Abbey Capital

Why Managed Futures?

The potential benefits of managed futures
in multi-asset portfolios

Why Managed Futures?

The potential benefits of managed futures in multi-asset portfolios

July 2018

In this paper:

- We give some background on the strategies used in managed futures.
- We discuss some of the attractions of investing in managed futures, such as the low correlation between managed futures and equities.
- We explain why the drivers of returns in managed futures are very different to those of traditional asset classes.
- We show that historically managed futures has provided better diversification in portfolios than other hedge fund strategies during US equity bear markets*.
- We demonstrate how adding managed futures to a traditional equity and bond portfolio may improve the risk-adjusted return of that portfolio.

* CTAs may not generate positive performance in all market environments including equity bear markets. Trading in managed futures is not suitable for all investors given its speculative nature and the high level of risk involved including the risk of total loss of initial investment.

Important Information & Disclosures

This document contains information about Abbey Capital Limited ("Abbey Capital") and the funds it manages. It is for the purpose of providing general information and does not purport to be full or complete or to constitute advice.

Abbey Capital is a private company limited by shares incorporated in Ireland (registration number 327102). Abbey Capital is authorised and regulated by the Central Bank of Ireland as an Alternative Investment Fund Manager under Regulation 9 of the European Union (Alternative Investment Fund Managers) Regulations 2013 ("AIFMD").

Abbey Capital is registered as a Commodity Pool Operator and Commodity Trading Advisor with the U.S. Commodity Futures Trading Commission ("CFTC") and is a member of the U.S. National Futures Association ("NFA"). Abbey Capital is also registered as an Investment Adviser with the Securities Exchange Commission ("SEC") in the United States of America. Abbey Capital (US) LLC is a fully owned subsidiary of Abbey Capital. None of the regulators listed herein endorse, indemnify or guarantee the member's business practices, selling methods, the class or type of securities offered, or any specific security.

While Abbey Capital has taken reasonable care to ensure that the sources of information herein are reliable, Abbey Capital does not guarantee the accuracy or completeness of such data (and same may not be independently verified or audited) and accepts no liability for any inaccuracy or omission. Opinions, estimates, projections and information are current as on the date indicated on this document and are subject to change without notice. Abbey Capital undertakes no obligation to update such information as of a more recent date.

Pursuant to an exemption from the CFTC in connection with accounts of qualified eligible persons, this report is not required to be, and has not been, filed with the CFTC. The CFTC, the SEC, the Central Bank of Ireland or any other regulator have not passed upon the merits of participating in any trading programs or funds promoted by Abbey Capital, nor have they reviewed or passed on the adequacy or accuracy of this report.

Risk Factors: This brief statement cannot disclose all of the risks and other factors necessary to evaluate a participation in a fund managed by Abbey Capital. It does not take into account the investment objectives, financial position or particular needs of any particular investor. Trading in futures is not suitable for all investors given its speculative nature and the high level of risk involved. Prospective investors should take appropriate investment advice and inform themselves as to applicable legal requirements, exchange control regulations and taxes in the countries of their citizenship, residence or domicile. Investors must make their own investment decision, having reviewed the private placement memorandum carefully and consider whether trading is appropriate for them in light of their experience, specific investment objectives and financial position, and using such independent advisors as they believe necessary.

Where an investment is denominated in a currency other than the investor's currency, changes in the rates of exchange may have an adverse effect on the value, price of, or income derived from the investment. Past performance is not a guide to future performance. Income from investments may fluctuate. The price or value of the investments to which this report relates, either directly or indirectly, may fall or rise against the interest of investors and can result in a total loss of initial investment.

Certain assumptions may have been made in this analysis, that have resulted in the returns detailed herein. No representation is made that any returns indicated herein will actually be achieved. Past performance does not guarantee future results.

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS. HENCE NO REPRESENTATION IS BEING MADE THAT ACTUAL PROFITS OR LOSSES WILL BE SIMILAR TO THOSE SHOWN IN THIS REPORT.

Potential investors are urged to consult with their own professional advisors with respect to legal, financial and taxation consequences of any specific investments they are considering in Abbey Capital products.

