UBS

For professional / institutional / qualified investors only.

Rise to the challenge

Making the case for hedge funds

Sophisticated investors are seeking alternative sources to bolster returns

Please note that the views expressed herein are those of UBS Asset Management. The following information is applicable as of the date of this report unless otherwise stated. It is believed to be reliable (including any charts or graph contained within); however, its accuracy cannot be guaranteed. All such information and opinions are subject to change without notice.

Hedge funds: rise to the challenge

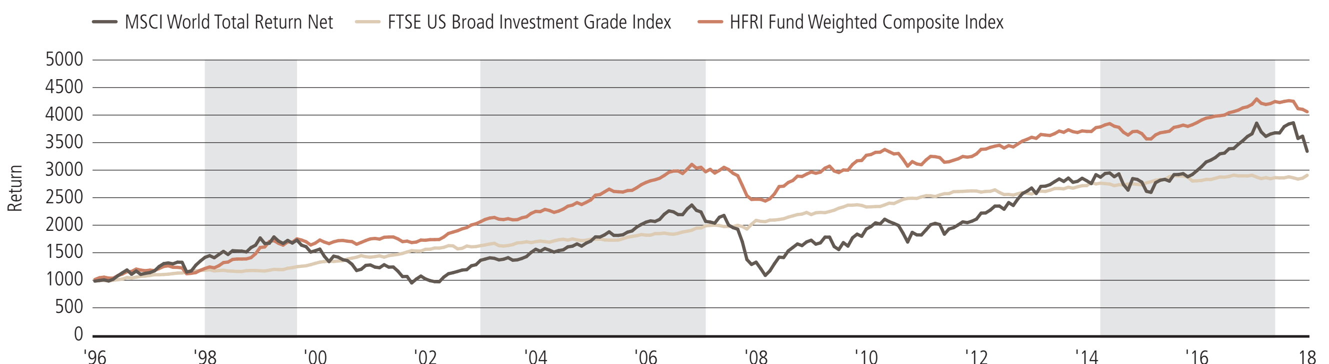
The case for reduced volatility and return enhancement

Shifting the paradigm
Traditional investment approaches have long relied on bond allocations to preserve capital and generate income, and on equity allocations for growth and capital appreciation. However, investors are now faced with a unique set of challenges as markets grapple with an elevated volatility regime brought on by uncertainty regarding global monetary policy, late cycle concerns and rising geopolitical risks. As a result, sophisticated investors are seeking alternative strategies in an attempt to bolster returns. Hedge funds seek to offer an attractive solution by striving to provide diversified approaches and consistent, risk-adjusted returns. As central banks tighten monetary policy and markets reach the later stages of the economic cycle, hedge fund managers may be in a unique position to take advantage of heighted volatility, market dislocations and widening risk premia.

A fixed income alternative
Bond portfolios have often been considered a safe haven from the volatility exhibited in equity markets. For over 30 years, bonds have benefited from a secular bull market, delivering consistent portfolio returns with relatively low volatility as interest rates declined. However, recent rate hikes and continued uncertainty surrounding market outcomes have had a negative effect on investors who have been allocating to longer duration credit. Yields on bonds also remain low by historical standards.

Hedge funds have historically outperformed the markets, as shown in Figure 1, and continued to do so throughout the recent rise in rates that began in March 2016. Despite a recent "pause" in rate hikes by the Federal Reserve, hedge fund strategies may remain favorable in the long term as we anticipate central banks will continue to take down balance sheets and increase rates.

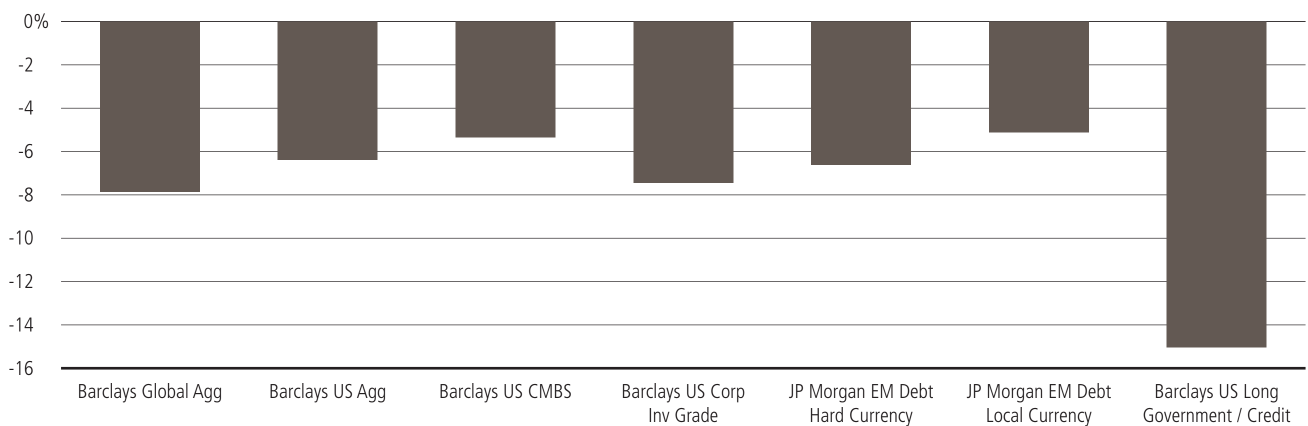
Figure 1: Markets respond to periods of rising rates



Source: Bloomberg, UBS Hedge Fund Solutions, HFRI data as of 31 December 2018. Shaded regions on chart represent historical periods where the Effective Federal Funds rate was rising. Indices are shown for illustrative purposes only. Please see endnotes (page 7) for index descriptions.
Past performance is not indicative of future results.

