

Hedge Funds in Crisis

Lessons Learned from the 2007-2009 Market Meltdown and Prescriptions for Restoring Investor Trust

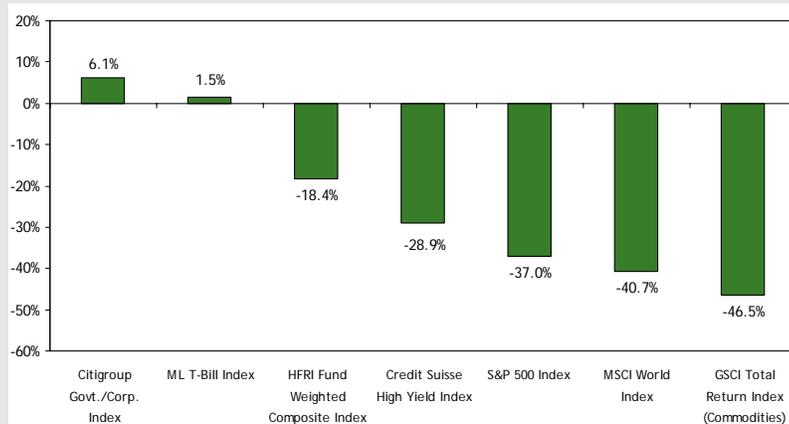
February 2009

BLACKROCK

Hedge funds and hedge funds of funds (HFoF) have disappointed investors in 2008, leading to a crisis of confidence in fund managers and the industry at large. Investor trust has been further eroded by the magnitude and duration of the Madoff fraud. A portion of this disappointment can be attributed to the financial crisis and the devastation it has wrought upon financial firms of all types. In its wake, some have concluded that the hedge fund model is irreparably broken. We think otherwise and believe enduring attributes of hedge funds and an evolving landscape of less competition will benefit the survivors in pursuit of attractive risk-adjusted returns in the years ahead. Still, the crisis has revealed weaknesses in the hedge fund industry that must now be addressed for the industry to regain the trust of the investor community.

Some of the problems have quietly persisted for years, but growth and indifference caused them to be overlooked and prevented resolution. Unrealistic expectations have been shaped by aggressive marketing and the intoxicant of past performance (e.g., the Madoff track record). Other issues derived from the structure or nuance of certain hedge fund investment terms have only recently drawn attention. As the debate continues on the nature of these deficiencies, it is evident to us that a number of changes can yield meaningful improvements in the management of hedge fund assets. In the pages that follow, we highlight what we perceive to be the more significant flaws in the hedge fund business model, remedies that we believe could repair the industry's damaged reputation and reasons why hedge fund and HFoF strategies remain compelling in 2009 and beyond.

2008 Global Sector Returns



Source: Bloomberg; Hedge Fund Research, Inc.

Asset-liability mismatching. As liquidity retreated across markets, a large number of hedge funds and HFoFs experienced asset/liability mismatches. In the case of HFoFs (which represent almost half of industry assets), many had offered liquidity terms to investors that in periods of financial stress could not reasonably be expected to be met from underlying investment portfolios. This mismatch was encouraged by the elevation of the offering document's stipulated normal liquidity terms as a primary selection criterion for investors comparing competing HFoFs. Liquidity terms were often the deciding factor with the chosen fund having the most frequent redemption schedule. This provided an incentive to HFoF managers to offer levels of liquidity that were

About BlackRock

BlackRock is a premier provider of global investment management, risk management, and advisory services. As of 31 December 2008, the firm manages US\$1.31 trillion across equity, fixed income, real estate, liquidity, and alternative strategies. Clients include corporate, public, and union pension plans, insurance companies, mutual funds, endowments, foundations, charities, corporations, official institutions, and individuals worldwide.

Through BlackRock Solutions[®], the firm offers risk management and advisory services that combine capital markets expertise with proprietary-developed systems and technology. BlackRock Solutions provides risk management and enterprise investment services for US\$7 trillion in assets.

BlackRock serves clients in North and South America, Europe, Asia, Australia, Africa, and the Middle East. Headquartered in New York, the firm maintains offices in 22 countries around the world.

Copyright © 2009 BlackRock. All Rights Reserved.

The opinions expressed are as of 5 February 2009 and are subject to change at any time as conditions vary.

For Institutional Use and Professional Investors Only

less likely to withstand a stressed liquidity environment. Recent announcements by several prominent HFOFs that they would extend notice periods or redemption frequencies provide an indication of the nature of mismatching that has escaped notice for a long period of time.

