

# BREVAN HOWARD MASTER FUND LIMITED ("BHM")

BREVAN HOWARD

Risk Report - As at close of business on 31-May-2019

T +44 (0)20 7022 6250 www.brevanhoward.com

NAV: \$2,481mm

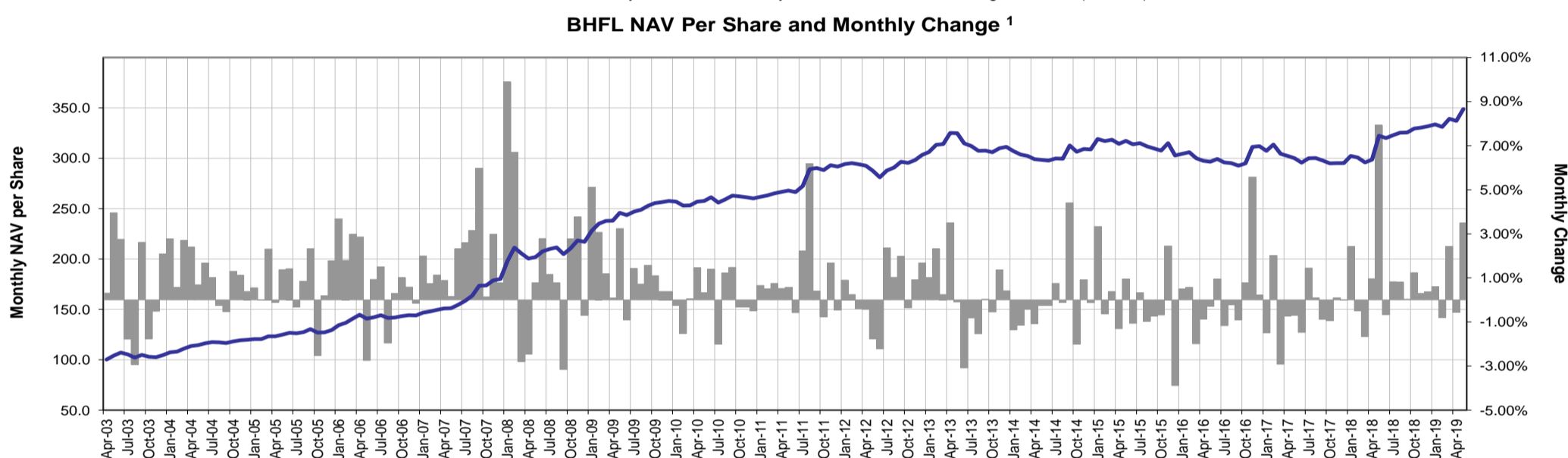
Performance summary

Brevan Howard Fund Limited ("BHFL") USD Class A Shares NAV Per Share % Change <sup>1</sup>													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2003				0.31	3.95	2.75	-1.77	-2.92	2.62	-1.75	-0.51	2.09	4.62
2004	2.76	0.56	2.70	2.41	0.68	1.66	1.01	-0.25	-0.53	1.29	1.11	0.38	14.62
2005	0.56	-0.01	2.31	-0.10	1.37	1.42	-0.31	0.85	2.33	-2.52	0.20	1.77	8.03
2006	3.68	1.79	2.98	2.86	-2.75	0.93	1.50	-1.96	0.30	1.00	0.59	-0.15	11.10
2007	1.99	0.74	1.13	0.89	0.15	2.32	2.60	3.16	5.97	0.15	2.97	0.77	25.21
2008	9.89	6.70	-2.79	-2.46	0.78	2.78	1.16	0.78	-3.16	2.78	3.76	-0.70	20.43
2009	5.11	3.07	1.18	0.09	3.24	-0.90	1.42	0.73	1.57	1.10	0.38	0.39	18.65
2010	-0.25	-1.51	0.05	1.47	0.33	1.39	-2.00	1.22	1.48	-0.32	-0.31	-0.48	1.01
2011	0.66	0.51	0.75	0.52	0.56	-0.57	2.21	6.19	0.40	-0.75	1.68	-0.46	12.15
2012	0.90	0.24	-0.39	-0.43	-1.76	-2.22	2.37	1.03	1.98	-0.36	0.92	1.68	3.93
2013	1.02	2.32	0.25	3.50	-0.09	-3.09	-0.82	-1.54	0.03	-0.54	1.35	0.42	2.68
2014	-1.35	-1.14	-0.43	-1.07	-0.25	-0.24	0.75	-0.12	4.40	-2.00	0.92	-0.12	-0.79
2015	3.33	-0.61	0.38	-1.30	0.95	-1.06	0.33	-0.96	-0.72	-0.68	2.44	-3.88	-1.96
2016	0.50	0.58	-1.98	-0.86	-0.29	0.94	-1.17	-0.20	-0.89	0.78	5.57	0.22	3.03
2017	-1.49	2.01	-2.91	-0.72	-0.70	-1.47	1.44	0.10	-0.88	-0.93	0.10	-0.00	-5.40
2018	2.42	-0.50	-1.65	0.96	7.92	-0.67	0.82	0.80	0.04	1.23	0.29	0.38	12.40
2019	0.60	-0.80	2.42	-0.56	3.49								5.19