To further deconstruct total bond returns, bond prices move inversely to interest rates. As interest rates increase, the value of bonds typically decline, resulting in a higher yield to maturity. While price fluctuations have always been a risk to investors, financial regulations enacted after the global financial crisis have significantly limited the liquidity that traditional intermediaries, typically banks, can devote to keeping bond markets orderly. Generally, even a modest rise in interest rates has the potential to expose bond portfolios to losses, and with fewer intermediaries able to provide market liquidity, bond holders are more exposed to price gap risk and volatility as rates rise. Figure 2 demonstrates the dramatic impact of a 1% rise in interest rates on bond pricing.

Figure 2: The impact of a 1% rise in interest rates on bond prices



Source: Barclays, Bloomberg, JP Morgan, data as of 31 December 2018. Indices are shown for illustrative purposes only. It is not possible to invest directly in an index. Bond price information is derived from the index duration averages and demonstrates that securities with longer durations tend to be more sensitive to interest rate changes than those with short durations. Please see endnotes (page 7) for index descriptions.

A powerful diversifier to equities

Traditional long-only equity investing typically requires successful timing and patience—and separating emotions from investing throughout market downturns can be challenging. Certain events in the past, such as the dramatic market downturn in Q4 2018 may drive investors to passive long-only equity products, but such instruments can expose a portfolio to a greater market beta.

For investors looking for protection from potential equity market drawdowns, active approaches utilized by hedge funds potentially offer more consistent returns with reduced volatility and low correlation to equity markets. Historical monthly return comparisons indicate that hedge funds typically exhibit lower and less frequent drawdowns relative to global equity markets (see Figure 3 on the next page). Supplementing traditional equity exposure with hedge fund allocations may help investors stay the course for the long term.

Supplementing traditional equity exposure with hedge fund allocations may help investors stay the course for the long term.

Figure 3: Historically preserving capital in varying market cycles

Global equities: Relative return focus (MSCI World Total Return Index)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2018	5.28	-4.14	-2.18	1.15	0.63	-0.05	3.12	1.24	0.56	-7.34	1.14	-7.60	-8.71
2017	2.41	2.77	1.07	1.48	2.12	0.38	2.39	0.14	2.24	1.89	2.17	1.35	22.40
2016	-5.98	-0.74	6.79	1.58	0.56	-1.12	4.22	0.08	0.53	-1.94	1.44	2.39	7.51
2015	-1.81	5.86	-1.57	2.35	0.34	-2.33	1.80	-6.62	-3.69	7.92	-0.50	-1.76	-0.87
2014	-3.70	5.01	0.14	1.02	1.97	1.79	-1.60	2.20	-2.71	0.65	2.00	-1.61	4.94
2013	5.09	0.17	2.34	3.15	0.04	-2.46	5.26	-2.13	5.00	3.91	1.78	2.12	26.68
2012	5.02	4.88	1.29	-1.14	-8.63	5.10	1.29	2.54	2.75	-0.68	1.28	1.88	15.83
2011	2.26	3.50	-0.99	4.25	-2.07	-1.58	-1.81	-7.05	-8.64	10.34	-2.44	-0.06	-5.54
2010	-4.13	1.41	6.19	0.01	-9.58	-3.43	8.11	-3.73	9.32	3.73	-2.16	7.35	11.76
2009	-8.76	-10.24	7.54	11.22	9.06	-0.45	8.47	4.13	3.99	-1.78	4.09	1.80	29.99
2008	-7.64	-0.58	-0.96	5.26	1.52	-7.98	-2.44	-1.40	-11.89	-18.96	-6.47	3.21	-40.71
2007	1.18	-0.52	1.83	4.41	2.80	-0.77	-2.21	-0.08	4.76	3.07	-4.09	-1.29	9.04
2006	4.47	-0.15	2.20	3.04	-3.42	-0.03	0.62	2.60	1.19	3.67	2.45	2.03	20.07
2005	-2.25	3.17	-1.94	-2.18	1.78	0.87	3.49	0.75	2.60	-2.43	3.33	2.22	9.49
2004	1.60	1.67	-0.66	-2.05	0.91	2.05	-3.26	0.44	1.89	2.45	5.25	3.82	14.72
2003	-3.05	-1.75	-0.33	8.86	5.69	1.72	2.02	2.15	0.60	5.92	1.51	6.27	33.11
2002	-3.04	-0.88	4.40	-3.40	0.17	-6.08	-8.44	0.17	-11.01	7.37	5.38	-4.86	-19.89
2001	1.93	-8.46	-6.59	7.37	-1.30	-3.15	-1.34	-4.81	-8.82	1.91	5.90	0.62	-16.82
2000	-5.74	0.26	6.90	-4.24	-2.54	3.35	-2.83	3.24	-5.33	-1.69	-6.08	1.60	-13.18
1999	2.18	-2.67	4.15	3.93	-3.67	4.65	-0.31	-0.19	-0.98	5.18	2.80	8.08	24.93
1998	2.77	6.75	4.21	0.96	-1.27	2.36	-0.18	-13.35	1.75	9.02	5.93	4.87	24.34
1997	1.19	1.13	-2.00	3.25	6.15	4.97	4.59	-6.71	5.42	-5.28	1.75	1.20	15.76

Indicates monthly returns equal to or in excess of -4.0%.

