TWO SIGMA INVESTMENTS, LP

March 31, 2023

This brochure provides information about the qualifications and business practices of Two Sigma Investments, LP (the "Adviser"). If you have any questions about the contents of this brochure, please contact the Adviser at (212) 625-5700. The information in this brochure has not been approved or verified by the United States Securities and Exchange Commission (the "SEC") or by any state securities authority.

Additional information about the Adviser also is available on the SEC's website at www.adviserinfo.sec.gov.

The Adviser is registered with the SEC as an investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act"). Registration with the SEC or with any state securities authority does not imply a certain level of skill or training.

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Important Note about this Brochure

This brochure is not:

- An offer or agreement to provide advisory services to any person;
- An offer to sell interests (or a solicitation of an offer to purchase interests) in any fund; or
- A complete discussion of the features, risks or conflicts associated with any fund or advisory service.

As required by the Advisers Act, the Adviser provides this brochure to current and prospective Clients (as defined herein) and may also, in its discretion, provide this brochure to current or prospective investors in a Client that is a fund managed by the Adviser, together with other relevant offering documents, such as such a fund's offering memorandum, prior to, or in connection with, such persons' investment in such a fund. The delivery of this brochure to an investor or prospective investor in a Client is not an acknowledgement that the investor or prospective investor is a Client under the Advisers Act or that there is any direct client relationship with the Adviser.

Additionally, this brochure is available through the SEC's Investment Adviser Public Disclosure website. Although this publicly available brochure describes investment advisory services and products of the Adviser, persons who receive this brochure (whether or not from the Adviser) should be aware that it is designed solely to provide information about the Adviser as necessary to respond to certain disclosure obligations under the Advisers Act. As such, the information in this brochure differs from information provided in relevant offering documents. More complete information about each product managed by the Adviser is included in relevant offering documents, certain of which will be provided only to current and eligible prospective investors by the Adviser. To the extent that there is any apparent conflict between discussions herein and similar or related discussions in any offering documents, the relevant offering documents shall govern and control.

Item 3. Table of Contents

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Item 4. Advisory Business

The Adviser is an investment adviser with its principal place of business in New York, New York. The Adviser commenced operations as an investment adviser in April 2002 and has been registered with the SEC since August 21, 2009. Two Sigma Management, LLC is the general partner of the Adviser. Trusts established by John A. Overdeck and David M. Siegel are the principal owners of the Adviser.

The Adviser provides advisory services on a discretionary basis to its clients, which include various private investment funds, consisting of both commingled vehicles (including employees' securities companies) and funds of one, as discussed in Item 7 of this brochure. Such private investment funds to which the Adviser provides advisory services are referred to herein collectively as "Clients" and each, as a "Client." The Adviser and its affiliates are referred to herein collectively as "Two Sigma Affiliates."

The Adviser specializes in process-driven, systematic investment management, generally by performing quantitative analysis to build mathematical strategies that rely on patterns inferred from historical prices and other data in evaluating prospective investments. These strategies are implemented by employing various risk management, investment, optimization and execution techniques (collectively, the "Techniques"). In addition to systematic strategies and Techniques, the Adviser utilizes certain non-systematic and/or discretionary strategies and Techniques often based, at least in part, on quantitative analysis. In certain cases, the Adviser expects to rely primarily or solely on human discretion, including for the purpose of pursuing what are viewed by its investment professionals as opportunistic trade ideas or discretionary strategies.

The Adviser uses these strategies and Techniques to provide advisory services with respect to a broad range of securities and financial instruments, which include or may include, without limitation, U.S. and non-U.S. equity and equity-related securities, bonds and other fixed income securities (including, without limitation, corporate, convertible, agency, non-U.S. and U.S. municipality, treasury and insurance-linked bonds and other fixed income instruments), exchange traded products (including exchange traded products on equity or sector indices), debt instruments, FX, futures, currency contracts, futures options, spot trades, forward contracts, warrants, options (both listed and over-the-counter ("OTC") including, without limitation, caps and floors), SPACs, repurchase agreements, reverse repurchase agreements, swaps (of any and all types including, among other things, equity swaps, commodity swaps, interest rate swaps, variance swaps, correlation swaps, currency swaps, credit default swaps and indices thereof, futures look-alike swaps and real estate swaps), convertible instruments, inflation protection instruments, mortgage and asset-backed instruments (including collateralized loan obligations), swaptions, foreign exchange contracts (including options, forwards and non-deliverable forward contracts), commodities, derivatives on virtual currencies and/or other digital assets, U.S. and non-U.S. money market funds and money market instruments (including, but not limited to, treasury and agency securities, municipal notes, commercial paper, time deposits, promissory notes and Eurodollar deposits), insurance-linked securities and any derivatives or financial instruments which exist now or are hereafter created (collectively, "Instruments").

The Adviser provides advisory services to Clients based on specific investment objectives, mandates, guidelines, risk parameters and constraints (collectively, the "Mandates") set forth in each Client's offering memorandum, investment management agreement and/or governing documents. Other than the restrictions set forth therein, Clients have broad Mandates and may not impose restrictions on investing in certain securities or certain types of securities. Offering memoranda are made available to investors only through the Adviser or another authorized party.

As of December 31, 2022, the Adviser had approximately $70,802,799,201 of regulatory assets under management, all on a discretionary basis.

Item 5. Fees & Compensation

Asset-Based Compensation

The substantial majority of Clients pay the Adviser management fees for its management services (the "Management Fees") through a deduction by the Client's custodian of such Management Fees from the Client's account under the Adviser's instructions. The Management Fees are typically based on the Client's assets under management and are determined based on an annualized rate. Currently, such fees have annualized rates of up to 4%, as described in each such Client's applicable offering memorandum (though, as noted below, such rates could be higher or lower for certain investors in Clients). The Management Fees are generally payable monthly in advance as of the first day of each month.

The Adviser has waived, reduced and/or modified the Management Fees for certain investors in Clients and may do so in the future. Similarly, the Adviser (and/or its affiliate, as applicable) has substituted the Management Fees in whole or in part with incentive allocations or incentive fees as agreed with investors in Clients and may do so in the future.

Performance-Based Compensation

The Adviser's affiliate also receives performance-based compensation, which is compensation that is based on a share of capital gains or capital appreciation of the assets of a Client. Specifically, Two Sigma Principals, LLC, an affiliate of the Adviser, as the general partner, member, allocation shareholder (or similar entity), as applicable, of many Clients, is entitled to receive an incentive allocation (the "Incentive Allocation") from such Clients in amounts currently ranging generally from 20% to 30% of the net profits, if any, allocated to each investor in such Clients for each calendar or fiscal quarter or year, as applicable (and in certain cases, greater amounts depending on Client performance); provided that certain Clients have Incentive Allocations taken at higher or lower rates for certain investors in such Clients. In addition, the Incentive Allocations are generally subject to adjustment for any previously unrecovered net losses allocated to each investor in prior periods, subject to certain other adjustments and provisions. The Incentive Allocations are deducted from Client accounts following instructions by the Adviser.

Two Sigma Principals, LLC has waived, reduced and/or modified the performance-based compensation for certain investors in Clients and may do so in the future.

Other Fees and Expenses

In addition to paying investment management fees and/or performance-based compensation to the Adviser (or an affiliate of the Adviser), Clients typically are responsible for their own operating and investment expenses including, but not limited to: fees, costs and out-of-pocket expenses incurred in connection with the formation of a Client; fees and expenses of any advisers and consultants to the Client; external legal, auditing, accounting, administration, registered office, trustee, tax return preparation and other professional fees and expenses; fees and expenses of the Client's directors, where applicable, including the costs associated with meetings; fees and expenses of the Client's administrator; out-of-pocket costs of the Client's reporting to regulatory authorities; taxes, fees and governmental charges or filing fees (including foreign marketing registration and filing fees and expenses); fees and expenses of prime brokers, futures commission merchants, dealers, custodians, sub-custodians, transfer agents and registrars; expenses of registering or qualifying securities and other investments; brokerage commissions and dealer collateral and other fees, charges, payments and expenses and other costs of trading, acquiring, monitoring or disposing of any investments of the Client (including, for the avoidance of doubt, exchange membership fees and expenses related to trading, acquiring, monitoring or disposing of any investments in preparation for an inflow or outflow of capital); research expenses, including fees and expenses of any third-party research, data, recommendations and/or services used by the Adviser in its investment decision-making process (*e.g.*, in connection with the use, implementation and support of alpha capture systems and/or any other contributor platforms, including those developed by third parties, the Adviser and/or its affiliates); fees and expenses of valuation and/or pricing services and software; interest expenses; expenses of preparing and distributing reports, financial statements and notices to investors in the Client; litigation and other extraordinary expenses; certain insurance expenses (including fees for directors' and officers' liability insurance); and other expenses as detailed in the Client's offering memorandum, investment management agreement or other governing document, as applicable. Where applicable, Clients also pay their pro rata share of the expenses of the underlying investment vehicles in which they directly or indirectly invest.

Please refer to Item 8 of this brochure for further discussion of conflicts of interest with respect to Client expenses. Please refer to Item 12 of this brochure for further discussion of the Adviser's brokerage practices, including the use of soft dollars to pay for research.

Item 6. Performance-Based Fees & Side-by-Side Management

Investment Services to Multiple Clients

The Adviser and its investment personnel provide investment management services to multiple Clients that are charged asset-based fees and/or performance-based compensation.

Certain Clients (and certain clients of Two Sigma Affiliates) have higher asset-based fees and/or performance-based compensation arrangements than other Clients. In addition, certain Clients utilize a higher degree of leverage than other Clients. Because the Adviser and its investment personnel manage more than one Client, the potential exists for one Client to be favored over another Client. The Adviser and its investment personnel have a greater incentive to favor Clients that pay the Adviser (and indirectly its personnel) higher performance-based compensation or higher asset-based fees and/or use a higher degree of leverage.

In addition, certain Two Sigma Affiliates including the Adviser (as well as their respective principals and certain personnel and their estate planning vehicles) invest in a number of Clients. Certain of such Clients utilize a higher degree of leverage than other Clients, including Clients offered to outside investors. In some cases, such Clients also utilize certain investment strategies and Techniques that are generally not offered to outside investors (as described in more detail below). Because of the varying fee structures and leverage levels, and due to the allocation of proprietary capital from certain Two Sigma Affiliates including the Adviser (and/or their respective principals and certain personnel), the potential exists for one Client to be favored over another Client. The Adviser and its personnel have a greater incentive to favor Clients and/or Two Sigma Affiliates that contain more proprietary capital, since those Clients are expected to provide Two Sigma Affiliates (as well as their respective principals and certain personnel) with a greater return on their investment.

Certain Conflicts of Interest Associated with Side-By-Side Management

There are additional actual and potential conflicts of interest inherent in the organizational structure and operation of the Adviser and its affiliates, certain of which are described below. The discussion below does not purport to be a comprehensive discussion of all of the conflicts of interest associated with the Adviser and an investment in any Client. Each Client's offering memorandum or other disclosure or governing document, as applicable, contains additional information with respect to the actual and potential conflicts associated with an investment in such Client (as applicable).

General

The Two Sigma Affiliates (as well as their respective principals and certain personnel) engage in a wide range of investment and other financial activities, many of which are not offered to Clients (or investors therein). The Adviser manages various private investment funds, including funds that are primarily or entirely owned, directly or indirectly, by principals and employees of the Adviser and its affiliates ("Proprietary Trading Vehicles"). The Proprietary Trading Vehicles often have the most attractive risk-reward profiles and, in certain cases, utilize strategies and Techniques that have not been made available to other Clients of the Adviser and/or clients of the Adviser's affiliates.

As Two Sigma Affiliates (and the assets they manage or advise) grow and/or evolve, Two Sigma Affiliates will continue to seek to balance the following challenges: (i) a desire to increase the amount of proprietary capital invested; (ii) an increasingly diverse and numerous investor base; (iii) greater variation in the Mandates and fee structures of Clients and other clients managed or advised by Two Sigma Affiliates; (iv) a shifting regulatory landscape; (v) managing a larger and more diverse set of strategies and Techniques; and (vi) maintaining a more diverse and profitable set of businesses through the Two Sigma Affiliates. The Two Sigma Affiliates are not and cannot be free from inherent conflicts of interest in balancing these and related considerations. The Adviser anticipates that the activities of Two Sigma Affiliates will continue to lead to increased competition (including, but not limited to, trading competition) between and among the Clients and clients of the Adviser's affiliates. Such competition will decrease the number of investment opportunities and strategies, as well as finite resources, available to the Clients and clients of the Adviser's affiliates, as well as result in increased transaction costs incurred by Clients and clients of the Adviser's affiliates that utilize the same or similar underlying strategies.

Shared Research Platform

The Adviser maintains a research and data platform that serves both its proprietary and Client-focused investment and other financial activities (including its licensing activities), as opposed to separately staffed teams for every portfolio (the "Shared Research Platform"). In addition, research and portfolio management personnel develop and make improvements to strategies and Techniques (often via computerized algorithms) that are deployed (i) for proprietary capital and/or Two Sigma Affiliates alongside Clients and TSA clients, (ii) exclusively for Proprietary Trading Vehicles and/or Two Sigma Affiliates, or (iii) exclusively for certain Clients and/or certain TSA clients. While the Adviser sets broad research objectives, employees working on its Shared Research Platform are afforded significant independence and have a potential conflict of interest to focus more heavily on research efforts that are more likely to result in benefits to employee investment vehicles, employee deferred compensation arrangements and other employee benefits that are tied to certain portfolios and/or business lines of Two Sigma Affiliates. Research developed and/or utilized on the Shared Research Platform could be based on a particular portfolio managed by a Two Sigma Affiliate or on a representative portfolio, and, in many cases, is not tailored to each of the specific portfolios in which it is implemented, which could result in suboptimal results in such portfolios.

The Adviser retains full discretion to share, license, select, move or exclude strategies and Techniques across Clients and to Two Sigma Affiliates (in each case, whether or not developed and/or utilized on the Shared Research Platform).

Investors should be aware that the utilization of the Shared Research Platform creates conflicts of interest within the Adviser and among the Two Sigma Affiliates, and that the continued expansion of the size and number of the Adviser's and its affiliates' portfolios and their participation in other investment and financial activities will only increase the magnitude and complexity of these conflicts. Similarly, the Adviser's sharing of strategies, Techniques, personnel, technology and trading infrastructure with Two Sigma Affiliates, will likely exacerbate existing conflicts of interest within the Adviser and among the Two Sigma Affiliates.

Finally, notwithstanding the fact that the Adviser generally maintains the Shared Research Platform that serves both its proprietary and client-focused activities, portfolios and trading strategies that are more reliant on human discretion than systematic processes can and do rely on research and/or trading ideas developed by dedicated personnel for their respective portfolios. While such research and/or trading ideas may be shared with other personnel of the Adviser and its affiliates from time to time, the research and/or trading ideas are typically utilized exclusively on behalf of the portfolio(s) managed by dedicated personnel.

Capital Allocation and Capacity Decisions

The Adviser periodically reviews and assesses the amount of capital that can reasonably be allocated to its existing investment strategies, including when raising assets for new or existing products of the Adviser or its affiliates and managing capital activity, including determinations to close or modify existing products. To make such capital allocation determinations, the Adviser considers several factors including, among others, each Client's Mandate, overall firm profitability (*i.e.*, the profit which accrues to the Two Sigma Affiliates from management fees, incentive allocations, proprietary capital returns and/or other factors that are expected to contribute to the long-term success and enterprise value of the Two Sigma Affiliates) ("Firm Profitability"), available capacity, current and projected market conditions, the development of new strategies and Techniques, the licensing of certain strategies and Techniques to affiliates (including, but not limited to, TSA and TSS), leverage and obtainable financing (both in absolute terms and on a relative basis between third-party capital and proprietary capital), tax implications, legal or regulatory requirements, various risk considerations and level of investor demand and proprietary capital.

The amount of third-party capital invested through the Clients in any of the Adviser's strategies, particularly those with limited capacity, does and will continue to face pressure from, among other things, the continued growth of proprietary capital and/or higher fee-paying capital relative to other capital and potential fluctuations in the amount of available capacity. The Adviser recognizes that this continued growth and resulting pressure, as well as the higher amount of leverage that it can and often does elect to apply to proprietary capital, creates an increasing conflict of interest between third-party capital and proprietary capital, as the Adviser determines how much proprietary capital it will elect to invest in or withdraw from each of its strategies and how much third-party capital it elects to accept or return to investors going forward. Such decisions are made due to a variety of factors, including but not limited to performance and capital needs, as Two Sigma Affiliates seek to maintain a diverse and profitable set of businesses. The Adviser cannot be free from, and is not free from, conflicts of interest in making these elections, and shall be free to make such elections in its sole discretion.

The Adviser and other Two Sigma Affiliates have deployed and continue to deploy portions of proprietary capital for testing, incubating and/or trading a range of new asset classes, strategies and/or Techniques, including Alternative Strategies (as defined below) and certain discretionary strategies, across both liquid and illiquid asset classes in either Proprietary Trading Vehicles or other entities in which Clients do not participate. Such strategies and Techniques can be experimental and/or represent departures (to varying degrees) from approaches and methodologies that the Adviser has historically deployed on behalf of Clients (e.g., are less conducive to reliable back-testing; do not follow certain portfolio optimization techniques, including in the case of certain discretionary strategies; may trade in a more opportunistic fashion and may not be possible to simulate; may represent new asset classes for the Adviser; and may employ different execution modalities). Strategies employed for Proprietary Trading Vehicles or other entities in which Clients do not participate may be shared, licensed, moved or excluded among or from Clients, or alternatively retained for use by proprietary capital, in the Adviser's discretion, as discussed above.

Decisions Relating to Systematic Strategies and Techniques

The Adviser's modelers construct systematic strategies, which the Adviser typically evaluates for use in a portfolio in light of certain factors described in detail in the applicable offering memoranda of the Clients. The Adviser assigns weights to its strategies. Oftentimes, the modelers provide certain metrics, which specialized research teams take into account when running methodologies that generate weighting recommendations for portfolios. These methodologies and/or the recommended weight are subject to approval by authorized portfolio management personnel. In other cases, portfolio management personnel play a more active role in the strategy weighting process. Regardless of the process used to weight strategies, the relevant portfolio managers retain the ultimate discretion to adjust, override or otherwise make the final decision with respect to strategy selection and weighting pursuant to applicable Mandates, though weighting recommendations from these specialized research teams are typically adopted in the ordinary course of business pursuant to agreed-upon methodologies.

Strategies are periodically re-weighted based on, among other things, ongoing research and simulated and live trading results. One goal of these weighting exercises is to prevent any single strategy or limited set of strategies from unintentionally dominating a portfolio, although, for the avoidance of doubt, the Adviser's portfolios do employ heavily weighted strategies or sets of strategies in the Adviser's discretion. Research decisions such as strategy selection are typically made on a portfolio-by-portfolio basis without regard to the impact of such decisions on other portfolios of Clients or TSA clients (i.e., ignoring the fact that other portfolios may be trading the same or similar strategies). Similarly, when reviewing such recommendations prior to release, the portfolio managers have typically only analyzed the simulation results of the strategy as they relate to the particular trading vehicle for which they have oversight responsibility. However, in certain situations, the Adviser has incorporated, and will in the future seek to incorporate, cross portfolio impact analyses into a number of these and other decisions.

Subject to the oversight and control of the Adviser, in addition to such decisions, portfolio managers are responsible for a variety of duties in overseeing their respective portfolios. Among other things, portfolio managers monitor and adjust optimizer settings, including with respect to leverage, turnover, position limits, certain exposures and overall risk. The portfolio managers are supported by a broader team of portfolio management personnel to whom certain of these activities are delegated, as well as by certain specialized research teams that perform various facets of portfolio research and make specific portfolio setting or other portfolio recommendations. Portfolio managers also seek to ensure compliance with Clients' Mandates, as applicable, primarily through their oversight of certain delegates. Both the specialized research teams, as well as certain delegates of portfolio managers, are responsible for tasks regarding the Shared Research

Platform and/or tasks of general applicability for the benefit of multiple Clients and/or Two Sigma Affiliates and their clients. Furthermore, portfolio managers in many cases have research, business and/or portfolio management duties on behalf of other portfolios of the Adviser and/or Two Sigma Affiliates. For example, from time to time, in addition to performing research for the portfolios to which they are assigned, portfolio managers engage in research that is generalizable and/or extendible to various asset classes and/or portfolios. In other cases, research performed by these individuals may be designed to more specifically benefit a particular portfolio other than the one(s) for which such portfolio managers are responsible. The majority of the Adviser's portfolio management personnel and specialized research teams report, directly or indirectly, to senior leadership personnel that oversee the equities and macro business lines, respectively, across the Adviser and certain affiliates, including Two Sigma Advisers, LP, an affiliated investment manager registered with the SEC ("TSA"). This portfolio management supervisory structure presents certain benefits as well as conflicts of interest. Please refer to "Cross-Adviser Leadership and Other Shared Personnel" below.

Strategy and Technique building, selection and portfolio management decisions are oftentimes not themselves automated despite the highly automated nature of the Adviser's investment process in which strategies and Techniques are employed, and so a certain degree of subjectivity and diversity of practice is inherent in the Adviser's operations.

Through its extensive research, the Adviser has developed and expects to continue to develop strategies and to research the use of new Techniques, which it believes could offer Clients meaningful excess returns, but which cannot be fully utilized or in some cases utilized at all by certain Clients because of the Mandates of such Clients (as set forth in each Client's offering memorandum). Such strategies and/or Techniques, which include, but are not limited to, the Alternative Strategies (as defined below) and certain discretionary strategies, will differ from those that are fully utilized by certain Clients because, among other reasons, they (i) have lesser capacity than can be optimally used in such Clients; (ii) involve asset classes outside the Mandates of such Clients; (iii) involve different levels of volatility and/or liquidity risk than that targeted by such Clients; (iv) involve the use of execution modalities that are less amenable to implementation for shared used among Clients; and/or (v) are less strictly or fully hedged by taking somewhat larger exposures to certain style factors, sectors or other directional risks than that targeted by such Clients. In some instances, the Adviser will choose to deploy strategies and/or Techniques differently (or not at all) for certain Clients, for example, in respect of specific geographical regions or Instruments.

In the future, the Adviser may, in its sole discretion and without notice to any Client or investor in such Clients, (i) remove any or all strategies and/or Techniques from utilization on behalf of any Client or (ii) materially increase or decrease a Client's exposure to any strategies and/or Techniques including eliminating a Client's exposure to such strategies and/or Techniques altogether (whether or not such strategy or Technique was developed and/or utilized on the Shared Research Platform or by a dedicated portfolio management team).

Licensing of Strategies and Techniques Between and Among Adviser and Affiliates

The Adviser currently licenses, and intends to continue to license, strategies and Techniques to TSA (please refer to Item 10 of this brochure for a discussion of the Adviser's other financial industry activities and affiliations) and to other affiliates such as TSS and TSC (as defined in Item 10) to, among other things, enhance overall Firm Profitability. The Adviser has the sole discretion to select the strategies and Techniques that it licenses to TSA, TSS and TSC and other affiliates. The Adviser currently licenses to TSA materially all of the strategies and Techniques that it also uses on behalf of the Clients owned primarily by third-party capital. While the scope of licensing with respect to TSS and TSC is more limited than vis-a-vis TSA, the Adviser licenses a significant number of strategies and Techniques to such affiliates that are seen as consistent with their research, investment and/or trading objectives. The use of licensed strategies and Techniques by Two Sigma Affiliates has had, and will continue to have, a material adverse impact on the Clients and will continue to reduce the returns of the Clients. See Item 10 below for additional information concerning the Adviser's licensing of strategies and Techniques.

Trading and Execution; Use of Multiple Execution Desks

The Adviser and TSA utilize the Adviser's proprietary order and execution management algorithms, systems, technology and services (the "Shared Execution Desk") in order to direct execution of orders on behalf of Clients and TSA clients. Traders on the Shared Execution Desk are employees supervised directly or indirectly by senior leadership personnel that oversee the equities and macro asset classes, respectively, across the Adviser and TSA.

