



Responsible Investing Overview

January 2023

Philosophy

Our research focuses on identifying, testing, and incorporating investment signals into our quantitative return and risk models. We understand that environmental, social, and corporate governance (ESG) considerations can impact businesses' profitability and sustainability of earnings, in addition to the risks associated with their securities.

While we do not believe that stocks with desirable ESG characteristics will systematically outperform, ESG characteristics may be incorporated into our forecasting model along with other characteristics of a stock.

In 2016, we became a signatory to the Principles for Responsible Investment ("PRI") demonstrating our recognition of the importance of these issues.

We have a Responsible Investing Committee, which is comprised of our Chief Investment Officer and senior members of Portfolio Management, Research, Legal, and Business Development / Client Relationship Management, that meets quarterly to discuss our approach to various ESG-related matters, both in our investment process and in our reporting.

Investment Process

We incorporate what we believe to be the best investment insights into our clients' portfolios with the objective to manage conflicts of interest and deliver sustainable alpha on a risk-controlled basis. Consistent with this objective, all alpha and risk signals, including those associated with ESG information, are evaluated in a systematic and rigorous manner prior to inclusion in our process. We have found that some of our existing expected return signals are correlated with ESG measures. The most conspicuous examples are our quality signals, which tend to be somewhat correlated with the "G" component of ESG. Additionally, we include signals derived from ESG and carbon information in our risk model.

When directed to do so by clients, we can also employ exclusionary screens, group restrictions, continuous penalties, ESG-tilted benchmarks, or a combination of these approaches to accommodate a variety of responsible investment considerations. We believe that we have developed effective tools to allow for the inclusion of these additional considerations with the lowest cost to the other investment considerations, and we manage a number of portfolios that use these approaches to help satisfy clients' ESG-related objectives.

Stewardship

We have retained Institutional Shareholder Services (ISS), a leading proxy service provider, to provide proxy voting services. Standard proxy voting policies (which we typically subscribe to) take into account certain ESG-related matters. In addition, upon request, we can implement enhanced ESG-specific voting policies with respect to the securities held in a client's account.

Engagement activities are fully outsourced through Sustainalytics, offering an established, standardized and systematic global engagement program. The engagement framework is incident and compliance based, addressing offenses of international norms and standards involving the following issues: labor, environment, business ethics and human rights. Reporting from Sustainalytics regarding their engagement activities is available.



Reporting

We are generally able to support reporting requests on a broad range of responsible investment topics, including the ESG score and carbon footprint of the portfolio as well as reporting relating to the Task Force on Climate Related Financial Disclosures (TCFD). Recognizing the growing importance of the Sustainable Finance Disclosure Regulation (SFDR) and related reporting, we recently expanded our reporting capabilities to accommodate portfolio level assessments to Principal Adverse Indicators (PAI). Lastly, further to our partnership with Sustainalytics, we offer robust reporting connected to ongoing engagement activities.

Continued Commitment to Research

One of our core beliefs is that active management is an intrinsically dynamic activity, and we continually reinvest in research, including research related to ESG concepts and characteristics. To this end, we recognize that the risks and return potential related to ESG issues change and evolve over time. To identify potential return or risk implications associated with ESG information, we are therefore committed to considering ESG-related signals as well as related third-party academic research.



Risk Disclosures

All investment strategies have the potential for profit or loss. Past performance may not be indicative of future results. It should not be assumed that the future performance of any specific investment or investment strategy (including those described herein), will be profitable or equal to past performance levels. Changes in investment strategies, investable assets, or contributions or withdrawals may materially alter the performance and results of a client's portfolio.

Economic factors and market conditions will affect the performance of any portfolio and there are no assurances that it will match or outperform any particular benchmark. Different types of investments involve varying degrees of risk, and there can be no assurance that any specific investment will be profitable for a client's portfolio.

Our equity investment strategies involve the risks of investing in equities and currencies (which may include entering contracts over the counter) globally. In addition, our alpha extension strategies and long/short strategy involve the risk of shorting equities and leverage.

We actively manage our client assets and therefore the performance of a portfolio will reflect, in part, our ability to make investment decisions that seek to achieve a given strategy's investment objectives. Due to the active management, a portfolio could underperform the target benchmark and/or investment mandates with similar investment objectives.