Hedge fund portfolios: Absolute return focus (HFRI Fund Weighted Composite Index)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2018	2.31	-1.80	-0.51	0.38	0.88	-0.40	0.45	0.33	-0.26	-3.15	-0.30	-1.07	-3.20
2017	1.20	0.90	0.39	0.53	0.19	0.30	1.07	0.49	0.65	1.03	0.46	1.06	8.58
2016	-2.60	-0.03	2.08	1.03	0.37	0.41	1.88	0.43	0.65	-0.59	0.77	1.01	5.46
2015	-0.04	1.88	0.37	0.95	0.59	-1.23	-0.51	-2.39	-1.38	1.73	0.16	-1.15	-1.11
2014	-0.54	1.97	-0.29	-0.22	0.92	1.30	-0.63	1.25	-0.92	-0.40	0.78	-0.23	2.98
2013	2.51	0.11	0.95	0.63	0.48	-1.47	1.30	-0.70	1.58	1.51	0.89	1.05	9.13
2012	2.78	2.06	-0.18	-0.51	-2.61	0.29	0.87	0.82	1.31	-0.38	0.41	1.44	6.37
2011	0.41	1.23	0.06	1.48	-1.20	-1.18	0.23	-3.21	-3.89	2.69	-1.35	-0.45	-5.25
2010	-0.76	0.66	2.49	1.19	-2.89	-0.95	1.61	-0.13	3.48	2.14	0.19	2.95	10.24
2009	-0.09	-1.21	1.66	3.60	5.15	0.25	2.50	1.30	2.79	-0.20	1.52	1.28	20.01
2008	-2.69	1.50	-2.24	1.63	1.87	-1.33	-2.29	-1.44	-6.13	-6.84	-2.67	0.15	-19.03
2007	1.10	0.68	0.96	1.77	1.99	0.73	0.08	-1.53	2.69	2.85	-2.20	0.53	9.95
2006	3.49	0.45	1.95	1.87	-1.56	-0.24	-0.18	1.01	0.18	1.77	2.07	1.48	12.89
2005	-0.21	1.83	-0.87	-1.50	1.04	1.59	2.30	0.82	1.93	-1.41	1.66	1.82	9.27
2004	1.98	1.19	0.51	-1.48	-0.31	0.75	-0.96	0.12	1.65	0.84	2.84	1.65	9.03
2003	0.65	0.02	0.14	2.64	3.58	1.35	1.30	1.83	1.16	2.45	1.06	1.87	19.55
2002	0.45	-0.70	1.91	0.28	0.04	-1.94	-2.86	0.53	-1.54	0.59	2.12	-0.21	-1.45
2001	3.39	-2.21	-1.59	1.95	1.19	0.29	-0.83	-0.41	-2.83	2.01	2.07	1.71	4.62
2000	0.64	6.16	0.93	-2.85	-1.96	3.68	-0.60	3.81	-1.24	-1.79	-3.49	2.07	4.98
1999	2.24	-1.32	3.14	4.50	0.72	3.63	0.52	-0.01	0.16	1.60	5.06	7.65	31.29
1998	-0.71	3.27	3.00	0.96	-2.08	-0.13	-0.79	-8.70	0.69	1.22	3.71	2.79	2.62
1997	3.17	1.03	-1.64	-0.11	4.38	2.70	3.87	0.34	3.72	-1.53	-0.93	0.88	16.79

Source: UBS Hedge Fund Solutions, Bloomberg, HFRI, data as of 31 December 2018. Neither the Fund nor any of the other indices shown are intended to track each other as they follow different investment strategies/programs, and different results over similar periods can be expected. Indices are shown for illustrative purposes only. Please see endnotes (page 7) for index descriptions.
Past performance is not indicative of future results.

Buying-in to hedge funds

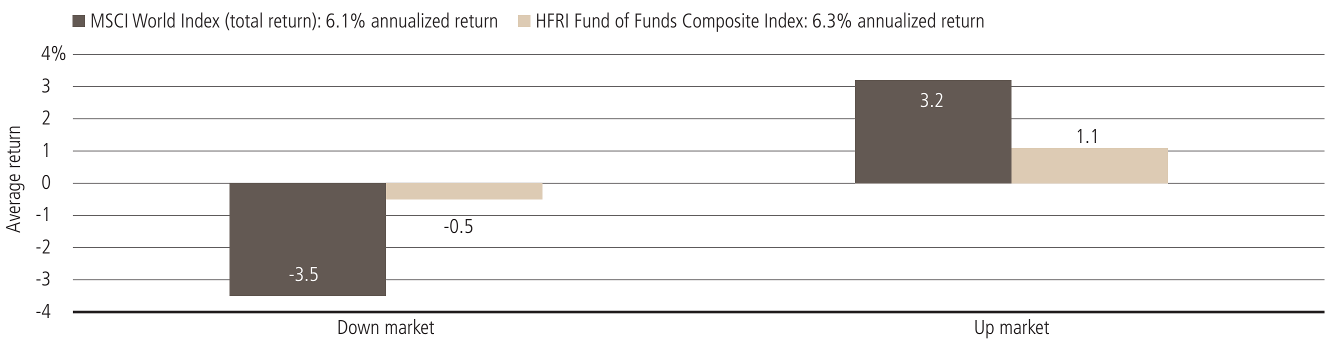
Hedge funds present investors with potential diversification benefits, attractive market capture and low exposure to the broader markets. As seen in Figure 4, this value proposition has historically enabled hedge funds to preserve capital during months with negative market returns, while attempting to capture a greater percentage of gains during positive months.