The Instruments traded on behalf of each Client (as well as certain clients of TSA) will involve substantial overlap with those traded on behalf of other Clients and TSA clients. However, such Instruments will often not be traded in the same way or at the same time on behalf of each Client or TSA client. From the standpoint of each Client and each TSA client, simultaneous identical portfolio transactions for Clients and TSA clients tend to decrease the prices received, and increase the prices required to be paid, for their portfolio sales and purchases, as applicable.

As a general matter, the Shared Execution Desk routes orders in an automated fashion to a wide range of third-party venues (including "dark liquidity" venues). The systems employed by the Shared Execution Desk seek to algorithmically aggregate orders and to ensure proper allocation of fills among the Clients and TSA clients that trade the same Instrument concurrently on the Shared Execution Desk, as discussed in more detail below. For the avoidance of doubt, the Adviser's order aggregation and trade allocation policy described herein is only applicable to trades that are made concurrently on the Shared Execution Desk and does not apply to trades made on separate execution desks, which handle a material amount of trading volume as compared to the volume handled by the Shared Execution Desk.

Notwithstanding the foregoing, traders retain broad discretion in the execution of orders and their ability to manually execute trades. In most cases of manual execution on the Shared Execution Desk, fills are allocated algorithmically in the same manner as indicated herein in respect of Instruments executed in an automated manner. Each trader's discretion regarding execution of orders for Clients may change such that the discretion granted to the traders regarding Clients is broadened or narrowed and exercised differently for different Clients.

In particular, market characteristics and/or system limitations for a given Instrument will, in certain cases, result in traders on the Shared Execution Desk handling trades manually (rather than in a fully automated manner). For example, for certain swaps and derivative Instruments (including those executed on a swap execution facility) and for other Instruments that are not liquid or exchange-listed, Client and TSA client orders are typically aggregated with those that seek to trade the same Instrument concurrently on the Shared Execution Desk, and then routed and placed manually by traders on the Shared Execution Desk.

The Adviser's trade allocation policy applicable to the Shared Execution Desk is designed to seek to: (i) provide a fair allocation of purchases and sales of Instruments among the various Clients and TSA clients, (ii) not systematically advantage one Client or TSA client over another, and (iii) ensure compliance with appropriate regulatory requirements. However, the Adviser's trade allocation policy is dependent upon the Shared Execution Desk's order aggregation logic which determines whether to aggregate desired positions of the Clients and TSA clients based on certain time and size rules set by the Adviser in its sole discretion. As a result, from time to time, smaller orders will be disadvantaged and certain Clients and/or TSA clients will be advantaged over others with respect to the timing of order placement and ultimately, fill quality received. With respect to the Shared Execution Desk, while the Adviser will monitor, review and may periodically modify its order aggregation and/or trade allocation logic in an effort to minimize the occurrence of these events, preferential allocations will occur, and it is not expected that such allocations will be reversed or otherwise changed. Such preferential allocations are not deemed by the Adviser to be trade errors.

The Adviser generally seeks to aggregate the desired positions of its Clients and TSA's clients that are sent to the Shared Execution Desk concurrently in an attempt to achieve more efficient execution and to seek to provide for equitable treatment among Clients and TSA clients. As a general matter, the aggregation logic seeks to aggregate goal positions of like order marking characteristics (*i.e.*, sell, sell short, buy, and buy to cover) received concurrently by the Shared Execution Desk. In the event that multiple Clients (including Proprietary Trading Vehicles) and/or TSA clients wish to buy, sell, buy to cover or sell short the same Instrument concurrently through the Shared Execution Desk, it is the Adviser's intention to attempt to aggregate orders and allocate all filled orders and corresponding prices ratably, based on desired trade amounts and like order marking instructions determined at the time the aggregated order was created, subject to the limitations discussed herein. Notwithstanding the foregoing, in certain circumstances, orders will be aggregated or allocated on a basis different from that specified above (or not aggregated at all). Examples of reasons for aggregating or allocating orders on a different basis (or not at all) include, among other things, different Mandates; available cash; liquidity requirements; macro risk parameters set by the applicable portfolio manager or investment personnel; to avoid a misallocation of fills; legal and/or regulatory reasons (including a desire to avoid and/or minimize a regulatory filing, disclosure or other obligation); to avoid odd lots; to facilitate the execution of relative value, hedged or packaged transactions; unusual market conditions; and/or, in certain markets, the use of different counterparties to trade the same Instruments. For certain Instruments and/or in certain situations (e.g., rolling positions in FX and futures), the overall volume of non-aggregated orders should be assumed to be material when compared to orders handled in an aggregated manner by the Shared Execution Desk.

Notwithstanding the Adviser's use of the Shared Execution Desk (and its policies with respect to order aggregation and trade allocation described above), the Adviser also employs separate execution desks. Separate execution desks trade on behalf of one or more portfolios and are used for a variety of reasons relating to the applicable portfolios and/or the Instruments traded, as discussed in more detail below. Separate desks can and often do provide execution services for types of Instruments that overlap with types of Instruments traded by other execution desks, without aggregating orders across any such other execution desks, and in each case the resulting trades are allocated entirely to the entity utilizing each such separate execution desk. Further, in some cases, separate execution desks (including desks processing orders on behalf of Proprietary Trading Vehicles) can and do utilize trading personnel who are also assigned to the Shared Execution Desk and who have visibility into the trading by such execution desks. The Adviser has implemented monitoring controls in an attempt to mitigate certain conflicts of interest that may result from sharing trading personnel across execution desks, but there can be no guarantee that Clients will not be adversely affected by the varied responsibilities of such personnel.

For example, in some cases, the Adviser uses separate execution desks on behalf of Clients that employ certain derivative and relative value strategies and/or discretionary strategies. Separate execution desks are used in these instances in part due to strategies and/or Instruments that can require more manual execution than those typically traded by the Shared Execution Desk. However, there is still significant overlap between the Instruments traded by such desks and the Shared Execution Desk, and the orders processed on such desks are not aggregated with orders on the Shared Execution Desk. Accordingly, trades via such separate execution desks are not allocated to portfolios using the Shared Execution Desk, notwithstanding any concurrent trading via the Shared Execution Desk. The separate execution desks currently do not use order aggregation and/or trade allocation logic, and they are not currently expected to do so even if utilized by multiple portfolios. Clients and investors therein should assume that such separate treatment will not be beneficial to any such Client.

Additionally, the Adviser utilizes certain strategies and Techniques, including certain low latency strategies and Techniques, trading capabilities and related execution modalities ("Alternative Strategies") via separate execution desks for certain Clients and, in some instances, solely for Proprietary Trading Vehicles. Some of the Alternative Strategies generally rely on different execution logic, venues, sources of liquidity, and pathways than the strategies and Techniques deployed on behalf of other Clients, many of which are not currently accessed by the Adviser's Shared Execution Desk. Certain of these Alternative Strategies utilize much of the same investment management research from the Shared Research Platform that is also used by many of the Clients which are not using such Alternative Strategies. The Alternative Strategies will frequently impact, to varying degrees, competition for and the price or amount of Instruments available to the Clients not using such Alternative Strategies. Alternative Strategies are not always but are often housed in or executed through the Adviser's affiliated broker-dealer, TSS. Oftentimes, the use of a separate execution desk in conjunction with shared investment management research will result in the Clients using such Alternative Strategies and/or TSS receiving fills before Clients not using such Alternative Strategies, which will likely result in the Clients using such Alternative Strategies and/or TSS, often receiving better executions than the Clients not using such Alternative Strategies, or such fills having a materially adverse impact on the prices paid or received by a Client not using such Alternative Strategies on its transactions. The trading volume of the Alternative Strategies is material when compared to the volume of trades handled by the Shared Execution Desk.

In addition, the introduction of any new strategy, capability or execution method, either by the Adviser, one of its affiliates, or by another market participant, increases competitive effects and will often adversely impact the profit and loss capabilities of existing strategies, capabilities and execution methods.

Finally, because certain strategies used by certain Clients have a shorter forecast horizon, use certain separate execution modalities and/or trade through separate execution desks than similar strategies used by other Clients, it is likely that in many instances those Clients will buy (or sell) Instruments prior to or after the other Clients buying (or selling) the same or similar Instruments and thereby have a materially adverse impact on the prices paid or received by a Client on its transactions or the available liquidity in such Instruments.

In certain cases, the Adviser will utilize personnel employed by one or more non-U.S. Two Sigma Affiliates for trading and other services. Please see Item 10 of this brochure for more information and Item 8. "Methods of Analysis, Investment Strategies & Risk of Loss—Material Risks (Including Significant or Unusual Risks) Relating to Investment Strategies—Risks of Participating Affiliates" for a discussion of certain potential conflicts of interest and risks associated with such arrangements. Additionally, please refer to Item 12 of this brochure for further discussion of the Adviser's brokerage practices.

Certain Structural Conflicts Regarding Portfolio Management Operations and Activities

Certain Clients of the Adviser invest in TSA clients, and certain TSA clients invest, directly or indirectly, in the Adviser's Clients. The Adviser acts on behalf of its Clients when making portfolio management and other decisions on behalf of such Clients, such as when to make and liquidate investments, how much leverage to use and how much capital to allocate among portfolios, among other decisions. However, when TSA clients invest, directly or indirectly, in portfolios managed by the Adviser, TSA acts on behalf of such TSA clients in making decisions on behalf of such TSA clients, including when to withdraw capital from the underlying portfolios. The interests of Clients, as determined by the Adviser, can and from time to time likely will differ from the interests of TSA clients as determined by TSA. Each of the Adviser and TSA will make decisions without necessarily considering the best interests of the other's clients. While the Adviser has implemented certain measures designed to mitigate this risk in respect of investments by TSA clients in underlying portfolios managed by the Adviser, there can be no assurance that TSA's management of the TSA clients will not adversely affect Clients.

Cross-Adviser Leadership and Other Shared Personnel

As discussed above, the Adviser's portfolio management personnel report, directly or indirectly, to senior leadership personnel who oversee the equities or macro asset classes, respectively, across the Adviser, TSA and certain affiliates. Such senior personnel also supervise traders on the Shared Execution Desk, as well as various research personnel, including personnel who perform portfolio-related research. Such senior management with overall responsibility for equities and macro, respectively, help to set the business strategy, objectives and research agendas with respect to their respective asset classes, though the day-to-day portfolio management of Clients and TSA clients is conducted by certain portfolio management teams with authority and responsibility over their respective portfolios. Similarly, specialized research teams perform various research services for both the Adviser, TSA and other Two Sigma Affiliates. The Adviser and TSA have sought to mitigate conflicts of interest, including by ensuring that the Adviser and TSA maintain separate portfolio managers who have day-to-day responsibility for one or more portfolios managed by the Adviser or by TSA (as applicable).

The Adviser believes that there are efficiencies and other benefits to organizing the research, portfolio management and trading functions across the Adviser and TSA under a single senior management structure for the equities and macro asset classes, respectively. However, such a structure also presents various actual and potential conflicts of interest. Senior leaders across both the Adviser and TSA perform supervisory functions including managing portfolio management personnel for both Clients and TSA clients and are responsible for providing cohesive coordination and/or performance of certain research capabilities, portfolio management activities and business functions for applicable asset classes on behalf of both the Adviser and TSA. Performance of these duties by such shared personnel involves participation in key decision-making processes in the face of conflicts, as the interests of Clients and TSA clients can and do diverge, and there can be no assurance that decisions made by such personnel will equally benefit such Clients and TSA clients. Investors should assume that such shared personnel will be required to balance competing interests among the Adviser, TSA, TSA clients and Clients (including those comprised primarily or exclusively of Two Sigma proprietary capital), and will make recommendations or decisions that are based, in whole or in part, on one set of clients and/or on Firm Profitability, as further discussed in "Decisions Relating to Systematic Strategies and Techniques" above; "Allocation of Certain Finite Resources" below; and elsewhere herein.

Similarly, the Adviser believes that the sharing of certain leadership personnel and certain portfolio-related information across the Adviser and TSA facilitates the identification of portfolio risks across (typically similar) portfolios. While information sharing and collaboration between and among portfolio management teams enables more efficient and effective portfolio research and improves overall portfolio and risk management, it also presents conflicts of interest as to the appropriate flow and usage of information in maintaining the independence of portfolio management decision-making.

Allocation of Certain Finite Resources

Because of various legal, regulatory, risk management, operational and counterparty-related considerations (and in part due to the overlap in the trading done on behalf of various Clients and TSA clients), the Adviser and TSA are often required to manage the allocation of locates, stock borrow and financing, position limit and reporting threshold capacity, and various other finite resources and/or to apply regulatory reporting, risk or counterparty-mandated limits across multiple Clients and TSA clients, as well as the Adviser's affiliates and their clients in certain instances. The Adviser and its affiliates seek to apply a systematic and/or objective set of allocation rules and methodologies to manage certain of these finite resources, however, a disproportionate benefit will result to those Clients that have greater trading volume, capital and/or risk exposure. Such Clients tend to be those portfolios owned solely or primarily by proprietary capital. To the extent that proprietary capital has greater trading volume, capital or risk exposure than client capital, proprietary capital will receive larger allocations of such finite resources under allocation rules based on volumes, capital levels or risk exposures. In addition, the Adviser and its affiliates seek to address unused position limit capacity by permitting Clients and clients of Two Sigma Affiliates to temporarily request additional capacity beyond such client's standard allocation.

Those requests have generally come from Clients, including Proprietary Trading Vehicles, that are less reliant on systematic investment processes or that use discretionary investment strategies.

Expenses

Clients typically pay all of their own operating and investment expenses as described in Item 5 of this brochure. Expenses borne by one or more Clients could differ from the expenses borne by other Clients and by clients of Two Sigma Affiliates. Common expenses frequently are incurred on behalf of multiple Clients and clients of Two Sigma Affiliates. The Adviser seeks to allocate those common expenses in a manner that is fair and reasonable over time. However, expense allocation decisions involve conflicts of interest (*e.g.*, amount of proprietary capital invested; the effect of expense arrangements on a Client's performance and thus Firm Profitability). The Adviser and its affiliates use a variety of methods to allocate common expenses, including allocating the expense equally among applicable Clients, as well as methods based on assets under management, relative use of a product or service, the nature or source of a product or service, the relative benefits derived by the Clients from a product or service, or other relevant factors. Nonetheless, the portion of a common expense that the Adviser allocates to a Client for a particular product or service often will require a subjective determination and might not directly reflect the relative benefit derived by the Client from that product or service in any particular instance.

Prime Brokers, Futures Commission Merchants and Custodians

Two Sigma Affiliates have leveraged their global relationships with certain prime brokers, futures commission merchants and custodians to seek to negotiate more favorable terms, such as aggregate margin requirements, on behalf of their clients. While the Adviser and TSA will endeavor to equitably allocate these benefits to the Clients and the TSA clients (respectively), at any point in time, some of such clients, including clients which contain primarily proprietary capital or that pay the Adviser or TSA higher performance-based compensation or fees, may benefit more or less than others due to or in light of factors such as fund size, trading volume and/or leverage levels. It should be noted that certain prime brokers, futures commission merchants and custodians provided services to multiple Clients and also to clients of Two Sigma Affiliates. See Item 12. "Brokerage Practices."

Charitable Giving Activities

The Adviser, its affiliates and their employees from time to time directly or indirectly engage in philanthropic activities unrelated to the business activities of Clients. These activities include, for example, charitable contributions, academic and/or research grants, sponsorships and offers of collaboration or assistance. For the avoidance of doubt, these activities are in no way intended to influence any investor's investment decision-making process, including any decision to invest or remain invested in any Client. To the extent that an investor, its affiliates, or any of their employees, directly or indirectly benefit from these philanthropic activities, it is the investor's obligation to make such inquiry as it deems necessary to ensure that the acceptance of any such benefit prior to or after such investor's investment in a Client does not violate such investor's policies, or any law, rule or regulation applicable to such investor.

Allocation of Human Capital; Support for Affiliates

The Adviser and its principals and affiliates have conflicts of interest in allocating their time and activity among the Clients and Two Sigma Affiliates, in allocating investments, strategies and Techniques among the Clients and Two Sigma Affiliates, and in effecting transactions among the Clients and Two Sigma Affiliates, including ones in which the Adviser and its principals have a greater financial interest or on the basis of Firm Profitability.

The Adviser will from time to time share personnel and other resources among its affiliates, which could adversely impact the Clients. Among other things, certain employees of the Adviser will devote time (including full-time support for certain employees) to providing services to Two Sigma Affiliates that could otherwise be spent in support of Clients. Such services include but are not limited to engineering, data strategy and data science services, investment research, and the development and maintenance of systematic models and strategies, and Two Sigma Affiliates will in certain cases pay the Adviser for such services. In addition, such activities present a risk that the Adviser will receive material non-public information through relationships maintained by Two Sigma Affiliates, which could adversely affect Clients, as discussed in more detail in Item 8 and Item 11 of this brochure. Other examples of resource sharing among Two Sigma Affiliates include arrangements between the Adviser and TSS, as discussed in more detail in Item 10 of this brochure, and the pursuit of Digital Assets trading by Two Sigma Affiliates, as discussed in Item 8 of this brochure.

Item 7. Types of Clients

The Adviser provides advisory services to Clients that are private investment funds, consisting of commingled vehicles and funds of one, typically organized as Delaware limited partnerships, Delaware limited liability companies, Cayman Islands exempted companies or other similar structures. The Adviser's Clients rely on the exemption set forth in Section 3(c)(7) or, in the case of "employees' securities companies" (currently, SoHo Orbit Strategies, LLC, Two Sigma Luna, LLC and Two Sigma Blazar Fund, LLC), the exemption set forth in Section 6(b) of the U.S. Investment Company Act of 1940, as amended (the "Investment Company Act").

Most Clients are set up in master-feeder structures wherein each feeder fund invests all or a portion of its assets into a master fund. Most master funds, and certain Clients not set up in master-feeder structures, then invest all or a portion of their assets into certain investment trading vehicles managed by the Adviser. Currently, the vast majority of the investments made on behalf of the Clients are made through the investment trading vehicles. The structure of any given Client is described in further detail in the applicable offering memorandum referencing such Client.

With respect to Clients, initial and additional subscription minimums, if any, are disclosed in the applicable offering memorandum referencing such Client. The Adviser is typically authorized to waive, reduce or modify such subscription minimums, subject to certain limitations in accordance with applicable law or regulation.

Item 8. Methods of Analysis, Investment Strategies & Risk of Loss

Methods of Analysis and Investment Strategies. The Adviser utilizes a variety of methods and strategies to make investment decisions and recommendations. The Adviser primarily combines multiple hedged and leveraged investment strategies with Techniques to make investment decisions for its Clients. The Adviser integrates information, computing power and human skill to attempt to systematically (and, in certain cases, non-systematically) extract alpha.

The investment strategies that the Adviser employs include, but are not limited to, the following: statistically-based strategies; merger (or risk) arbitrage; closed-end fund/constituent arbitrage; fundamentally-driven strategies; event-driven strategies; spread-based and long/short strategies; relative value strategies; volatility arbitrage and trading strategies; structured credit trading strategies; and contributor-based and sentiment-based strategies (*e.g.*, strategies based on the Adviser's proprietary alpha capture system). The specific strategies utilized on behalf of any given Client are described in greater detail in such Client's offering memorandum.

In general, the Adviser primarily uses quantitative mathematical models to implement its strategies and to seek to achieve the Mandates of each Client. Such quantitative mathematical models rely on patterns inferred from historical prices and other financial data in evaluating prospective investments. These formulas and models are typically implemented using high-powered computers that generate buy or sell indications to assist the Adviser in the purchase and sale of securities and other Instruments or alternatively send buy or sell orders directly to brokers or other third-party venues. The strategies used are highly complex and rely on quantitative (and to a lesser extent, technical) analysis of large amounts of real-time and historical financial and other data with a view towards identifying pricing discrepancies, inefficiencies and/or anomalies.

In addition to the strategies described above, the Adviser also employs strategies and Techniques that focus more on fundamental analysis and research conducted by internal and external analysts (rather than computer-based quantitative and technical analysis) and/or strategies that combine two or more types of analysis in varying degrees. Fundamental analysis and research explores, among other things, issuers, industries, current market and financial conditions and an understanding of the drivers of change within these areas. Such fundamental analysis and research is generated by internal personnel and substantial numbers of external investment professionals, data vendors, market participants, experts, other consultants to the Adviser and/or licensors and is augmented from time to time by the Adviser. The Adviser has discretion to apply systematic mathematical formulae to such analysis and research, or to use such analysis and research alone, without further quantitative analysis to assist in the Adviser's investment decision-making process.

The Adviser may authorize the sharing or discussion of certain investment ideas, theses, strategies or derived data, including as they relate to current holdings or strategies of the Adviser or Clients, with other investors or financial professionals. Given the differences among Clients and their respective Mandates, investment ideas, theses, strategies or derived data discussed or shared by the Adviser with such other investors, investment professionals or more broadly, may not reflect the forecasts and/or investment activity of all Clients. To the extent that other investors or financial professionals use such investment ideas, theses, strategies or derived data to buy (or sell) certain Instruments while one or more Clients are buying (or selling) the same Instruments, there is potential for Clients' returns to be impacted to varying degrees. All of the investment methods and strategies used by the Adviser involve the risk of loss that Clients and investors in Clients should be prepared to bear. Investors are responsible for appropriately diversifying their assets to help guard against the risk of loss.

Discretionary Strategies. In addition to its systematic investment strategies, the Adviser also engages in various forms of discretionary and less-systematic methods of analysis and portfolio management. The Adviser utilizes such discretionary methods in strategies and Techniques that, while often aided by quantitative analysis, are typically based primarily or solely on human discretion on behalf of Clients.

Such discretionary strategies and Techniques are utilized by Clients with discretionary Mandates and also, to a lesser extent, by Clients with more systematic Mandates in order to, among other things, express certain views based on fundamental research, market sentiment, perceived or predicted events, opportunities or market conditions, as well as to manage certain risks. Discretionary strategies and Techniques often rely on manual processes and do not benefit from the full range of tools and systems used by the Adviser for systematic portfolio management, risk management and trading. While the Adviser believes that discretionary strategies present certain opportunities, discretionary strategies and Techniques are more susceptible to certain risks, errors and/or behavioral biases that could adversely affect Clients.

Certain of such strategies and Techniques are expected to be materially reliant on human discretion and in many cases will not utilize optimization processes and/or other systematic Techniques as described elsewhere in this brochure. While such strategies are often aided by quantitative analysis, the investment and risk management decision-making for such strategies is directly dependent upon human judgment. Discretionary decision-making will likely result in a different evaluation of the nature and magnitude of various factors that affect the value and risk of investments, as compared to a more systematic approach. There can be no assurance that such discretionary decisions will perform comparably with a more systematic process or that such discretionary decisions will not result in material losses. See "Reliance on Human Discretion."

Finally, in many cases discretionary strategies of a Client, and the investment opportunities pursued by such strategies, will not be made available to other Clients and/or clients of Two Sigma Affiliates due to, among other things, their dependence on the expertise of portfolio-specific personnel, implementation challenges, regulatory considerations and resource limitations. In addition, portfolio management personnel dedicated to one or more specific portfolios and/or research personnel may generate trading opportunities that are made available exclusively for certain Clients and/or clients of Two Sigma Affiliates and not others. In those cases, other Clients with more systematic Mandates will typically not benefit from the investment opportunities, expertise or judgment of such personnel. Further, see Item 6. "Performance-Based Fees & Side-by-Side Management—Certain Conflicts of Interest Associated with Side-by-Side Management—Capital Allocation and Capacity Decisions" above for more information on the Adviser's practices of testing, incubating and/or trading new or experimental strategies from time to time with proprietary capital, which has included certain discretionary strategies.