The information herein is not intended to and shall not in any way constitute an invitation to invest in any of the funds managed by Abbey Capital. Any offer, solicitation or subscription for interests in any of the funds managed by Abbey Capital shall only be made in a private offering to qualified investors pursuant to the terms of the relevant private placement memorandum and subscription agreement and no reliance shall be placed on the information contained herein.

Managed futures is a $347bn* segment of the hedge fund industry, comprising of managers trading primarily in futures markets.

Background

Managed futures traders, known as Commodity Trading Advisors (CTAs), employ a range of strategies and typically trade across equities, bonds, commodities and currencies. In 2018, there were 541 CTA programs in the Barclay CTA Index, a leading industry benchmark of CTA performance, with $347bn in assets under management in managed futures*.

Systematic managers, who use computerised trading rules which have been tested on historical data, manage the majority of assets within the industry. Most systematic traders use a trendfollowing approach to trading, with counter-trend, carry and systematic macro other common strategies used by these traders.

Trendfollowers do not try to predict future price moves, but instead systematically follow the existing price trend until there is evidence of a trend reversal.

Discretionary managers base their trading decisions on fundamental analysis, often complemented with analysis of market positioning, sentiment and technical analysis.

*Source: BarclayHedge, as at Q4 2017.

There are a number of potential benefits from investing in *Managed Futures:*

1 Uncorrelated returns

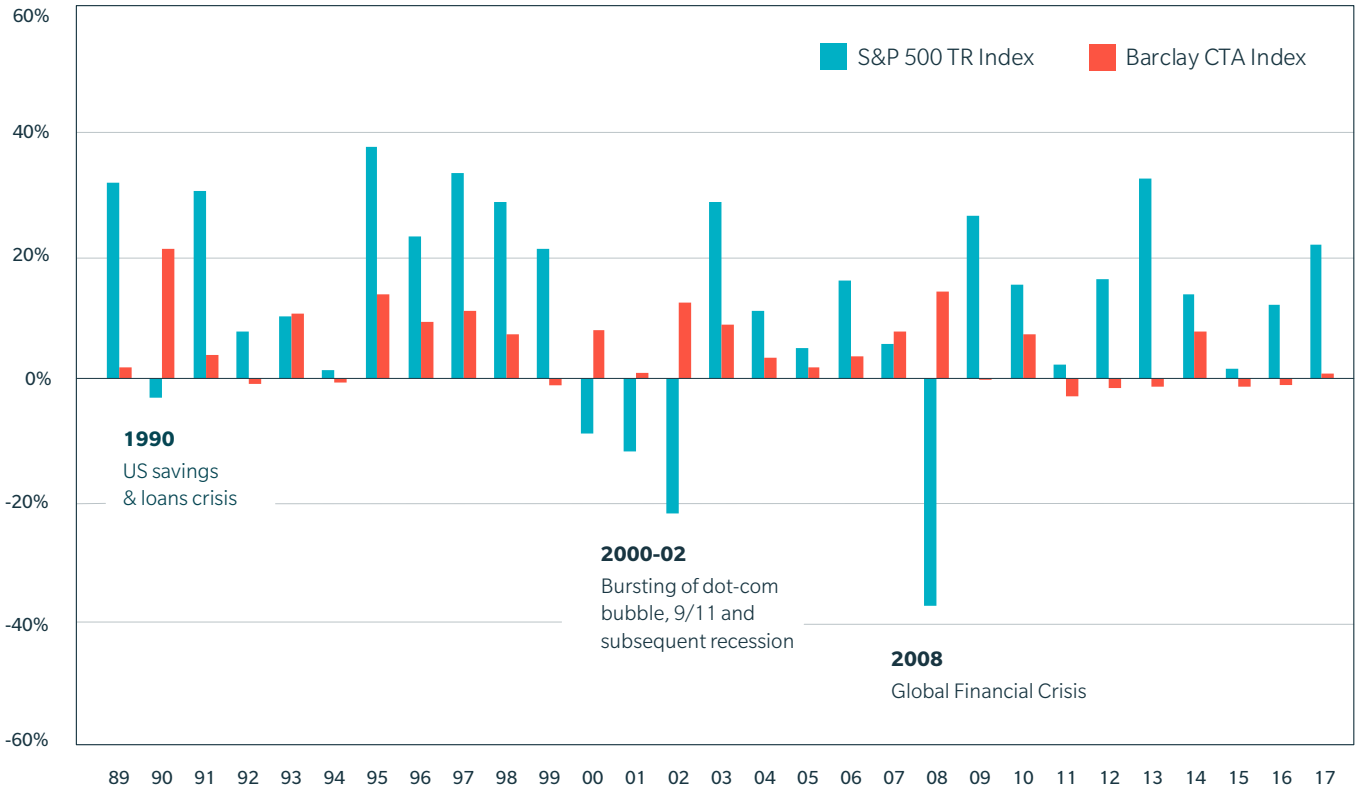
The returns in managed futures have historically been uncorrelated with equities