With greater flexibility and freedom, hedge fund managers are able to utilize a greater variety of instruments—they can employ leverage, sell securities short and employ asymmetric structures—seeking to produce low beta returns. In periods of heightened volatility, a dynamic approach may potentially provide smoother returns compared to long-only strategies. Hedge funds aren't limited to just equities—there are a diverse array of strategies across fixed income, credit, commodities and others that all have the goal of providing higher risk-adjusted returns to investors compared to long-only investments in their sector. Active hedge fund management may help investors to better position themselves to take advantage of evolving opportunity sets.

Evolve your asset allocation

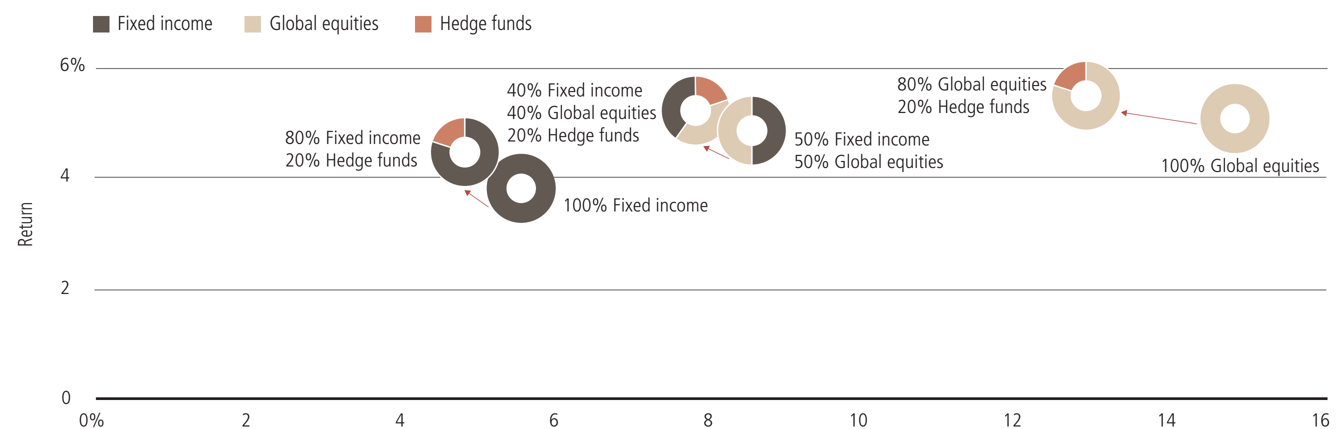
As investors face the uncertainty of rapidly changing global markets, the traditional investment allocation of blended equities and fixed income may not provide adequate protection from market volatility. Hedge funds may provide complementary exposure and diversification to a portfolio of traditional, long-only investments. The chart below (Figure 5) shows how hedge fund allocations have historically helped reduce volatility in a portfolio and enhanced long-term returns, compared to traditional portfolios without hedge fund allocations.

Figure 4: Downside protection and upside capture



Source: UBS Hedge Fund Solutions, Bloomberg. Data from 1 January 1990 through 31 December 2018

Figure 5: Adding hedge funds to a traditional portfolio



Source: UBS Asset Management, Morningstar, data as of 31 December 2018. Source: UBS Asset Management, Morningstar. Data for the period of 31 July 1997–31 July 2017. Global equities are represented by the MSCI World index. Fixed income is represented by the Barclays Global Aggregate Index. Hedge funds are represented by the HFRI Fund Weighted Composite. Indices are shown for illustrative purposes only. Please see endnotes (page 7) for index descriptions. **Past performance is not indicative of future results.**

For more information and other research pieces from UBS Asset Management, please visit:
https://www.ubs.com/am

Index definitions:

- **Barclays Global Aggregate Ex-USD Index:** is a broad-based measure of global Investment Grade fixed-rate debt investments, excluding USD-denominated debt.
- **Barclays US Aggregate Bond Index:** is an unmanaged index of domestic investment-grade bonds, including corporate, government and mortgage-backed securities.
- **Barclays US Commercial Mortgage Backed Securities Index (CMBS):** measures the market of conduit and fusion CMBS deals with a minimum current deal size of $300 mn.
- **Barclays US Corporate Investment Grade Index:** is an unmanaged index that measures the performance of investment-grade corporate securities within the Barclays U.S. Aggregate Index.
- **Barclays US Long Government/Credit Index:** Unmanaged index that tracks the performance of US government and corporate bonds.
- **FTSE Broad Investment Grade Index:** tracks the performance of US Dollar-denominated bonds issued in the US investment-grade bond market. Introduced in 1985, the index includes US Treasury, government-sponsored, collateralized, and corporate debt and provides a reliable representation of the US investment-grade bond market.
- **HFRI FoF Composite Index:** The HFRI Fund of Funds Composite Index is an equally weighted performance index broken down into 37 different categories by strategy. There is no required asset-size minimum for fund inclusion in the HFRI and there is no required length of time a fund must be actively trading before inclusion in the HFRI.
- **HFRI Fund Weighted Composite Index:** is an equal-weighted return of all funds in the HFRI Monthly Indices, excluding HFRI Fund of Funds Index. Such funds fall into strategy classifications including, but not limited to: emerging markets, distressed securities, equity hedged, market neutral, fixed income, macro, Regulation D, relative value, convertible arbitrage, merger arbitrage, and various sector funds.
- **J.P. Morgan EM Bond Index (EMBI) Global Diversified (EM Debt Hard Currency):** is an unmanaged index of USD-denominated bonds with maturities of more than one year issued by emerging markets governments.
- **J.P. Morgan Government Bond Index-EM (GBI-EM) Global Diversified (EM Debt Local Currency):** is an unmanaged index of local-currency bonds with maturities of more than one year issued by emerging market governments.
- **MSCI World Total Return Index:** is an unmanaged free float-adjusted market-capitalization-weighted index designed to measure the equity market performance of developed and emerging markets.

The Risks Associated with Investing in a Hedge Fund generally:

- **Limited Regulatory Oversight:** Since Hedge Funds are typically private investments, they do not face the same oversight and scrutiny from financial regulatory entities such as the Securities and Exchange Commission ("SEC") and are not subject to the same regulatory requirements as regulated investment companies, (i.e., open-end or closed-end mutual funds) including requirements for such entities to provide certain periodic pricing and valuation information to investors. Hedge fund offering documents are not reviewed or approved by the SEC or any US state securities administrator or any other regulatory body. Also, managers may not be required by law or regulation to supply investors with their portfolio holdings, pricing, or valuation information.
- **Portfolio Concentration; Volatility:** Many Hedge Funds may have a more concentrated or less diversified portfolio than an average mutual fund. While a more concentrated portfolio can have good results when a manager is correct, it can also cause a portfolio to have higher volatility.
- **Strategy Risk:** Many Hedge Funds employ a single investment strategy. Thus, a Hedge Fund or even a fund of Hedge Funds may be subject to strategy risk, associated with the failure or deterioration of an entire strategy. Strategy specific losses can result from excessive concentration by multiple Hedge Fund managers in the same investment or broad events that adversely affect particular strategies.
- **Use of Leverage and Other Speculative Investment Practices:** Since many Hedge Fund managers use leverage and speculative investment strategies such as options and short sales, investors should be aware of the potential risks. When used prudently and for the purpose of risk reduction, these instruments can add value to a portfolio. However, when leverage is used excessively and the market goes down, a portfolio can suffer tremendously. Also, managers can face additional risk when selling short. In theory, the loss associated with shorted stocks is infinite, because stocks can go up indefinitely. So, while selling short can add return and risk reduction to a portfolio, managers need to pay special attention to their short positions. In the same way, when options are used to hedge a portfolio (i.e., short calls and buy puts), the portfolio's volatility can be reduced. However, when options are used to speculate (i.e., buy calls, short puts), a portfolio's returns can suffer and the risk of the portfolio can increase.
- **Valuations:** Further there have been a number of high profile instances where Hedge Fund managers have mispriced portfolios, either as an act of fraud or negligence.
- **Past Performance:** Past performance is not necessarily indicative and is not a guarantee of a Hedge Fund's future results or performance. Some Hedge Funds may have little or no operating history or performance and may use hypothetical or pro forma performance that may not reflect actual trading done by the manager or advisor and should be reviewed carefully. Investors should not place undue reliance on hypothetical or pro forma performance.
- **Limited Liquidity:** Investors in Hedge Funds often have limited rights to redeem or transfer their investments. In addition, since Hedge Funds are not listed on any exchange, it is not expected that there will be a secondary market for them. Repurchases may be available, but only on a limited basis. A Hedge Fund's manager may deny a request to transfer if it determines that the transfer may result in adverse legal or tax consequences for the Hedge Fund.
- **Tax Risks:** Investors in certain jurisdictions and in Hedge Funds generally may be subject to pass-through tax treatment on their investment. This may result in an investor incurring tax liabilities during a year in which the investor does not receive a distribution of any cash from the Fund. In addition, an investor may not receive any or only limited tax information from Hedge Fund and funds of Hedge Funds may not receive tax information from underlying managers in a sufficiently timely manner to enable an investor to file its return without requesting an extension of time to file. In certain jurisdictions a lack of tax information may result in an Investor being taxed on a deemed basis at an adverse rate of tax.
- **Fees and Expenses:** Most Hedge Funds charge both an asset-based management fee and a performance-based incentive fee or allocation. In addition, many Hedge Funds are more actively traded than a long-only mutual fund and thus have greater commission expenses for securities trading. As a result, the fees and expenses associated with Hedge Fund investing may exceed those of a long-only mutual fund.
- **Reliance on Fund Manager; Lack of Transparency:** A Hedge Fund's manager or adviser has total trading authority over the Hedge Fund. There is often a lack of transparency as to a Hedge Fund's underlying investments. Because of this lack of transparency, an investor may be unable to monitor the specific investments made by the Hedge Fund or to know whether the investments are consistent with the Hedge Fund's historic investment philosophy or risk levels. Due to the risks mentioned above, it is important to perform proper due diligence in evaluating and choosing Hedge Fund managers to place your money with. There have been occasions when Hedge Fund managers took on too much risk in their portfolio and lost a substantial amount of their investors' money.