Overview of Risk Management. Risk management is an integral part of the Adviser's investment process and maintaining a controlled overall level of risk is part of the Adviser's objective in managing Client assets. The Adviser generally seeks to control risk systematically through the use of its proprietary portfolio management and risk management systems and techniques. However, the Adviser can and does at times also employ certain non-systematic strategies in order to manage certain risk. Portfolio managers, working together with other personnel, evaluate various risks related to a given Client's trading program (including many of the risks discussed below in "Material Risks (Including Significant or Unusual Risks) Relating to Investment Strategies") and work to develop techniques for measuring, managing, and mitigating those risks, though there can be no assurance that any such risks will be effectively managed or mitigated. The Adviser's Chief Risk Officer serves as an independent check on the risks taken across the platform and runs stress tests of various sorts to measure those risks. When needed, the Risk Department liaises with the portfolio managers to understand and potentially mitigate sources of risk. Except where otherwise noted, the discussion of risk management processes below applies to the Adviser's systematic strategies.

In the case of systematic strategies, the Adviser primarily seeks to control risk for a given Client through a combination of strategy weightings, position limits, and other controls that are programmed into each optimizer, and seeks to eliminate unwanted risk and factor other risks into the decision-making process when deciding which positions to hold in a given portfolio. This process is generally automated, but remains under the oversight of the portfolio managers and the Chief Risk Officer (and their respective teams), though there can be no assurance that any such risks will be effectively managed or mitigated.

The Adviser at times also employs certain manual, discretionary and/or non-systematic strategies and/or processes in order to seek to manage certain risk (as well as to take advantage of perceived or predicted events or market conditions), as discussed in more detail in "Discretionary Strategies" above.

The Adviser evaluates various risks related to Clients' trading programs (including many of the risks discussed in this Item 8) and has worked to develop techniques for measuring and seeking to manage and mitigate those risks (though there can be no assurance that any such risks will be effectively managed or mitigated).

In order to seek to better control aggregate risk and to obtain efficiency in execution, multiple strategies are often traded together in combined, quantitatively-optimized portfolios within Clients' systematic portfolios. The Adviser primarily relies upon its optimization process to determine such a portfolio's "target goal position" in a given Instrument. The optimization process incorporates certain risk parameters and factors that, combined with other metrics, shape the final "target goal position" value. These risk constraints and metrics are developed, in part, in an effort to seek to ensure that the Client stays within its Mandate.

When a Client's systematic portfolio seeks to buy or sell an Instrument, the applicable optimizer measures certain known risks that would result from trading in such an Instrument and adjusts the target goal positions accordingly. An optimizer makes target goal position adjustments based on risks related to size, liquidity, sector exposure and certain other factors. Hedging trades can also be used as a mechanism to seek to limit or offset certain risk taking orders generated by an optimizer on behalf of the Clients.

With respect to all strategies (systematic and discretionary), portfolio managers and the Chief Risk Officer (and their teams) monitor each Client's risk on an ongoing basis, and the portfolio managers may take action, or the risk teams may advise the portfolio managers to take action, if unwanted risk is detected. Such actions include but are not limited to reducing strategy weights, lowering optimizer risk limits, adjusting other optimizer parameters and/or managing exposure through trading including, but not limited to, hedging. The monitoring tools available include, but are not limited to, Value at Risk (VaR) and similar calculations, stress-testing (based on both various historical and forward-looking scenarios), and other risk factor measurements.

The Adviser can vary the risk of a Client's investments (and therefore, possibly, a Client's returns), in part, by varying the manner in which, and/or the degree to which, a Client's investments are hedged or leveraged, including through the use of equity index futures, exchange traded products, swaps or similar instruments. A Client may, at times, maintain a substantial portion of its assets in money market instruments and government securities, either directly or indirectly through a cash management vehicle, with the objective of assuring the Client's ability to satisfy the various credit and other obligations incurred in connection with its investment activities. Additionally, at any given time, the strategies and Techniques employed by a given Client or portfolio may involve significant systematic and non-systematic risks.

The Adviser generally seeks to manage each Client's liquidity through its portfolio management systems and risk management activities in an effort to ensure that the liquidity profile of portfolio investments is consistent with a given Client's redemption terms.

The Adviser utilizes a Conflicts Committee comprised of certain of the Adviser's and its affiliates' senior management and control personnel. The primary purpose of the Conflicts Committee is to provide a body to which such personnel can raise potential conflicts of interest for evaluation, including potential conflicts which relate to investment process decisions.

Material Risks (Including Significant or Unusual Risks) Relating to Investment Strategies.

Quantitative Strategies and Trading. Quantitative strategies and Techniques cannot fully match the complexity of the financial markets and therefore sudden unanticipated changes in underlying market conditions can significantly impact their performance. Further, as market dynamics shift over time, a previously highly successful strategy or Technique tends to become outdated—perhaps without the Adviser recognizing that fact before substantial losses are incurred. Even without becoming a completely outdated strategy or Technique, a given strategy's or Technique's effectiveness may decay in an unpredictable fashion for any number of reasons including, but not limited to, an increase in the amount of assets managed, the sharing of such strategy or Technique with other Clients or affiliates, the use of similar strategies or Techniques by other market participants and/or market dynamics shifting over time. Moreover, there are likely to be an increasing number of market participants who rely on strategies and Techniques that are similar to those used by the Adviser, which could result in a substantial number of market participants taking the same action with respect to an investment, and some of these market participants could be substantially larger than any given Client. Should one or more of these other market participants begin to divest themselves of one or more positions, a "crisis correlation", independent of any fundamentals and similar to the crises that occurred, for example, in September 1998 and August 2007, could occur, thereby causing certain Clients to suffer material, or even total, losses.

Although the Adviser generally will attempt to deploy relative value strategies, this does not mean that the Clients will not be affected by adverse market conditions similar to those described above and/or others. There can be no assurances that the strategies pursued or Techniques implemented will be profitable, and various market conditions will be materially less favorable to certain strategies than others. Mispricings, even if correctly identified, may not be corrected by the market, at least within a time frame over which it is feasible for any given Client to maintain a position. In the event that the perceived mispricings underlying the Adviser's relative value trading positions were to fail to converge toward, or were to diverge further from, relationships expected by the Adviser, Clients would incur a loss. Even pure arbitrage positions can result in significant losses if a Client does not maintain both sides of the position until expiration. Certain Clients utilize high degrees of leverage and therefore could be forced to liquidate positions prematurely in order to meet margin or collateral calls, causing an otherwise "pure" arbitrage position to result in major losses.

The research and expertise developed by the Adviser and its affiliates in pursuing Clients' investment objectives are considered confidential and generally will not be disclosed to investors. Similarly, position level and other portfolio information related to the Clients will not be disclosed to investors unless otherwise agreed by the Adviser. For the avoidance of doubt, the Adviser is not required and does not expect to disclose information (including to investors) that the Adviser reasonably and in good faith considers proprietary and/or a trade secret (*e.g.*, investment models) and which cannot be presented in a way that reasonably avoids such a confidential disclosure.

Statistical Measurement Error. Many of the strategies employed by the Adviser rely on patterns inferred from the historical series of prices and other data. Even if all of the assumptions underlying the strategies were met exactly, the strategies can only make a prediction, not afford certainty. There can be no assurance that the future performance will match the prediction. Further, most statistical procedures cannot fully match the complexity of the financial markets and as such, results of their application are uncertain. In addition, changes in underlying market conditions and/or market practices can adversely affect the performance of a statistical strategy and could require changes to such strategy or the development of new strategies.

Reliance on Technology. The Adviser's strategies and Techniques are fundamentally dependent on technology, including hardware, software and telecommunications systems. The data gathering and processing, research, forecasting, portfolio construction, order execution, trade allocation, risk management, operational, back office and accounting systems, among others, utilized by the Adviser are all highly automated and computerized. Such automation and computerization is dependent upon an extensive amount of proprietary software, software created by affiliates and contractors of the Adviser and third-party hardware and software. Such dependencies (including with respect to third-party software) have and will likely continue to increase over time. The Adviser typically does not utilize design documents or specifications when building its proprietary software. The proprietary software code thus typically serves as the only definitive documentation and specification for how such software should perform.

This proprietary software and third-party hardware and software are known to have errors, omissions, imperfections and malfunctions (collectively, "Coding Errors"). Coding Errors in third-party hardware and software are generally entirely outside of the control of the Adviser.

The Adviser seeks to reduce the incidence and impact of Coding Errors through a certain degree of internal testing and real-time monitoring, and the use of independent safeguards in the overall portfolio management system and often, with respect to proprietary software, in the software code itself. Despite such testing, monitoring and independent safeguards, Coding Errors can and do occur and will result in, among other things, the execution of unanticipated trades, the failure to execute anticipated trades, the failure to properly allocate trades, the failure to properly gather, organize and/or process available or accurate data, the generation of erroneous and/or incomplete model forecasts, the failure to take certain hedging or risk reducing actions and/or the taking of actions which increase certain risk(s), all of which can and do have adverse (and materially adverse) effects on Clients and/or their returns.

Coding Errors are often extremely difficult to detect and resolve, and, in the case of proprietary software, the difficulty of resolving potential Coding Errors is exacerbated by the lack of design documents or specifications. Regardless of how difficult their detection appears in retrospect, some of these Coding Errors will go undetected for long periods of time and some will never be detected. The degradation or impact caused by these Coding Errors can compound over time. Moreover, the Adviser will detect certain Coding Errors that it chooses, in its sole discretion, not to address or fix. The Adviser will not perform a materiality analysis on many of the Coding Errors it discovers. Clients (and investors therein) should assume that Coding Errors and their ensuing risks and impact are an inherent part of investing with a process-driven, systematic investment manager such as the Adviser. Accordingly, the Adviser does not expect to disclose discovered Coding Errors to the Clients or their investors. For the avoidance of doubt, Coding Errors are generally not considered trade errors under the Adviser's trade errors policy. See "Trade Errors" below.

The Adviser seeks, on an ongoing basis, to create adequate backups of software and hardware where possible but there is no guarantee that such efforts will be successful.

Further, to the extent that a software or hardware malfunction or problem is caused by a defect, security breach, virus or other outside force, the Clients may be materially adversely affected.

Reliance on Data. The Adviser's strategies and Techniques are highly reliant on the gathering, cleaning, culling, mapping and analyzing of large amounts of both market and non-traditional (i.e., alternative) data from third-party and other sources. It is not possible or practicable, however, to factor all relevant, available data into forecasts and/or trading decisions. The Adviser will use its discretion to determine what data to gather with respect to any strategy or Technique and what subset of that data the Adviser's strategies and Techniques will take into account to produce forecasts which have an impact on ultimate trading decisions. The Adviser's determination is subject to various legal, regulatory, risk management, operational and counterparty-related considerations and constraints. For example, vendors may adjust, degrade, limit or suspend the provision of data to the Adviser for a variety of reasons. In addition, due to the automated nature of such data gathering and the fact that much of this data comes from third-party sources, it is inevitable that not all desired and/or relevant data will be available to, or processed by, the Adviser at all times. This could result from Coding Errors and/or the failure of a technological dependency at the Adviser, its affiliate, a third-party data source or data processor, or because a vendor has adjusted, degraded, limited or suspended the provision of data to the Adviser (in their sole discretion or as a result of various legal, regulatory, risk management, operational and counterparty-related considerations and constraints). In such cases, the Adviser often generates forecasts and makes investment and trading decisions based on the data available to it. Additionally, the Adviser may determine that certain available data, while potentially useful in generating forecasts and/or making investment and trading decisions, is not cost effective to gather, store, process, clean and/or organize due to either the technology costs or third-party or affiliated vendor costs and, in such cases, the Adviser will not utilize such data. Further, the Adviser is affiliated with certain data processors. While the Adviser believes there can be certain benefits associated with utilizing such affiliates, it is conflicted in the use of affiliated data processors, which could be less efficient or effective as compared to third-party data processors.

Clients (and investors therein) should be aware that, for all of the foregoing reasons and more, certain data or types of data will inevitably not be utilized in generating forecasts or making investment and trading decisions on behalf of the Clients, and the data actually utilized in generating forecasts or making investment and trading decisions on behalf of the Clients will inevitably contain a degree of inaccuracies and errors (whether due to Coding Errors, manual human errors or other factors). Certain data errors (*e.g.*, errors in pricing data) could materially adversely affect trading for Clients. Clients (and investors therein) should assume that the foregoing limitations and risks associated with gathering, cleaning, culling, mapping and analyzing large amounts of data from third-party and other sources are an inherent part of investing with a data- and process-driven, systematic investment manager, especially one that invests in a large universe of Instruments such as the Adviser.

Use of Simulations. The Adviser sets expectations for Client performance based on, among other things, simulated performance results from portfolio simulations that use historical and simulated data and take into account the size and trading activities of other Clients and clients of affiliates. The Adviser also uses simulations in its portfolio management activities. These portfolio simulations have inherent limitations. For example, these portfolio simulations are designed with the benefit of hindsight and do not represent actual trading; actual returns will be different than those of the simulations. In addition, Clients (and investors therein) should note that the interpretation of simulated results is an inherently subjective process, requires significant interpretation by portfolio management personnel, and is ultimately based upon the knowledge, expertise and subjective beliefs of portfolio management personnel about the workings of the strategies, Techniques and markets. For the avoidance of doubt, differing interpretations of any given portfolio simulation's results are common. There can be no assurance that the future performance of any strategies employed by a Client will match any simulated performance results from portfolio simulations. Furthermore, simulations are also used internally to represent strategy behavior and/or performance on an ongoing basis. In addition to the limitations discussed above, certain simulations are likely to imprecisely simulate actual activity. This occurs for various reasons, including due to the timing of data ingestion in simulations that differs from that of actual forecasting and trading activity. Certain portfolio management decisions may be based on these imprecise simulations, with or without the knowledge as to what extent the simulations are imprecise. The Adviser's reliance on simulations can materially adversely impact Clients.

Political, Social and Economic Uncertainty Risk. Social, political, economic and other conditions and events (such as natural disasters, epidemics and pandemics, terrorism, wars, conflicts, economic sanctions activity and social unrest) occur from time to time, and will likely continue to occur. Such events create uncertainty and have significant impacts on financial markets, exchanges, issuers, industries, governments, counterparties, service providers and other systems to which Clients and the Instruments in which they invest are exposed. As global systems, economies and financial markets are increasingly interconnected, events that once had only local impact are now more likely to have regional or even global effects. Events that occur in one country, region or financial market will, more frequently, adversely impact issuers in other countries, regions or markets, including in established markets such as the United States. These impacts can be exacerbated by failures of governments and societies to adequately respond to an emerging event or threat.

The foregoing events and related uncertainty can result in or coincide with: increased volatility in the global financial markets; a decrease in the reliability of market prices and difficulty in valuing assets; greater fluctuations in currency exchange rates; increased risk of default (by government and private issuers, service providers and counterparties); inability to purchase and sell assets or otherwise settle transactions (*e.g.*, a market freeze or disruption); substantial rates of inflation; recessions; depressions; difficulties in obtaining and/or enforcing legal judgments; further social, economic, and political instability (which can compound these effects); greater governmental and regulatory involvement in the economy, in financial markets or in social factors that impact the economy (*e.g.*, the imposition of quarantines and/or travel restrictions). Many of the foregoing risks implicate risk factor disclosures included elsewhere in this brochure, such as "Risk of Independent Management, Independent Deleveraging or Liquidation;" "Highly Volatile Markets;" "Regulatory Changes;" and "Derivative, Counterparty and Settlement Risk."

For example, beginning in early 2020, a novel coronavirus (SARS-CoV-2) and related respiratory disease (COVID-19) spread rapidly across the world, including within the United States. This outbreak has led and is likely to continue to lead to disruptions in the worldwide economy. This outbreak and any future outbreaks could have a further adverse impact on the economies of nations where the novel coronavirus has arisen and on the global economy in general, including volatility in or disruption of markets in which Clients invest, which could have a material adverse impact on the Clients. As of the date of this brochure, it remains impossible to determine the final scope of this outbreak, or any future outbreaks, or its full potential impact on Clients and the issuers in which they invest. Moreover, due to the unprecedented nature of this outbreak, reasonable expectations about any of the risks to which a Client is subject could prove inaccurate.

The Instruments in which Clients invest have been and could further be significantly impacted by emerging events and uncertainty of this type, and Clients will be negatively impacted if the value of their portfolio holdings decreases as a result of such events and the uncertainty they cause. Clients will also be negatively affected if the operations and effectiveness of Two Sigma Affiliates, Clients' counterparties or their service providers are compromised or if necessary or beneficial systems and processes are disrupted. See, *e.g.*, "Reliance on Technology" above and "Cybersecurity and Business Continuity Risks" below.

Sustainability Risk under the European Union's Sustainable Finance Disclosure Regulation ("SFDR"). The Adviser utilizes a variety of methods and strategies to make investment decisions and recommendations for Clients and generally seeks to control risk systematically through the use of its proprietary portfolio management and risk management systems and Techniques. The SFDR defines a "sustainability risk" to mean an environmental, social, or governance event or condition that, if it occurs, could cause an actual or potential material negative impact on the value of an investment. It is not the Adviser's practice to consider these sustainability risks as a distinct element of risk within its investment processes. Rather, portfolio managers, working together with other personnel, evaluate various risks related to the Clients' trading program and work to develop techniques for measuring, managing, and mitigating those risks.

To the extent that these or other sustainability risks are integrated into certain Clients' investment decisions, they are typically integrated within the totality of events and conditions that inform investment decisions under the Adviser's investment and risk management programs. Please see "Methods of Analysis and Investment Strategies" and "Overview of Risk Management" above for a broader discussion of, among other things, the investment strategies and analytics used on behalf of such Clients and the Adviser's efforts to systematically control risk, each of which is discussed in greater detail in such Clients' offering memoranda.

Assessment of sustainability risks is complex and may be based on data that is difficult to obtain, incomplete, out of date, or otherwise materially inaccurate. Moreover, the impacts following the occurrence of a sustainability risk may be numerous and vary depending on the specific risk and asset class. As is the case with political, social and economic uncertainty risks (see "Political, Social and Economic Uncertainty Risk" above), sustainability risks (as defined under SFDR) could cause an actual or a potential material negative impact on the value of an investment and, even when identified, there can be no assurance that any such risks will be effectively managed or mitigated.

Cybersecurity and Business Continuity Risks. The information and technology systems of the Adviser, its affiliates and service providers to the Adviser and Clients are vulnerable to potential damage or interruption from computer attacks, network failures, computer and telecommunication failures, infiltration by unauthorized persons and security breaches, errors by their respective professionals, power outages and catastrophic events such as fires, tornadoes, floods, hurricanes and earthquakes. Such risks are likely increased in some cases as a result of the global activities of Two Sigma Affiliates across different countries, regions and markets. In addition to direct vulnerabilities of the systems of the Adviser and its affiliates, the foregoing (and similar) risks from time to time originate on systems and in locations beyond the Adviser's control. For example, software, data and other services provided by third parties may be compromised without the Adviser's knowledge. Additionally, the Adviser's communications with other persons, including Client counterparties and investors, are susceptible to infiltration due to human error or vulnerabilities in the systems of such persons. Accordingly, investors are advised to ensure communication methods with the Adviser and the relevant administrator(s) are secure so as to prevent interception or impersonation that could result in fraudulent communications being submitted on their behalf.

Although the Adviser has implemented various measures designed to seek to manage risks relating to these types of events, if these systems are compromised, become inoperable for extended periods of time or cease to function properly, it may be necessary for the Adviser or a service provider to make a significant investment to fix or replace them and to seek to remedy the effect of such issues. The failure or interruption of these systems and/or of disaster recovery plans for any reason could cause significant interruptions in the operations of the Adviser and the Clients and result in a failure to maintain the confidentiality, integrity or availability of sensitive data, including personal information, as well as reputational damage and/or financial loss, including via adverse, and potentially materially adverse, impacts to Clients' returns. Further, there may be legal and related costs arising from either existing or pending laws or regulations governing cybersecurity requirements for the Adviser and the Clients, as well as litigation and/or regulatory investigations associated with any incidents that occur. While many investment advisers and funds are subject to the same or similar risks in respect of their operations, these risks are particularly acute with respect to an investment in the Clients due to the Adviser's and the Clients' fundamental dependence on technology (as discussed herein).

Another potential result of the interruption of the Adviser's (and its affiliates') systems and/or implementation of disaster recovery plans is a remote working or distributed workforce environment for employees of the Adviser and its affiliates, which presents certain risks discussed below in "Distributed Workforce Risks."

In addition, in connection with the services provided to a Client, an investor's personal data will be subject to the Adviser's privacy policy, will be shared with certain Two Sigma Affiliates and will be transferred and/or stored in various jurisdictions in which Two Sigma Affiliates, a Client's administrator or sub-administrator and/or their respective affiliates have a presence, including to jurisdictions that might not offer a level of personal data protection equivalent to the investor or prospective investor's country of residence.

Distributed Workforce Risks. In early 2020, the Adviser and its affiliates transitioned the majority of employees across their offices to remote work-from-home arrangements and imposed travel and related restrictions due to the outbreak of the novel coronavirus (SARS-CoV-2) and related respiratory disease (COVID-19) discussed above. While certain of the Adviser's and its affiliates' employees were accustomed to working remotely or working with other remote employees, this workforce was not historically fully remote. A partial or fully remote working environment increases risks relating to cybersecurity, data protection, employee supervision, workforce engagement and cohesion of operations, which could negatively impact the Adviser and its Clients.

Notwithstanding these risks, the Adviser believes that a remote working environment, in whole or in part, provides certain benefits to the Adviser, its affiliates and their employees (including in respect of workforce flexibility and the ability to recruit and retain personnel). The Adviser and its affiliates will endeavor to appropriately protect against the risks and will employ workplace policy arrangements designed to balance the benefits and potential drawbacks of remote work and a distributed workforce going forward. However, there can be no assurance that the operations of Clients will not be adversely affected.

Trade Errors. On occasion, errors occur with respect to trades executed on behalf of Clients. The Adviser has adopted policies and procedures reasonably designed to identify and resolve trade errors (as defined in the Adviser's trade errors policy) in a timely and appropriate manner. Losses resulting from such trade errors will generally be borne by the Client except to the extent provided in the Client's applicable offering memorandum or other governing document. Accordingly, to the extent such trade errors occur, the Client and/or its returns may be materially adversely affected. The Adviser will have a conflict of interest in determining the cause of an error, whether the Adviser has satisfied the applicable standard of care and any remediation. When a trade error occurs, the Adviser will seek to ensure that the Client is treated in a manner that is consistent with policies and procedures, applicable law and the fiduciary duties owed to the Client. Unless otherwise required by the offering or organizational documents of the Client, the Adviser generally will not notify the Client (or the investors therein) that a trade error has occurred.

Risk of Process Changes. As an evolving company, there can be no guarantee that any of the numerous processes developed by the Adviser to perform various functions (including, without limitation, processes related to data ingestion, research, forecasting, portfolio construction, order execution, trade allocation, risk management, compliance, operations and accounting) will not change over time or, in some cases, cease altogether (such changes or cessations, "Process Changes"). To the fullest extent permitted by rule, regulation, requirement or law, the Adviser reserves the right to make Process Changes in its sole and absolute discretion. The Adviser may make Process Changes due to: (i) external factors such as, without limitation, changes in law or legal/regulatory guidance, changes to industry practice, market factors or changes to external costs; (ii) internal factors such as, without limitation, personnel changes, changes to proprietary technology, security concerns or updated cost/benefit analyses; or (iii) any combination of the foregoing.

Effects of Process Changes are inherently unpredictable and can lead to unexpected outcomes which can and sometimes do ultimately have an adverse impact on one or more Clients. In addition, certain Process Changes, for example certain Process Changes made due to changes in law or legal/regulatory guidance, could be made despite the Adviser's belief that such Process Changes will have an adverse impact on one or more Clients. Finally, while the Adviser may choose to notify Clients or investors in Clients about certain of its Process Changes, the vast majority will be made without any such notification.