Since inception in 01 January 1987 to 28 February 2018 the annualised return of the Barclay CTA Index is 6.5%. However, the correlation between the Barclay CTA Index and the S&P 500 Total Return Index ("S&P 500 TR Index") from 01 February 1988 to 28 February 2018 is -0.02, while the correlation between the Barclay CTA Index and the JP Morgan US Government Bond Index is 0.24 over this same period.

Chart 1

Annual returns of Barclay CTA Index & S&P 500 TR Index: 1989 to 2017

Source: Bloomberg, Abbey Capital



The inception date for the S&P 500 TR Index is 04 January 1988; the first full year is 1989. A full explanation of indices referenced can be found at the end of the document. The Barclay CTA Index is derived from data which is self-reported by investment managers based on the performance of privately managed funds. In contrast the S&P 500 TR Index comprises publicly traded shares. As a result, these indices may not be directly comparable and the above is shown for illustrative purposes only.

The chart above shows the annual returns of the Barclay CTA Index and the S&P 500 TR Index; the Barclay CTA Index has delivered positive performance both in positive and negative years for the S&P 500 TR Index.

Furthermore, the Barclay CTA Index has been positive in each of the five calendar years when the S&P 500 TR Index was negative*.

---

* Trading in managed futures is not suitable for all investors given its speculative nature and the high level of risk involved including the risk of total loss of initial investment. Diversification does not assure profit, nor does it protect against a loss in a declining market.

Table 1
Barclay CTA Index in bullish and bearish periods for S&P 500 Index: Jan 1987 to Feb 2018 [1]

Source: Bloomberg, Abbey Capital

Period	Equity Phase	S&P 500 Index	Barclay CTA Index	Correlation
Jan 87 - Aug 87	Bullish	36%	37%	-0.06
Sep 87 - Nov 87	Bearish	-30%	10%	0.25
Dec 87 - Aug 00	Bullish	559%	156%	0.03
Sep 00 - Sep 02	Bearish	-46%	23%	-0.45
Oct 02 - Oct 07	Bullish	90%	24%	0.12
Nov 07 - Feb 09	Bearish	-53%	16%	-0.30
Mar 09 - Feb 18	Bullish	269%	5%	0.15

None of the funds managed by Abbey Capital are benchmarked against any of the indices listed. Data is shown for this period as it represents the earliest dataset available. Indices are unmanaged and not available for direct investment.

In fact, the Barclay CTA Index has been positive in each major bull and bear period for equities since 1987, as demonstrated in the table above, highlighting how managed futures performance is not linked to the performance of the equity market i.e. managed futures and equities are uncorrelated[1].

Another way to look at this phenomenon is to consider the periods when managed futures and equities are in a "drawdown". Chart 2 plots plots the drawdown for the Barclay CTA Index and the S&P 500 TR Index.

Drawdown
This is the term used in the investment industry to describe a period when an asset, strategy or fund is below its highest ever value and the magnitude of the drawdown describes the magnitude of the loss from its peak value.