Performance Statistics <sup>1</sup>	MTD (%)	QTD (%)	YTD (%)	12M (%)	LTD <sup>2</sup> (%)	ARR <sup>3</sup> (%)	Risk <sup>4</sup> (%)	Sharpe <sup>5</sup> (X)
BHFL USD Class A Shares	3.49	2.91	5.19	8.26	248.91	8.04	5.70	1.13

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS. Data for May 2019 is estimated by Brevan Howard Asset Management LLP ("BHAM").

Performance graph



PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS. Data for May 2019 is estimated by BHAM.

Risk

Securities Leverage (ratio of absolute value of securities (excluding derivatives) to NAV) as at 31 May 2019 0.0

DV01 Summary (Change in Fund NAV for a 0.01% rise in rates)

ccy	3M	2Y	10Y+	Total
EUR	0.00%	0.06%	(0.04%)	0.02%
USD	(0.04%)	(0.14%)	0.01%	(0.17%)
JPY	(0.00%)	0.00%	(0.01%)	(0.01%)
GBP	(0.00%)	(0.02%)	0.00%	(0.02%)
Other	0.00%	(0.02%)	0.01%	(0.01%)
Total	(0.04%)	(0.12%)	(0.02%)	(0.18%)

Historical Simulations (%NAV)

Scenario	Period	Performance
Lehman	15/09/08 - 20/11/08	29.5
European Sovereign Crisis	22/07/11 - 08/08/11	3.0
Taper Tantrum	23/05/13 - 24/06/13	0.9
Jackson Hole Aug 2014	25/08/14 - 30/09/14	0.3
European QE 2015	02/01/15 - 13/03/15	7.7
China 2015	31/07/15 - 30/09/15	2.4
Brexit 2016	23/06/16 - 27/06/16	7.1
Trump Election	07/11/16 - 15/12/16	(4.2)

Net Fx Delta Exposure (% NAV)<sup>6</sup>

Region	Delta
Asia	7%
Europe	(32%)
Other	1%
USD	25%

Other Asset Classes - Net Exposure (% of NAV)<sup>7</sup>

Class	Delta
Equity	(2%)
Commodity	1%
Credit	(2%)

Total IR Vega Exposure (% NAV)<sup>8</sup> 0.35%

Total Fx Vega Exposure (% NAV)<sup>9</sup> 0.35%

Sources:

- Performance Data: Unless otherwise indicated, monthly return data is provided by the fund's administrator, International Fund Services (Ireland) Limited ("IFS"). Performance statistics have been estimated by Brevan Howard Asset Management LLP ("BHAM")

- Risk Exposure Data: BHAM

Notes:

- Performance data is represented by the performance of BHFL Class A USD shares, net of all investment management fees (being (1) from inception until 31 December 2018, 2% annual management fee and 20% performance fee, and (2) from 1 January 2019 onwards, 1.5% annual management fee and 20% performance fee) and all other fees and expenses payable by BHFL and BHM, including an operational services fee payable by BHM of 0.5% per annum.
- Since inception (April 2003).
- ARR: Annualised Rate of Return, since inception.
- Risk: Annualised standard deviation of returns (based on daily data estimated by BHAM), since inception.
- Sharpe: Annualised excess return (over Federal Funds target rate) / annualised standard deviation of excess returns (based on daily data estimated by BHAM), since inception.
- Figures are rounded to the nearest whole number. Therefore in some instances the total may not equal 100% or 0% (as applicable).
- Equity & commodity - net delta; Credit - net iTraxx Xover equivalent for EUR denominated positions, net CDX HY equivalent for all others (beta adjustments estimated by BHAM based on 2 years' risk history). Please note that prior to 31 August 2014, a different methodology for calculating net credit exposure was used.
- Change in BHM NAV for a relative rise of 10% in implied normal yield volatility.
- Change in BHM NAV for an absolute 1% rise in implied volatility.

Note: Brevan Howard measures leverage according to three calculation methodologies: (i) the "Gross Method" (as required under the EU Alternative Investment Fund Managers Directive ("AIFMD")), (ii) the "Commitment Method" (as required under the AIFMD) and (iii) its own leverage calculation methodology (the "Manager's Method"). For further information, please see the BHM AIFMD Leverage Report.

Private and confidential. Not for publication. Please refer to Important Legal Information and Disclaimer at the end of this document.

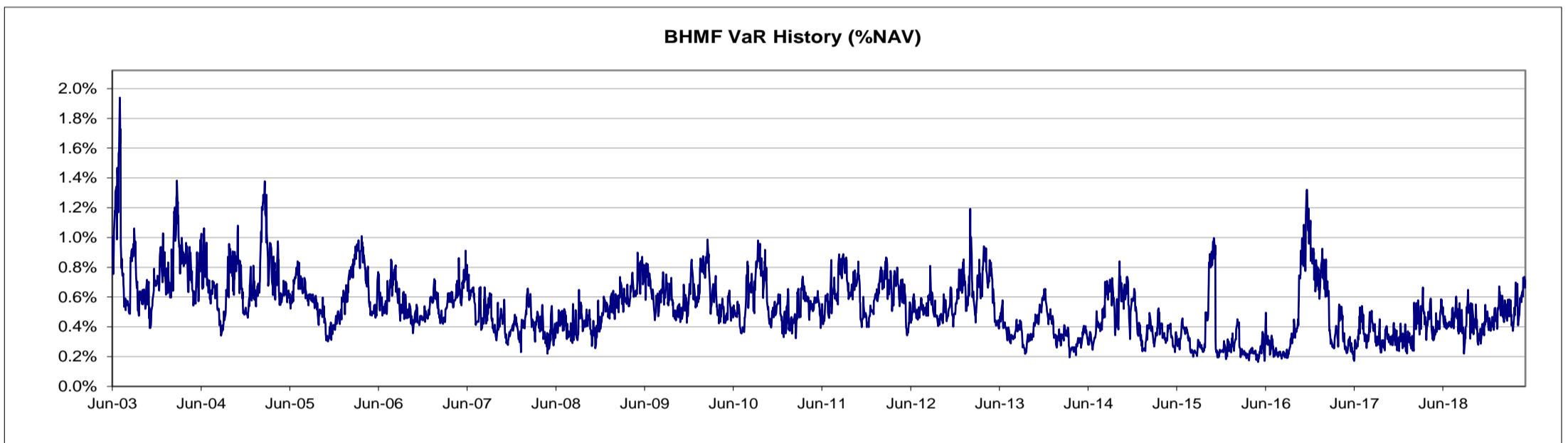
BHM20190531

Value at Risk (% NAV)<sup>1</sup> 0.71

Product	VaR \$mm	%NAV	%Total
IR	14.3	0.58%	63%
Vega	2.4	0.10%	10%
FX	5.0	0.20%	22%
Equity	0.4	0.01%	2%
Com	0.4	0.02%	2%
Credit	0.2	0.01%	1%
<b>Total</b>	<b>17.7</b>	<b>0.71%</b>	<b>100%</b>

