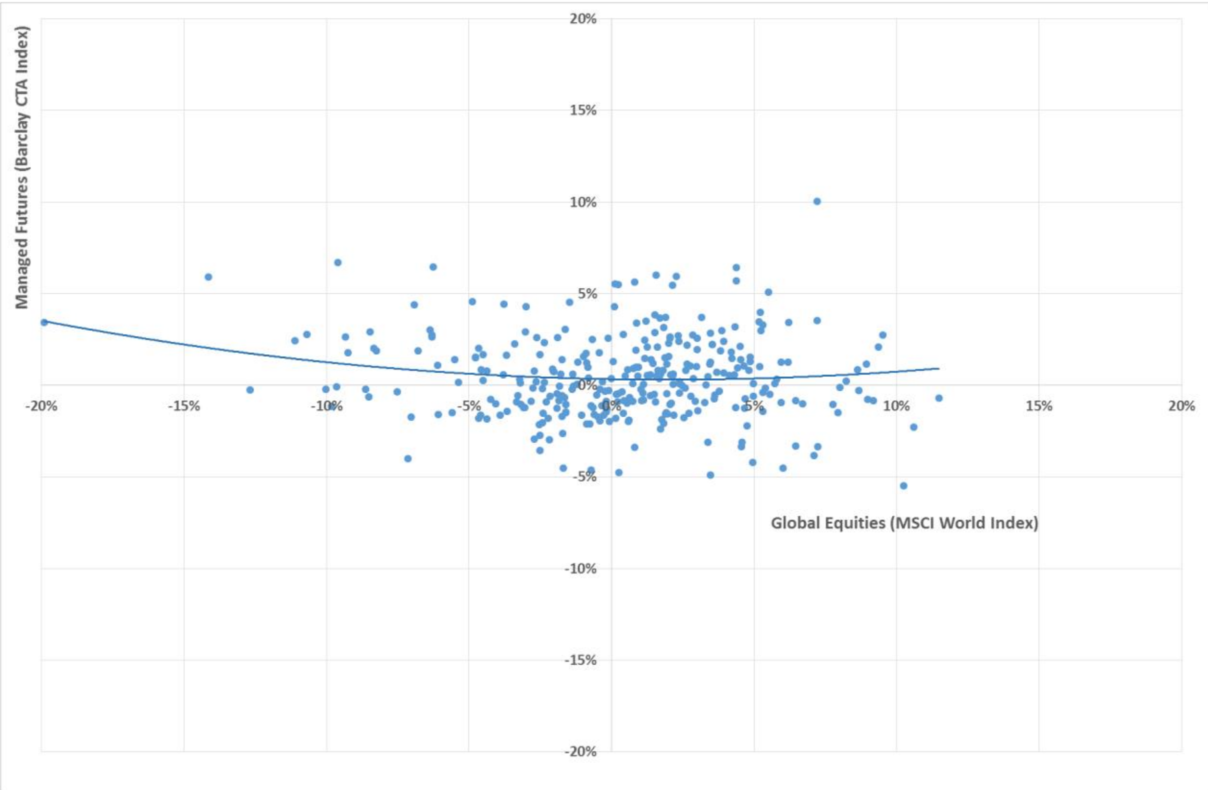
Systematic Momentum based Strategies (such as systematic CTAs) are providing an answer to the above 2 conundrums: The systematic element removes the need for perfect recurring timing discretionary decisions by making it process-based, while trading signals are issued from momentum grounded multiple factors analysis.

Systematic Momentum based Strategies, as represented by the Barclays CTA Trend Index in the Charts below, display a complementary convex profile when compared to the Equity markets, represented here by the MSCI World equity index, and active equity strategies, as represented by the HFRI Equity Hedge Index.