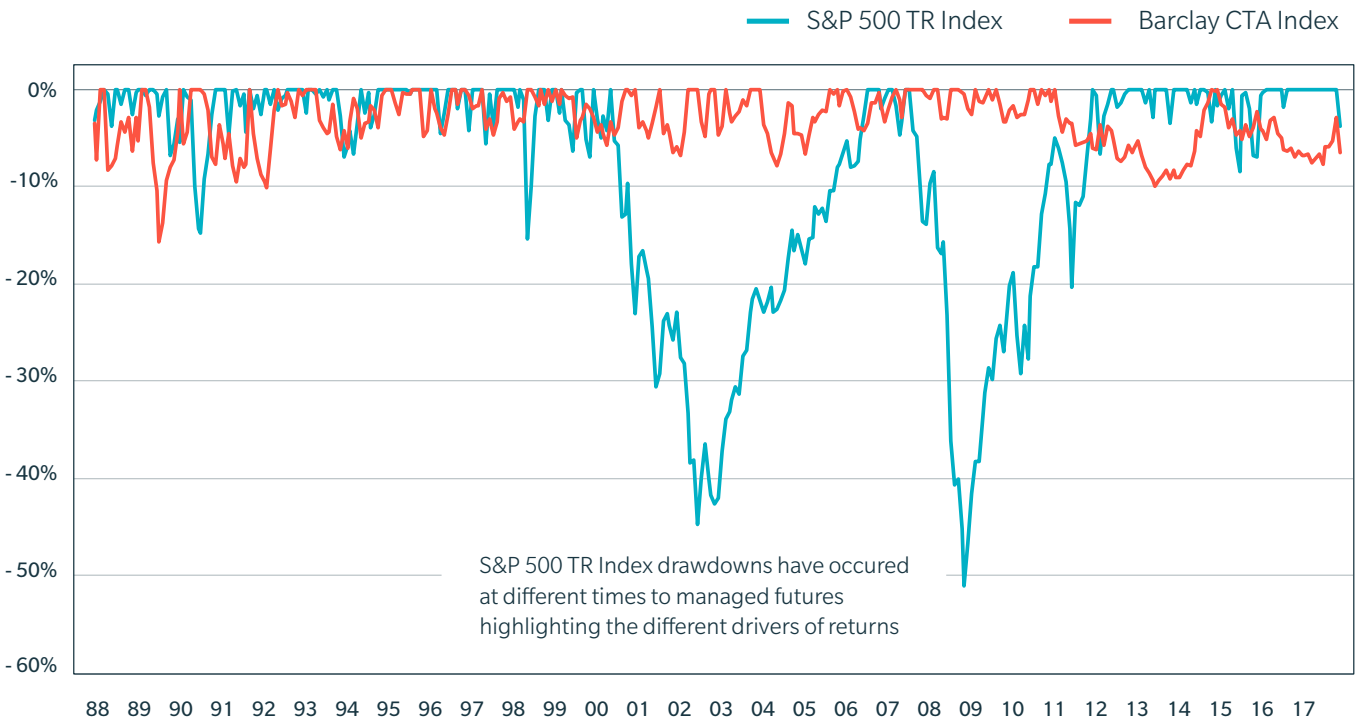
1 For the purposes of this study, a bearish market phase entails at least a -20% decline in the S&P 500. A bullish phase entails at least a +25% increase in the S&P 500. A full explanation of indices referenced can be found at the end of the document. The Barclay CTA Index is derived from data which is self-reported by investment managers based on the performance of privately managed funds. In contrast the S&P 500 Index is an investible index comprised of publicly traded shares. As a result, these indices may not be directly comparable and the above is shown for illustrative purposes only.

The chart below illustrates two important points:

- When the S&P 500 TR Index has experienced a drawdown (such as in 2001/2002 or 2008) the Barclay CTA Index has tended not to be in a drawdown (i.e. was continuing to generate positive performance).
- The drawdowns for managed futures, i.e. the periods which have tended to be difficult for managed futures (such as in 2012/2013 and 2004), are often periods when the S&P 500 TR Index has generated positive performance.

Chart 2

Drawdowns of Barclay CTA Index & S&P 500 TR Index: Feb 1988 to Feb 2018



The inception date for the S&P 500 TR Index is 04 January 1988. The Barclay CTA Index is derived from data which is self-reported by investment managers based on the performance of privately managed funds. In contrast the S&P 500 Index is comprised of publicly traded shares. As a result these indices may not be directly comparable and the above is shown for illustrative purposes only. A full explanation of indices referenced can be found at the end of the document.

Source: Bloomberg, Abbey Capital

The low correlation between managed futures and both equities and bonds stems from the different drivers of returns for managed futures relative to equities and bonds.