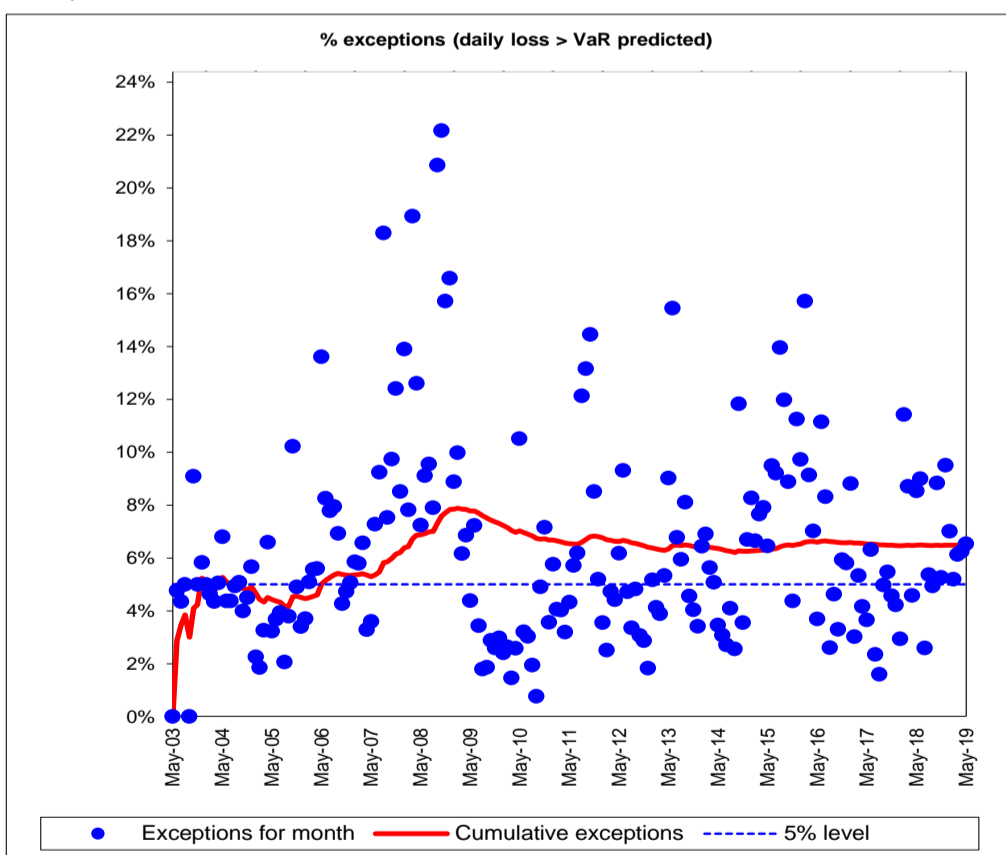
Currency	IR VaR
EUR	0.04%
USD	0.13%
JPY	0.01%
GBP	0.00%

Region	%
Americas	40%
Europe	32%
Asia	9%
Oceania	3%
Africa	1%
Multi-Region	15%
<b>Total</b>	<b>100%</b>