While the extent of illiquidity that has frozen the industry was unforeseeable, some HFOF imbalances prevented them from meeting even small redemptions. The industry situation has been exacerbated by some endowments and pension plans that had come to rely on hedge fund allocations (either direct or through a HFOF) as a primary source of liquidity to fund private equity commitments. Many hedge funds have their most significant redemptions from this latter category of institutional investors.

Going forward, there is bound to be a greater appreciation for both the paucity of liquidity that can grip the capital markets in extreme circumstances and the potential for misalignment. Thoughtful investors will better assess the liquidity of hedge fund portfolios and adjust assumptions accordingly.

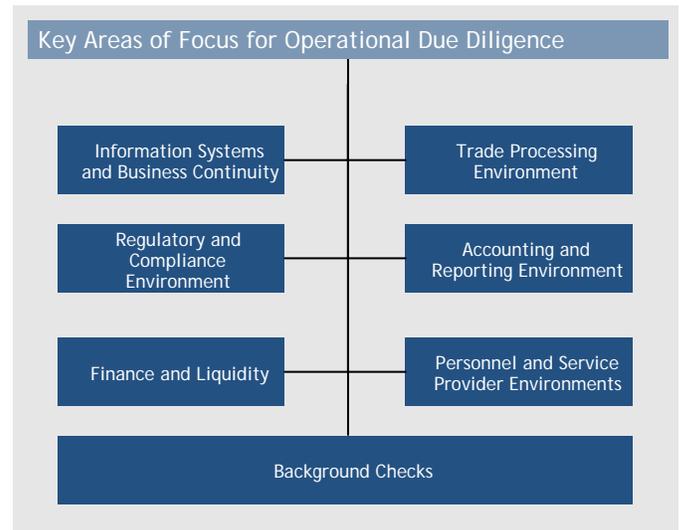
Game theory and redemptions. Given the inter-connectedness of investors in commingled funds, one investor's decision can have an impact, often negative, on the other investors. For instance, many hedge funds incorporate a fund-level gate to protect from a "run on the fund." While the concept is compelling in theory, it has failed miserably in practice, in particular with "stacked gates." In a stacked gate, an investor queue is recorded for purposes of making redemption payments. If redemptions are less than the gate, all investors are paid according to their request. If requests exceed the gate, the queue is rolled to the following redemption date and those in the queue take priority over all subsequent redeemers. As concerns mount about fund liquidity, all investors have incentives to enter full redemptions, thereby saving a place in line with the highest possible payout—a prime example of the prisoner's dilemma (a problem in game theory whereby acting in one's strict self-interest can result in a sub-optimal collective result). Even without a gate, one investor can be adversely affected by the actions of another. For example, investors may be concerned that the cash payment to redeemers would leave an unreasonably high proportion of illiquid assets; if this concern is deep, continuing investors might submit a full or partial "protective" redemption to nullify this effect.

Whether it stems from a stacked gate or the simple nature of a commingled fund, hedge fund investors can be adversely affected by other investors and must speculate about what those other investors' actions might be when making their own decisions. Generally, game theory would suggest an investor enter much higher levels of redemptions than they would otherwise prefer. In the future, we expect hedge funds to convert to investor level gates (whereby limitations on withdrawal apply on an investor-specific basis) and to take on more separate accounts

Insufficient due diligence. The alleged Madoff fraud has ramifications for our industry and the general integrity of the capital markets. Many investors, especially high net worth investors, seemingly relied on a cursory level of due diligence in deciding whether to invest with Madoff. Many appear to have relied upon the infamous "cocktail recommendation" or were seduced by Madoff's unusually stable track record and by his reputation as an industry leader. Some investors may have placed undue reliance on the fact that Madoff was an

SEC-registered investment adviser as a proxy for their own investigation of his integrity. Others trusted "professionals" that directed some or all of their investment to Madoff. Such professionals either failed to disclose their Madoff dealings or professed to understand the Madoff trading strategy. In return for their perceived understanding and due diligence, they were richly rewarded (with as much as a 1% or higher management fee and in some cases up to a 20% performance fee). Unfortunately, this reward system created a crippling conflict of interest. To put this in perspective, Fairfield Greenwich, one of the largest investors, reportedly earned more than \$200 million in annual fees for channeling investors to Madoff.