Leverage Risk. The Adviser employs substantial leverage on behalf of many of its Clients. Such leverage is achieved by borrowing funds from U.S. and non-U.S. brokers, banks, dealers and other lenders, purchasing or selling Instruments on margin or with collateral and/or using options, futures, forward contracts, swaps and various other forms of derivatives and other Instruments which have substantial embedded leverage. If a Client can no longer utilize margin or post collateral under such lending arrangements, such Client could be required to liquidate a significant portion of its portfolio, and trading would be constrained, adversely affecting such Client's performance.

Trading on leverage will result in greater risks, exposures, interest charges and costs, which may be explicit (*e.g.*, in the case of margin loans) or implicit (*e.g.*, in the case of many derivative instruments) and such charges or costs could be substantial. The use of leverage, both through direct borrowing and through the investment in various types of instruments across a wide variety of asset classes, can and will substantially increase the market exposure (and market risk) to which a Client is subject. Specifically, if the value of such Client's portfolio fell below the margin or collateral level required by a prime broker or dealer, the prime broker or dealer would require additional margin deposits or collateral amounts. If such Client were unable to satisfy such a margin or collateral call by a prime broker or dealer, the prime broker or dealer could liquidate the Client's positions in the Client's account with the prime broker or for which the dealer is the counterparty and cause the Client to incur significant losses. The failure to satisfy a margin or collateral call, or the occurrence of other material defaults under margin, collateral or other financing agreements, could trigger cross-defaults under such Client's agreements with other brokers, dealers, lenders, clearing firms or other counterparties, multiplying the adverse impact to such Client. In addition, because the use of leverage will allow such Client control of or exposure to positions worth significantly more than the margin or collateral posted for such positions, the amount that such Client can lose in the event of adverse price movements will be high in relation to the amount of this margin or collateral amount, and could exceed the value of the assets of such Client. In the event of a sudden decrease in the value of a Client's assets, a Client might not be able to liquidate assets quickly enough to satisfy its margin or collateral requirements. In that event, such entity would become subject to claims of financial intermediaries that extended "margin" loans or counterparty credit. Such claims could exceed the value of the assets of the Client. Trading of futures, forward contracts, equity swaps and other derivatives, for example, generally involves little or no margin deposit or collateral requirement and, therefore, provides substantial implicit leverage. Accordingly, relatively small price movements in these Instruments (and others) can result in immediate and substantial losses. While the Adviser and TSA will endeavor to equitably allocate any benefit from their trading agreements to their respective clients, at any point in time some Clients or TSA clients (including clients that contain primarily proprietary capital or that pay the Adviser or TSA higher performance-based compensation or fees) could benefit more or less than others due to factors such as size, Mandate, leverage levels and any changes thereto.

The banks, dealers, and counterparties (including prime brokers, futures commission merchants and central clearing houses) that provide financing to Clients can apply essentially discretionary margin, haircut, financing and collateral valuation policies. Changes by banks, dealers and counterparties in any of the foregoing may result in large margin calls, loss of financing and forced liquidations of positions at disadvantageous times or prices. There can be no assurance that such Clients will be able to secure or maintain adequate financing or favorable terms for such financing.

Risk of Independent Management, Independent Deleveraging or Liquidation. The Adviser will make portfolio decisions on behalf of a particular Client based on such Client's Mandate, with the result that decisions made by portfolio management personnel on behalf of one Client could vary materially from the decisions made by portfolio management personnel on behalf of other Clients and/or decisions made by TSA on behalf of TSA clients, including during times of market stress and during liquidation events. Because the Adviser and TSA employ the same or similar strategies and Techniques on behalf of many Clients and/or TSA clients, and because such Clients and TSA clients often trade the same or similar Instruments, the decisions made by portfolio management personnel on behalf of any individual Client or TSA client are likely to have a material impact on other Clients and/or TSA clients. This impact is likely to be exacerbated during times of market stress and/or during liquidation events. For example, to the extent that portfolio management personnel decide to liquidate or "delever" all or any portion of one Client's portfolio for any reason (especially a portfolio operating the Alternative Strategies which tend to trade more volume and more quickly through separate execution desks), such liquidation or deleveraging is likely to adversely affect positions held by other Clients or such other Client's ability to liquidate or delever the same or similar positions, whether or not portfolio management personnel have made the independent decision to liquidate or delever such other Clients' portfolios. In addition, there is no guarantee that the Adviser will choose to, or will be able to, liquidate or delever the portfolios of Clients simultaneously or in any orderly fashion.

The Adviser and TSA will seek to address these and related potential conflicts of interest in accordance with the applicable fiduciary duties they owe to their respective clients. For instance, depending on the circumstances that have contributed to the decision to liquidate or delever the portfolios of a Client and the Adviser's belief about how such events will unfold, the Adviser may, in its discretion, defer to each portfolio manager and/or such person's delegate, as applicable; restrict the coordination of such individuals across the Clients and/or TSA clients; or deliberately coordinate across the Clients and TSA clients for the purpose of seeking to mitigate overall impact. There can be no assurance that the Adviser's chosen course of action will effectively manage or mitigate the adverse impact of such events on the Clients or that a different course of action would not have resulted in a better or worse outcome for the Clients.

Given the size and scope of the portfolios traded by Clients and TSA clients, the Adviser expects that it is unlikely to be able to liquidate or delever such portfolios in an orderly fashion, particularly during times of market stress and/or during liquidation events.

Varying Liquidity Terms. Different Clients that invest in the same underlying funds or investment trading vehicles have different liquidity terms with respect to such entities. Such differences include, but are not limited to, more frequent redemption dates and/or shorter notice periods. Under certain circumstances, therefore, investors in certain Clients can redeem or withdraw, as applicable, from the applicable underlying fund or investment trading vehicle at times when the ability of investors in other Clients to redeem is restricted.

Highly Volatile Markets. The prices of securities and other Instruments can be highly volatile. Price movements of Instruments in which Clients trade are influenced by, among other things, interest rates, changing supply and demand relationships, trade, fiscal, monetary and exchange control programs and policies of governments, and national and international political and economic events and policies. In addition, governments from time to time intervene, directly and by regulation, in certain markets. Such intervention often is intended directly to influence prices and may, together with other factors, cause all of such markets to move rapidly in the same direction because of, among other things, interest rate fluctuations. Clients are also subject to the risk of the failure of any of the exchanges on which its positions trade or of their clearinghouses and subject to the risk of failure of their counterparties in the case of OTC positions. Even if considered safe under normal conditions, such exchanges, clearinghouses or counterparties are nevertheless susceptible to failure, which could materially adversely affect Clients.

Hedging Risk. The Adviser will (directly or indirectly) employ hedging for certain Clients by taking long and short positions in related Instruments. Hedging against a decline in the value of a portfolio position does not eliminate fluctuations in the values of such portfolio positions or prevent losses if the values of such positions decline, but establishes other positions designed to gain from those same developments, thus seeking to moderate the decline in the value of such portfolio position. Such hedging transactions also limit the opportunity for gain if the value of the portfolio position should increase. In the event of an imperfect correlation between a position in a hedging instrument and the portfolio position that it is intended to protect, the desired protection may not be obtained, and a Client will be exposed to risk of loss. In addition, it is not possible to hedge fully or perfectly against any risk, and hedging entails its own costs. Positions that would typically serve as hedges could actually move in the same direction as the Instruments they were initially attempting to hedge, adding further risk (and losses) to the Client. The Adviser may determine in its sole discretion not to hedge against certain risks. Even in the case of Clients that are designed to seek market neutrality, the Adviser will weigh various considerations in determining the amount of hedging to employ. Among other things, the costs of hedging (*e.g.*, the cost of borrow) any particular position or set of positions can be prohibitive, and therefore certain hedging transactions in some cases will not appear appropriate from a cost/benefit perspective. Furthermore, certain risks exist that cannot be hedged.

Commodities. Commodity investments are affected by business, financial market or legal uncertainties. There can be no assurance that the Adviser will correctly evaluate the nature and magnitude of the various factors that could affect the value of and return on its (direct or indirect) commodity investments. Prices of commodity investments can be volatile, and a variety of factors that are inherently difficult to predict, such as domestic or international economic and political developments, may significantly affect the performance of a Client. In addition, the performance of a Client may fluctuate as the general level of interest rates fluctuates.

Short Selling Risk. A Client's investment program may include a significant amount of short selling. Short selling transactions expose the Client to the risk of loss in an amount greater than the initial investment, and such losses can increase rapidly and without effective limit. Short sales can, in certain circumstances, substantially increase the impact of adverse price movements on a Client's portfolio. A short sale of an Instrument involves the risk of a theoretically unlimited loss from a theoretically unlimited increase in the market price of the Instrument, which could result in an inability to cover the short position. In addition, there can be no assurance that securities or other Instruments necessary to cover a short position will be available for purchase. There is the risk that the Instruments borrowed by the Client in connection with a short sale would need to be returned to the lender on short notice. If such request for return of Instruments occurs at a time when other short sellers of the subject Instrument are receiving similar requests, a "short squeeze" can occur, wherein the Client might be compelled, at the most disadvantageous time, to replace the borrowed Instruments previously sold short with purchases on the open market, possibly at prices significantly in excess of the proceeds received earlier in originally selling the Instruments short. Purchasing Instruments to close out the short position can itself cause the price of the Instruments to rise further, thereby exacerbating any loss. In early 2021, several prominent examples of short squeezes occurred, driven at least in part by trading activity attributed to participants on social media networks. Such trading activity targeting particular Instruments presents risks to short selling transactions in those (and potentially other) Instruments by Clients. To the extent such trading activity continues to occur, and particularly if positions held by Clients are intended targets of such activity, Clients may be adversely affected.

Frequent Trading. The Adviser's primary strategies involve frequent trading of Instruments which results in significantly higher commissions and charges to Clients due to increased brokerage, which will offset Client profits.

Merger Arbitrage/Deal Risk. The most significant risk in merger arbitrage is that a transaction will be abandoned such that the value of securities purchased falls, resulting in loss of capital. This loss will be increased if the price of the shorted security (*i.e.*, the acquiring company) rises as the deal is called off. Abandonment may occur for a number of reasons, including (i) regulatory or antitrust prohibitions, delays or restrictive conditions for approval of the merger; (ii) problems arising out of due diligence review; (iii) incompatibility of the managements of the two parties; (iv) incompatibility of strategies; or (v) a movement outside of the required price range in "collar" transactions. When a deal is not abandoned, there is still a risk of price renegotiation or a timing delay.

Event-Driven Strategies Risk. A Client may have investments in companies involved in (or the target of) acquisition attempts or tender offers or companies involved in work-outs, liquidations, spin-offs, reorganizations, bankruptcies and similar transactions. In any investment opportunity involving any such type of business enterprise, there exists the risk that the transaction in which such business enterprise is involved either will be unsuccessful, will take considerable time or will result in a distribution of cash or a new security the value of which will be less than the purchase price to a Client of the security or other Instrument in respect of which such distribution is received. Similarly, if an anticipated transaction does not in fact occur, a Client may be required to sell its investment at a loss. Because there is substantial uncertainty concerning the outcome of transactions involving financially troubled companies in which a Client may invest, there is a potential risk of loss by a Client of its entire investment in such companies. In connection with such transactions (or otherwise), a Client may purchase securities on a when-issued basis, which means that delivery and payment take place sometime after the date of the commitment to purchase and is often conditioned upon the occurrence of a subsequent event, such as approval and consummation of a merger, reorganization or debt restructuring. The purchase price and/or interest rate receivable with respect to a when-issued security are fixed when a Client enters into the commitment. Such securities are subject to changes in market value prior to their delivery.

Lack of Diversification. Because a Client may not always be diversified across markets, industries, geographies or instrument types and because a Client is typically permitted to concentrate its investments in a few industries, issuers and Instruments in a specific geographic area, the negative impact on the value of the assets of a Client due to adverse movements in a particular economy or industry or in the value of the securities of particular issuer or Instrument could be considerably greater than if a Client were not permitted to concentrate its investments to such a significant extent. If a Client's portfolio becomes concentrated in a limited number of investments, such Client's performance will not necessarily correlate with the performance of the markets on which Instruments held by the Client are traded. Any loss with respect to a portfolio Instrument may have a significant adverse impact on a Client.

Adverse Effects of Substantial Growth and Licensing. Many of the strategies and Techniques used by a Client will be utilized by the Adviser on behalf of more than one Client and will be licensed to TSA for utilization on behalf of TSA's clients, and/or to other affiliates, including TSS and TSC. A strategy or set of strategies and Techniques employed by a Client often will be employed in a significant way (*e.g.,* to support billions of dollars of invested assets) on behalf of one or more other Clients or affiliates' clients. Further, due to a variety of factors, the profitability of many of these strategies are expected to decrease as the assets of clients of the Adviser (or its affiliates) increase, thereby potentially decreasing any Client's returns relative to its historical performance. This may be the case whether the Adviser (or its affiliates) utilizes the same strategies, or another strategy that trades in similar or related securities on behalf of different Clients, TSA clients or Two Sigma Affiliates.

Possible Adverse Effects of Substantial Withdrawals or Redemptions. In the event that there are substantial investor withdrawals or redemptions from a Client in a short period of time (including withdrawals of proprietary capital), the Adviser may find it difficult to adjust its asset allocation and trading strategies to the suddenly reduced amount of such Client's assets under management. Under such circumstances, in order to provide funds to satisfy withdrawal or redemption requests, the Adviser could be required to liquidate positions at an inopportune time or on unfavorable terms, resulting in a lower net asset value for the remaining investors and a lower withdrawal or redemption amount for the withdrawing or redeeming investors. On an ongoing basis, irrespective of the period over which substantial withdrawals or redemptions occur, it may be more difficult for Clients to generate additional profits operating on a smaller asset base and, as a result of liquidating assets to assist a Client to fund withdrawals or redemptions, any such Client could be left with a much less liquid portfolio. Finally, if a substantial number of investors were to withdraw or redeem all or a portion of their investment from a Client and the Client did not have a sufficient amount of cash, the Client might have to meet such withdrawal or redemption requests through distributions of securities or other instruments (which may include then illiquid securities) at a time that is potentially unfavorable.

Position Limits. Various regulators (in the U.S. and elsewhere), exchanges and/or counterparties impose position limits or reporting thresholds that can and do limit a Client's ability to effect desired trades. For example, the U.S. Commodity Futures Trading Commission ("CFTC") has established position limits on the maximum net position that any person or entity may own, hold, or control in certain futures and related derivatives including swaps that are economically equivalent to in-scope futures contracts. Position limits are also imposed by the Adviser in its discretion for risk management purposes, to avoid triggering regulatory filings or other obligations or for other purposes. All positions owned or controlled by the same person or entity or its affiliates, even if in different Clients or accounts, are often required to be aggregated for purposes of determining whether the applicable position limits have been exceeded. Thus, even if the Client does not intend to exceed applicable position limits, it is often the case that different Clients managed by the Adviser and its affiliates (including TSA) are aggregated. If at any time positions managed by the Adviser exceed applicable position limits, the Adviser would be required to liquidate positions of a Client or reallocate position limit budgets of its Clients to the extent necessary to come within those limits. Further, to avoid exceeding the position limits, Clients might have to forego or modify certain of their contemplated trades and, as a result, will lose the opportunity to fully capitalize on investment opportunities. The Adviser has conflicts of interest in respect of such decisions, which include considerations of Firm Profitability. See also "Allocation of Certain Finite Resources" in Item 6 above. In addition, it is possible that one or more regulators will change applicable position limits and/or aggregation requirements, including requirements across affiliates. In such case, the Adviser may be required to liquidate positions of Clients to the extent necessary to come within the revised limits. Further, any such position limit change could lead to Client losses based on dislocation in the market generally.

Risks Associated with Strategies that Utilize Third-Party Analysis. Strategies have been and may further be developed partly or wholly in reliance on third-party research, which can be provided in various forms, including discretionary research, discretionary trade ideas, or systematically generated signals. These strategies are highly reliant on the Adviser's and/or a Client's ability to provide adequate incentives to persons or firms (the "Providers") to generate and/or provide good analysis, recommendations or research, as applicable. Further, because many of such Providers will be employees of broker-dealers, other investment advisers or other financial institutions, experts and/or consultants and will not be directly supervised by the Adviser, utilizing their analysis, recommendations or research, as applicable, presents certain regulatory or other risks. For example, there is a risk that a Provider will furnish material non-public information to the Adviser or its affiliates thereby potentially limiting a Client's ability to trade in the securities of a particular company (including trades that would have been made based on other strategies utilized by the Client) or subjecting the Adviser to regulatory risks or restrictions. See "Trading Restrictions" below.

The analysis, recommendations and/or research generated by Providers are incorporated as inputs in certain strategies (systematic and/or discretionary). The Providers often rely to some degree on human judgment, and there can be no assurance that their analysis, recommendations or research will correctly evaluate the nature and magnitude of the various factors that could affect an investment. Moreover, the underlying strategy, thesis and/or research process of the Providers may be inaccessible or opaque to the Adviser, leading to misapplication of the strategy, an inability to identify errors and/or diminished performance by the Adviser and its Clients. In particular, the Adviser anticipates that the back-testing of the data utilized in strategies that rely on a Provider's discretionary research or a Provider's trade ideas may be less predictive than back-testing of other data utilized in other strategies pursued by the Adviser for its Clients.

Risks of Participating Affiliates. As discussed in Item 6 and Item 10, the Adviser expects personnel of non-U.S. Two Sigma Affiliates such as TSIL to engage in certain trading and advisory services for certain Clients. There are certain risks associated with the Adviser's reliance on such participating affiliates.

First, non-U.S. Two Sigma Affiliates are typically subject to various non-U.S. laws and regulations, many of which do not otherwise apply to the Adviser and/or the Clients. In the case of TSIL, these include certain U.K. regulatory requirements arising under the Markets in Financial Instruments Directive, such as trade and transaction reporting requirements, as well as certain research unbundling rules that can require brokers to price and supply execution services separately from investment research or other services. Further, such non-U.S. regulatory requirements may change over time, and there can be no guarantee that such non-U.S. laws and regulations will not adversely affect operations of or on behalf of Clients. Please refer to "Regulatory Changes" below for more information.

Additionally, the Adviser's reliance on a non-U.S. affiliate and its personnel could present or increase certain operational risks. For example, in the event of any failure or disruption of systems that are designed to facilitate the interaction of or communication between personnel of the Adviser and TSIL, trading activities by TSIL affiliate associated persons, and by extension Clients, could be adversely affected.

Competition. There have been and will likely continue to be attempts by others to duplicate the strategies developed by the Adviser. Although the Adviser believes that it has taken reasonable measures to protect the confidential and proprietary nature of these strategies, it is likely that certain of the Adviser's competitors currently have, or will develop, relationships with certain of the data providers and/or investment service providers that will be providing data and/or conducting much of the analysis, recommendations or research, as applicable, utilized in these strategies and will therefore have access to such data, analysis, recommendations or research, as applicable. Clients do and will continue to compete with other funds (including other funds managed by the Adviser and its affiliates) and institutional investors for the same or similar investment opportunities. Such competition reduces the opportunities available to the Clients to generate returns.

Trading Restrictions. In the course of its activities, there is a risk that the Adviser will receive material non-public information. The Adviser from time to time receives such information directly as a result of its own business activities or exploration of new business opportunities, or indirectly as a result of its relationship with affiliates including, but not limited to, TSA, TSIL, TSIS, TSPI, TSV, TSS, TSC and TSRE, which are discussed in Item 10 of this brochure. In such an event, Clients can be and often are restricted from trading certain securities regardless of whether the activities leading to the receipt of material non-public information were for the benefit of such Clients or otherwise. While the Adviser has instituted compliance procedures that it believes will mitigate such risks, such compliance procedures could result in, among other things, a Client not participating in investment opportunities in which it would have otherwise been eligible to participate, not selling an investment it would otherwise sell or not selling an investment at the time it would otherwise choose to sell such investment, resulting in potential or actual losses and potentially hindering the timely liquidation of a Client's portfolio. A client not advised by the Adviser or its affiliates would likely not be subject to such restrictions, and such restrictions can be, and often are, long lasting and could have a material impact on the gains and losses of Clients.

In addition, the legal and regulatory treatment of material non-public information and insider trading continues to evolve and is therefore subject to a level of uncertainty. The effect of any future legal or regulatory change could have a substantial and adverse impact on Clients.

Trading on behalf of a Client may be subject to additional trading restrictions, including with respect to short sales. A number of jurisdictions from time to time have imposed restrictions or outright bans on short sales and related transactions in certain types of financial instruments, making it difficult or impossible for many market participants (including Clients) either to continue to effectively implement their strategies or to control the risk of open short positions relating to such financial instruments. In addition, short sales historically have been, and continue to be, subject to certain restrictions under U.S. federal securities laws. Similarly, other jurisdictions also have adopted or may adopt short-selling restrictions and short-position reporting requirements. Any ongoing or future regulatory limitations on short selling, or any ongoing or future requirement to disclose short sales or short positions, could limit the Adviser's ability and/or willingness to implement strategies involving short sales on behalf of Clients, which would likely have a material adverse effect on Clients. For additional risks related to short sales, see "Short Selling Risk" above.

In addition, many regulators or operators of trading venues in which Clients may participate have authority to impose price caps, price restrictions, retroactive price changes, position limits, "circuit breakers," and other mechanisms to address volatility or manage supply and/or demand in such markets. Various authorities may intercede in markets to exercise this authority. Such interventions may be difficult to predict and may significantly affect the markets in which Clients operate or hope to operate. Any form of price cap, price restriction, or other mechanism implemented to try to control or adjust pricing, supply, or other market variables could limit the Adviser's ability and/or willingness to implement certain strategies on behalf of Clients, which will have a material adverse effect on Clients.

In addition to the restrictions above, see "Position Limits" above for a discussion of certain risks associated with position limits.

Information Asymmetry. Certain employees and/or affiliates of the Adviser who from time to time invest directly or indirectly in Clients will receive and/or have exposure to information related to such Clients' portfolios and operations, either directly or by means of their respective day-to-day roles at the Adviser or its affiliates, and any such information may not be shared with (or otherwise known by) other investors in such Clients. Additionally, certain Clients that invest in the same or similar portfolios as other Clients will receive, directly or indirectly, more frequent reporting regarding such portfolios than such other Clients receive. As a result, in the event of any overlap among investors in these Clients, such overlapping investors may receive or infer additional or more timely information regarding such portfolios than is known to other investors in such other Clients. Investors with greater exposure to information will be at an advantage as compared to other investors with regard to investment decision-making.

Valuation Risks. Valuing Clients' assets is complex and can involve uncertainties and discretionary determinations. As a result, values used in determining investors' sharing percentages (*e.g.*, upon new subscriptions), redemption or withdrawal proceeds and fees might not accurately reflect the amounts the Client could obtain (or would be required to pay as to some types of derivatives positions) if it were to try to sell the security (or close the position). For example, if an investor redeems or withdraws from a Client, subsequent valuation adjustments to investments may occur, and there is a risk that the redeeming or withdrawing investor may receive an amount upon redemption or withdrawal which is greater or less than the amount the investor would have been entitled to receive on the basis of the adjusted valuation. To the extent such subsequently adjusted valuations adversely affect a Client's net asset value, the Client will be adversely affected to the benefit of investors who had previously redeemed or withdrawn. Conversely, any increases in the net asset value resulting from such subsequently adjusted valuations generally will be entirely for the benefit of current investors and to the detriment of investors who redeemed or withdrew at a net asset value lower than the adjusted amount. New investors may be affected in a similar way as the same principles apply to subscriptions or transfers. Net asset value determinations are generally conclusive and binding on all investors for all purposes, including determining the subscription and redemption or withdrawal prices and fees paid to the Adviser (and/or its affiliate, as applicable).