This document is for informational purposes only and is not intended to be construed as an invitation or offer of securities or to conclude a contract or to buy and sell any security or related financial instrument.

Such an offer will only be made by means of a confidential offering memorandum. This material is confidential and intended solely for the information of the person to whom it has been delivered and may not be distributed in any jurisdiction where such distribution would constitute a violation of applicable law or regulations or to certain categories of investors. Recipients may not reproduce or transmit it, in whole or in part, to third parties. The program described herein is for sophisticated investors or professional clients as the program by its nature involves a substantial degree of risk.

This document is not to be distributed to or relied upon by retail clients under any circumstances. The information in this document does not constitute advice and does not take into consideration your investment objectives, legal, financial or tax situation or particular needs in any other respect. Investors should seek professional advice as to the suitability of the program.

If conflicts exist between this document and the applicable offering memorandum, the offering memorandum takes precedence. Any returns presented may or may not be indicative of the returns of the share class, series, and/or fund offered to you. Commissions and costs have a negative impact on performance. Should the currency of a financial product or service not match your reference currency, performance may rise or fall due to currency fluctuations. Your actual returns may be different and can be determined from the statements sent by the fund's administrator.

Unless otherwise noted, the information used to create information presented was based solely on information collected and retained by the investment manager and is believed to be reliable, but its accuracy cannot be guaranteed. Information used herein may have been obtained from third party sources including affiliates and as such the investment manager makes no representations as to the accuracy of such source or information which is subject to change without notice to the recipient.

Notwithstanding the foregoing, third party funds and managers have neither reviewed nor approved any of the charts, graphs or other materials prepared by UBS Hedge Fund Solutions LLC based on information contributed by such third party funds and managers. If contained in a presentation, the information herein is not intended to be read in isolation and may not provide a full explanation of all of the topics that were presented and discussed.

All such information and opinions are subject to change without notice. Neither this document nor the securities nor any other financial instruments referred to herein have been registered or filed with or approved or disapproved by any regulatory authority of any country or jurisdiction, and no regulatory authority has passed upon or endorsed upon the merits of this product or the accuracy or adequacy of this document.

UBS may have a position in and may make a purchase and/or sale of any of the securities or other financial instruments mentioned in this document. This document may contain statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations. Any market or investment views expressed are not intended to be investment research. Source for all data and charts (if not indicated otherwise): UBS Asset Management, a business division of UBS AG.

The securities offered hereby (if this presentation concerns a Fund) are not deposits or other obligations of UBS or any other Bank, are not endorsed or guaranteed by UBS or any other Bank, are not insured by the Federal Deposit Insurance Corporation (FDIC) or any other Governmental Agency and involve investment risks, including loss of principal invested.

Any losses in the Fund presented herein will be borne solely by investors in the Fund and not by the Investment Manager or its affiliates; therefore, the Investment Manager and its affiliates' losses in the Fund will be limited to losses attributable to the ownership interests in the covered fund held by the investment Manager and its affiliates in their capacity as investors in the Fund.

As an investor, you should read the Fund Documentation Prior to investing in the Fund.

An affiliate of the Investment Manager may serve as the Administrator of the Fund, and the Investment Manager may engage affiliates as Prime Brokers for the Fund. None of these entities will bear any losses for the fund.

Past performance (whether simulated or actual) is not indicative of future results. Potential for profit is accompanied by possibility of loss.

For Switzerland: This document has been issued by UBS AG, a company registered under the Laws of Switzerland, and its affiliates. The following paragraph refers only to fund(s) mentioned in this document, which are distributed in or from Switzerland, which are managed by UBS and/or any of its affiliates and having UBS Fund Management (Switzerland) AG as Representative in Switzerland. Any such fund(s) referenced herein are intended only for Swiss qualified investors pursuant to Art 10.3 of the Collective Investment Schemes Act (CISA) and are not allowed to be distributed to the retail public (i.e. non-qualified investors).

Information for Swiss qualified Investors: Representative in Switzerland is UBS Fund Management (Switzerland) AG, Aeschenplatz 6, 4052 Basel. Paying Agent in Switzerland: UBS Switzerland AG, Bahnhofstrasse 45, 8001 Zürich.

The relevant Legal Fund Documents to this fund (s) are available free of charge from the Representative in Switzerland. Before any investment, please read the latest Legal Fund Documents. The information herein is not intended to be construed as a solicitation or an offer to invest in the fund(s). Past performance is not a reliable indicator of future results. The performance shown does not take account of any commissions and costs charged when subscribing and redeeming. If the currency of the fund(s) is different from your reference currency, the return can increase or decrease as a result of currency fluctuations. This information pays no regard to the specific or future investment objectives, financial or tax situation or particular needs of any specific recipient.

The details and opinions contained in this document are provided by UBS Hedge Fund Solutions LLC without any guarantee or warranty and are for the recipient's personal use and information purposes only. This document and its contents have not been reviewed by any regulatory authority in Switzerland.