Going forward, we expect those considering investing in hedge funds will do so only after significant due diligence has been completed by a competent, well-resourced, non-conflicted organization. In some cases, an institutional investor will build out its own expansive and experienced team such as the leading endowments have done. In other cases, an investor will select a consultant or hedge fund of funds to oversee this vital task. Gone will be the reliance upon one or two individuals informed by industry conferences and cocktail chatter. In their place will be a serious due diligence function staffed by individuals with requisite investment, risk-management, operations, accounting and legal expertise.



Excessive leverage and shifting counterparty arrangements. Hedge funds have relied upon bank counterparties for, among other services, leverage and custody of assets. These counterparties have failed to adequately provide these services during this period of crisis. In a desperate act of self-preservation, banks imposed severe deleveraging requirements upon hedge funds at a time of extreme illiquidity and plunging asset prices. The banks' own balance sheet problems trumped all other standards and precedents of behavior toward their hedge fund clients. Escalating margin requirements and predatory practices were oft-cited contributors to hedge fund woes. This observation does not exempt hedge funds themselves, as many entered this period of stress with, in hindsight, excess leverage.

Already, hedge funds rely much less significantly on bank-provided leverage. Going forward, hedge funds will likely reduce their dependency on bank financing even further. In general, the dramatic increase in spread and distressed opportunities should allow hedge funds to achieve their target returns with little to no leverage in many cases. Additionally, we expect much of the bank-dependent investment strategies, including those that use

credit default swaps, will migrate toward exchanges such as the Chicago Mercantile Exchange where there is deep liquidity, transparency and a reduction in counterparty risk. Such a move will restore a tremendously important element of the hedge fund investment model—liquidity.

Regarding custody, the Lehman bankruptcy underscored the inability of investment banks to safeguard the assets of their hedge fund clients. The spotlight focused on this corner of the

capital markets when Lehman's UK broker-dealer devolved into chaos while the US broker-dealer continued to operate during its parent's bankruptcy, thus allowing for more-or-less orderly resolution of its trading arrangements. The rehypothecation of custodied assets at Lehman's UK broker-dealer, coupled with the forced cessation of operations with the declaration of the parent's insolvency, crippled many hedge funds. The UK has recognized the insufficiency of such procedures and now is actively seeking redress through promulgation of new policies.

The Importance of Due Diligence: Perspectives on Bernard Madoff

The shocking scope and depth of Bernard Madoff's apparent fraud raises puzzling questions about the effectiveness of regulators. It has also served to sharpen investor focus on the paramount importance of due diligence.

Three senior professionals at BlackRock Alternative Advisors independently evaluated Madoff's program at various points over a fifteen year period from the early 1990s and each separately decided not to invest. While the existence or extent of Madoff's alleged fraud was unknown at the time, several apparent concerns supported a decision to pass on the investment. These issues are outlined below.

Absence of a credible auditor. Auditors are trusted throughout the commercial sector to opine on the fairness of financial statements, including the statements of hedge funds. Unfortunately, an auditor can be an accomplice to a fraud as one might reasonably surmise was the case with Madoff. (The infamous Friebling & Horowitz were operating out of a house in the mid-90s when we conducted our review.) Reputable auditing firms with substantial infrastructure and defined procedures are more likely to detect the malfeasance of a rogue individual within their ranks and less likely to risk their business by knowingly assisting in fraudulent activity. However, sole proprietors or poorly resourced auditing partnerships may lack these attributes and their risk of ruin may not offset the potential rewards from illicit activity.

Given the recent focus on independent administrators, we feel it is important to distinguish the role of the auditor and administrator. The auditor is responsible for examining and opining upon the integrity of financial statements. An administrator may have responsibility for many support functions that can underpin the integrity of the financial statements, regardless of their independence. Administrators commonly maintain the fund registry and provide for investor communications for offshore funds. For US-domiciled limited partnerships, there is often no administrator. Even if a fund has an administrator, they may or may not provide independent valuation services. Factors such as whether the administrator has undergone independent third-party review by a qualified auditor is often more relevant. All third-party service providers bear close scrutiny as part of a robust due diligence process.

A highly irregular business model. Although the media has frequently characterized Madoff's investment program as a hedge fund, he did not manage or operate any funds and did not charge a typical hedge fund fee (i.e., 1-2% management fee and 20% performance fee). Instead, Madoff relied heavily

on third parties to set up feeder funds with hedge fund-like fees, which in turn established a brokerage account and gave him discretionary authority to trade the account, paying brokerage commissions for his "services." Why would Madoff allow others to earn the lion's share of fees from returns he generated? No self-respecting investment professional with an iota of an ego would allow this to occur. This structure was not only unusual, it was also ultimately conducive to the perpetuation of fraud. A reliance on feeder funds further served to hold the majority of investors at arms length, without direct access to conduct meaningful due diligence. The sponsors of the feeders could earn literally hundreds of millions of dollars on the back of Madoff, resulting in a crippling conflict of interest in the execution of their fiduciary responsibilities.