Reliance on Human Discretion. Although many of the Adviser's strategies and Techniques are reliant on technology (as discussed above), certain portfolio settings, data-related and risk management decisions and non-systematic strategy decisions remain materially reliant on human discretion, and in particular on that of the portfolio managers and the other personnel of the Adviser. The portfolio managers and other personnel of the Adviser will endeavor to exercise that discretion in a reasonable manner, but no guarantee can be made that such decisions will be successful or not have unintended or unforeseen consequences.

The relevant portfolio manager(s) have broad discretion in making investments for Clients. There can be no assurance that the portfolio managers have or will correctly evaluate the nature and magnitude of the various factors that could affect the value of and return on a Client's investments. Prices of a Client's investments may be volatile, and a variety of factors that are inherently difficult to predict may significantly affect the results of a Client's activities and the value of its investments. No guarantee or representation is made that a Client's investment objective will be achieved or that such Client will be able to avoid significant losses.

Certain Risks Associated with Management and Governance Challenges. There have been a variety of management and governance challenges at the Adviser. The Management Committee of the Adviser's general partner (the "Management Committee") has been unable to reach agreement on a number of topics, including: (i) defining roles, authorities and responsibilities for a range of C-level officers, including for the various roles of the members of the Management Committee and Chief Investment Officers; (ii) organizational design and management structure of various teams; (iii) corporate governance and oversight matters; and (iv) succession plans. These disagreements can affect the Adviser's ability to retain or attract employees (including very senior employees) and could continue to impact the ability of employees to fully implement key research, engineering, or corporate business initiatives. If such disagreement were to continue, the Adviser's ability to achieve Client mandates could be impacted over time.

Regulatory Changes. It is possible that changes in applicable laws and regulations will affect the Adviser's operations. The consequences of additional regulation on the liquidity and the functioning of the markets in which the Adviser trades (and, possibly, on the Adviser itself) cannot be predicted and could materially diminish the profitability of investment opportunities for the Adviser's Clients. Further, changes in regulation could increase public disclosure of trading activity on behalf of, or positions held by, Clients, the Adviser and/or Two Sigma Affiliates.

In particular, as of the date of this brochure, a number of recent rulemaking proposals have been released, some of which could materially impact the Adviser's business. Among other things, certain proposed rules, if adopted, could potentially affect the enforceability of certain Clients' contractual arrangements and/or increase costs of operating the businesses of the Adviser and other Two Sigma Affiliates.

In addition, the global financial markets have in the past undergone pervasive and fundamental disruptions which have led to extensive and unprecedented governmental intervention. Such intervention has in certain cases been implemented on an "emergency" basis, suddenly and substantially eliminating market participants' ability to continue to implement certain strategies or manage the risk of their outstanding positions. In addition, as one would expect given the complexities of the financial markets and the limited time frame within which governments have felt compelled to take action, these interventions have typically been unclear and often inconsistent in scope and application, resulting in confusion and uncertainty which in itself has been materially detrimental to the efficient functioning of the markets as well as previously successful investment strategies. It is impossible to predict what additional governmental restrictions will be imposed on the markets and/or the effect of such restrictions on Clients' strategies, however, increased regulation of the financial markets could be materially detrimental to Clients.

Participation in Litigation. From time to time, the Adviser and/or a Client will likely have the opportunity to participate in class action litigations or otherwise pursue potential legal claims, for example in connection with alleged wrongdoing by a counterparty or other service provider, or by virtue of having held an interest in a given issuer (such as in a shareholder class action or shareholder derivative suit). In certain cases, such participation could require or potentially result in the confidential information related to the Adviser and/or the Client becoming subject to discovery, which could include discovery of strategies and Techniques and/or portfolio information of the Client from which strategies and/or Techniques could be derived. The Adviser and/or the Client may decline to participate in any such class action litigation or to pursue such claims in the Adviser's discretion, and the Adviser expects to decline to do so in certain circumstances, including if discovery of confidential information appears reasonably likely to be required, notwithstanding the prospect of monetary recovery for one or more Clients. The determination not to pursue claims on behalf of a Client would result in the Client not recovering damages under these claims, and the amount of damages related to these claims could be material. The Adviser will consider factors such as the protection of its confidential information, and the long-term interests of the Client in protecting such confidential information. The Adviser will have a conflict of interest in making this determination.

Advice of Counsel. The Adviser frequently relies on the advice of internal and external legal counsel in the ordinary course of its business. The advice received by the Adviser will generally not be disclosed to investors in Clients.

Combination or "Layering" of Multiple Risk Factors May Significantly Increase Risk of Loss. Although the various risks discussed herein are generally described separately, a prospective investor should consider the potential effects on its investment of the interplay of multiple risk factors. Where more than one significant risk factor is present, the risk of loss to a Client may be significantly increased.

Risks Associated with Types of Securities that are Primarily Recommended (including Significant or Unusual Risks)

Equity Securities. The value of equity securities fluctuates in response to issuer, political, market, and economic developments. Fluctuations can be dramatic over the short as well as over the long term, and different parts of the market and different types of equity securities can react differently to these developments. For example, large cap stocks can react differently from small cap stocks, and "growth" stocks can react differently from "value" stocks. Issuer, political, or economic developments can affect a single issuer, issuers within an industry or economic sector or geographic region, or the market as a whole. Changes in the financial condition of a single issuer can impact the market as a whole. Terrorism and related geo-political risks have led, and may in the future lead, to increased short-term market volatility and may have adverse long-term effects on world economies and markets generally.

Rights and Warrants. Rights and warrants entitle the holder to buy equity securities at a specific price for a specific period of time. Rights and warrants are more speculative than certain other types of investments in that they do not entitle a holder to dividends or voting rights with respect to the underlying securities nor do they represent any rights in the assets of the issuing company. Also, the value of a right or warrant does not necessarily change with the value of the underlying securities and a right or warrant ceases to have value if it is not exercised prior to the expiration date.

Exchange-Traded Products. Certain Clients invest in exchange-traded products ("ETPs"), including, but not limited to, registered investment companies. Investments in an ETP are subject to the fees and expenses of the ETP, which may include a management fee, other fund expenses and a distribution fee. The Investment Company Act places certain restrictions on the percentage of ownership that a private investment fund may have in a registered investment company. A Client's positions in ETPs are subject to a number of risks associated with the management and market conditions of the ETP. These include (but are not limited to):

(i) *Delisting*—An ETP may be delisted and liquidated at the discretion of its issuer. Should a Client hold a position in an ETP when it is delisted, such Client may be subject to costs associated with the ETP's liquidation, counterparty risk against the issuer, and additional taxes due to cash distributions from the liquidation.

(ii) *Market Maker Instability*—The supply and demand of ETP shares are kept in balance by its authorized participants. The authorized participants of an ETP may, purposefully or by mistake, destabilize the supply-demand balance of an ETP, causing tracking error of the ETP to its constituent instruments that may negatively affect the value of an entity's position in the ETP.

(iii) *Hidden Illiquidity*—The liquidity of an ETP is determined not only by the ETP's own market liquidity but how easy or difficult it is to transact in the ETP's constituent instruments. If one or more of an ETP's constituent instruments becomes difficult to buy or sell, the ETP may become difficult to transact or experience tracking error that negatively affects the value of positions held in the ETP.

(iv) *Borrow Availability*—The ability to take short positions in an ETP is subject to borrow availability. The ability to take optimal positions in ETPs may be adversely affected by one or more ETPs becoming hard to borrow.

(v) *Constituent Fluctuation*—ETPs on equity indices attempt to track their underlying indices closely. However, the issuer may in its discretion temporarily introduce ex-index constituents to the ETP, including ex-index equities and foreign currencies. This may introduce risks and tracking error that are difficult to model to the ETP and that may negatively affect the value of positions in the ETP.

(vi) *Additional Taxation*—Depending on the ETP's structure, investors may be subject to additional taxation on distributions from ETPs.

Clients may invest in ETPs listed in countries different from their constituent instruments. These ETPs are subject to additional risks not typically associated with ETPs listed in the same country as their constituents, including (i) movements in currency exchange rates; (ii) significant events that affect the ETP's underlying value that occur when the ETP's listed exchange is closed; and (iii) risk factors that arise from trading in foreign instruments.

Concentration Risk of Custodians, Dealers and Prime Brokers. Certain Clients will clear their equities, ETPs and futures trades in accounts that they will maintain with custodians, dealers and/or prime brokers and/or their affiliates. As a result, the custodians, dealers and/or prime brokers (and/or their respective affiliates) will maintain custody of all or a material portion of the assets of Clients. In some instances, the Adviser might utilize only one custodian for clearing and custody of a particular Client's futures and swap transactions, as well as equity trades. The Adviser may also, in its sole discretion, elect to utilize other and/or additional custodians, dealers and/or prime brokers for purposes of clearing and custodying equity and/or futures and swap transactions, however, the potential concentration of the clearing and custody of a Client's assets means that the Client is subject to risks associated with such lack of diversification. In particular, the Client would be subject to material risks in the event of the bankruptcy, default or other credit event involving any custodian, dealer and/or prime broker (or their affiliates) and/or in the event of a material failure of any trading, clearance, settlement or other systems of any custodian, dealer and/or prime broker (or their affiliates).

Options and Derivatives. A Client may engage in trading in options on individual securities, securities sectors, securities indices, futures contracts, foreign exchange contracts or commodities. Trading options entails certain risks, some of which are described below. In addition, if the purchaser of an option exercises the option, the holder will, in effect, be buying or selling the underlying instrument, and will then be subject to the same risks as are attendant to trading in such instrument. Trading in options can result in a greater potential for profit or loss than trading in the underlying instruments. The value of an option will change because of a change in the value of the underlying instruments, the passage of time, changes in the market's perception as to the future price behavior of the underlying instruments or any combination of the foregoing and/or other factors. In the case of the purchase of an option, the risk of loss of an option buyer's entire investment in the option (*i.e.*, the premium paid and transaction charges) reflects the nature of an option as a wasting asset that may become worthless at its expiration. Where an option is written (or sold) uncovered, the option seller could be liable to post substantial additional margin or collateral, and the risk of loss is substantial and is theoretically unlimited for written call options, as the option seller will be obligated to deliver, or take delivery of, the underlying instrument at a predetermined price, which could, upon the exercise of the option, be significantly different from its market value at the time the option was initially written (or sold).

Additionally, Clients may purchase and sell exchange-traded options and/or privately negotiated OTC derivatives. There can be no guarantee that there will at all times be a liquid market for these options or derivatives. A market could become unavailable if one or more exchanges or dealers were to stop trading options or OTC derivatives, respectively, or it could become unavailable with respect to options on a particular underlying instrument if exchanges or dealers stopped trading derivatives on that underlying instrument. In addition, a market could become temporarily unavailable if unusual events (*e.g.*, volume exceeds clearing capability) were to interrupt normal exchange operations. If an options market were to become illiquid or otherwise unavailable, an option holder would be able to realize profits or limit losses only by exercising the option and an options seller or writer would remain obligated until the option is exercised or expires.

If trading is interrupted in an underlying instrument, the trading of options or derivatives on that instrument is usually halted as well. Holders and writers of options or dealers in any derivative will not be able to close out their positions until trading resumes in the underlying instrument, and they could face considerable losses if the instrument reopens at a substantially different price.

In the case of options, even if options trading is halted, holders of options may be able to exercise their options. However, if trading has also been halted in the underlying instrument, option holders face the risk of exercising options without knowing the instrument's current market value. If exercises do occur when trading of the underlying instrument is halted, the party required to deliver the underlying instrument may be unable to obtain it, which would necessitate a postponed settlement and/or the fixing of cash settlement prices.

Futures. Certain Clients are expected to engage in futures transactions, which could include bona fide hedging of existing long and short positions and/or independent profit opportunities. Trading in futures involves significant risks, including, but not limited to: (i) price volatility; (ii) highly leveraged trading; and (iii) possible illiquidity. Clients may sustain a total loss of the initial margin and any maintenance margin that it posts (directly or indirectly) to a broker to establish or maintain a position in the futures market. If the market moves against a Client's position, such Client may be called upon to post a substantial amount of additional margin, on short notice, in order to maintain its position. If a Client does not provide the required margin within the prescribed time, its position may be liquidated at a loss, and a Client will be liable for any resulting deficit in its account. Under certain market conditions, a Client may find it difficult or impossible to liquidate a position. This can occur, for example, when the market makes a "limit move." Placing contingent orders, such as a "stop-loss" or "stop-limit" order, will not necessarily limit losses to the intended amounts, since market conditions could make it impossible to execute such orders. A "spread" position may not be less risky than a simple "long" or "short" position. The high degree of leverage that is often obtainable in futures trading because of the small margin requirements can work against a Client as well as for it. The use of leverage can lead to large losses. Non-U.S. futures markets may have greater risk than U.S. futures markets. Unlike trading on U.S. commodity exchanges, trading on non-U.S. commodity exchanges is not regulated by the CFTC and are subject to greater risks than trading on domestic exchanges.

An option on a futures contract is a right or an obligation to either buy or sell the underlying futures contract at a specific price. The risks of trading options on futures are similar to the risks of trading securities options. See "Options and Derivatives" above. In addition, if the purchaser of an option on a futures contract exercises the option, the holder will, in effect, be buying or selling the underlying futures contract, and will then be subject to the same risks as are attendant to futures trading.

Foreign Instruments. Trading in non-U.S. instruments and derivatives on non-U.S. instruments involves risks and considerations not present in the trading of U.S. instruments and derivatives. Since non-U.S. instruments generally are denominated, pay interest and are settled in non-U.S. currencies, the value of the assets of a Client as measured in U.S. Dollars will be affected favorably or unfavorably by changes in the exchange rate between the U.S. Dollar and other currencies. The weakening of a country's currency relative to the U.S. Dollar will affect, potentially adversely, the U.S. Dollar value of a Client's investments that are denominated in such country's currency. As a result, a Client could realize a net loss on an investment, even if there were a gain on the underlying investment before currency losses were taken into account. Currency exchange rates can be affected unpredictably by controls or restrictions imposed by U.S. or non-U.S. central banks or other governmental agencies in joint or unilateral efforts to alter exchange rate trends. Political developments in the United States or abroad may also affect currency exchange rates. To the extent a Client trades instruments denominated in non-U.S. currencies, it may be adversely affected by restrictions on the conversion or transfer of such non-U.S. currencies. The Adviser may (or may not) seek to hedge these risks by trading currencies, currency futures contracts, forward currency contracts, swaps, or any combination thereof (whether or not exchange traded), but there can be no assurance that such strategies if utilized will be effective. Swaps, "synthetic" or derivative instruments, and certain types of customized Instruments are subject to the risk of non-performance by the other party to the contract. As a result, a default on the instrument may deprive a Client of unrealized profits and/or collateral held by the counterparty or may force a Client to cover its commitments for purchase or resale of the underlying currency at the then current market price.

In addition, there often is less publicly available information about foreign economies and foreign companies than the U.S. economy and U.S. companies. Non-U.S. companies may not be subject to accounting, auditing and financial reporting standards, practices and requirements comparable to those applicable to U.S. companies. Many non-U.S. securities markets have substantially less volume than U.S. securities markets and, therefore, securities of non-U.S. companies are generally less liquid and at times their prices may be more volatile than securities of comparable U.S. companies. In addition, in many non-U.S. markets there is less government supervision of exchanges, brokers, dealers and issuers than in the United States. There is a possibility of expropriation or confiscatory taxation, seizure or nationalization of non-U.S. bank deposits, establishment of exchange controls, the adoption of non-U.S. government restrictions or other adverse political, social or diplomatic developments that could adversely affect any such investment. Some of the instruments could be subject to taxes levied by non-U.S. governments, which have the effect of increasing the cost of such trading and reducing the realized gain or increasing the realized loss on such securities at the time of sale. Income from non-U.S. instruments held by a Client could be reduced by a withholding tax at the source. Tax conventions between certain countries and the United States, however, may reduce or eliminate such taxes, and some or all of such taxes may be creditable against the U.S. federal income tax liability of investors which are U.S. taxpayers but may be eliminated or changed at any time.

Forward Contracts. Trading in forward contracts involves significant risks. Forward contracts are typically not traded on exchanges; rather, banks and dealers act as principals in these markets. A Client, in trading forward contracts, will therefore be subject to the risk of credit failure or the inability of or refusal of forward contract dealers to perform with respect to its forward contracts. There is no limitation on the daily price movements of forward contracts, and a dealer is not required to continue to make markets in such contracts. There have been periods during which forward contract dealers have refused to quote prices for forward contracts or have quoted prices with an unusually wide spread between the bid and ask price. Forward contract trading may therefore be or become highly illiquid.

Foreign Exchange Contracts. A Client may enter into foreign currency spot trades, forward contracts and/or other derivatives thereon for speculative, hedging or other investment purposes. Foreign currency spot trades, forward contracts and other derivatives involve a risk of loss if currency exchange rates move against a Client, unless such derivatives are hedges of foreign currency risk of a Client in its investments. In addition, forward contracts and certain currency derivatives are not guaranteed by an exchange or clearinghouse. Therefore, a default by the forward contract, or derivative counterparty could result in a loss to a Client for the value of unrealized profits on the contract or derivative or for the difference between the value of its commitments, if any, for purchase or sale at the current currency exchange rate and the value of those commitments at the forward contract exchange rate.

It is contemplated that most foreign currency forward contracts will be with banks, including among others, investment banks and brokerage firms. There are no limitations on daily price moves of spot trades, forward contracts or many derivatives. Banks, including investment banks and brokerage firms, are not required to continue to make markets in currencies. There have been periods during which certain banks, including investment banks and brokerage firms, have refused to continue to quote prices for forward contracts or derivatives or have quoted prices with an unusually wide spread between the bid and ask price. The imposition of credit controls by governmental authorities might limit the level of such forward trading to less than that which the Adviser would otherwise recommend, to the possible detriment of a Client. Clients will be subject to the risk of bank or brokerage firm failure or the inability of or refusal by a bank or a brokerage firm to perform with respect to such contracts.

Non-Deliverable FX Forwards. Non-Deliverable FX Forwards ("NDFs") are subject to the risks of loss associated with standard foreign exchange transactions. In addition, NDFs are subject to the risk that an event would force the parties to the transaction to find an alternative basis for determining settlement amounts such as, among other things, a general or specific default, inconvertibility, non-transferability or nationalization of one of the underlying currencies in the NDF. If on any date upon which an NDF transaction is to be valued such an event has occurred or is continuing, the settlement amount to be delivered may be adjusted by the clearing broker or its counterparty, acting in a reasonable manner. Such adjustments will result in changes to the prices at which such transactions were effected and such changes could be material. The fixing of a trade at a settlement price, the determination of whether such a disruption has occurred and the settlement amount associated therewith are beyond the control of the Adviser and the relevant Client.

Fixed Income and Related Instruments. A Client will be subject to interest rate risk in connection with its positions in futures contracts on interest rates, sovereign notes and bonds and futures contracts on sovereign notes and bonds, options on such futures contracts and interest rate swaps. Generally, the value of fixed income instruments will change inversely with changes in interest rates. As interest rates rise, the market value of such instruments tends to decrease. Conversely, as interest rates fall, the market value of such instruments tends to increase. This risk will typically be greater for instruments based on longer-term interest rates than for instruments based on shorter-term interest rates.

Trading in Emerging Market Instruments. Trading in emerging market Instruments involves additional risks and special considerations not typically associated with trading in other more established economies or securities markets. Such risks include (i) increased risk of nationalization or expropriation of assets or confiscatory taxation; (ii) greater social, economic and political uncertainty including war; (iii) higher dependence on exports and the corresponding importance of international trade; (iv) greater controls on foreign investment and limitations on repatriation of invested capital and on the ability to exchange local currencies for U.S. Dollars; (v) increased likelihood of governmental involvement in and control over the economies; and (vi) governmental decisions to cease support of economic reform programs or to impose centrally planned economies.

Clients' trading in emerging market Instruments is subject to such additional risks as (i) greater volatility, less liquidity and smaller capitalization of securities markets; (ii) greater volatility in currency exchange rates; (iii) greater risk of inflation; (iv) differences in auditing and financial reporting standards which may result in the unavailability of material information about issuers; (v) less extensive regulation of the securities markets; (vi) longer settlement periods for securities transactions and less reliable clearance and custody arrangements; (vii) less developed corporate laws regarding fiduciary duties of officers and directors and the protection of investors; and (viii) certain considerations regarding the maintenance of Client securities and cash with non-U.S. brokers and securities depositories.

Emerging Market Fixed Income Securities and Futures. A Client may also trade emerging market fixed income securities and futures, including short-term and long-term futures denominated in various currencies. In addition to the risks related to investments in emerging market Instruments outlined above, emerging market debt futures are subject to greater risk of loss due to high volatility. Additionally, evaluating credit risk for non-U.S. fixed income securities and futures involves great uncertainty because credit rating agencies throughout the world have different standards, making comparisons across countries difficult. Because investors generally perceive that there are greater risks associated with such emerging market instruments, the yields or prices of such fixed income securities and futures tend to fluctuate more than those for higher-rated fixed income securities or futures. The market for emerging market interest rate futures is generally thinner and less active than that for developed market futures, which can adversely affect the prices at which futures are sold. In addition, adverse publicity and investor perceptions about emerging market interest rate futures, whether or not based on fundamental analysis, may be a contributing factor to a decrease in the value and liquidity of such futures.

Sovereign Notes and Bonds and Related Derivatives. A Client may trade in U.S. Government securities and in derivatives upon these instruments. Generally, these securities include U.S. Treasury obligations and obligations issued or guaranteed by U.S. Government agencies, instrumentalities or sponsored enterprises. U.S. Government securities also include Treasury receipts and other stripped U.S. Government securities, when the interest and principal components of stripped U.S. Government securities are traded independently. Clients also are permitted to trade in non-U.S. government securities and in derivatives upon these instruments. All of these securities are generally subject to market and interest rate risk. A Client may also trade in domestic or foreign government-issued inflation-protected securities (*e.g.*, Treasury Inflation-Protected Securities ("TIPS"), Inflation Linked Gilts ("ILG"), etc.) and in futures, swaps and other derivatives on these securities and/or other inflation related underlyings.

A Client may also trade foreign or U.S. sovereign notes and bonds which are unrated by a recognized credit-rating agency or below investment grade and which are subject to greater risk of loss of principal and interest than higher-rated debt securities. A Client may trade foreign or U.S. debt securities which rank junior to other outstanding securities and obligations of the issuer, all or a significant portion of which may be secured on substantially all of that issuer's assets.

A Client may trade foreign or U.S. sovereign notes and bonds which are not protected by financial covenants or limitations on additional indebtedness. A Client may trade distressed sovereign notes and bonds which are subject to the significant risk of the issuer's inability to meet principal and interest payments on the obligations (credit risk) and which are also subject to price volatility due to such factors as interest rate sensitivity, market perception of the creditworthiness of the issuer and general market liquidity risk. A Client would therefore be subject to credit, liquidity and interest rate risks. In addition, evaluating credit risk for foreign or U.S. sovereign notes and bonds involves uncertainty because credit rating agencies throughout the world have different standards, making comparison across countries difficult. Also, the market for credit spreads is often inefficient and illiquid, which can make it difficult to accurately calculate discounting spreads for valuing Instruments. A Client may also trade derivatives on any or all such sovereign notes and bonds.

Repurchase Agreements, Reverse Repurchase Agreements or Cleared Repurchase Agreements. Under a repurchase agreement, a Client sells a security to a counterparty and simultaneously agrees to repurchase the security back from the counterparty at an agreed upon price and date, with the difference between the sale price and the repurchase price establishing the cost of the transaction to a Client. Repurchase agreements essentially constitute a form of borrowing secured by collateral in the form of securities and will have the effect of leveraging a Client's assets. These agreements may be entered into on an overnight, specified term or open-ended basis. Repurchase agreements are subject to the risk of failure of the seller to repurchase the investment purchased by the Client, or delays or limitations on realization of the purchase obligation in the event of the initiation of bankruptcy or other proceedings involving the seller.