**VaR - Accuracy of VaR Methodology**

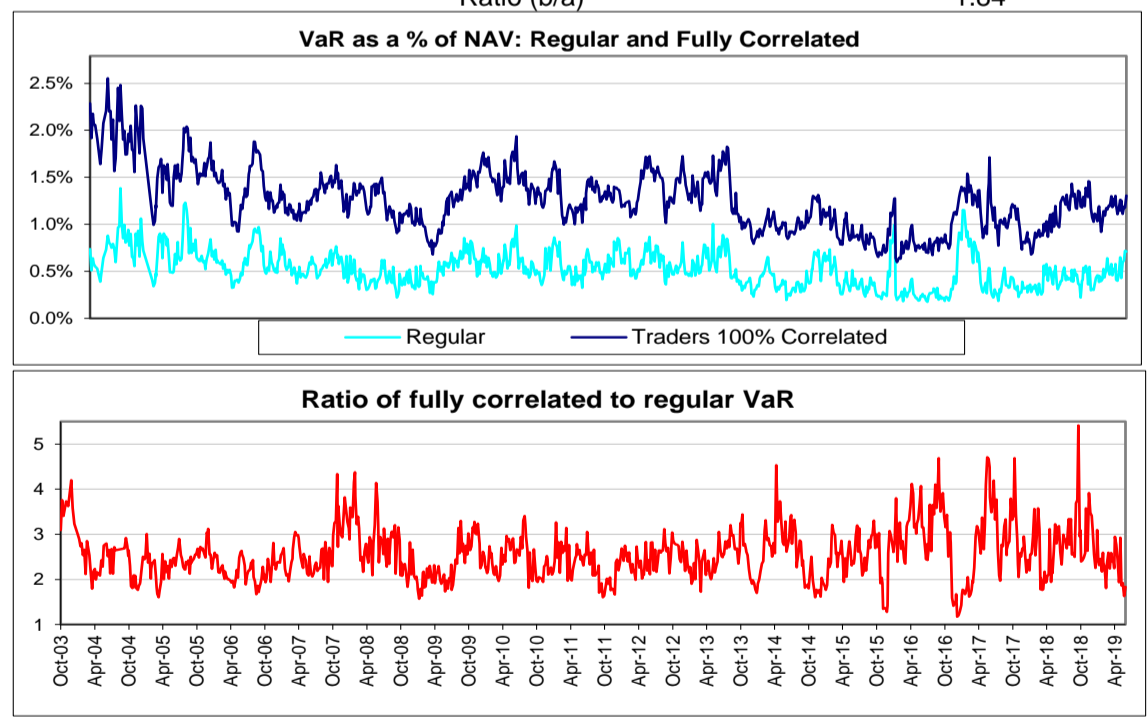
The VaR method is intended to describe the level of loss that would be exceeded no more than 5% of the time. The method uses historical market data from the last 2 years. The graph shows the actual incidence of losses that are greater than the estimated VaR ("VaR Exceptions"). During 2008, exception rate was greater than 5% because actual market moves were much more volatile than the historical data. The selection of different confidence intervals may achieve different results, including a higher incidence of exceptions which exceed the VaR calculation.



**VaR - Reliance on beneficial correlation among Traders**

The VaR of BHM takes account of beneficially low correlations among traders. To account for situations where these correlations change sharply BHM calculates the VaR assuming all traders are 100% correlated.

At 31 May 2019  
 BHM VaR (a) 0.71%  
 Sum of trader VaR's (b) 1.31%  
 Ratio (b/a) 1.84



**Notes:**  
 1. Calculated using historical simulation based on a 1 day, 95% confidence interval.  
 2. IR risks may exist for currencies other than those listed.  
 3. Geographical Exposure is based on VaR by region.  
 4. Figures are rounded to the nearest whole number. Therefore in some instances the total may not equal 100% or 0% (as applicable).  
 Source : Underlying data provided by the Administrator, IFS. Information derived using software provided by Murex and RiskMetrics

## Important Legal Information and Disclaimer

This document has been prepared by, and is being communicated outside the United States of America and Hong Kong by, Brevan Howard Asset Management LLP ("BHAM"). BHAM is authorised and regulated by the Financial Conduct Authority of the United Kingdom (the "FCA"). This document relates to the fund or funds referred to herein (each, a "Fund" and collectively the "Funds"), which are or will be managed by Brevan Howard Capital Management LP ("BHCM"). BHCM, BHAM and each of their affiliates are collectively referred to in this document as "Brevan Howard". The investment strategies described herein may involve one or more entities which are part of the Brevan Howard group of companies and certain of the functions described herein may be performed by employees of affiliates of BHAM.

This document has been provided specifically for the use of the intended recipient only and must be treated as proprietary and confidential. It may not be passed on, nor reproduced in any form, in whole or in part, under any circumstances without express prior written consent from Brevan Howard. Without limitation to the foregoing, any text and statistical data or any portion thereof contained in this document may not be permanently stored in a computer, published, rewritten for broadcast or publication or redistributed in any medium, except with the express prior written permission of Brevan Howard.