An unknown (or implausible) investment strategy. Madoff revealed very little about the details of his investment program. Pinning him down for a meeting was in itself a challenging task. When able to finally meet, in our experience he had trouble answering basic questions about the number of accounts or assets managed. The dearth of detail available apart from past performance made it extraordinarily difficult to gain a fundamental understanding of how he made money. The simplified explanation of his investment method—split strike conversions—was a dubious method of making money in a highly efficient options market. The only real way of generating the returns that Madoff reported would have been to know the short-term direction of a particular stock's price. In fact, there were widely circulated theories through the 1990s and early 2000s that Madoff was front-running his brokerage clients for the benefit of his investment clients (see for example "Madoff top charts; skeptics ask how" in the May 2001 issue of *MAR/Hedge*.) However, if one knew the future direction of a stock's price, it would be simpler and more profitable to just buy or sell the stock.

There were other signs that came to light after we decided to pass, such as the utter inadequacy of resources. In January 2008, the firm's ADV filed with the SEC indicated fewer than five employees devoted to the investment advisory business, despite having \$17 billion under management as disclosed on the very same form. The whole Madoff affair is an unpleasant chapter in the history of the financial markets. Increasing professionalism and higher standards should help prevent a reoccurrence.

No BlackRock-managed fund or investment product invested with any funds advised by Bernard Madoff, or any feeder funds, nor did any trading relationship exist. Further, we are not aware of any indirect exposure to any Madoff funds.

Misalignment of incentive fees. As hedge funds exploited less-liquid investment opportunities and sought to build long-term stability in their investment organizations, many have increased the lock-up requirements for investors, adopted side-pocket policies, decreased the frequency of redemptions, imposed gates and/or extended redemption notice periods. While these measures are helpful in aligning the liquidity of assets and liabilities, managers often failed to take them into account when structuring their remuneration. With respect to material private or hard to value assets, managers face an inherent conflict as they assess the fees to pay themselves. Further, if investors are allowed to enter and exit a fund with material private or hard to value assets, inequities might arise among new, continuing, and redeeming shareholders.

Going forward, managers should charge incentive fees on private hard-to-value assets only on realized results. Side-pockets or similar mechanisms should be used if the hedge fund includes private investments as part of its mandate. The adoption of such measures would better align manager and investor interests and reduce potential inequities among shareholders.

Opacity of fundamental hedge fund risks. Hedge fund reporting has taken significant steps forward in recent years. Nevertheless, the industry can improve its disclosures so that investors can make more informed decisions as to whether to invest or redeem. In some cases, this may entail position-level disclosures; however, it is likely to be more meaningful to provide reports that articulate basic risks of hedge fund portfolios, such as leverage, liquidity, diversification, exposure to asset types, credit ratings and exposure to geographies among other potential measures. This routine provision of quantitative and qualitative information would help to convey the risks inherent in hedge fund investing. Going forward, we believe leading hedge funds will develop systems of communication that inform investors while protecting against the leakage of proprietary information.

Hidden beta. Long/short equity hedge funds comprise over half the population of the hedge fund universe and are a significant component of HFoF and other institutional portfolios. The upward trending market over the last several years disguised for the value added by many hedge funds, especially long-biased long/short equity managers. While some investors understand and accept beta in long/short portfolios, those that sought beta-free investment programs were unpleasantly surprised by the high degree of correlation to primary markets manifested in many hedge funds.