A Client may also enter into reverse repurchase agreements, whereby a Client purchases a security from a counterparty and simultaneously agrees to resell the security back to the counterparty at an agreed upon price and date, with the difference between the purchase price and the resale price establishing a Client's return. Reverse repurchase agreements involve certain risks. If the seller of securities under a reverse repurchase agreement defaults on its obligation to repurchase the underlying securities, as a result of its bankruptcy or otherwise, a Client will seek to dispose of such securities, which action could involve costs or delays. If the seller becomes insolvent and subject to liquidation or reorganization under applicable bankruptcy or other laws, a Client's ability to dispose of the underlying securities would likely be restricted. If the seller fails to repurchase the securities, a Client will suffer a loss to the extent proceeds from the sale of the underlying securities are less than the repurchase price.

Clients also enter into cleared repurchase agreements which are executed through a third party that provides settlement and collateral management services, and such repurchase transactions are centrally cleared. Although cleared repurchase agreements are intended to be less operationally demanding and provide a degree of protection for the transaction participants, settlement risk and counterparty risk are not completely mitigated.

Additionally, certain types of bank obligations that could be acquired by a Client may not be covered by insurance from the U.S. Federal Deposit Insurance Corporation or the U.S. Federal Savings and Loan Insurance Corporation.

Credit Derivative Contracts. A Client may engage in trading of credit derivative contracts, which are contracts that transfer price, spread and/or default risks of debt and other instruments from one party to another, both for bona fide hedging of existing long and short positions, but also for independent profit opportunities. Such instruments may include one or more credits. The market for credit derivatives may be relatively illiquid, and there are considerable risks that may make it difficult either to buy or sell the contracts as needed or at reasonable prices. There are also risks with respect to credit derivatives in determining whether an event will trigger payment under the contract and whether such payment will offset the loss or payment due under another instrument. The occurrence of a credit event is generally the occurrence of bankruptcy, a failure to pay, the acceleration of an obligation or modified restructuring of a credit obligation or instrument.

A Client may be either the buyer or seller in these transactions. If a Client is a buyer of credit protection and no credit event occurs, a Client will recover nothing. If a credit event occurs, a Client, as a buyer, typically will receive full notional value for a reference obligation that may have little or no value. Buyers of credit derivatives carry the risk of non-performance by the seller due to an inability to pay.

As a seller of credit protection, a Client would typically receive a fixed rate of income throughout the term of the contract, *provided* that no credit event occurs. If a credit event occurs, the seller pays the buyer the full notional value of the reference obligations. Sellers of credit derivatives carry the inherent price, spread and default risks of the underlying instruments.

Credit default swaps involve greater risks than if a Client had invested in the reference obligation directly. In addition to general market risks, credit default swaps are subject to liquidity risk and credit risk. A buyer of credit protection also may lose its investment and recover nothing should no credit event occur. If a credit event were to occur, the value of the reference obligation received by the seller, coupled with the periodic payments previously received, may be less than the full notional value it pays to the buyer, resulting in a loss of value to a Client. Further, in certain circumstances, the buyer can receive the notional value of a credit default swap only by delivering a physical security to the seller, and is at risk if such deliverable security is unavailable or illiquid. Such a delivery "crunch" is a distinct risk of these investments.

The credit derivatives market is rapidly evolving. As a result, different participants in the credit derivatives markets have different practices or interpretations with respect to applicable terms and definitions, and ambiguities concerning such terms or definitions may be interpreted or resolved in ways that are adverse to a Client. Additionally, there may be circumstances and market conditions (including the possibility of a large number of buyers of credit default swaps being required to deliver the same physical security in the same time frame) that have not yet been experienced that could have adverse effects on Clients and/or their returns.

Illiquidity and Credit Risk of Derivative Instruments. A Client may enter into transactions involving privately negotiated, OTC derivative instruments, which could include, among others, derivatives on interest rates, commodities, bonds, portfolios of selected securities, volatility, energy, foreign currencies, equity and indices of any and all of these underlying instruments. Such transactions could also include derivatives on derivatives of any or all of these underlying instruments. There can be no assurance that a liquid secondary market will exist for any particular derivative instrument at any particular time. Although OTC derivative instruments are designed to meet particular financing needs and, therefore, typically provide more flexibility than exchange-listed products, the risk of illiquidity is also greater as these instruments can generally be closed out only by negotiation with the other party to the instrument. OTC derivative instruments, unlike exchange-listed instruments, are not guaranteed by an exchange or clearinghouse and thus are generally subject to greater credit risks and the possibility of non-performance by the counterparty.

Distressed Securities. A Client may invest in "distressed securities", including private claims and obligations of domestic and foreign entities which are experiencing significant financial or business difficulties. Investments may include loans, commercial paper, trade claims held by trade or other creditors, stocks, partnership interests and similar financial instruments, executory contracts and options or participations therein that are not publicly traded. Distressed securities involve a substantial degree of risk. A Client may lose a substantial portion or all of its investment in a distressed environment or may be required to accept cash or securities with a value less than a Client's investment. Among the risks inherent in investments in entities experiencing significant financial or business difficulties is the fact that it frequently may be difficult to obtain information as to the true condition of such issuers. Such investments also may be adversely affected by state and federal laws relating to, among other things, fraudulent conveyances, voidable preferences, lender liability and the bankruptcy court's discretionary power to disallow, subordinate or disenfranchise particular claims. The market prices of such instruments are also subject to abrupt and erratic market movements and price volatility, and the spread between the bid and asked prices of such instruments may be greater than normally expected. In trading distressed securities, litigation is sometimes required. Such litigation can be time-consuming and expensive, and can frequently lead to unexpected delays or losses.

High-Yield Securities. A Client may make investments in "high-yield" bonds and preferred securities that are not investment grade. Securities in the lower rating categories are subject to greater risk of loss, as to timely repayment of principal and timely payment of interest or dividends than higher-rated securities. They are also generally considered to be subject to greater risk than securities with higher ratings in the case of deterioration of general economic conditions. The yields and prices of lower-rated securities tend to fluctuate more than those for higher-rated securities. In addition, adverse publicity and investor perceptions about lower-rated securities, whether or not based on fundamental analysis, may be a contributing factor in a decrease in the value and liquidity of the securities. High-yield securities that are rated BB or lower by S&P or Ba or lower by Moody's (or equivalent ratings by other firms) are often referred to in the financial press as "junk bonds" and may include securities of issuers in default. "Junk bonds" are considered by the ratings agencies to be predominantly speculative and may involve major risk exposures such as: (i) vulnerability to economic downturns and changes in interest rates; (ii) sensitivity to adverse economic changes and corporate developments; (iii) redemption or call provisions which may be exercised at inopportune times; and (iv) difficulty in accurately valuing or disposing of such securities.

Equity Derivatives. The Clients may trade equity derivatives, including, but not limited to, listed equity options and OTC equity derivatives such as variance swaps, conditional variance swaps, correlation swaps and dividend swaps. These types of equity derivatives are frequently valued based on implied volatilities of such derivatives rather than the historical volatility of their underlying securities or instruments. Fluctuations or prolonged changes in the volatility, realized or implied and/or correlation, of such underlying securities or instruments, therefore, can adversely affect the value of equity derivative positions held by the Clients.

Trading in Commodity Derivatives. The Clients may trade commodity forward contracts, commodity futures contracts and/or other commodity derivatives. Trading commodities and commodity derivatives is a highly specialized investment activity entailing substantial risks. Commodity-related markets are also highly volatile. The low margin collateral required in such trading may provide a large amount of leverage, and a relatively small change in the price of a contract or instrument can produce a disproportionately larger profit or loss. There is no assurance that a liquid secondary market will exist for commodity derivatives purchased or sold, and the Clients may be required to maintain a position until exercise or expiration, which could result in material losses.

Trading in Deliverable Commodities Futures. The Clients' strategies generally do not anticipate taking or making delivery of underlying commodity positions. Nonetheless, as the strategies may involve active trading of physical commodities contracts close to their delivery date, it is conceivable that a Client might be required to take or make delivery of certain commodities, and/or that market conditions make it commercially unreasonable to avoid such delivery. Such required delivery could result, for example, from a failure to "roll" futures contracts as intended or as necessary to extend a Client's exposure to certain commodities. In certain cases, such Client may lack the necessary license or approvals to take delivery of various contracts. In this case, such Client would risk being bought in or forced to deliver under commercially unattractive terms.

Convertible Securities. Certain Clients trade convertible securities, securities that may be exchanged or converted into a predetermined number of the issuer's underlying shares or the shares of another company or that are linked to a passive market index at the option of the holder during a specified time period. Convertible securities may take the form of convertible preferred stock, convertible bonds or debentures, stock purchase warrants, zero-coupon bonds or liquid-yield option notes, stock index notes, mandatories, or a combination of the features of these securities. Prior to conversion, convertible securities have the same general characteristics as non-convertible debt securities. As with all debt securities, the market value of convertible securities tends to decline as interest rates increase and conversely, increase as interest rates decline. Convertible securities, however, also appreciate when the underlying common stock appreciates, and conversely, depreciate when the underlying common stock depreciates.

Corporate Bonds. Certain Clients invest in credit-related instruments, including single-name corporate bonds and related derivative contracts. Corporate bonds are subject to the risk of the issuer's inability to meet principal and interest obligations (credit risk) and may also be subject to price volatility due to such factors as interest rate sensitivity, market perception of the creditworthiness of the issuer and general market liquidity risk. Such Clients may therefore be subject to credit, liquidity and interest rate risks. Instruments that are rated Baa3 (by Moody's) or BBB- (by Standard & Poor's or Fitch) or higher are considered investment grade and may have superior risk characteristics than those rated below such levels, however investment grade instruments still bear risk of significant adverse price movements, lack of liquidity and default. Each of these risks can be exacerbated by adverse publicity, investor perceptions, accounting issues, corporate malfeasance, credit downgrade and extreme market conditions.

IPOs and Recently Listed Securities. Certain Clients participate, directly or indirectly, in initial public offerings ("IPOs") and/or invest in recently listed securities. Such investments can involve higher risks than purchases on a secondary market due to a variety of factors, including, without limitation, the limited number of shares available for trading, the lack of seasoned trading at the time of offering, lack of market familiarity with the issuer and, in some cases, the limited operating history of the issuer. These factors could contribute to substantial price volatility for such securities and adversely affect Clients that trade them.

SPACs. Certain Clients invest in the shares of Special Purpose Acquisition Companies, commonly referred to as "SPACs." SPACs are publicly traded companies that act as an investment tool for investors looking to make money from the acquisition of private companies. When a Client invests in a SPAC, it faces many possible risks. First, SPACs have experienced periods of excessive volatility, causing investors in SPACs to face material losses. Second, the proceeds of a SPAC IPO, which are generally placed in a trust account, are subject to risks, such as the risk of insolvency of the custodian of the funds, interest rate risk, and credit and liquidity risk relating to the securities and money market funds in which the proceeds are invested, and such proceeds may also be used to pay various SPAC expenses and fees. Third, since SPACs have no operating history (they are "blank check" companies), there is less basis for an investor to evaluate the merits or risks of a SPAC's securities before investing as compared to other securities. Fourth, SPACs have faced and may continue to face costs and other adverse effects arising from litigation regarding their regulatory treatment. Among other things, pending lawsuits can result in increased uncertainty as to a SPAC's regulatory status and can impair a SPAC's ability to participate in merger transactions or IPOs. Moreover, since hedge funds can be prominent investors in these "blank check" companies, SPACs may face increased regulatory scrutiny to which hedge funds are subject. Fifth, a SPAC will not generate revenue until it consummates an acquisition. While its securities can be thinly traded as it seeks an acquisition, there is no assurance that any market will develop for them, and the SPAC may trade at a discount or at a premium to the SPAC's IPO price or redemption value. Even when an acquisition is consummated, the revenues are uncertain; to the extent a SPAC acquires an entity in an industry characterized by a high level of risk, the SPAC may be susceptible to the risks of the industry. Sixth, a SPAC's management team is typically responsible for identifying business opportunities for its investors, who are dependent upon the integrity, skill and judgment of such team, and the SPAC's management team could change once the SPAC completes an acquisition. Seventh, the success of a SPAC is dependent upon the general market conditions. When the markets do not favor mergers and acquisitions, SPAC securities will likely face significant losses. Additionally, SPACs are generally subject to "event risk" in that their success depends on their ability to identify and close an acquisition by a time specified in their charter or they are subject to liquidation. If liquidation occurs, investors could suffer a loss in distributions, compared to the SPAC's IPO price, due to the cost of seeking the prospective acquisition, and the Fund could lose the entire amount of its investment in the SPAC's warrants. Finally, SPAC trading is expected to be more reliant upon certain different trading processes and/or methodologies than other strategies employed by the Adviser, which can present higher risks as compared to other strategies. Please see "Risk of Process Changes" above.

Trading in Digital Assets. Certain Clients are permitted to invest in certain digital assets, including assets relating to virtual currencies and/or their derivatives (collectively, "Digital Assets"). Investments in Digital Assets are subject to many specialized risks and considerations, including risks relating to technology, security, regulation, user/market acceptance, volatility and timing. A number of these risks are discussed in more detail elsewhere in this brochure but are particularly heightened in the context of trading Digital Assets. For example, see "Reliance on Technology" and "Regulatory Changes."

As discussed in Item 6. "Performance-Based Fees & Side-by-Side Management—Certain Conflicts of Interest Associated with Side-by-Side Management—Capital Allocation and Capacity Decisions," the Two Sigma Affiliates from time to time deploy proprietary capital for testing, incubating and/or trading experimental strategies. Accordingly, notwithstanding any particular

Client's investments in Digital Assets, the Adviser currently expects Two Sigma Affiliates to primarily pursue Digital Assets in either Proprietary Trading Vehicles or other entities in which Clients do not participate at this time. Furthermore, the Adviser expects such Two Sigma Affiliates or related entities to trade Digital Assets utilizing the Adviser's research, trading and portfolio management personnel, who are otherwise responsible for trading similar Instruments and/or strategies on behalf of Clients. Such shared personnel will therefore participate in the day-to-day trading and portfolio management activities on behalf of proprietary and client capital across such portfolios. The Adviser and its affiliates expect to implement certain monitoring controls in an attempt to mitigate the conflicts of interest inherent in the use of shared trading and portfolio management personnel across such portfolios, but there can be no guarantee that Clients will not be adversely affected. For example, as discussed in Item 6, the Adviser's personnel have a potential conflict of interest to focus their time and attention on proprietary portfolios.

Weather Derivatives. The Clients may trade weather derivatives which are options, swaps and/or other derivatives that reference weather related indices such as CDDs (*i.e.*, "cooling degree days"), HDDs (*i.e.*, "heating degree days"), precipitation and/or other weather events. Weather derivatives are inherently risky and volatile instruments whose value changes with actual and anticipated weather-related events and non-events. Weather derivatives are therefore extremely volatile and illiquid products.

Investment in Real Estate and Real Estate Related Securities. Investments in REITs, other real estate related securities or indices and fee simple assets and/or derivatives upon these instruments are subject to the risks incident to the ownership and operation of real estate generally. Some of the risks associated with investments in real estate and/or related derivatives are declines in the value of real estate, risks related to general and local economic conditions, dependency on management skill, heavy cash flow dependency, possible lack of availability of mortgage funds, overbuilding, extended vacancies of properties, increased taxes and operating expenses, changes in zoning laws, losses due to costs resulting from the clean-up of environmental problems, liability to third parties for damages resulting from environmental problems, casualty or condemnation losses, limitations on rents, changes in neighborhood values and the appeal of properties to tenants and changes in interest rates.

Credit Correlation Trading Risks. The Clients may participate in certain tranches of structured credit portfolios in order to generate high current yields with positive credit optionality, seeking to extract additional value from credit market volatility. Portfolios of credits may be structured to generate various investable assets with particular yields and credit ratings. This activity responds to the investment preferences of certain classes of ratings-driven investors. The Adviser may seek to structure investments in certain tranches that will provide current yield to the portfolio, offer benefits from large correlated moves in portfolios of credits, and isolate other arbitrage opportunities. The Adviser may employ various credit strategies, including, without limitation, single name credit derivatives, credit derivative indices, individually tailored baskets of credit derivatives, tranches of credit derivative indices and baskets, and other credit-related products, structures, and vehicles. Credit correlation strategies are exposed to certain assumptions and outcomes. Among them are the probability as well as the timing of individual defaults in diversified credit portfolios and the anticipated levels of correlation among credit spread movements and of defaults within structured credit portfolios. Trade structures may be determined, among other factors, by the Adviser's outlook for individual credits in the underlying portfolios, for changes in implied correlation levels, and for technical market factors (including supply of, and demand for, structured credit), as well as by the Adviser's specific credit opinions and by the extent to which the Adviser expects to benefit from future unexpected credit events.

Interest Rate Transactions (Swaps, Swaptions, Caps and Floors). The Clients may enter into interest rate swap, cap or floor transactions for speculative or hedging purposes. Interest rate swaps involve the exchange by the Clients with another party of their respective commitments to pay or receive interest (*e.g.*, an exchange of floating rate payments for fixed rate payments) computed based on a contractually-based principal (or "notional") amount. Interest rate swaps are entered into on a net basis (*i.e.*, the two payment streams are netted out, with the Clients receiving or paying, as the case may be, only the net amount of the two payments). Swaptions are options granting its owner the right but not the obligation to enter into an underlying swap. Swaptions can be traded on a variety of swaps, but typically are done so on interest rate related instruments. Payor swaptions give the owner the right, but not the obligation, to enter into a swap whereby they pay the fixed leg and receive the floating leg. Receiver swaptions give the owner the right, but not the obligation, to enter into a swap whereby they pay the floating and receive the fixed leg. Interest rate caps and floors are similar to options in that the purchase of an interest rate cap or floor entitles the purchaser, to the extent that a specified index exceeds (in the case of a cap) or falls below (in the case of a floor) a predetermined interest rate, to receive payments of interest on a notional amount from the party selling the interest rate cap or floor.

Interest Rate Risks. The Clients will be subject to interest rate risk in connection with its investments in debt securities. Generally, the value of debt securities will change inversely with changes in interest rates. As interest rates rise, the market value of debt securities tends to decrease. Conversely, as interest rates fall, the market value of debt securities tends to increase. This risk will be greater for long-term securities than for short-term securities. Interest rate risks include the following:

(i) *Directional Movement in Interest Rates.* The Adviser's strategies for certain Clients may presume that changes in interest rates cannot be reliably predicted. The portfolio managers will attempt to construct the Clients' portfolios to produce expected returns which have a low correlation to directional moves in interest rates. General shifts in the level of interest rates, however, could immediately affect the value of all components of the portfolio and, depending on the composition of the portfolio, could adversely affect its net performance. This risk would be greater for time periods less than the holding period of the investment targeted in the design of the portfolio. In addition, realized returns will likely depend not only on the level of rates, but also on the path along which rates move over the time from portfolio inception to the investment horizon.

(ii) *Correlation of Rates.* Global government bond and swap curves exhibit irregular cycles during which fluctuations of adjacent components (yields for different maturity instruments) are highly correlated for extended periods, followed by brief episodes in which the correlations dramatically decline and the yield curve steepens, flattens or kinks. Although the loss of correlation can be clearly observed in retrospect, it is difficult to anticipate precisely the timing or the changes in the shape of the yield curve. The value of portfolios that are composed of instruments with differing maturities, coupons and embedded option features will be exposed to changes in yield curve shape.

(iii) *Interest Rate Volatility.* The value of a portfolio depends *inter alia* upon two types of volatilities (measured as the standard deviation of the log of the period to period difference in interest rates): (i) the volatility of rate fluctuations experienced in the market; and (ii) the implied volatility used to price options in the market. The relationship between the two is neither well-defined nor intuitive and cannot generally be anticipated. The Clients may trade in various types of options and securities with embedded options, and their immediate value will be affected by the increase or decline in implied volatility due to its effect on options prices, whether or not actual rate changes are experienced.

Municipal Market and Tax Reform Risk. The Clients may purchase (i) debt securities of municipal issuers, (ii) collateralized debt obligations of issuers holding municipal securities or (iii) other derivatives upon municipal securities. Changes or proposed changes in federal tax laws could impact the value of those securities and/or related derivatives. Of particular concern would be large changes in marginal income tax rates or the elimination of the tax preference for municipal interest income versus currently taxable interest income. Also, the failure or possible failure of such debt issuances to qualify for tax-exempt treatment may cause the prices of such municipal securities and/or related derivatives to decline, possibly adversely affecting the value of the Clients' portfolio. In addition, the municipal market is fragmented and very technically driven. There can be regional variations in economic conditions or supply-demand fundamentals. Municipal bonds essentially cannot be shorted or be the subject of repurchase agreements, and any interest or other expenses incurred for their purchase cannot be deducted. What is issued by municipalities must be held by beneficial owners for their interest to be treated as tax-exempt. The municipal market is also still predominantly retail driven. For these reasons, it is subject to very different supply-demand fundamentals than corporate markets. Public information in the municipal market is also less available than in other markets, increasing the difficulty of evaluating and valuing securities. Municipal bonds and/or related derivatives held by the Clients may be secured by payments to be made by private companies and changes in market conditions affecting such bonds, including the downgrade of a private company obligated to make such payments could have a negative impact on the value of Clients' holdings, the municipal market generally, or the Clients' performance.

Insurance-Linked Securities. The Clients may trade in notes and other debt instruments issued in respect of insurance risks and obligations and may trade derivatives upon these instruments. Such instruments may lose all or a portion of the principal and income if certain events occur. For example, catastrophes that result in losses to the issuers of insurance-linked securities may cause substantial volatility in the value of the debt instruments or related derivatives the Clients trade. Catastrophes are caused by various events including, but not limited to, hurricanes, earthquakes, tornadoes, windstorms, hail, terrorism and public health emergencies, such as an influenza pandemic. The incidence and severity of catastrophes are inherently unpredictable. The possibility that certain events will happen, resulting in loss payments, is inherently unpredictable. Although insurance companies establish loss reserves, there can be no assurance that such loss reserves will be sufficient. Estimation of ultimate net losses, loss expenses and loss reserves is a complex process for many types of insurance, including excess and umbrella liability, directors' and officers' liability, professional liability, medical malpractice, workers' compensation, general liability, products liability and related classes, as well as for asbestos and environmental exposures. Generally, actual historical loss development factors are used to project future loss development. However, there can be no assurance that future loss development patterns will be the same as in the past. Moreover, any deviation in loss cost trends or in loss development factors might not be discernible for an extended period of time subsequent to the recording of the initial loss reserve estimates for any accident year. Thus, there is the potential for reserves with respect to a number of years to be significantly affected by changes in loss cost trends or loss development factors that were relied upon in setting the reserves. These changes in loss trends or loss development factors could be attributable to changes in inflation in labor and material costs or in the judicial environment, or in other social or economic phenomena affecting claims. Research and modeling used to support risk analyses of insurance-linked instruments cannot be an exact representation of reality. In addition, the insurance industry is subject to extensive regulatory oversight by insurance and/or financial services regulators. These regulations are primarily intended to protect policyholders and beneficiaries, not investors in the debt instruments or other securities issued by insurance companies or derivatives upon these instruments. The value of the debt instruments and/or related derivatives the Clients trade could be adversely affected by changes in applicable laws or regulations or the interpretation or enforcement thereof.

Mortgage-Backed Securities and Asset-Backed Securities. The investment characteristics of certain mortgage-backed securities differ from those of traditional fixed income securities. The major differences include the payment of interest and principal on the mortgage-backed securities on a more frequent schedule and the possibility that principal may be prepaid at any time due to prepayments on the underlying mortgage loans or other assets. These differences can result in significantly greater price and yield volatility than is the case with traditional fixed income securities. In general, "premium" securities will be adversely affected by faster-than-anticipated prepayments, while "discount" securities will be adversely affected by slower-than-anticipated prepayments. In some cases, price and yield volatility can be substantial. For example, stripped mortgage-backed securities are created by stripping a pool(s) of mortgage-backed pass-through securities to create an interest-only (IO) security and principal-only (PO) security. While the aggregated risk/reward characteristics of the IO and PO securities will resemble the underlying pass-through security, the price and yield sensitivity of the individual components will be much greater than that of the underlying pass-through security with respect to unanticipated changes in prepayments. Certain Clients are permitted to trade any or all such mortgage-backed securities, including in the to-be-announced (TBA) forward market, and may trade derivatives on such securities.