This document is provided for information purposes only and does not constitute an invitation, solicitation or offer to subscribe for or purchase any of the investments, products or services mentioned herein, nor shall it, or the fact of its distribution or communication, form the basis of, or be relied on in connection with any contract. This document is not intended to constitute, nor should it be construed as, investment advice. Potential investors in any investments, products or services referred to in this document or to which this document relates should seek their own independent financial, legal and taxation advice. Any offer to invest in a Fund may only be made on the basis of the relevant approved prospectus or offering memorandum relating to that Fund, which must be received and reviewed prior to any investment decision and which may contain information which is different from the information and opinions contained in this document. This document is not intended to provide a sufficient basis on which to make any investment decision.

Any estimated net asset values contained in this document are based on unaudited estimated valuations compiled by Brevan Howard. Final month-end net asset values are determined by the relevant Fund's administrator and may be materially different from any estimated valuation. Any estimates may be subject to error and significant fluctuation, especially during periods of high market volatility or disruption. Any estimates should be taken as indicative values only and no reliance should be placed on them. Estimated results, performance or achievements may differ materially from any actual results, performance or achievements.

The information, data and opinions contained in this document are for background purposes only, are not purported to be full or complete and no reliance should be placed on them. Brevan Howard believes (but has not necessarily verified) that the sources of the information, data and opinions contained in this document are reliable. Brevan Howard gives no guarantee, representation, warranty or undertaking, either express or implied, regarding and accepts no liability, responsibility or duty of care for, the accuracy, validity, timeliness or completeness of any such information, data or opinion (whether prepared by Brevan Howard or by any third party) or that it is suitable for any particular purpose or use or it will be free from error. To the extent that any further information, data or material is provided in relation to the investments, products or services referred to herein, no representation is made that any such further information, data or material will be calculated or produced on the same basis, or in the same format, as contained in this document. No obligation is undertaken to update any information, data or material contained herein.

Certain information contained in this document may be "forward-looking statements", which can be identified by the use of forward-looking terminology such as "may", "will", "should", "expect", "anticipate", "project", "estimate", "intend", "continue", "target", "believe", the negatives thereof, other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events, results or performance may differ materially from those reflected or contemplated in such forward-looking statements.

This document is only being made available to, and the investments (including in relation to the Funds), products and services referred to herein are only available to, such persons and in such jurisdictions and in such manner as is compliant with applicable laws and regulations (including, without limitation, relevant laws and regulations relating to the promotion, offering and provision of such investments, products and services). The information herein should not be relied or acted on by any other person or in any other circumstances.

In relation to member states of the European Economic Area ("EEA") that have implemented the EU Directive on Alternative Investment Fund Managers (Directive (2011/61/EU)) ("AIFMD"), interests in the Funds will only be offered or sold to investors in any such member state to the extent that the relevant Fund: (i) is permitted to be marketed into the relevant member state pursuant to Article 42 of the AIFMD (as implemented into applicable local law); or (ii) where any marketing, offer and sale of interests of the Fund occurs exclusively at the initiative of the relevant investor.

Interests in the Funds have not been and will not be registered under any securities laws of the United States of America or any of its territories or possessions or areas subject to its jurisdiction, and may not be offered for sale or sold to nationals or residents thereof except pursuant to an exemption from the registration requirements of the U.S. Securities Act of 1933, as amended (the "Securities Act"), and any applicable state laws. This document is only being provided to United States persons who are "accredited investors" as defined in Regulation D under the Securities Act and "qualified purchasers" as defined in the U.S. Investment Company Act of 1940, as amended, and the rules promulgated thereunder. The Funds and any other investments, products or services described in this document are only available to such persons.

The information contained herein has not been provided in a fiduciary capacity, and it is not intended to be, and should not be considered as, impartial investment advice.

In the United States, this document is communicated by Brevan Howard US LLC, a Delaware limited liability company, which acts as non-exclusive placement agent with respect to the sale of interests to certain investors in the Funds, and may provide such investors with marketing and other materials on behalf of Brevan Howard and the Funds. Brevan Howard US LLC is registered as a broker-dealer under the U.S. Securities Exchange Act of 1934, as amended, and under various state securities laws, and is a member of the Financial Industry Regulatory Authority, Inc.

