

FIRM BROCHURE

(Part 2A of Form ADV)

March 17, 2023

APERIO GROUP, LLC

Three Harbor Drive, Suite 204

Sausalito, CA 94965

Phone: (415) 339-4300

Fax: (415) 339-4301

www.aperiogroup.com

Part 2A of Form ADV (the “Brochure”) provides information about the qualifications and business practices of Aperio Group, LLC (“Aperio,” “we,” or the “Firm”). If you have any questions about the contents of this Brochure, please contact us at (415) 339-4300, and/or aperioclientservice@blackrock.com, and/or www.aperiogroup.com. The information in this Brochure has not been approved or verified by the U.S. Securities and Exchange Commission (SEC) or by any state securities authority.

Aperio is registered as an investment adviser with the SEC; however, such registration does not imply a certain level of skill or training, and no inference to the contrary should be made.

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

ITEM 1: COVER PAGE

ITEM 2: MATERIAL CHANGES

This Brochure has been revised to reflect the following updates and material changes since the last annual update of our Brochure on March 14, 2022.

Item 4: Advisory Business.

We updated the types of investment strategies we offer Clients. While Aperio generally only implements long-only equity portfolios, certain Clients that meet eligibility criteria established by Aperio may invest in long/short equity strategies.

We also added discussion of how Aperio also is offering the capability to integrate exchange-traded funds (“ETFs”) and mutual funds into Aperio’s management of Client portfolios at the Client’s direction.

For Wrap Program Clients, we highlighted that Aperio requires a minimum account size for certain investment strategies, which varies among Wrap Program Sponsors.

We provided details on a model-based SMA Wrap Program in which Aperio participates where Aperio delivers a model portfolio to an overlay portfolio manager.

We updated Aperio’s Regulatory Assets Under Management as of December 31, 2022, to be \$54,545,912,619.

Item 5: Fees and Compensation.

We removed reference to a specific minimum annual fee to allow for flexibility in the minimum fee charged for Client accounts. We also noted that fees are applicable to long/short equity strategies. The range of Wrap Program fees was updated to reflect a maximum of 0.40% annual fee, depending on the product offered.

For Clients who direct Aperio to manage ETFs that are Affiliated Funds in an Aperio account, we noted that Clients may be subject to fees and expenses in addition to Aperio’s management fee, which is based on a percentage of the Client account value, including the value of the Affiliated Funds held in such account.

Item 8: Methods of Analysis, Investment Strategies, and Risk of Loss.

We updated the risks discussed to include expanded discussion of the risks associated with strategies using indexes as benchmarks, values-aligned investment strategies, and strategies involving short selling of securities (including borrowing risk, leverage risk, and long/short strategy risk).

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

We added a discussion of potential conflicts involved in certain Client accounts that may hold shares of BlackRock Affiliated Funds. We noted that Aperio does not recommend purchases of BlackRock Affiliated Funds in Aperio portfolios but only integrates them into Client portfolios at a Client's direction.

Item 12: Brokerage Practices.

We updated Aperio's brokerage practices involving certain Wrap Programs, noting that it is likely that most, if not all, equity transactions for Clients of such Wrap Program Sponsors will be effected through the Wrap Sponsor because brokerage commissions and other charges for equity transactions not effected through the Wrap Sponsor can be charged to the Client, whereas the Wrap Fee generally covers the cost of brokerage commissions and other transaction fees on equity transactions effected through the Wrap Sponsor. In certain instances, the Wrap Sponsor requires Aperio, and not the Client, to bear the cost of brokerage commissions and other transaction fees for equity transactions not effected through the Wrap Sponsor. In such circumstances, Aperio will have an incentive to select the Wrap Sponsor or, if the Wrap Sponsor cannot effect a particular equity transaction, such other broker-dealer with the lowest transaction fees in order to minimize the costs to be borne by Aperio, which incentive may conflict with Aperio's duty to seek best execution for its Clients' accounts. Aperio seeks to mitigate this potential conflict of interest by selecting broker-dealers to obtain best execution based on the factors noted in *Item 12: Brokerage Practices*.

Item 17: Voting Client Securities.