The Clients also are permitted to trade variable rate mortgage-backed securities, including adjustable-rate mortgage securities that are backed by mortgages with variable rates, and CMO derivatives that pay a rate of interest that varies with a specified index and may trade derivatives on such securities. The value of these securities can fluctuate significantly with the level of the specified indices as well as anticipated movements of the indices. The variable rate nature of these securities introduces another risk that must be measured and hedged. It is possible that this variable rate risk may interact in a complex form with the imbedded prepayment risk of the security, making it difficult to hedge the instrument.

Asset-backed securities are subject to interest rate risk and, to a lesser degree, prepayment risk. Each type of asset-backed security also entails unique risks depending on the type of assets involved and the legal structure used. For example, credit card receivables are generally unsecured and the debtors are entitled to the protection of a number of state and federal consumer credit laws, many of which give debtors the right to set off certain amounts owed on the credit cards, thereby reducing the balance due. Asset-backed securities typically experience credit risk. There is also the possibility that recoveries on repossessed collateral may not, in some cases, be available to support payments on these securities because of the inability to perfect a security interest in such collateral. The Clients may trade any or all such asset-based securities and derivatives on such securities.

Other types of asset-backed securities traded by Clients include collateralized loan obligations ("CLOs"), which are limited recourse securitized pools of corporate loans payable solely from the underlying assets of the issuer. The underlying assets of the issuer are actively managed by CLO managers, especially within the reinvestment period. CLOs typically also have call feature optionality. Consequently, holders of equity and debt interests in CLOs must rely solely on distributions from the CLO assets and proceeds thereof and CLO deal call optionality. In addition, CLOs are typically separated into tranches of different degrees of credit quality. Lower rated tranches generally correspond to lower credit quality and therefore pay a higher spread due to an increase in credit risk, and interest payments may be deferred and compounded into the tranches' principal balance if cash is not available for interest payments. If distributions on the CLO assets (or, in the case of market value CLOs, proceeds from the sale of the CLO assets) are insufficient to make payments on the CLOs, no other assets will be available for payment of the deficiency and following realization of the underlying assets, the obligations of the issuer of the related CLO to pay such deficiency will be extinguished. As a result, investments in CLOs are subject to liquidity and credit risks and specifically the risk of default in the collateral pool. Furthermore, the fixed income markets have at times experienced significant illiquidity. During such periods of market illiquidity, a CLO may not be able to sell assets in its portfolio or may only be able to do so at unfavorable prices, which may result in significant losses.

Restricted or Non-Marketable Securities; Other Illiquid Investments. Clients are permitted to trade restricted or non-marketable securities. Such investments would involve a high degree of business and financial risk that can result in substantial losses. There may be no existing market for such securities and the Clients may not be able to readily sell such investments. In addition, the Clients' assets may, at any given time, include securities and other Instruments or obligations that are extremely illiquid, making purchase or sale of such securities at desired prices or in desired quantities difficult or impossible. Furthermore, the sale of any such investments may be possible only at substantial discounts and it may be extremely difficult to value any such investments accurately.

Derivative, Counterparty and Settlement Risk. Clients invest in derivative instruments or other OTC transactions. In certain circumstances, a Client will take on credit risk with regard to parties with whom it trades and will also bear the risk of settlement default. These risks differ materially from those entailed in exchange-listed transactions which generally are backed by clearing organization guarantees, daily marking-to-market, daily settlement, segregation and minimum capital requirements applicable to intermediaries. Transactions entered directly between two counterparties generally do not benefit from such protections and expose the parties to the risk of counterparty default. Further, to the extent these Clients trade swaps or other derivatives in order to replicate underlying positions (*e.g.*, short or similar equity positions), such instruments will often contain the same risks as the underlying positions (*e.g.*, unlimited loss, short squeeze, etc.) as discussed above under "Short Selling Risk." To the extent a counterparty defaults on a derivative instrument or is insolvent, there is a risk that the relevant Client will not receive the return of any collateral transferred to the counterparty. Additionally, if the counterparty has not delivered collateral to the Client reflecting the latest mark-to-market valuation of all transactions with the Client, the Client will have an unsecured claim against the counterparty in its insolvency equal to such deficiency. Furthermore, these Clients' assets will not necessarily be held at a sufficiently diverse number of custodians, brokers or dealers, subjecting these Clients to concentrated credit risk with a small number of such parties (or one such party). In valuing OTC derivative instruments, it is anticipated that these Clients will typically rely on quotes or other information provided by counterparties.

Additionally, the posting of margin or collateral is subject to ongoing regulatory changes. For example, recent developments in a certain set of Uncleared Margin Rules ("UMR") are expected to materially affect the practice of posting margin in respect of certain swaps traded by Clients. Among other things, UMR requires certain amounts of margin posted by certain Clients to be placed with third-party custodians rather than directly with a dealer, bank and/or other market participant of the Clients ("Dealer"), and such amounts may exceed the margin amounts that would otherwise be required by the Dealer directly. These UMR requirements are expected to expose Clients to the credit risk of any such third party custodian that holds collateral of the Clients. Further, the required use of a third-party custodian could adversely affect the pricing of the associated Instruments that may be obtained from such a Dealer. Additionally, UMR requires Dealers to post margin collateral as well, which could prove costly and likewise adversely affect the pricing available to Clients. Other impacts from UMR and similar regulatory developments could also negatively affect Clients and may be more difficult or impossible to predict. See "Regulatory Changes" above for more information.

Swap Agreements and OTC Derivative Instruments. Clients may enter into derivative transactions in the form of swap agreements and OTC derivative Instruments. Swap agreements are two party contracts entered into primarily by institutional investors with varying durations. In a standard "swap" transaction, two parties agree to exchange the returns (or differentials in rates of return) earned or realized on particular predetermined investments or instruments. The gross returns to be exchanged or "swapped" between the parties are calculated with respect to a "notional amount," (*i.e.*, the return on or increase in value of a particular amount invested at a particular interest rate, in a particular non-U.S. currency or security, or in a "basket" of securities representing a particular index, or in one or more other underlying measures). The "notional amount" of the swap agreement is only a reference basis on which to calculate the obligations that the parties to a swap agreement have agreed to exchange. Most swap agreements entered into by these Clients would calculate the obligations of the parties to the agreement on a "net" basis. Consequently, these Clients' obligations (or rights) under a swap agreement will generally be equal only to the net amount to be paid or received under the agreement based on the relative values of the positions held by each party to the agreement.

Whether these Clients' use of swap agreements, if any, are successful in furthering its investment objective will depend on the portfolio manager's ability to correctly predict whether certain types of investments are likely to produce greater returns than other investments. These Clients bear the risk of loss of the amount expected to be received under a swap agreement in the event of the default or bankruptcy of a swap agreement counterparty. It is possible that developments in the swaps market, including potential government regulation, could adversely affect these Clients' ability to terminate existing swap agreements or to realize amounts to be received under such existing agreements.

The risks posed by such swap agreements and OTC derivative instruments, which can be extremely complex and generally involve leveraging of Clients' assets, include (but are not limited to): (i) credit risk (*e.g.*, the exposure to the possibility of loss resulting from a counterparty's failure to meet its financial obligations); (ii) market risk (*e.g.*, adverse movements in the price of a financial asset); (iii) legal risk (*e.g.*, the characterization of a transaction or a party's legal capacity to enter into it could render the financial contract unenforceable, and the insolvency or bankruptcy of a counterparty could preempt otherwise enforceable contract rights); (iv) operations risk (*e.g.*, inadequate controls, deficient procedures, human error, system failure or fraud); (v) documentation risk (*e.g.*, exposure to losses resulting from inadequate documentation); (vi) liquidity risk (*e.g.*, exposure to losses created by inability to prematurely terminate the derivative); (vii) systematic risk (*e.g.*, the risk that financial difficulties in one institution or a major market disruption may cause uncontrollable financial harm to the financial system); (viii) concentration risk (*e.g.*, exposure to losses from the concentration of closely related risks such as exposure to a particular region, index, industry or particular entity); and (ix) settlement risk (*e.g.*, the risk faced when one party to a transaction has performed its obligations under a contract but has not yet received value from its counterparty).

Swap agreements could also contain specific portfolio-level requirements and parameters involving, among other things, maintenance of minimum net assets, maximum net asset value drawdown restrictions, risk exposure limitations and volatility triggers (collectively, "Automatic Termination Events") which, when triggered, could permit Clients' counterparties to, among other things, substantially curtail Clients' trading activities and/or liquidate all or a portion of the Clients' portfolio. Should Clients' trading activities trigger one or more of these Automatic Termination Events, a Client's ability to continue to trade and/or manage its positions would be materially adversely affected. In addition to Automatic Termination Events, in certain cases a swap counterparty will have the right to terminate one or more swap positions of a Client upon the occurrence of certain pre-determined events, and this risk is inherent in the swap market (as compared to positions that are not traded via swap agreements).

Price Limits (so-called "Circuit Breakers"). Certain exchanges do not permit trading at prices that represent a fluctuation in price during a single day's trading beyond certain set limits. If prices fluctuate during a single day's trading beyond those limits, which conditions have in the past sometimes lasted for several days in certain Instruments, a Client could be prevented from promptly liquidating unfavorable positions and thus be subject to substantial losses. In addition, even if futures prices remain within daily limits, it still might not be possible to execute futures trades at favorable prices if there is little or no trading in such futures.

Exchange Intervention or Government Intervention in Futures Markets. It is possible that an exchange or a government authority could suspend or limit trading in a particular futures contract or other Instrument, order immediate settlement or order that trading in a particular contract or other Instrument be conducted for liquidation only. This would likely result in losses to a Client.

Credit Risk of Prime Brokers, Dealers and Futures Commission Merchants. Clients will assume the credit risk associated with placing its cash, margin, collateral and other securities with brokers, dealers, futures commission merchants and various other counterparties, and the failure or bankruptcy of any of such broker, dealer, futures commission merchant or other counterparty could have a material adverse impact on the Client. Under the U.S. Commodity Exchange Act of 1936, as amended (the "Commodity Exchange Act"), futures commission merchants are generally required to maintain customers' U.S. assets in segregated accounts. To the extent a Client engages in futures contract trading and the futures commission merchants with whom a Client maintains accounts fail to so segregate a Client's assets, a Client will be subject to a risk of loss in the event of the bankruptcy of any of its futures commission merchants. In certain circumstances, a Client might be able to recover, even in respect of property specifically traceable to a Client, only a pro rata share of all property available for distribution to a bankrupt futures commission merchant's customers. In addition, while the provisions of the Commodity Exchange Act are intended to afford the customers certain protections, such provisions, even if met by futures commission merchants, may not actually provide such protections. Finally, cash, margin, collateral and other securities held outside of the U.S. will not be afforded protections under U.S. law and distributions upon bankruptcy may be unpredictable.

The above summary does not purport to be a comprehensive discussion of all the risks associated with a Client's specific Mandate. A Client's offering memorandum contains additional information with respect to the risks to which the Client will be subject.

Item 9. Disciplinary Information

On March 28, 2017, a Panel of the Business Conduct Committee of the Chicago Board of Trade ("CBOT") accepted an offer of settlement from the Adviser in connection with a CBOT position limit rule. The CBOT Notice relating to this matter stated that on February 22nd and February 23rd 2016, certain Clients and TSA clients held aggregated wheat futures positions in excess of the CBOT standard all month limit. Upon discovery, the overage was liquidated to bring the aggregate position into compliance with the CBOT limits. As part of the settlement, the Adviser agreed to pay a fine of $25,000, while neither admitting nor denying any rule violation.

Item 10. Other Financial Industry Activities & Affiliations

In addition to the Adviser, Two Sigma Affiliates include four investment advisers registered with the SEC: TSA; Two Sigma Investor Solutions, LP ("TSIS"); TSPI, LP ("TSPI"); and Two Sigma Ventures, LP ("TSV").

TSA, a Delaware limited partnership, manages third-party private investment funds and provides advisory services to certain separately managed accounts, as well as sub-advisory services to an investment company and certain non-U.S. investment funds. TSIS, a Delaware limited partnership, provides non-discretionary investment-related services, principally through an online analytics platform called Venn by Two Sigma, to help its clients with strategic asset allocation, risk management, and certain other portfolio-related matters. TSPI, a Delaware limited partnership, changed its name from "Sightway Capital, LP" as of August 18, 2020. TSPI generally focuses on private equity-style investments through its Sightway Capital and Two Sigma Impact businesses. TSV, a Delaware limited partnership, focuses on venture capital investments, including negotiated transactions in operating entities that utilize advanced science, technology, computing, engineering, and/or mathematics to innovate in their selected market. The brochures for each of TSA, TSIS, TSPI and TSV are available through the SEC's Investment Adviser Public Disclosure website.

Additionally, the Adviser is affiliated with Two Sigma China Co., Ltd. ("TSC"), which is licensed as a Private Fund Manager with the Asset Management Association of China. TSC, a Chinese Wholly Foreign-Owned Enterprise incorporated as a limited liability company, manages Chinese private investment funds, which trade a broad range of instruments. While many of such instruments are not traded by the Adviser on behalf of Clients, in some cases there is an overlap with the Instruments traded by the Adviser on behalf of Clients. The trading activities of TSC may be significant, and there can be no assurance that such trading will not adversely affect Clients.

Finally, the Adviser is affiliated with Two Sigma Real Estate, LP ("TSRE"), a Delaware limited partnership, which generally takes a human-led, data science-supported approach to investing in real estate assets.

The Adviser and TSA are each registered as both a commodity pool operator and a commodity trading advisor with the CFTC under the Commodity Exchange Act. Additionally, TSIS is registered as a commodity trading advisor with the CFTC under the Commodity Exchange Act. In connection with the Adviser's (and certain of its affiliates') registration as commodity pool operators or commodity trading advisors, certain of the Adviser's management persons and personnel are registered as associated persons of and/or as principals of the Adviser (and/or its affiliates).

As discussed throughout this brochure, Two Sigma Affiliates (as well as their respective principals and certain personnel) engage in a wide range of investment and other financial activities. Many of the opportunities presented by these investment and other financial activities are not offered to Clients (or investors therein), and participation in such investment and other financial activities by

Two Sigma Affiliates could have an adverse impact on Clients. These activities result in certain potential conflicts of interest that are discussed in more detail in Item 6. For the avoidance of doubt, such activities include those of the affiliates of the Adviser discussed in this Item 10.

The Adviser is also affiliated with Two Sigma Securities, LLC ("TSS"), which is a broker-dealer registered with the Financial Industry Regulatory Authority, Inc. ("FINRA") and the SEC. TSS is also licensed as a "High Speed Trader" with Japan's Financial Services Agency and a member of a number of other self-regulatory organizations and exchanges. Certain of the Adviser's employees are registered representatives or principals of TSS. Further, the Adviser is affiliated with Two Sigma Securities UK Limited ("TSS UK"), which is authorized as an investment firm with the United Kingdom's Financial Conduct Authority and trades for its own account.

Certain of TSS' business lines interact with the Adviser in connection with TSS serving as an introducing broker-dealer that executes trades on behalf of one or more Proprietary Trading Vehicles. Specifically, Wholesale Market Making ("WMM") receives orders in equity securities from the Adviser on behalf of a Proprietary Trading Vehicle that are directed for crossing with orders WMM handles for non-affiliated broker-dealers. Additionally, TSS' agency brokerage business provides order routing and agency crossing services in equity securities for the Adviser on behalf of one or more Proprietary Trading Vehicles. TSS also operates certain other proprietary trading businesses, including an options market maker. Overall, TSS generates substantial trading volume in equities, options and futures, and expects such trading volume to grow.

TSS does not currently custody assets or self-clear trades for the Adviser or its Clients. The Adviser may in the future choose to engage TSS to clear or custody assets or to execute trades on behalf of additional Clients.

The Adviser, TSS and TSS UK engage in a significant degree of resource and research sharing activities and draw upon shared strategies and Techniques. Other forms of sharing between the Adviser, TSS and TSS UK include the sharing of personnel, technology and trading infrastructure. These sharing arrangements are governed by licensing or certain expense-sharing arrangements. While there are benefits to the Adviser's Clients and to TSS of such resource and technology sharing, certain conflicts of interest arise including as it relates to the allocation of time of shared personnel to the Adviser's activities on behalf of Clients. Personnel of the Adviser dedicate substantial amounts of time and expertise to TSS-related activities, and in some instances, will likely prioritize certain TSS-related activities ahead of the Adviser's activities on behalf of Clients. It is also the case that certain of these research or technology collaborations result in the development of strategies and Techniques that are deployed in TSS but not on behalf of Clients. These resource and technology sharing activities are subject to a range of supervisory and compliance controls that seek to ensure that the activity is appropriately governed and performed in a manner consistent with the Adviser's and TSS's regulatory obligations. There can be no guarantee, however, that such controls and oversight functions will fully mitigate the adverse impacts and effects to Clients from these sharing activities.

The Adviser and certain of its related persons also have a conflict of interest arising from the additional compensation they receive based upon, in large part, the amount of commissions, fees and other revenues received or derived by TSS (or any other applicable entity) including from a Client or a Client's orders. While it is expected that TSS would charge Clients commissions and other fees that compare favorably with those charged for similar services offered by other firms with similar capabilities, such commissions and other fees charged by TSS are not the result of arms' length negotiations and not necessarily the lowest commission rates or fees available. This may result from the fact that TSS (and such other applicable entities) may provide services and/or execution capabilities for which comparable rates may not be readily available or ascertainable. In other words, the Adviser is incentivized to cause a Client to execute trades through TSS (or any other applicable entity) rather than through an unaffiliated entity and/or to engage in more transactions than it would if such trades were executed through an unaffiliated entity. Accordingly, the Adviser and certain of its related persons may be deemed to have a financial conflict of interest with respect to the extent of utilization of TSS (or any other applicable entity) as compared with other entities, as well as with respect to the Adviser's sharing of strategies, Techniques, personnel, technology and trading infrastructure with TSS. Similarly, since the Adviser and TSS have certain ownership and control relationships in common, certain intrinsic conflicts of interest exist when the Adviser causes a Client to execute transactions directly or indirectly with TSS (or any other applicable regulated entities) rather than with unaffiliated parties, as well as when the Adviser shares resources with TSS.

The Adviser recognizes the potential conflicts of interest associated with TSS and has adopted policies and procedures to seek to mitigate many of these potential conflicts, including, but not limited to, the following: (i) TSS will not trade as principal with Clients; (ii) all TSS trades will be cleared through third-party clearing brokers; and (iii) the Adviser and TSS maintain and enforce various written policies and procedures, and have agreed to ensure appropriate treatment is provided to the confidential information, including information regarding orders, that the Adviser sends to TSS. As part of such efforts to mitigate conflicts of interest, the Adviser expects to engage on matters such as the Adviser's best execution processes and the commission rates paid by such Clients. In addition, the Adviser will monitor the Clients' transactions and seek to obtain best execution for the Clients. The Adviser has established internal review processes and mechanisms to review conflicts of interest arising from Client transactions and will report on such matters to the Adviser's management as needed.

Two Sigma Affiliates and companies in which they invest (including portfolio companies of Two Sigma Affiliates' clients) may serve as counterparties or participants in agreements, transactions or other arrangements with the Adviser and/or its affiliates, and such agreements, transactions or other arrangements could be material to such other companies' success or failure. Such agreements, transactions or other arrangements may involve fees, commissions, servicing payments, discounts, rebates and/or other benefits to such portfolio companies, the Adviser or its affiliates, as applicable. While the Adviser and its affiliates intend to monitor such conflicts, there can be no assurance that any such conflicts will be effectively managed or mitigated.

The Adviser and certain of its related persons are affiliated with and/or own interests in TSA. The Adviser currently licenses certain analytical tools, strategies (and related derived data) and Techniques (collectively, "Analytics") that it has developed, and intends to continue licensing certain new Analytics that it develops, to TSA. TSA utilizes these Analytics on behalf of its clients. The Adviser has the sole discretion to select the Analytics that it licenses to TSA, and it may license Analytics to TSA that it does not utilize on behalf of Clients even though such Analytics could have a positive expected return. In addition, once licensed to TSA, TSA has sole discretion as to how such Analytics are utilized on behalf of its clients and, for example, how a given strategy should be weighted or how a Technique is programmed on behalf of a given TSA client. It is entirely possible, therefore, that clients of TSA will obtain greater benefit from such licensed strategies than any or all of the Clients. In addition, TSA's use of a strategy that is also used by the Adviser on behalf of the Clients does have an adverse impact on such Clients and, in certain cases, such adverse impacts are material. The Adviser is not, and does not intend to be, a fiduciary with respect to TSA's clients and, as such, does not base its licensing decisions on the needs or mandates of TSA's clients. However, certain shared personnel across the Adviser and TSA are responsible for performing functions on behalf of TSA clients. The Adviser has also shared, and will, at its sole discretion, continue to share and/or license certain Analytics to other affiliates including, but not limited to, TSS and TSC. While the scope of licensing with respect to TSS and TSC is more limited than vis-a-vis TSA, the Adviser licenses a significant number of Analytics and strategies to such affiliates that are seen as consistent with their research, investment and/or trading objectives.

In addition to the licensing of Analytics to TSA, the Adviser provides various services to TSA pursuant to a licensing and services agreement (the "Licensing and Services Agreement") including, but not limited to, trade execution; administrative, legal, technical and clerical services; access to technology equipment and office facilities; maintenance and support services; and other related and miscellaneous services (please refer to Item 6 of this brochure for a discussion of the Adviser's order aggregation and trade allocation policy which covers trades that the Adviser executes on behalf of TSA pursuant to the Licensing and Services Agreement). TSA pays the Adviser a fee for the provision of these services, however, such fee is borne by TSA and will not be borne, directly or indirectly, by investors who invest in TSA's clients.

In addition to the Licensing and Services Agreement, TSA, pursuant to the mandates of certain TSA clients, currently directs such clients to invest in certain Clients managed by the Adviser, and the Adviser directs one or more of its clients to invest in certain entities advised by TSA.

The Adviser is also affiliated with Two Sigma International Limited ("TSIL"), which is authorized and regulated by the Financial Conduct Authority of the United Kingdom and provides a number of services for Two Sigma Affiliates. Among other things, the Adviser relies on personnel employed by TSIL for certain trading and advisory services for certain Clients. Specifically, TSIL serves as a "participating affiliate" of the Adviser, and such personnel as "affiliate associated persons," as such terms are used in no-action relief granted by the SEC for purposes of permitting the sharing of investment advisory personnel and services of a non-U.S. affiliate of a registered investment adviser. Pursuant to these arrangements, TSIL and the affiliate associated persons will be subject to certain oversight requirements by the Adviser, as well as certain conditions and undertakings prescribed by the SEC. Services provided by TSIL to the Adviser for the benefit of Clients are considered to be services provided by the Adviser directly. Accordingly, any operating expenses of Clients will remain payable by Clients if incurred by TSIL to the same extent as if they had been incurred by the Adviser.

Finally, certain related persons of the Adviser are affiliated with and/or own interests in Two Sigma Principals, LLC which, as the general partner or allocation shareholder of various Clients, is entitled to receive the performance-based compensation from certain Clients as discussed in Item 5 hereof. Certain related persons of the Adviser are affiliated with and/or own interests in Two Sigma Institutional Partners, LLC, which is the general partner or allocation shareholder of various

TSA clients and is entitled to receive similar performance-based compensation from certain TSA clients. Additionally, the Adviser is affiliated with entities that serve as the general partners and/or managing members of clients of TSPI and TSV.