We use proprietary quantitative models in our investment process. While we expect these models to perform as expected, deviation between model predictions and the actual events can result in either no advantage or in results opposite to those desired by us and our clients. In particular, these models draw from historical data that may not predict future returns, volatilities, correlations or market performance adequately. In addition, market conditions may be such that they are outside of the confidence level employed by the models. There can be no assurances that the models behave as expected. An error in the coding of data or formulas within the models could be magnified by the model and may be difficult to detect. While we maintain internal controls and human oversight of our investment models, no guarantee or warranty can be provided that any quantitative investment model is or will be completely free of errors. Any such errors could have a negative impact on investment results.

Unexpected market turbulence or unanticipated extraneous events could also cause the actual results to fall outside of the range predicted from the models' forecasts.

Applying an investment strategy that orients a portfolio on the basis of ESG characteristics carries the risk that the portfolio may underperform funds that do not pursue an investment strategy with this constraint. Applying ESG-related factors to investment decisions is qualitative and subjective by nature, and there is no guarantee that the criteria utilized in incorporating such factors or any judgment exercised will reflect the beliefs or values of any particular investor.

Our equity strategies invest in equity securities of companies with varying market capitalizations. Investment in companies with relatively small market capitalizations generally involve greater risk and price volatility than investment in larger, more established companies, and the equity securities of such companies are typically less liquid than larger capitalization companies.

Where investment in an Arrowstreet Sponsored Fund is contemplated, please refer to the corresponding fund's offering materials for further details on risks specific to such fund.

Important Information and Legal Disclosures

These materials are being provided by Arrowstreet Capital, Limited Partnership (we, us, our, Arrowstreet), or on its behalf by Arrowstreet Capital Europe Limited (Arrowstreet Europe), as a general overview of the firm and its investment advisory services, strategies and capabilities, as applicable. These materials are solely for the benefit of select, qualified institutional investors for educational, informational and discussion purposes only. References to "Arrowstreet" or the "firm" and the other information provided herein (e.g. assets under management, representative clients, investment philosophy) refer to Arrowstreet Capital, Limited Partnership unless otherwise noted.

Arrowstreet is a registered investment adviser with the United States Securities and Exchange Commission (SEC), and as a Commodity Trading Advisor and Commodity Pool Operator with the U.S. Commodity Futures Trading Commission (CFTC) and is a member of the National Futures Association (NFA), an industry self-regulatory organization. Arrowstreet is also registered as a Portfolio Manager and Exempt Market Dealer under with the Ontario Securities Commission and other relevant provincial authorities and is an appointed corporate authorized representative (Number: 001282039) of Evolution Trustees Limited (ACN: 611 839 519, AFSL: 486217), authorized for the purposes of the Corporations Act 2001 (Cth) (Corporations Act) to provide certain financial services to wholesale clients in Australia. Arrowstreet Europe is registered in England, company number 07233286 and is authorized and regulated in the United Kingdom by the Financial Conduct Authority. Registration as an investment adviser under applicable SEC rules and regulations (or registration or licensing with any other regulatory authority) does not imply any level of skill or training. The information included herein has not been approved or verified by the SEC or by any other U.S. or foreign securities authority. Any representation to the contrary is unlawful in the U.S. Arrowstreet's principal office is located at 200 Clarendon Street, 30th Floor, Boston, Massachusetts 02116, United States. Arrowstreet Europe's registered office is Nova North, 11 Bressenden Place, London SW1E 5BY. EEA/UK residents/persons present within the EEA/UK - Please review the Arrowstreet privacy notice, which can be found here: <https://www.arrowstreetcapital.com/privacy/>.

These materials are being provided on a confidential basis and are not intended for public use or distribution. All information contained in these materials is proprietary and confidential. These materials may not be copied, reproduced, republished, posted, transmitted, disclosed, distributed or disseminated, in whole or in part, in any way without our prior written consent or as required by applicable law.



These materials are not intended as an offer, solicitation or recommendation for the purchase or sale of any security, financial instrument, investment product or service, nor do they constitute investment advice to buy or sell any particular security, financial instrument, investment product or service. Any such offer would only be made pursuant to the relevant offering documents, the terms of which shall govern in all respects.