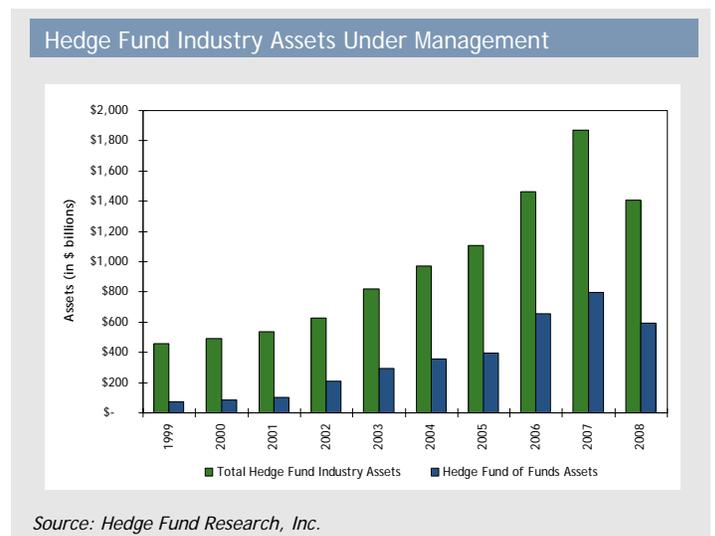
As a result, we expect increased attention paid to hidden beta. Unfortunately, the task of attributing performance between causal and spurious factors is quite difficult. For example, a manager might have lost money in a distressed investment due to a court ruling. If this coincided with a decline in the market, an investor might incorrectly infer a causal link based on this correlation. Moreover, when there is wholesale de-risking and de-leveraging, the concurrent reduction of liquidity can adversely impact the pricing of equity and debt that also negatively affects hedge funds (and can lead to higher correlation). As technical pressures abate and markets stabilize over time, security pricing will be increasingly driven by more fundamental factors and correlations will also likely normalize. Looking forward, we anticipate that investors in hedge funds will likely attempt to select hedge funds with lower prospective betas while recognizing differences between causal and spurious forms of empirical beta.

Regulatory gaps. From a regulatory perspective, hedge fund woes pale in comparison to problems facing banks, insurance companies and other financial institutions. However, hedge funds' position as the scapegoat for many of the capital markets failings will focus attention on the industry in the months ahead. There are many sensible initiatives that would raise the caliber and professionalism of the industry. Two areas of interest for regulators are financial stability and investor protection.

Concerning financial stability, regulators are likely to focus on the banking system and impose greater limits on the use of risk capital and leverage. This may have a secondary impact on hedge funds by reducing the leverage available to pursue their strategies. In our view, such limits, if they come to pass, will have a muted impact on hedge funds as most strategies use responsible amounts of leverage that would not raise the ire of banks and regulators. A few highly levered strategies may have restricted access and the cost of financing will increase, but given the current and likely future dislocations, these restrictions should not be greatly limiting.

With regard to investor protection, we believe it is time to recognize the graduation of hedge funds from a cottage industry to a full-fledged member of the institutional investment community. We would welcome a rule to require US hedge funds to register (as in the UK) and adopt best practices. Some hedge funds may operate with greater care in the execution of their fiduciary responsibilities if subjected to periodic examination by the SEC. Regulatory reform may also lead to discussion of short-selling and, in particular, the merits of requiring public disclosure of positions sold short. In our view, regulators should stop short of imposing such public disclosure rules. Disclosure to a regulator should be sufficient to police the markets.

Contraction and consolidation. The financial crisis has accelerated a winnowing of weakened hedge funds and is driving a movement for consolidation. The amount of assets invested in hedge funds, HFoFs, and proprietary trading desks that employ similar strategies declined substantially in the latter half of 2008. The contraction of the industry stands in stark contrast to prior periods when we observed almost no barriers to enter the hedge fund business. Firms whose expense run-rate is out of proportion to their asset base will have a difficult time surviving. Medium-sized firms that have geared their expenses in anticipation of significant growth are likely to feel the most squeezed. Going forward, survivors will face less competition for investment opportunities.



One clear implication of 2008 for those investing in hedge funds is the need for resources and scale. Hedge fund strategies are complex, heterogeneous and require an enormous breadth of coverage. In this pursuit, some investors (including HFOFs) will be better positioned than others. We believe organizations that can draw upon large and experienced teams plus integrated systems and processes to analyze large volumes of data will have a clear advantage. A multi-faceted and comprehensive risk management system is another essential feature of any robust hedge fund investment program. In light of Madoff and other hedge fund failings, it will be extremely difficult to justify an investment into a hedge fund where extensive due diligence was not performed or where ongoing monitoring and risk management is not being conducted.

Exaggerated investment expectations. Years of strong capital flows into the hedge fund industry combined with a benign environment served to modify investors' perception of hedge fund risk. The banks' increasing proprietary risk capital acted to further stabilize asset price volatility and inject liquidity into the markets. In a Special Report written in August 2005, the ten-year anniversary of the legacy Quellos (now BlackRock Alternative Advisors) investment program, we noted such factors in reducing our forecasted level of volatility for our core HFOF strategies. Notwithstanding this change, some investors took umbrage with the fact that our empirical results were demonstrably lower than our forecast. In our view, the low risk exhibited by the industry lulled investors into extrapolating that experience when developing asset class expectations. While no one predicted the degree of difficulty that visited the financial industry, many hedge fund investors expected less downside risk than that which materialized in 2008, hence their disappointment.