Item 11. Code of Ethics, Participation or Interest in Client Transactions & Personal Trading

The Adviser has adopted a Code of Ethics (the "Code") and certain other policies and procedures that obligate its "access persons" (*e.g.*, any partner, officer, director, member, or employee of the Adviser) to put the interests of the Clients before their own personal interests and to act honestly and fairly in all respects in their dealings with Clients. All of the Adviser's personnel are also required to comply with applicable federal securities laws. The Adviser will supply a complete copy of its Code to any Client or prospective Client or any investor or prospective investor in a Client upon request.

The Adviser and its related persons effect transactions for their own accounts in the same securities or other Instruments purchased and sold for Clients.

To ensure trading by the Adviser's access persons is conducted in a manner that (i) does not adversely affect the Adviser's trading on behalf of the Clients and (ii) is consistent with the fiduciary duties owed by the Adviser to the Clients, the Adviser has adopted the Code and attendant policies and procedures governing, among other things, transactions by the Adviser's access persons and other "covered persons" (*e.g.*, any such access person's spouse, immediate family members who share the same household, any person to whom an access person provides primary financial support, partnerships and corporations in which access persons maintain a certain level of beneficial interest, and any person with whom access persons share common financial support). The Code and attendant policies and procedures contain provisions designed to, among other things, (i) prevent improper personal trading by the Adviser's access persons and other covered persons; (ii) identify actual or potential conflicts of interest; and (iii) provide guidance in resolving certain actual or potential conflicts of which the Adviser is aware of in favor of the Clients. To accomplish these objectives, the Adviser's Code and attendant policies and procedures generally, among other things (i) require pre-clearance of personal trades in "reportable securities" (as defined in the Code) and certain other assets by the Adviser's access persons and covered persons; (ii) restrict the number of such trades by the Adviser's access persons and covered persons in a given month; (iii) prohibit certain trading by the Adviser's access persons and covered persons in securities of issuers listed on any applicable "restricted list" (as defined in the Code); and (iv) require certain minimum holding periods.

The Adviser's advisory affiliates are permitted to trade in Instruments for their own accounts and engage in personal securities transactions in securities and other Instruments in which Clients invest in accordance with the Code. These activities create conflicts of interest between the Adviser's advisory affiliates and the Adviser's Clients with regard to such matters as allocation of opportunities to participate in, or refrain from participation in, particular Instruments or to dispose of certain Instruments.

The Code contains provisions designed to prevent improper personal trading by the Adviser's access persons. Pursuant to the Code, all of the Adviser's "access persons" and "covered persons" must obtain pre-approval prior to trading a reportable security, unless such person has a managed account with an independent adviser who has discretionary investment authority. The Adviser's access persons and covered persons are prohibited from trading securities on any applicable restricted list and generally are prohibited from participating in "new issues." Short selling is prohibited. The Adviser's current personal trading policies limit the brokers that access persons and covered persons can use for personal trading. All accounts that have the ability to hold securities and all holdings in reportable securities need to be disclosed upon joining the Adviser and confirmed and/or updated periodically.

While not anticipated in the ordinary course of business operations, the Adviser and/or its affiliates have engaged, and may further engage, in principal transactions (for example, when transitioning a portfolio from one vehicle to another in connection with a given Client's launch). In each such instance, the Adviser expects to seek to effect any such transaction in accordance with the requirements of Section 206(3) of the Advisers Act. Certain Clients have appointed a board of directors or independent advisory committee to review and, in their discretion, approve or disapprove principal transactions on behalf of such Clients. In such instances, requests for consent will be directed to such board or committee, and any approval will be obtained in accordance with the procedures set forth in the relevant Client's offering documents or other documentation governing such board or committee.

Furthermore, while not currently anticipated in the ordinary course of business operations, the Adviser and/or its affiliates may, in their discretion and without further notice, engage in cross trading on behalf of Clients and others, which transactions would not be subject to the consent requirements of principal transactions.

The Adviser has also adopted policies and procedures regarding the receipt of gifts and entertainment by the Adviser's access persons from certain third parties (*e.g.*, vendors, broker-dealers, consultants, etc.). Specifically, these policies and procedures require access persons to report the receipt of gifts and entertainment in excess of pre-established *de minimis* thresholds. The Adviser reviews these reports for any potential conflicts of interest with respect to individual instances of gifts or entertainment, as well as patterns of the same over time, to seek to prevent access persons from placing their own interests ahead of the interest of Clients.

The Code and the Adviser's other policies and procedures also address the following key areas: (i) recordkeeping; (ii) oversight of the Code; (iii) conflicts of interest; (iv) the treatment of confidential information; (v) compliance with SEC rules and regulations; (vi) reporting misconduct; (vii) political contributions; and (viii) outside activities. Periodic training regarding the Code and the Adviser's other policies and procedures are provided to the Adviser's access persons.

The Adviser from time to time comes into possession of certain information that it believes to be confidential or material non-public information that, if disclosed, might be material to a decision to buy, sell or hold a security. The Adviser from time to time receives such information directly as a result of its investment advisory activities for any individual Client (including, but not limited to, Proprietary Trading Vehicles), indirectly as a result of its relationship with affiliates including, but not limited to, TSA, TSIL, TSIS, TSPI, TSV, TSS, TSC and TSRE, or through other activities such as strategic partnership negotiations or an employee's board or credit committee service. The Adviser will often be prohibited from communicating such information to a Client or using such information for a Client's benefit. The Adviser maintains and enforces written policies and procedures that prohibit the communication of such information outside of the Adviser, that typically prohibit the communication of such information internally within the Adviser to persons other than the General Counsel and/or the Chief Compliance Officer or their designees and that are reasonably designed to ensure that the Adviser is meeting its obligations to Clients and remains in compliance with applicable law. The Adviser will have no responsibility or liability to the Client for not disclosing such information to the Client (or the fact that the Adviser possesses such information), or not using such information for the Client's benefit, as a result of following the Adviser's policies and procedures designed to provide reasonable assurances that it is complying with applicable law.

As noted in Item 6. "Performance-Based Fees & Side-by-Side Management," certain of the Clients are owned in large part or entirely by proprietary capital. Item 6 also summarizes the Adviser's allocation of trades.

As noted in Item 8, the Adviser and TSA employ a Conflicts Committee comprised of certain of the Adviser's and TSA's senior management and control personnel. The primary purpose of the Conflicts Committee is to provide a body to which such personnel can raise potential conflicts of interest for evaluation, including potential conflicts which relate to investment process decisions.

Item 12. Brokerage Practices

As indicated above, the Adviser utilizes proprietary order and execution management systems and execution algorithms. Client orders are processed via the Adviser's order and execution management systems or through similar third-party platforms, and for liquid, exchange-traded Instruments, execution of orders on those types of Instruments generally occurs in a fully automated manner or with limited employee assistance, and for Instruments that are less liquid and/or exchange-traded (e.g., OTC (including cleared) Instruments), execution of orders on those types of Instruments are generally handled manually by a trader. For more information regarding the Adviser's execution management system, see Item 6. "Performance-Based Fees & Side-by-Side Management—Certain Conflicts of Interest Associated with Side-by-Side Management—Trading and Execution; Use of Multiple Execution Desks."

The traders are equipped with one or more user interfaces, depending on execution desk, which are used as tools to monitor and direct trading activity. When using such user interface(s) to direct trading activity, a trader has the discretion to determine the appropriate means for handling an order and can choose to do so either via an electronic trading application or manually. In each case, the Clients' orders are sent to an order management system and orders are executed manually or through electronic trading systems maintained with a broker, dealer, trading counterparty, other OTC participant and/or other market intermediary (each, a "Market Intermediary") for execution.

Market Intermediaries used to execute Client trades are selected primarily on the basis of their execution capability, services provided, research provided, financial stability, reputation, access to the market for the securities being traded and expertise. In providing services to the Clients, the Adviser utilizes many brokerage services offered by Market Intermediaries including, but not limited to, traditional brokerage, direct market access and third-party algorithms. As such, the Adviser, at times, exercises significant control over the brokerage process and, at other times, relies more heavily on such Market Intermediaries. In some cases, due to the nature of specific markets, the limited routes of market access and/or the limited counterparty availability for Clients in certain geographical regions, the Adviser expects to obtain exposure to certain Instruments through a single swap provider (or a very limited number of swap providers) that will serve as a Client's Market Intermediary, subjecting the Client to concentrated counterparty risk and limited execution options. The Adviser has discretion as to how these exposures are acquired through the Market Intermediary. However, in certain cases market access and other capabilities may be limited to offerings provided by such Market Intermediary. Notwithstanding the foregoing, the Adviser may, in its discretion, conduct such a Client's investment activities by entering into arrangements with other swap providers and/or directly on various exchanges.

The Adviser need not solicit competitive bids for orders and does not have an obligation to seek the lowest available commission cost. It is not the Adviser's practice to negotiate "execution only" commission rates. Thus, Clients may be deemed to be paying for research, brokerage or other services provided by Market Intermediaries (or provided by third parties to whom the Adviser directs payment from the Market Intermediaries) in recognition of the commissions, mark-ups or other compensation received by such Market Intermediaries (collectively, "Commissions").

As part of its best execution responsibilities, the Adviser reviews and monitors, among other things, (a) data and/or reports regarding Market Intermediaries and execution costs of transactions, and (b) transactions being executed through the Shared Execution Desk. The Adviser seeks to ensure that transactions are conducted in the best interest of the Clients, including by continuing to seek to obtain best execution through the Adviser's best execution policies and procedures with regard to the Shared Execution Desk and with regard to trades placed by or through such desk.

Consistent with seeking overall best execution, the Adviser may also obtain research, brokerage and other services that would otherwise be a Client expense provided by the Market Intermediary (or provided by third parties to whom the Adviser directs payment from the Market Intermediaries) for Commissions paid in connection with the transaction. Additionally, the Adviser may place transactions that involve increased transaction costs for the foregoing services with a Market Intermediary that also (i) provides the Adviser (or an affiliate) with the opportunity to participate in capital introduction events sponsored by the Market Intermediary; (ii) refers investors to the Adviser or other products advised by the Adviser (or an affiliate); and/or (iii) provides the Adviser (or an affiliate) with the opportunity to participate as appropriate in securities offerings or privately negotiated securities transactions. Accordingly, a Client may pay higher Commissions to Market Intermediaries that provide these services and benefits (or that are provided by third parties to whom the Adviser directs the Market Intermediaries to pay) than such Client would pay to other Market Intermediaries that do not provide these services and benefits (or the ability to direct payments to other third parties) based on the Adviser's recognition of the value of the research, brokerage and other services that would otherwise be an expense of a Client.

Please refer to Item 6. "Performance-Based Fees & Side-by-Side Management—Certain Conflicts of Interest Associated with Side-By-Side Management—Trading and Execution; Use of Multiple Execution Desks" for further information regarding the procedures adopted by the Adviser for allocating trades among its Clients including procedures for order aggregation.

The Adviser currently only uses Commissions to obtain research and brokerage services that constitute research and brokerage within the meaning of Section 28(e) of the Securities Exchange Act of 1934, as amended. Research services within Section 28(e) include, but are not limited to, research reports (including market research); certain financial newsletters and trade journals; software providing analysis of securities portfolios; corporate governance research and rating services; attendance at certain seminars and conferences; discussions with research analysts; meetings with corporate executives; consultants' advice on portfolio strategy; data services (including services providing market data, company data (including financial data), certain valuation and pricing data and economic data); advice from brokers on order execution; investment and economic recommendations; and certain proxy services. Brokerage services within Section 28(e) include, but are not limited to, services related to the execution, clearing and settlement of securities transactions and functions incidental thereto (*i.e.*, connectivity services between an investment manager and a broker-dealer and other relevant parties such as custodians); trading software operated by a broker-dealer to route orders; software that provides trade analytics and trading strategies; software used to transmit orders; clearance and settlement in connection with a trade; electronic communication of allocation instructions; routing settlement instructions; post trade matching of trade information; and services required by the SEC or a self-regulatory organization such as comparison services, electronic confirms or trade affirmations. Should the Adviser elect in the future to use Commissions arising from a Client's investment transactions for services other than research and brokerage, such usage will be limited to services that would otherwise be a Client expense. The use of Commissions to obtain such other services would be outside the parameters of Section 28(e).

In some instances, the Adviser receives a product or service that may be used only partially for Section 28(e) types of services or services for which a Client is obligated to pay. In such instances, the Adviser will make a good faith effort to determine the proportion of the "mixed use" product or service used for Section 28(e) types of services or services for which such Client is obligated to pay and the proportion used for other purposes. The proportion of the product or service used for Section 28(e) types of services may be paid through Commissions generated by transactions for the Client and the proportion used for other purposes will be paid for by the Adviser from its own resources. To the extent the Adviser uses soft dollars to pay for a product or service that includes a function that is not an eligible research or brokerage service under Section 28(e) or that the Adviser uses for purposes other than investment decision making, the Adviser will make an appropriate allocation of such product or service as a "mixed-use" item.

The Adviser uses "soft dollars" for brokerage and research products and services that provide lawful and appropriate assistance to the Adviser in carrying out its investment decision-making responsibilities, as permitted under the safe harbor of Section 28(e). While the Adviser currently does not do so, the Adviser is permitted under its Clients' offering documents to also use soft dollars to pay certain Client expenses that are outside of the scope of Section 28(e). The Adviser acknowledges and understands that it has an obligation to seek "best execution" for its Clients' transactions under the circumstances of the particular transaction. Consequently, notwithstanding the Adviser's soft dollar policy, no transaction shall be directed to a broker unless best execution of the transaction is reasonably expected to be obtained.

The use of Commissions (or certain markups or markdowns) to obtain research and brokerage products and services raises conflicts of interest. For example, the Adviser will not have to pay for the products and services itself. This creates an incentive for the Adviser to select or recommend a broker-dealer based on its interest in receiving those products and services (or the ability to instruct such a broker-dealer to pay a third-party vendor for these products and services). In addition, the receipt of benefits and the determination of the appropriate allocation in the case of "mixed use" products or services (as noted above) creates an additional potential conflict of interest between the Adviser and the Clients. The Adviser causes the Clients to pay Commissions (or certain markups or markdowns) higher than those charged by other broker-dealers in return for soft dollar benefits (known as paying-up), resulting in higher transaction costs for Clients. However, the Adviser will make a good faith determination that the amount of Commissions paid is reasonable in light of the research and brokerage services obtained.

Research and brokerage services obtained by the use of Commissions arising from a Client's portfolio transactions are used by the Adviser (and may be shared with its affiliates) in its other investment activities, including for the benefit of other Clients. The Adviser and TSA do not seek to allocate soft dollar credits, generated collectively by Clients and TSA clients, on a pro-rata basis based on the Client or TSA client which generated such soft dollar credits. Further, soft dollar credits generated by the Clients and TSA clients are not allocated on a pro rata basis between the Adviser and TSA. None of the Adviser, Clients, TSA or TSA clients will, in any particular instance, necessarily be the direct or indirect beneficiary of a specific research and/or brokerage service. Additionally, soft dollar balances are likely to be treated as unsecured claims in a bankruptcy and, as such, if a broker were to enter bankruptcy, the Adviser and Clients could lose the benefit of any unused soft dollar credits.

During the Adviser's last fiscal year, as a result of client brokerage commissions (or markups or markdowns), the Adviser and/or its related persons acquired research reports (including market research); corporate governance research and rating services; inputs from traders, analysts, experts on selected subjects, and other market participants (*e.g.*, in connection with the use, implementation and support of the alpha capture systems, including those developed by the Adviser and/or its affiliates); and data services (including services providing market data, news data, company data (including financial data), certain valuation and pricing data and economic data).

In selecting or recommending broker-dealers, the Adviser may consider whether the Adviser or a related person receives client referrals from a broker-dealer or third party. The Adviser has an incentive to select or recommend a broker-dealer based on its interests or a related person's interests to receive client referrals rather than on the Client's interest in receiving most favorable execution. To address this conflict of interest, the Adviser may execute trades through broker-dealers that refer clients to the Adviser or a related person but only if it is determined by the Adviser's Best Execution Committee that trades with such broker-dealers are otherwise consistent with seeking best execution. In no event will the Adviser select a broker-dealer or will a Client pay a higher commission than would otherwise be paid as a means of remuneration for recommending the Adviser or a related person or any other product managed by the Adviser (or an affiliate) or affording the Adviser or a related person with the opportunity to participate in capital introduction programs.

Item 13. Review of Accounts

Frequency and Nature of Review.

The Adviser's Chief Investment Officer (or his delegates) periodically reviews the trading activity conducted on behalf of Clients in conjunction with the relevant portfolio management personnel responsible for such trading activity. These reviews consist of a review and analysis of (i) various trading data, (ii) internally-generated risk reports and (iii) an evaluation of such other information the Adviser deems appropriate.

Content and Frequency of Regular Account Reports.

A Client's investor(s) receives written reports from the Adviser as described in the offering or organizational documents of the Client. Investors in Clients that are private investment funds are provided with audited annual financial statements typically within one hundred twenty (120) days of the end of any such fund's fiscal year or, in the case of funds of funds, within one hundred eighty (180) days of the end of any such fund's fiscal year. In addition, such investors are provided with unaudited statements typically within thirty (30) days of the end of each month.

Clients and/or the Adviser may enter into agreements with certain investors to provide such investors with additional (or more frequent) reports, including detailed information regarding portfolio positions.

Item 14. Client Referrals & Other Compensation

The Adviser does not currently compensate any person for Client referrals. However, in accordance with applicable law, the Adviser compensates certain third parties for assistance in connection with soliciting Canadian and Japanese investors in certain Clients. Additionally, the Adviser may compensate broker-dealers that provide referrals, to the extent consistent with best execution as discussed in Item 12.

The Adviser has developed extensive relationships through a lengthy and continued course of dealing with certain third-party investment consultants ("Investment Consultants") that are neither affiliated with nor compensated by the Adviser. Investors and prospective investors in Clients retain these same Investment Consultants from time to time to advise them on the selection and review of investment managers and investment products, including in respect of the Adviser and its Clients. Such Investment Consultants do not act on behalf of the Adviser, and their services are generally outside the scope of any offering of securities by the Adviser and/or its Clients. Furthermore, the Adviser does not participate in the advisory services offered by such Investment Consultants to their clients and generally seeks to ensure that Clients and investors in Clients rely solely on the applicable offering memorandum and other governing documents.

The Adviser receives certain research or other products or services from broker-dealers through "soft dollar" arrangements. These "soft dollar" arrangements create an incentive for the Adviser to select or recommend particular broker-dealers based on the Adviser's interest in receiving the research or other products or services from such broker-dealers (or from third parties to whom the Adviser directs payments from such broker-dealers). Please see Item 12 above for further information on the Adviser's "soft dollar" practices, including the Adviser's procedures for addressing conflicts of interest that arise from such practices.

Item 15. Custody

The Adviser and certain of its affiliates are generally deemed to have custody of Client assets and, where applicable, intend to comply with Rule 206(4)-2 under the Advisers Act, by meeting the conditions of the pooled investment vehicle annual audit provision. Accordingly, investors in Clients do not receive account statements directly from qualified custodians holding Clients' assets, though audited financial statements are distributed to such investors. Please refer to Item 13 of this brochure for further discussion of the Adviser's reporting practices.

Item 16. Investment Discretion

The Adviser provides investment advisory services on a discretionary basis to the Clients. Other than those restrictions set forth in the applicable offering memorandum or investment management agreement, the Clients generally may not impose restrictions on investing in certain securities or certain types of securities.

Prior to assuming full discretion in managing a Client's assets, the Adviser enters into an investment management agreement or other agreement that sets forth the scope of the Adviser's discretion.

The Adviser generally has the authority to determine (i) the securities and other Instruments to be purchased and sold for Clients (subject to restrictions on its activities set forth in the applicable offering memorandum, investment management agreement and any written investment guidelines) and (ii) the amount of securities and other Instruments to be purchased or sold for Clients. See Item 6 for a discussion of the Adviser's allocation and aggregation practices.

The Adviser, directly or indirectly, from time to time, causes certain of the Clients to purchase equity securities that are part of IPOs (sometimes referred to as "New Issues"). The Adviser will determine those Clients that are eligible to participate in the IPOs and will allocate such IPO securities in a manner consistent with applicable law and the Adviser's fiduciary duties among such Clients. Subject to any restrictions in a Client's offering memorandum or governing documents, the Adviser is authorized to determine, among other things the (i) manner in which New Issues are directly purchased, held, transferred and sold and any adjustments (including interest) with respect thereto; (ii) manner in which the investors will participate in the profits and losses from New Issues; (iii) investors who are eligible and ineligible to participate in the profits and losses from New Issues; (iv) method by which profits and losses from New Issues are to be allocated among the investors in a manner that is permitted under the FINRA rules; and (v) time at which New Issues are no longer considered as such under the FINRA rules. Investors in Clients may elect to be treated as either eligible or ineligible to participate in the profits and losses from New Issues (if any).

Item 17. Voting Client Securities

The Adviser has the authority to vote proxies with respect to the securities of its Clients. When the Adviser votes proxies with respect to the securities of a Client, the Adviser employs proxy voting guidelines and proxy voting procedures. The Adviser may choose to cease voting proxies, or not vote proxies, on behalf of certain of its Clients. The Clients are not permitted to direct their votes in a particular solicitation.

When voting proxies, the Adviser generally utilizes the services of a third-party proxy agent that votes pursuant to guidelines agreed upon with the Adviser in advance which will take certain environmental, social, and/or corporate governance ("ESG") factors into account. Taking ESG factors into consideration might not improve, and, while not currently expected, might detract from, the performance of a Client over any period of time. By considering ESG factors in proxy voting determinations, the Adviser might vote a proxy in a manner that it would not otherwise have done if ESG factors were not considered.

Such services of a third-party proxy agent are believed to mitigate certain conflicts of interest between the Adviser and Clients. However, there can be no assurance that this practice will eliminate all potential conflicts of interest with respect to proxy voting. The third-party proxy agent votes pursuant to guidelines that take certain ESG factors into account, and the Adviser expects to experience certain benefits in connection with such practice (*e.g.*, in the form of reputational benefits and goodwill) that will not, in every case, correspond to measurable benefits experienced by a Client. If a material conflict of interest between the Adviser and a Client is brought to the Adviser's attention, the Adviser will determine whether voting in accordance with the guidelines set forth in the proxy voting policies and procedures is in the best interests of the Client or take some other appropriate action.

An investor in a Client can obtain a copy of the Adviser's proxy voting policies and procedures, which include information as to how the Adviser voted proxies for each applicable Client in which they are invested, by contacting the Adviser's Investor Relations Department at (212) 625-5700.

Item 18. Financial Information

This Item is not applicable.

Item 19. Requirements for State-Registered Advisers

This Item is not applicable.

Appendix: Item 2. Material Changes

Below is a summary of material changes that the Adviser has made to this brochure since the Adviser's last annual Form ADV filing on March 31, 2022. Please be aware that other non-material changes have been included in this brochure.

- Item 4. Updates have been made to reflect regulatory assets under management.
- Item 6. Updates have been made to provide additional information with respect to the Shared Research Platform; decisions relating to systematic strategies and Techniques; reliance on personnel of affiliates for trading services; certain structural conflicts of interest; and cross-adviser leadership and other shared personnel.
- Item 7. Updates have been made to reflect Two Sigma Blazar Fund, LLC as an employees' securities company managed by the Adviser.
- Item 8. Updates have been made to, among other things, provide additional information with respect to risks of participating affiliates; trading restrictions; risks associated with management and governance challenges; recent rulemaking proposals; cleared repurchase agreements; collateralized loan obligations; and uncleared margin rules.
- Item 10. Updates have been made to reflect, among other things, details regarding TSIL's services as a participating affiliate of the Adviser.
- Item 12. Updates have been made to reflect, among other things, details regarding the Adviser's soft dollar allocation practices.