We updated the list of proxy voting guidelines that Aperio offers Clients. We also described the default proxy voting policies that are applied to portfolios using particular strategies, as well as guidelines available for selection by certain Clients, including Clients in certain Wrap Fee Programs. We added discussion of Aperio's practices around voting paper ballots during the period in which the Client's custodian links to Aperio's proxy voting services or periods of interruption of the connection, noting that we would vote paper ballots during this period in favor of management as in the best interests of Clients. Additionally, we expanded our discussion of Aperio's policies regarding handling any material conflicts of interest.

The previous version of this Brochure is dated March 14, 2022. Aperio encourages each Client to read the Brochure carefully and to contact us at the telephone number or email address on the cover page of this Brochure with any questions you may have.

Additional information about Aperio and its investment adviser representatives is available on the SEC's website at www.adviserinfo.sec.gov.

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ITEM 4: ADVISORY BUSINESS

Description of Aperio

Aperio is a California limited liability company and an investment adviser registered with and regulated by the SEC under the Investment Advisers Act of 1940 (the “Advisers Act”). Aperio manages domestic, international, and global equity portfolios for high-net-worth individuals, institutions, and intermediaries such as wealth managers, consultants, and family offices. Aperio also advises a limited number of ERISA Clients, and provides sub-advisory investment management services to registered mutual funds and pooled investment vehicles, including private funds.

Aperio was founded and has been in business since August 1999 and until early 2016, was entirely owned by its four partners: Patrick Geddes, Guy Lampard, Robert Newman, and Paul Solli.

Principal Owners

On February 1, 2021, BlackRock, Inc. (“BlackRock”), a publicly traded company, completed its acquisition of Aperio Holdings, LLC, and other equity interests related to Aperio Holdings, LLC, upon which BlackRock acquired all of the outstanding equity interests of Aperio Holdings previously held by Aperio insiders and Aperio’s majority investor, Golden Gate Capital, and thus acquired, indirectly, all equity interests in Aperio (the “Acquisition”).

As a result of the Acquisition, Aperio is an indirect wholly-owned subsidiary of BlackRock, a global leader in investment management, risk management, and advisory services for institutional and retail Clients.

Aperio is led by its Co-Heads: Ran Leshem, who also has been acting as Chief Investment Officer since 2007, and Liz Michaels, Aperio’s former Chief of Staff and Head of ESG, who each report to Martin Small, Head of BlackRock’s U.S. Wealth Advisory Business (“USWA”).

As used in this Brochure, the term the “Adviser” refers to Aperio, except where the context otherwise requires. References to “BlackRock” in this Brochure include BlackRock, Inc., together with its subsidiaries, including investment advisory and trust company subsidiaries (“BlackRock Investment Advisers” or the “Advisers,” which includes Aperio).

Types of Advisory Services

Separate Account Management

Aperio offers three (3) main equity investment strategies:

- Active Tax Management,
- Factor Tilts, and
- Values-aligned investing.

Aperio's investment management services are offered (directly or indirectly through a sub-advisory arrangement with the Client's primary investment adviser) to U.S. registered investment companies, single-investor funds, discretionary and non-discretionary advisory programs, commingled investment vehicles, other investment advisers, and individuals and institutional investors through separate account management. The types of clients to which each Adviser provides investment management services are disclosed in each Adviser's Form ADV Part 1A and summarized in Item 7 ("Types of Clients") of this Brochure.

Aperio creates customized separately managed equity portfolios using quantitative models and tools to incorporate Client specifications for benchmark, factor tilts, tax management, and values-aligned preferences, including, without limitation, incorporating socially responsible investing considerations ("SRI") or environmental, social, and governance ("ESG") considerations. Clients also are able to customize their portfolios to meet specific requirements, such as holding restrictions, industry/country limitations, and situation-appropriate tax needs. While Aperio generally only implements long-only equity portfolios, certain Clients that meet eligibility criteria established by Aperio may invest in long/short equity strategies. Benchmarks include broad market equity indexes representing domestic and/or foreign companies. Once a Client has selected an investment strategy and benchmark, Aperio provides continuous supervision and management of the assets. Clients are responsible for informing Aperio of any changes to their investment objectives, individual needs, and/or restrictions.