Hedge fund risk was not the only risk mis-estimated by investors. The thought of losing 40% on equity investments was well beyond investor expectations. The slowly surfacing realization of the troubles in private equity and the potential effects of inflation on bond portfolios are other risk factors likely to surpass investor expectations. Thus, while hedge funds failed to meet expectations, they were not alone in this regard.

Going forward, the greater risk is that investors will overestimate the risk in hedge fund portfolios as compared to the fundamental reality that hedge funds will be operating with significantly less leverage and substantially less competition.

Given these circumstances, we believe it is more likely that hedge fund investments will surpass expectations.

In light of the tumultuous events of 2008 and various factors discussed above, one might conclude that hedge funds no longer merit inclusion in an institutional portfolio. We believe otherwise. Although the financial crisis has revealed flaws in the hedge fund model, it has also created opportunities, increased unlevered return potential and lessened competition for many strategies. More importantly, while much has changed in the financial landscape, this crisis has not altered or diminished the essential and differentiating attributes of hedge funds. For instance, there remains continuity in the sources of return for skilled hedge fund managers that seek to exploit potential mispricings in less efficient segments of the capital markets. The factors that give rise to market inefficiencies—complexity, poorly-informed market participants, lopsided incentives, discriminatory government policies, and regulatory constraints—are unlikely to disappear anytime soon and some may become more pronounced in the period ahead.

Furthermore, hedge funds retain a competitive advantage relative to other market participants given their flexibility to take advantage of a wide universe of assets and financial instruments, both long and short across the capital structure. Their returns are not dependent upon rising earnings and low/stable inflation as is the case with traditional stock and bond investments. They will still attract some of the sharpest minds in the investment business despite the near-term lack of incentive fees. Moreover, many hedge fund strategies emphasize idiosyncratic sources of risk, which are meaningfully different from those of a direct or long-only investment in primary markets. We believe a well-diversified allocation to hedge funds can continue to add diversification and reduce risk within an overall portfolio context.

Finally, we have heard certain individuals cite the Madoff fraud as sufficient reason to avoid hedge fund investing. We do not ascribe to that view (nor do we consider Madoff a hedge fund). Such sweeping generalizations would lead one to avoid stock and bond investments because the fraud at Enron destroyed the value of those securities. Clearly there is potential for fraud in all forms of commerce. The compelling attributes of hedge funds will persist or, in our view, will be strengthened in the years ahead. Investors equipped to conduct in-depth due diligence and risk management either directly or through hedge funds of funds will have a distinct advantage in this environment.

This material is not intended to be relied upon as a forecast, research or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. The opinions expressed are as of 5 February 2009 and may change as subsequent conditions vary. The information and opinions contained in this material are derived from proprietary and non-proprietary sources deemed by BlackRock to be reliable, are not necessarily all inclusive and are not guaranteed as to accuracy. There is no guarantee that any forecasts made will come to pass. Any investments named within this material may not necessarily be held in any accounts managed by BlackRock. Reliance upon information in this material is at the sole discretion of the reader. Index performance is shown for illustrative purposes only. It is not possible to invest directly in an index.

Hedge funds often engage in leveraging and other speculative investment practices that may increase the risk of investment loss; can be highly illiquid; may not be required to provide periodic pricing or valuation information to investors; may involve complex tax structures and delays in distributing important tax information; are not subject to the same regulatory requirements as mutual funds; and often charge high fees.

For distribution in EMEA and Korea for Professional Investors only. This material is being distributed/issued in Canada, Australia and New Zealand by BlackRock Financial Management, Inc. ("BFM"), which is registered as an International Advisor with the Ontario Securities Commission. In addition, BFM is a United States domiciled entity and is exempted under Australian CO 03/1100 from the requirement to hold an Australian Financial Services License and is regulated by the Securities and Exchange Commission under U.S. laws which differ from Australian laws. BFM believes that the information in this document is correct at the time of compilation, but no warranty of accuracy or reliability is given and no responsibility arising in any other way for errors and omissions (including responsibility to any person by reason of negligence) is accepted by BFM, its officers, employees or agents. This document contains general information only and is not intended to represent general or specific investment advice. The information does not take into account your financial circumstances. An assessment should be made as to whether the information is appropriate for you having regard to your objectives, financial situation and needs.