No securities commission or regulatory authority in the United States or in any other country has in any way passed upon the merits of Arrowstreet's investment advisory services or the accuracy or adequacy of the information or material contained herein or otherwise. This information is not, and under no circumstances is to be construed as, a prospectus, a public offering, or an offering memorandum as defined under applicable securities legislation. The information contained herein does not set forth all of the terms, conditions and risks of an investment. Prospective investors are advised to consult with their own independent advisors, including tax advisors.

To the extent these materials constitute a financial promotion in the UK, such promotion is directed exclusively at persons who are professional clients or eligible counterparties for the purposes of the FCA Conduct of Business Sourcebook (COBS) and consequently the services or instruments that may be referred to in these materials are only available for use by such persons. No other person should act upon or rely on this communication.

These materials contain general information only, do not contain any personal advice and do not take into account any prospective investor's objectives, financial situation or needs. These materials do not constitute a prospectus, product disclosure statement, or other disclosure document, and will not be lodged with ASIC. Any potential invitation to acquire financial products will be an offer that does not need disclosure under section 708 of the Corporations Act or Part 7.9 of the Corporations Act. These materials are intended to be provided only to sophisticated investors, wholesale clients, and professional investors to whom disclosure is not required to be made under the Corporations Act (Recipients). By retaining these materials, the Recipient represents that the Recipient is a sophisticated investor as referred to in section 708(8)(a) of the Corporations Act, a wholesale client under section 761G of the Corporations Act, and/or a professional investor under section 9 of the Corporations Act. These materials are not to be distributed to, or disclosed to, retail clients.

These materials may include references to specific securities or financial instruments and such references are for illustrative purposes only and are not intended as investment advice or an endorsement of any particular stock, region or sector. We may have already bought or sold, or may in the future buy and sell, such securities or financial instruments on behalf of our clients. Such securities or financial instruments do not represent all of the securities or instruments that we may trade in on behalf of clients. There can be no assurance that an investment in the securities of these issuers or other financial instruments mentioned herein, or in any actual investment recommendation we make, has been or will be profitable.

These materials contain information that have been developed by us and/or obtained from publicly available documents or other sources considered by us to be reliable. We make no representation or warranty, express or implied, as to the information's accuracy or completeness. Links to third-party websites (if any) do not imply any endorsement by the third party of these materials; nor do they imply any endorsement by this firm of the third-party website or of the link. Information contained on third party websites is not reviewed for accuracy and Arrowstreet assumes no liability for the information contained on these websites.

These materials include statements or other information that may constitute "forward-looking statements" for purposes of applicable securities laws. Forward looking statements include, but are not limited to, statements that refer to targets, expectations, projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. Such statements are based in part on current market conditions, which will fluctuate and may be superseded by subsequent market events or other factors. Forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause the statements made herein to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Factors which could cause actual results to differ materially from those anticipated include, but are not limited to: competitive and general business, economic, market and political conditions in the United States and abroad from those expected; changes in the legal, regulatory and legislative environments in the markets in which our firm operates; and the ability of our management team to effectively implement certain strategies. Undue reliance should not be placed on these forward-looking statements. Unless otherwise provided herein, the information presented in these materials reflects our views as of the date this information is being provided to the recipient and not as of any other date. Arrowstreet undertakes no duty to update the information provided herein to reflect events or circumstances after the date they were made, whether as a result of new information, future events or otherwise.

These materials should not be construed as legal, accounting or tax advice, nor is it intended to replace the advice of a qualified attorney, accountant or tax advisor. Wherever the potential for profit exists, there is also the potential for loss. Accordingly, there can be no guarantee that any investment strategy or product will produce the intended results or achieve its investment objective. Past performance is not necessarily indicative of future results. There can be no assurance that any investment strategy will be able to make investments similar to those made in prior periods. The ultimate returns realized by the application of any investment strategy will depend on numerous factors that are subject to uncertainty. Accordingly, there can be no assurance that any return objectives will actually be realized.

Copyright © 2023 Arrowstreet Capital, Limited Partnership. All rights reserved.