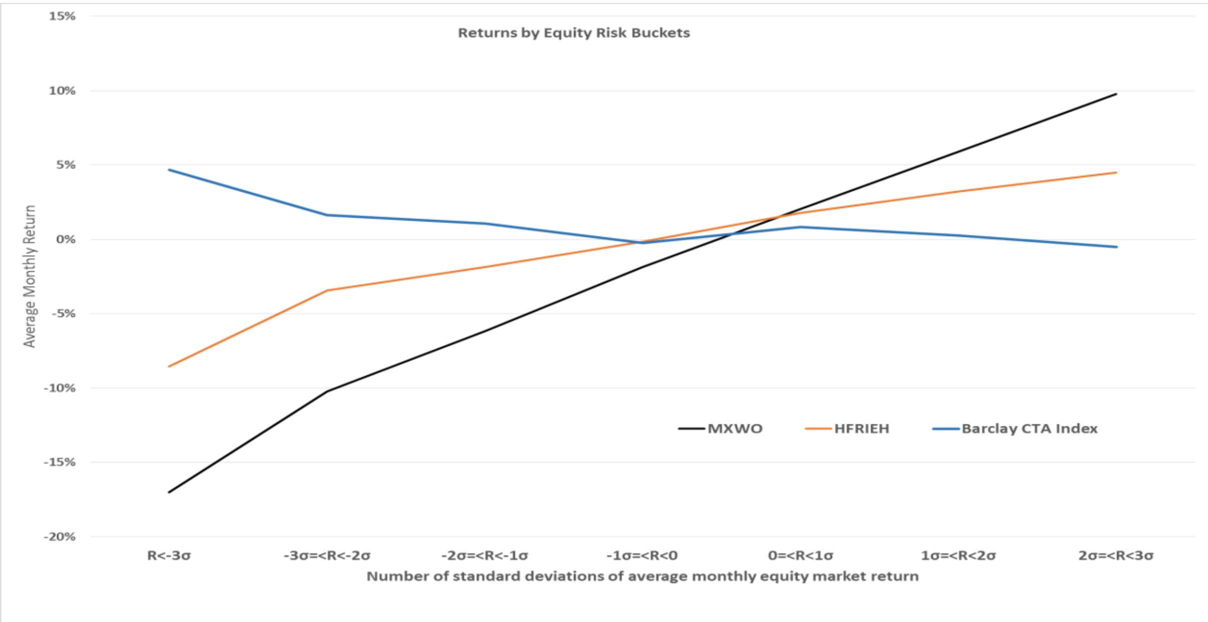
These Systematic Momentum based Strategies tend to deliver positive monthly returns during Equity market sell-offs (i.e. months with MSCI World equity Index down more than 5%), while preserving

[2] Simon Savage, GLG Global Strategies, April 2016
[3] Balvers&Wu, 2006

capital when Equity markets are quiet (i.e. months with MSCI World equity Index delivering returns between -5% and +5%). Equally, Systematic CTAs tend to produce a positive premium to the investor while providing protection when it is most needed. This last point is a key benefit of Systematic Momentum based Strategies, as most Equity overlays or equity hedging tools have a negative cost (please refer to Appendix A).



Source: Bloomberg, data: Jan 1990 – Feb 2016



Sources: Bloomberg (MXWO: MSCI Wold Equity Index, HFRIEH: HFRI Equity Hedge Index)

The complementary characteristics of Active, Passive and Momentum strategies can be further illustrated by Table 3, which shows how they have performed historically each year since 1990.

Table 3:
Source: Bloomberg

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Best Strategy	21.02%	40.15%	21.32%	27.94%	3.36%	31.04%	21.75%	23.41%	22.78%	44.22%	9.09%
	14.43%	16.00%	-0.91%	20.39%	2.61%	18.70%	11.72%	14.17%	15.98%	23.56%	7.86%
Worst Strategy	-18.65%	3.73%	-7.14%	10.37%	-0.65%	13.64%	9.12%	10.89%	7.01%	-1.19%	-14.05%

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Best Strategy	0.84%	12.36%	30.81%	12.84%	10.60%	17.95%	10.48%	14.09%	26.98%	10.45%	-3.09%	13.18%	24.10%	7.61%	-0.96%
	0.40%	-4.71%	20.54%	7.68%	7.56%	11.71%	7.64%	-26.65%	24.57%	9.55%	-7.62%	7.41%	14.28%	2.93%	-1.50%
Worst Strategy	-17.83%	-21.06%	8.69%	3.30%	1.71%	3.54%	7.09%	-42.08%	-0.10%	7.05%	-8.38%	-1.70%	-1.42%	1.81%	-2.74%

Active	Passive	Overlay
HFRI Equity Hedge Index	MSCI World Equity Index	Barclay CTA Index

An "All-in-One" portfolio would benefit investors:

The combination of equity oriented passive, active and overlay strategies all in one portfolio ("AiO") should provide investors with strategic upside participation to equities markets and the opportunity to benefit from additional potential tactical returns through stock selection and dynamic exposure management, while mitigating losses during bear markets through the complementary characteristics of the Overlay in a systematic way without constant need to "time" the markets. It can also be envisaged that the extent of loss reduction could range from 50% up to 80% in some cases.