For Clients implementing certain strategies and where internal Aperio systems support management, Aperio also offers the capability to integrate exchange-traded funds ("ETFs") into Aperio's management of Client portfolios at the Client's direction. For information concerning costs associated with integrating ETFs into an Aperio account, please refer to Item 5 ("Fees and Compensation"), and for information regarding a potential conflict of interest concerning Aperio management of ETFs which may pay fees to Aperio affiliates for providing management, administrative or other services ("Affiliated Funds") that are in addition to any fees received by Aperio for providing discretionary investment services, please refer to Item 11 ("Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading").

Please refer to *Item 8: Methods of Analysis, Investment Strategies, and Risk of Loss* for detailed information regarding Aperio strategies.

Advisory Agreements

Separate Accounts

For all separate account Clients, a written advisory agreement governs the terms of the relationship between Aperio and its Clients. Aperio's most common agreement types are its Master Sub-Advisory Agreement and individual Investment Advisory Agreement. Both types of agreements describe the advisory services to be provided, Aperio's responsibilities, and the terms of engagement, including, but not limited to, fees and termination.

Investment advisor intermediaries, consultants, and wealth managers (collectively, "Intermediaries," and individually, an "Intermediary") acting as the primary advisor may enter into a Master Sub-Advisory Agreement with Aperio when Aperio has been selected to

manage portfolios for Intermediaries' clients as a sub-advisor. In this case, the Intermediary's client (usually a high-net-worth individual investor or foundation/endowment) delegates to the Intermediary the authority to select sub-advisor managers. A list of clients covered by the Master Sub-Advisory Agreement is appended to the agreement and updated regularly. Otherwise, non-sub-advisory Clients, including those that are introduced to Aperio by an Intermediary, typically enter into an individual Investment Advisory Agreement.

Both the Master Sub-Advisory Agreement and the individual Investment Advisory Agreement may be terminated by either party upon written notice to the other party. If Aperio terminates a Master Sub-Advisory Agreement, Aperio agrees to continue service for a specified period to facilitate transitioning of accounts. Both agreements generally provide for management fees paid in advance to be pro-rated to the date of termination and any unearned portion of the prepaid fees to be refunded to the Client. For services billed in arrears, the Client will be billed for services earned but not paid.

Wrap Program Services

Aperio's separate account strategies are also offered through certain wrap programs (each, a "Wrap Program"), which are sponsored by unaffiliated multi-service financial institutions (each, a "Wrap Sponsor"). A list of Wrap Programs may be found in Part 1 of our Form ADV. For further information on Wrap Programs, please also refer below to information in Item 5.

Aperio requires a minimum account size for certain of its investment strategies, which varies among Wrap Programs. In most Wrap Programs, the Wrap Sponsor is responsible for establishing the financial circumstances, investment objectives, and investment restrictions applicable to each client, often through a client profile and discussions between the client and the Wrap Sponsor's personnel.

For single-contract Wrap Programs, Aperio contracts directly with the Wrap Sponsor or an affiliated advisor, and the written agreement governing Aperio's services for the Wrap Program describes the services to be provided for each Wrap Program client (the "Wrap Client"), Aperio's responsibilities, and the terms of engagement, including fees and termination. For single-contract Wrap Programs, Aperio does not execute a contract with each Wrap Client.

Conversely, for dual-contract Wrap Programs, Aperio will execute an individual Investment Advisory Agreement with each Wrap Client. Wrap Sponsors of such dual-contract Wrap Programs may require service or other additional agreements with Aperio to cover items such as use of software provided, data downloads of account information, and electronic trading service terms and conditions.

Generally, a Wrap Client, with the assistance and advice of the Wrap Sponsor, selects an investment advisor, such as Aperio, from a list of Wrap Sponsor approved advisers to provide investment management services for their assets allocated to their Wrap Program account(s). In addition, a Wrap Client may receive certain other services provided by the Wrap Sponsor and/or entities affiliated with the Wrap Sponsor (such as manager selection, trading execution, custodial services, periodic monitoring of investment managers, and performance reporting).

Wrap Clients are typically charged by the Wrap Sponsor quarterly, in advance or in arrears, a comprehensive or wrap fee based upon a percentage of the value of the assets under management to cover such services (the “Wrap Fee”). The Wrap Fee often, but not always, includes the advisory fees charged by Aperio (or other participating managers) through the Wrap Program. Where the services provided by Aperio are included in the Wrap Fee, the Wrap Sponsor generally collects the Wrap Fee from the Wrap Client and remits the advisory fee to Aperio. For dual-contract Wrap Programs, Aperio’s fee is typically paid directly by the Wrap Client pursuant to the Investment Advisory Agreement with Aperio.