Some of the differences are:

Managed futures strategies are bi-directional	CTAs can take long or short positions and potentially profit from declines in equity and bond markets. The ability to go short generates a different return profile from long-only investing but short positions will not always generate gains for CTAs.
Managed futures is multi-asset	CTAs typically trade a range of financial, commodity and foreign exchange markets and potentially benefit from trends in these markets. Trading across multiple markets will also contribute to a different return profile than long-only investing in one market such as equities.
Most CTAs use systematic approaches	A large proportion of CTAs adopt systematic strategies which have been tested for validity on historical data. In contrast, many bond and equity investment managers make investment decisions on a discretionary basis.
Managed futures tends to perform best when there are strong trends in markets	The drivers of returns for most Trendfollowing CTAs are the trends exhibited in the markets they trade. Periods when there are strong trends in markets (either up or down) have historically been periods of strong performance for managed futures. In contrast, the performance of equities and bonds tends to be linked more to particular economic environments (for example, positive equity market performance tends to be linked to rising earnings growth) rather than the number or extent of trends across markets*. * CTAs may not generate positive performance in any given market environment.

The fact that managed futures strategies have generated gains and losses at different times than equities, and performance was dependent on a different set of factors than equities, suggests that managed futures may be a suitable complement in a portfolio.

There are a number of potential benefits from investing in *Managed Futures:*

2 *Diversification during market stress*

Managed futures has a different return profile than other hedge fund strategies, particularly during periods of market stress.

Table 2 on the next page shows the performance of the Barclay CTA Index relative to the Hedge Fund Research Institute (HFRI) Fund Weighted Composite Index in the 10 worst months for the S&P 500 TR Index since 1990 (note: the HFRI Fund Weighted Composite Index came into inception in 1990). A full explanation of indices referenced can be found at the end of the document.

Table 2

Barclay CTA Index & HFRI Fund Weighted Composite Index Performance in 10 worst months of the S&P 500 TR Index from Jan 1990 to Feb 2018 [2]

Source: Abbey Capital, Bloomberg

	S&P 500 TR Index	Barclay CTA Index	HFRIFWC Index	Difference (Barclay-HFRI)
Oct 08	-16.8%	3.4%	-6.8%	10.3%
Aug 98	-14.5%	5.9%	-8.7%	14.6%
Sep 02	-10.9%	2.4%	-1.5%	4.0%
Feb 09	-10.6%	-0.2%	-1.2%	1.0%
Feb 01	-9.1%	-0.6%	-2.2%	1.6%
Aug 90	-9.0%	6.7%	-3.4%	10.1%
Sep 08	-8.9%	-0.3%	-6.1%	5.9%
Jun 08	-8.4%	2.0%	-1.3%	3.3%
Jan 09	-8.4%	-0.2%	-0.1%	-0.1%
Sep 01	-8.1%	1.8%	-2.8%	4.6%

Difference refers to the Barclay CTA Index return less the HFRI Fund Weighted Composite Index return. None of the funds managed by Abbey Capital are benchmarked against any of the indices listed. A full explanation of indices referenced can be found at the end of the document.

The table shows that managed futures has provided better diversification than a general hedge fund allocation in 9 of the 10 worst months for equities in the period, again highlighting the diversification value of an allocation to managed futures.

In particular, in times of severe financial market stress, such as during the Global Financial Crisis in 2008 and the Russian debt default in August 1998, hedge funds suffered sizeable losses while managed futures managers capitalised on dislocations in markets in those periods. Of course, there is no guarantee that managed futures will capitalise from a similar period of market stress in the future.

2 Data is shown for this period as it represents the earliest dataset available. Both the Barclay CTA Index and the HFRI Index are derived from data which is self-reported by investment managers based on the performance of privately managed funds. In contrast, the S&P 500 Total Return Index comprises publicly traded shares. As a result these indices may not be directly comparable and the above is shown for illustrative purposes only.

There are a number of potential benefits from investing in Managed Futures:

3 *Potential portfolio benefits*

A study by the Harvard Professor John Lintner in 1983 highlighted the role that managed futures can play in traditional investment portfolios.

Lintner found the addition of managed futures reduced the maximum drawdown experience by traditional portfolios. Lintner's study has been updated on several occasions in recent years and we believe it has shown to be just as relevant today.

Table 3 shows, as an allocation to managed futures is increased in a traditional equity and bond portfolio, the risk-adjusted return (as measured by the Sharpe ratio) can improve, volatility can be lowered and the maximum drawdown can be less severe. The reduction in volatility and drawdown achieved by adding managed futures to a bond-equity portfolio stems from the low correlation between managed futures and those assets.