In the United Kingdom, this document is directed only at, and made available only to, professional clients and eligible counterparties (as defined in the FCA Handbook). This material is not intended for use by, or directed at, retail customers (as defined in the FCA Handbook). BHAM neither provides investment advice to, nor receives and transmits orders from, investors in any Funds nor does it carry on any other activities with or for such investors that constitute "MiFID or equivalent third country business" (as defined in the FCA Handbook).

Persons in Australia should note that (a) each of BHAM and Brevan Howard (Hong Kong) Limited ("BHHK") is exempt from the requirement to hold an Australian financial services licence under the Australian Corporations Act 2001; (b) BHAM is authorised and regulated by the FCA under UK laws and BHHK is licensed and regulated by the Securities and Futures Commission under Hong Kong laws, each of which differ from Australian laws; and (c) any views expressed, or financial product advice provided, by a representative of BHAM or BHHK is made on behalf of BHAM or BHHK, as appropriate, only and no other Brevan Howard group entity.

In Hong Kong, this document is directed only at, and made available only to, professional investors as defined in the Securities and Futures Ordinance (Cap. 571, the laws of Hong Kong, "the Ordinance") and its subsidiary legislation. The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to any offer. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. This document has not been registered by the Registrar of Companies in Hong Kong. The Funds are collective investment schemes as defined in the Ordinance but have not been authorised by the Securities and Futures Commission pursuant to the Ordinance. Accordingly, shares in the Funds may only be offered or sold in Hong Kong to persons who are "professional investors" as defined in the Ordinance and any rules made under the Ordinance or in circumstances which are permitted under the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32, the laws of Hong Kong) and the Ordinance. In addition, this document may not be issued or possessed for the purposes of issue, whether in Hong Kong or elsewhere, and shares in the Funds may not be disposed of to any person unless such person is outside Hong Kong, such person is a "professional investor" as defined in the Ordinance and any rules made under the Ordinance or as otherwise may be permitted by the Ordinance. BHHK is licensed for Type 9 (asset management) regulated activities by the Securities and Futures Commission with central entity number AKO483.

The securities described in this document are offered only in those provinces and territories of Canada in which they may be lawfully offered for sale and only to accredited investors or other purchasers exempt from the prospectus requirement and only by a registered dealer or person exempt from the dealer registration requirement permitted to sell these securities in the relevant province or territory.

In Switzerland, this document is only being provided to Qualified Investors (as defined under applicable law and regulations). It sets out the proposal for a fund which has not yet been launched. Any fund features and proposed investment activities described in this document are subject to change. This document is designed to provide some preliminary information about the proposed fund, is for the sole and exclusive use of persons to whom it is addressed or provided, and may not be passed on to any other person. After the launch of the Fund, it is proposed that the Swiss Representative and Paying Agent of the Fund will be Société Générale, Paris, Zurich Branch, Talacker 50, P.O. Box 5070, 8021 Zurich.

Shares of the Fund may in particular not be distributed or marketed in any way to German retail investors if the Fund is not admitted for distribution to this investor category by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht).

This document has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of Shares/Interests may not be circulated or distributed, nor may Shares/Interests be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor pursuant to Section 304 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") or (ii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

#### Additional information

The investment programmes of the Funds are speculative and will entail substantial risks. Interests may be subject to sudden and large falls in price or value and there could be a large loss on realisation which could equal the amount invested. As there is no recognised market for the interests, it may be difficult for an investor to see or realise the interests or to obtain reliable information about their value or the extent of the risks to which they are exposed. Changes in interest rates or exchange rates may have an adverse effect on the value, price or income of the interests. References to future returns are not promises or even estimates of actual returns an investor may achieve. Any forecasts and other material contained herein are for illustrative purposes only and are not to be relied upon as advice or interpreted as a recommendation. BHAM and its affiliates give no representations, warranties or undertakings that any indicative performance or return will be achieved in the future or that the investment objectives and policies from time to time of the Funds will be met. Past performance is no guarantee and is not indicative of future results. The information herein reflects prevailing conditions and BHAM's judgements as at this date, all of which are subject to change. The portfolio characteristics and risk controls set forth are not static and may change over time. BHAM does not represent that the statistics, investment guidelines, capital allocation and limits disclosed herein will remain constant over time. The portfolio risk management process includes an effort to monitor and manage risk, but should not be confused with and does not imply low risk.