For USA: This document has been issued by UBS Hedge Fund Solutions LLC for distribution to professional clients or sophisticated investors only. Funds are offered through UBS Asset Management (US) Inc./UBS Financial Services Inc. (a member of FINRA and SIPC). UBS Hedge Fund Solutions LLC (an investment adviser registered with the US Securities and Exchange Commission) and UBS Financial Services Inc./UBS Asset Management (US) Inc. are indirect wholly-owned subsidiaries of UBS AG.

For UK/Jersey: UBS Asset Management (UK) Ltd is a subsidiary of UBS AG. Registered in England. UBS Asset Management (UK) Ltd and UBS Asset Management Funds Ltd are authorised and regulated by the Financial Conduct Authority. UBS Asset Management Life Ltd is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Telephone calls may be recorded.

This document is for Professional Clients only. It is not to be distributed to or relied upon by Retail Clients under any circumstances. This material supports the presentation(s) given. It is not intended to be read in isolation and may not provide a full explanation of all the topics that were presented and discussed. Care has been taken to ensure the accuracy of the content, but no responsibility is accepted for any errors or omissions. This document is a marketing communication. Any market or investment views expressed are not intended to be investment research. The document has not been prepared in line with the FCA requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. Source for all data and charts (unless otherwise stated): UBS Asset Management

This document does not create any legal or contractual obligation with UBS Asset Management. The recipient agrees that this information shall remain strictly confidential where it relates to the Investment Manager's business. The prior consent of UBS Asset Management (UK) Ltd should be obtained prior to the disclosure of commercially sensitive information to a third party (excluding the professional advisors of the recipient). Information reasonably deemed to be commercially sensitive and obtained from UBS Asset Management (UK) Ltd should not be disclosed. This information is supplied with a reasonable expectation that it will not be made public. If you receive a request under the Freedom of Information Act 2000 for information obtained from UBS Asset Management (UK) Ltd we ask that you consult with us. We also request that any information obtained from UBS Asset Management (UK) Ltd in your possession is destroyed as soon as it is no longer required.

For EMEA: This document has been issued by UBS AG, a company registered under the Laws of Switzerland, and its affiliates. In relation to each member state of the EEA which, at the date of this document, has implemented the Alternative Investment Fund Managers Directive (Directive (2011/61/EU), the "AIFMD"), this document may only be distributed, and shares in the Fund may only be offered or placed, in a member state to the extent that: (i) the Fund is permitted to be marketed to professional investors in the relevant member state (as implemented in the local law/regulation of that member state); or (ii) this document may otherwise be lawfully distributed and/or the Shares in the Fund may otherwise be lawfully offered or placed in that member state (including at the initiative of the investor). In relation to each member state of the EEA which, at the date of this document, has not implemented the AIFMD, this document may only be distributed, and shares in the Fund may only be offered or placed, to the extent that this document may be otherwise lawfully distributed and the shares in the Fund may be lawfully offered or placed in that member state (including at the initiative of the investor).

UBS AG and its affiliates, including, but not limited to UBS Asset Management (UK) Ltd, and any products or services mentioned in this document: (i) have not been approved by or registered with; and (ii) do not fall under the supervision of, the Securities and Commodities Authority of the United Arab Emirates.

For Japan: This document is sent to you, at your request, merely for information purposes only. No invitation or offer to subscribe or purchase securities is made except pursuant to the applicable laws and regulations of Japan, including but not limited to the Financial Instruments and Exchange Act and any other applicable laws, regulations or rules of Japan.

For Hong Kong: This document and its contents have not been reviewed by any regulatory authority in Hong Kong. No person may issue any invitation, advertisement or other document relating to the Interests whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the Interests which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571) and any rules made thereunder. The use of simulated past performance is not permitted in this jurisdiction.

For Singapore: This document has not been registered with the Monetary Authority of Singapore pursuant to the exemptions under Sections 304 and 305 of the SFA. Accordingly, this document may not be circulated or distributed, nor may the Securities be offered or sold, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor pursuant to Section 304 of the SFA, (ii) to an accredited investor or other relevant person, or any person pursuant to Section 305(2) of the SFA, and in accordance with the conditions specified in Section 305 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

For Vietnam: This document does not contemplate an offer to sell the securities in Vietnam and has not been approved by the State Securities Commission of Vietnam which takes no responsibility for its contents. No offer to purchase the securities will be made in Vietnam and this document is intended to be read by the addressees only. Investors should themselves carefully balance the risks and the level of those risks before they make any decision to invest in the securities. Investors are responsible for obtaining all approvals required by the laws of Vietnam.

For Korea: The securities may not be offered, sold and delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the Capital Market and Financial Investment Business Act and the Foreign Exchange Transaction Law of Korea, the presidential decrees and regulations thereunder and any other applicable laws, regulations or rules of Korea. The securities have not been registered with the Financial Services Commission of Korea (FSC) for a public offering in Korea nor has it been registered with the FSC for distribution to non-qualified investors in Korea.

For People's Republic of China: This document and its contents have not been reviewed by, delivered to or registered with any regulatory or other relevant authority in the People's Republic of China (the "PRC"). This document is for informational purposes and should not be construed as an offer or invitation to the public, direct or indirect, to buy or sell securities. This document is intended for limited distribution and only to the extent permitted under applicable laws in the PRC. No representations are made with respect to the eligibility of any recipients of this document to acquire interests in securities under the laws of the PRC.