Importantly, the historical evidence highlights that adding managed futures to bond-equity portfolios can potentially improve the Sharpe ratio for the overall portfolio.

Table 3

Hypothetical Results: Managed Futures with Traditional Portfolios: Feb 1988 to Feb 2018

Source: Bloomberg, Abbey Capital

	Scenario 1	Scenario 2	Scenario 3
Barclay CTA Index	0%	10%	20%
S&P 500 TR Index	50%	45%	40%
JP Morgan US Government Bond Index	50%	45%	40%
Max Drawdown	-24.3%	-20.9%	-17.8%
Annual Volatility	7.2%	6.6%	6.2%
Annualised Return	8.5%	8.2%	8.0%
Sharpe Ratio	0.75	0.77	0.78

None of the funds managed by Abbey Capital are benchmarked against any of the indices listed. Data is shown for this period as it represents the earliest dataset available. A full explanation of indices referenced can be found at the end of the document. The table shows that adding an allocation to managed futures (represented by the Barclay CTA Index) to a portfolio of bonds and equities, between February 1988 and February 2018, reduced portfolio volatility and drawdown and improved risk-adjusted portfolio returns (Sharpe ratio). Performance figures shown above that combine S&P 500, JP Morgan US Government Bond Index and Barclay CTA Index are hypothetical. While based on the actual historical data of each, results are purely the product of simulation and there was no actual trading or actual profits for these scenarios. The Barclay CTA Index is derived from data which is self-reported by investment managers based on the performance of privately managed funds. In contrast, the S&P 500 and the JP Morgan US Government Bond Index comprise publicly traded securities. As a result these indices may not be directly comparable and the above is shown for illustrative purposes only. For further information about the limitations of hypothetical performance results please see main disclosure page. As at 28 February 2018, the annualised return since 01 February 1988 for the Barclay CTA Index is 5.24%, for the S&P 500 Total Return Index is 10.58% and for the JP Morgan US Government Bond Index is 5.84%.

To check the robustness of the outcome we assessed the impact of using two other managed futures indices, the SG CTA Index and the SG Trend Index. These indices were incepted in January 2000.

The hypothetical results below show a similar profile with the allocation to managed futures again reducing portfolio volatility and drawdown and improving the Sharpe ratio (relative to the traditional portfolio) in each case.

Table 4

Hypothetical Results: Managed Futures with a Traditional Portfolio (60% S&P 500 TR Index, 40% JP Morgan US Government Bond Index): Jan 2000 to Feb 2018

Source: Bloomberg, Abbey Capital

	Barclay CTA Index	SG CTA Index	SG Trend Index	Traditional Portfolio	80% Traditional Portfolio & 20% Barclay CTA Index	80% Traditional Portfolio & 20% SG CTA Index	80% Traditional Portfolio & 20% SG Trend Index
Cumulative Return	85.6%	117.5%	151.7%	164.9%	150.8%	160.4%	173.1%
Annualised Return	3.5%	4.4%	5.2%	5.5%	5.2%	5.4%	5.7%
Annualised Volatility	6.4%	8.8%	14.2%	8.3%	6.7%	6.8%	7.1%
Sharpe Ratio	0.27	0.30	0.25	0.45	0.51	0.54	0.56
Correlation to Traditional Portfolio	-0.04	-0.06	-0.06				

None of the funds managed by Abbey Capital are benchmarked against any of the indices listed. A full explanation of indices referenced can be found at the end of the document. Performance figures shown above that combine S&P 500 TR Index, and JP Morgan US Government Bond Index, with Barclay CTA Index, SG CTA Index and SG Trend Index are hypothetical. While based on the actual historical data of each, results are purely the product of simulation and there was no actual trading or profits for these scenarios. The Barclay CTA Index, SG CTA Index and SG Trend Index are all derived from data which is self-reported by investment managers based on the performance of privately managed funds. In contrast, the S&P 500 and the JP Morgan US Government Bond Index comprise publicly traded securities. As a result, these indices may not be directly comparable and the above is shown for illustrative purposes only. For further information about the limitations of hypothetical performance results please see main disclosure page. As at 28 February 2018, the annualised return since 01 January 2000 for indices are as follows: Barclay CTA Index +3.46%, S&P 500 Total Return Index +5.46%, JP Morgan US Government Bond Index +4.70%, SG CTA Index +4.37%, SG Trend Index +5.21%.