The corresponding potential benefit of mitigating losses during bear markets is that less time is required to restore capital during bull markets, thereby reducing the reliance on relatively high expected returns, which enables the approach to exploit lower levels of expected returns relative to traditional equity investing approaches through the compounding of money effect, which should be particularly beneficial during prolonged periods of relatively low returns and higher volatility – "An ounce of prevention is worth a pound of cure".

Conclusion

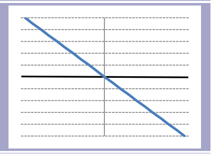
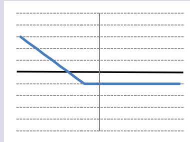
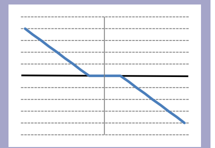
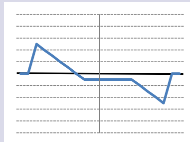
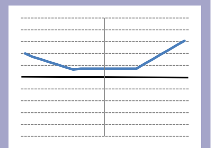
Designing investment strategies such as the one above, allows investors to focus on their individual determination of what they may feel would be the efficient portfolio mix using the latest evolution and research in the asset management industry, putting them together, and demonstrating a capacity to add value through the design of meaningful investment solutions to allow investors to meet today's challenges.

The above solution is one illustration of a strategy proposing a portfolio mix which should limit the downside impact on investors' assets during bear equity markets while preserving positive performance during rising equity markets. By the simple rule of compounding, this should result in a more robust approach towards achieving one's goals:

- Firstly, given the program's dynamic nature, the need for perfect timing is suppressed allowing investors to benefit from protection when it is most needed.
- Secondly, while hedging is often associated with high costs, the Dynamic hedging program using systematic momentum based strategies reduces the cost of protection by benefiting from rising and falling markets. This benefit constitutes a clear advantage compared to traditional portfolio insurance strategies that are binary in nature and very costly if imperfectly timed.
- Thirdly, counterparty risks associated with OTC derivative contracts or structured products are strongly reduced by the Dynamic hedging program. The level of transparency, alongside with the usage of multiple counterparties and the trading of mostly exchange traded instruments is at the base of the program.

All in all, the unique dynamic features and characteristics of an "All-in-One" solution offers investors an efficient tool to manage their wealth in the long run and hopefully protect future generation purchasing power and improves the odds of reaching one's financial goals.

Appendix A: different hedging techniques, their benefits and drawbacks

Hedging Efficiency	Hedging Techniques	Benefits	Drawbacks	Expected Pay-off Sample
Low	**Selling equity index futures**	• Liquid instruments • Flexible hedging ratio • Low counterparty risk as they are exchange-traded instruments	• Market timing is key to get effective hedging • Non-perfect hedge if Equity portfolio has a high tracking error with the indices	
	Buying equity put options	• Liquid instruments • Flexible hedging ratio • Convex pay-off • Low counterparty risk if use of exchange-traded options	• Costly when option expired worthless Hedging efficiency is very sensitive to • Market volatility (i.e. during market stressed periods, put option may become a very expensive hedging tool) • The choice of the option strike and maturity	
	Using combination call/put/futures	• Liquid instruments • Flexible hedging ratio • Very flexible pay-off • Low counterparty risk if use of exchange-traded options • May reduce the hedging cost (e.g. by capping the upside, i.e. selling OTM call)	• Same as previous technique • Options combination choice is key to get effective hedging • Structuring, trading and managing these positions are resource demanding (both human and technology)	
	Using structured products	• Flexible hedging structure • Require only one trade to be put in place	• Liquidity: it may be difficult or costly to resell the structured product • Low level of transparency • High counterparty: exposure to one single counterparty	
High	**Using a portfolio of liquid alternative strategies**	• A superior positive performance during prolonged and/or severe bear equity markets • A positive performance during bull equity markets • A diversified portfolio limiting counterparty risks	• Liquidity: it may require more than a month to liquidate the entire portfolio • Transparency: full disclosure by risk exposures and not by positions • Manager selection & due diligence and portfolio management require specific expertise and resources	

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