The securities may not be offered or sold directly or indirectly in the PRC. Neither this document or information contained or incorporated by reference herein relating to the securities, which have not been and will not be submitted to or approved/verified by or registered with the China Securities Regulatory Commission ("CSRC") or other relevant governmental authorities in the PRC pursuant to relevant laws and regulations, may be supplied to the public in the PRC or used in connection with any offer for the subscription or sale of the Securities in the PRC. The Securities may only be offered or sold to the PRC investors that are authorised to engage in the purchase of Securities of the type being offered or sold. PRC investors are responsible for obtaining all relevant government regulatory

approvals/licences, verification and/or registrations themselves, including, but not limited to, any which may be required from the CSRC, the State Administration of Foreign Exchange and/or the China Banking Regulatory Commission, and complying with all relevant PRC regulations, including, but not limited to, all relevant foreign exchange regulations and/or foreign investment regulations.

For Taiwan: This document and its contents have not been reviewed by, delivered to or registered with any regulatory or other relevant authority in the Republic of China (R.O.C.). This document is for informational purposes and should not be construed as an offer or invitation to the public, direct or indirect, to buy or sell securities. This document is intended for limited distribution and only to the extent permitted under applicable laws in the Republic of China (R.O.C.). No representations are made with respect to the eligibility of any recipients of this document to acquire interests in securities under the laws of the Republic of China (R.O.C.).

For Australia: This document has been prepared and issued by UBS Hedge Fund Solutions LLC. UBS Hedge Fund Solutions LLC is an investment adviser registered with the US Securities and Exchange Commission and such is regulated under a regulatory regime that differs from the Australian regulatory regime. UBS Hedge Fund Solutions LLC does not hold an Australian Financial Services Licence and is not authorised and regulated by the Australian Securities and Investments Commission ("ASIC"). UBS Hedge Fund Solutions LLC is permitted to provide financial services to wholesale clients in Australia in reliance on Class Order CO 03/1100 issued by ASIC. This document is intended for limited distribution to professional investors only. It is not to be distributed to or relied upon by retail clients. This document is general information only and does not take into account your objectives, financial situation or needs. Before investing you should seek professional advice. Any investment involves risk UBS Hedge Fund Solutions LLC does not guarantee the performance of any investment.

For Brunei: This document has not been delivered to, licensed or permitted by the Authority as designated under the Brunei Darussalam Mutual Funds Order 2001. Nor has it been registered with the Registrar of Companies. This document is for informational purposes only and does not constitute an invitation or offer to the public. As such it must not be distributed or redistributed to and may not be relied upon or used by any person in Brunei other than the person to whom it is directly communicated, (i) in accordance with the conditions of section 21(3) of the International Business Companies Order 2000, or (ii) whose business or part of whose business is in the buying and selling of shares within the meaning of section 308(4) of the Companies Act Cap. 39.

For Malaysia: This document is sent to you, at your request, merely for information purposes only. No invitation or offer to subscribe or purchase securities is made by UBS Asset Management as the prior approval of the Securities Commission of Malaysia or other regulatory authorities of Malaysia have not been obtained. No prospectus has or will be filed or registered with the Securities Commission of Malaysia.

For Thailand: NOTICE TO RESIDENTS OF THAILAND—the securities will not be offered or sold, directly or indirectly, in Thailand. UBS Asset Management is not licenced to publically offer securities in Thailand. Thai investors must be authorised to engage in the purchase of Securities of the type being offered or sold. Thai investors are responsible for obtaining all relevant government regulatory approvals/licences, consents, verification and/or registrations from relevant Thai governmental and regulatory authorities required to invest in the securities and required for the purposes of remitting any amounts in foreign currencies for the investment.

For Brazil: UBS Hedge Fund Solutions LLC is not accredited with the Brazilian Securities Commission (" CVM") to perform Asset Management Services. The Asset Management Services may not be publicly offered or sold to the public in Brazil. Documents relating to the Asset Management Services as well as the information contained therein may not be supplied to the public in Brazil.

For Canada: Services to Canadian persons for any strategy herein are provided by UBS Asset Management (Canada) Inc., a Nova Scotia corporation and a member of the UBS Asset Management business division of UBS AG, a publicly traded Swiss bank (NYSE: UBS). UBS Asset Management (Canada) Inc. is an indirect wholly-owned subsidiary of UBS AG and is registered as a portfolio manager and exempt market dealer (in all provinces of Canada), commodity trading manager (Ontario), adviser – commodity futures (Manitoba) and investment fund manager (Ontario, Quebec and Newfoundland), all pursuant to Canadian securities law. This document can be distributed in Canada to Accredited Investors who qualify as Permitted Clients only. UBS Hedge Fund Solutions LLC may be considered a connected or related issuer of UBS Asset Management (Canada) Inc. in connection with a distribution of the strategy herein to investors in Canada.

© Copyright UBS 2019. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

The traditional investment approach of equities, bonds and cash is evolving to include alternative investments.

© UBS 2019. All rights reserved.
AMMA-1554 3/19
www.ubs.com/am-us
Expiration: 3/31/20
Review Code: IS1901288

UBS Asset Management (Americas) Inc. is an indirect asset management subsidiary of UBS Group AG.
For professional / institutional / qualified investors only.