Interestingly, even though the SG Trend Index had a lower Sharpe ratio than the SG CTA Index or the Barclay CTA Index on a standalone basis, when combined with equities and bonds it generated a portfolio with a higher return and a lower maximum drawdown than the portfolios of bonds, equities and managed futures using the other managed futures indices.

This is because the higher volatility of the SG Trend Index magnified the portfolio benefit of the positive return and negative correlation of the SG Trend Index with equities.

Of course, adding managed futures to a traditional portfolio may not always achieve these outcomes. In particular, if the returns in managed futures were less in the future or if the correlation profile between equities and managed futures changed, these properties may not hold true.

Conclusion

Managed futures managers have historically shown an ability to make gains in both bull and bear equity markets, provided diversification in times of market stress and have generated positive returns while exhibiting a correlation of close to zero with equities.

The notably different return profile of managed futures versus bonds and equities stems from the fundamentally different drivers of returns for managed futures.

While there is no guarantee that past performance will continue in the future, historically adding managed futures to a traditional bond-equity portfolio has resulted in better outcomes for investors, over time, in terms of the magnitude of drawdown, portfolio volatility and the enhancement of the risk-adjusted return.

Indices

It is not possible to invest directly in an index.

Barclay CTA Index (Start Date: Jan-1987)

The Barclay CTA Index is an equal weighted Index which is representative of the performance of the managed futures industry. There are currently 541 programs included in the index and it is rebalanced annually. To qualify for inclusion in the Barclay CTA Index, an advisor must have four years of prior performance history.

SG CTA Index (Start Date: Jan -2000)

The SG CTA Index is a daily performance benchmark of major CTAs; it calculates the daily rate of return for a pool of CTAs selected from the larger managers that are open to new investment. Selection of the pool of qualified CTAs used in construction of the index is conducted annually.

SG Trend Index (Start Date: Jan -2000)

The SG Trend Index is designed to track the 10 largest trend following CTAs (by AUM) and be representative of the trend followers in the managed futures space. The index is equally weighted and rebalanced annually on the 1st of January.

S&P 500 Index (Start Date: Feb-1954)

The Standard and Poor's 500 Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the US equity market through changes in its aggregate market value.

S&P 500 Total Return Index (Start Date: Jan-1988)

The S&P 500 Total Return Index is the total return version of the S&P 500 Index. Dividends are reinvested on a daily basis and all regular cash dividends are assumed reinvested in the index on the ex-dividend date.

HFRI Fund Weighted Composite Index (Start Date: Jan-1990)

The HFRI Fund Weighted Composite Index is an equally weighted performance index designed to be representative of the performance of a broad range of hedge funds. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

JP Morgan GBI US Unhedged in Local Currency ("JP Morgan US Government Bond Index") (Start Date: Jan-1987)

The JP Morgan US Government Bond Index is a leading measure of US government bond market performance designed to give representative performance of US government bonds. The index measures the total return of traded US Treasury securities across the whole yield curve.

Definitions

Correlation

Correlation is a statistical measure which quantifies the extent to which two assets, or securities, move in relation to each other. The correlation coefficient between two assets can vary from between -1 and +1, with a positive correlation indicating a tendency to rise and fall together, and a negative correlation indicating a tendency to move in opposite directions. In this paper we measured the correlation between the monthly returns of the Barclay CTA Index and the S&P 500 Index, and found that the correlation, over the full time period (01-Jan-1987 to 28-Feb-2018), is -0.02. As this is close to zero it indicates that, over time, there is little relationship between monthly returns of the Barclay CTA Index and the monthly returns of the S&P 500 Index.

Sharpe ratio

The Sharpe ratio is a measure of risk-adjusted return. The measure subtracts the risk-free rate from the annualised performance of the asset or fund and divides by the realised annualised volatility. A higher (lower) Sharpe ratio is seen as indicative of stronger (weaker) risk-adjusted performance.

Contact Us

DUBLIN

Abbey Capital Limited,
1–2 Cavendish Row,
Dublin 1, Ireland

tel. +353 1 828 0400
businessdevelopment@
abbeycapital.com