Brevan Howard understands the importance of maintaining market integrity and confidence in financial markets and has outlined its commitment and approach to the prevention of market abuse in the Brevan Howard Compliance Manual.

Brevan Howard has established a risk management framework which is intended to identify, measure, monitor, report, and where appropriate, mitigate key risks identified by the Funds' investment managers. Amongst other things, the risk management framework addresses portfolio risks (such as market, credit, liquidity, counterparty and funding risks), operational risks and outsourcing risks.

Portfolio risks which are monitored by the risk management team include, as at the date hereof, analysis of sensitivity measures, gross and net exposures, value at risk, leverage, stress tests and scenario analyses, with a view to identifying and mitigating the potential impact of extreme market movements. These analyses may be changed from time to time. Brevan Howard believes its risk management framework to be appropriate but gives no warranty as to the adequacy or sufficiency of this framework, or that it is exhaustive or able to address the entire universe of possible risks to which an investment manager or the Funds may be subject.

## Risk Factors

Acquiring an investment in a Fund or any of the other products or services described herein may expose an investor to a significant risk of losing all or a substantial amount of the amount invested. Any person who is in any doubt about investing in a Fund or any of the other products or services described herein should consult an authorised person specialising in advising on such investments, products or services. Any person making an investment in a Fund must be able to bear the risks involved, which include, besides such other risks as may be described in any prospectus or offering memorandum for the relevant Fund, the following:

- The Funds are speculative and involve substantial risk and may have limited, or no, operating history.
- The Funds will be leveraged and will engage in speculative investment practices that may increase the risk of investment loss.
- The Funds will invest in illiquid and volatile securities.
- Investments in the Funds are subject to restrictions on transfer, withdrawal and redemption and should be considered illiquid.
- As there is no recognised market for interests in the Funds (and no secondary markets are expected to develop), it may be difficult for an investor to realise its investment or to obtain reliable information about its value or the extent of the risks to which an investor is exposed through its investment.
- Past results of the Funds' investment managers are not necessarily indicative of future performance of the Funds, and the Funds' performance may be volatile.
- While the Funds are subject to market risks common to other types of investments, including market volatility, the Funds employ certain trading techniques, such as the use of leverage and other speculative investment practices that may increase the risk of investment loss.
- The investment managers have total investment and trading authority over the Funds, and the Funds are dependent upon the services of the investment managers. The use of a single advisor could mean lack of diversification and, consequently, higher risk.
- The Funds are not required to provide periodic pricing or valuation information to investors with respect to individual investments.
- The Funds are not subject to the same regulatory requirements as mutual funds or other regulated fund products.
- The Funds and their managers are subject to conflicts of interest.
- Changes in interest rates or exchange rates may have an adverse effect on the value, price or income of interests in the Funds.
- A portion of the trades executed for the Funds may take place on markets outside the United States and the United Kingdom.
- The Funds are dependent on the services of certain key personnel, and if certain or all of them were to become unavailable, the Funds may prematurely terminate.
- The Funds' managers will receive performance-based compensation, which may give such managers an incentive to make riskier investments than they otherwise would and may offset the Funds' trading profits.
- The Funds' incentive and performance-based compensation, fees and expenses may offset their trading and investment profits.
- The Funds may involve complex tax structures and there may be delays in the provision of important tax information to investors.
- Returns generated from an investment in a Fund may not adequately compensate investors for the business and financial risks assumed.
- The Funds may make investments in securities of issuers in emerging markets. Investment in emerging markets involves particular risks, such as less strict market regulation, increased likelihood of severe inflation, unstable currencies, war, expropriation of property, limitations on foreign investments, increased market volatility, less favourable or unstable tax provisions, illiquid markets and social and political upheaval.

The above summary risk factors do not purport to be a complete description of the relevant risks of an investment in the Funds and therefore reference should be had to the prospectus or offering documents of the Funds and related offering documentation for a more detailed description of these and other relevant risks prior to making any investment.