Although the types of investment management services provided by Aperio to Wrap Clients are generally the same as the types of investment management services provided to our non-Wrap Program Clients, certain differences usually exist. For example, the Wrap Sponsor collects each client’s investment objectives and assists the client in determining the strategy best suited for the client, and client communications regarding the investment management of a Wrap Client’s assets are generally between the Wrap Sponsor or an affiliated advisor and the Wrap Client, with Aperio communicating only with the Wrap Sponsor or affiliated advisor, unless requested otherwise.

Since the Wrap Fee paid by Wrap Clients is all-inclusive, as described above, Aperio believes it is important for each Wrap Client to evaluate whether such a program is suitable for their needs and cost effective, given factors such as the size of the account, frequency of transactions, and the Wrap Client’s investment objectives, as well as whether comparable or similar services are available at a lower cost if provided separately. Wrap Sponsors are responsible for providing Wrap Clients with this Brochure and applicable brochures for the Wrap Program (the “Wrap Program Brochure”). Wrap Clients should review the Wrap Program Brochure for further details about the relevant Wrap Program.

Model-Based SMA Program

Pursuant to participation in a “Model-Based SMA Program,” Aperio provides discretionary investment advisory services to an overlay portfolio manager (“OPM”) in connection with the OPM’s provision of investment advisory services to clients through a unified managed account Wrap Program. Specific to the terms of the Model-Based SMA Program agreement, Aperio acts as investment adviser to each Model-Based SMA Program client designated by the Wrap Sponsor and exercises discretion to select securities for the Model-Based SMA Program client’s account solely by delivering a model portfolio to the OPM, which the OPM will implement (subject only to account-specific restrictions imposed by such client) and arrange for execution of trades in such client’s account. Under the terms of the Model-Based SMA Program, the OPM can choose not to execute the trades recommended by Aperio. In the Model-Based SMA Program, the fees payable to Aperio for providing model portfolios are paid by the Wrap Sponsor based on the amount of their clients’ assets that are managed by the OPM pursuant to a model portfolio provided by Aperio. The Model-Based SMA Program to which Aperio currently provides model portfolios is identified in Aperio’s Form ADV Part 1.

Amount of Client Assets Managed

As of December 31, 2022, the following represents the total amount of Client assets under management by Aperio:

Type of Account	Assets Under Management (“AUM”)
Discretionary	\$54,545,912,619
Non-Discretionary	\$0
Total:	\$54,545,912,619

ITEM 5: FEES AND COMPENSATION

Fee Agreements – General

Aperio fee arrangements for its investment management services vary by client and are based on a number of different factors, including investment mandate, services performed, and account/relationship size.

Typically, Aperio negotiates fees with advisers and Wrap Sponsors, and not directly with Clients participating in such programs. However, for specialized portfolio customization, additional fees may be charged based on the size and complexity of the account(s). In the event of fee schedule changes, Aperio reserves the right to continue pre-established fee schedules with current Clients that may be more or less advantageous to such Clients than the new or changed fee schedules offered to prospective Clients. Additionally, Aperio reserves the right to offer prospective Clients’ fee schedules or terms that may be more or less advantageous to such prospective Clients than the existing fee schedules offered to its current Clients for similar service.

Separate Account Indexing

Aperio charges an annual management fee based on a percentage of a Client’s account value for all separately managed equity index strategies managed by Aperio. However, accounts may be charged additional fees for certain customization options, such as pass-through costs of licensing data for specialized indexes or premiums for implementing long/short equity strategies. Fees are negotiable at the sole discretion of Aperio and vary depending on account size, account parameters, and overall relationship. A minimum annual fee may be applied in certain cases, which can result in a higher effective fee rate than set forth below; however, Aperio has discretion to lower or waive the minimum at any time and for any Client(s).

Standard annual advisory fee rates are set forth below, based on the Client account’s chosen benchmark index for the implemented investment strategy:

U.S. Domestic Benchmark Indexes	0.35%
Foreign/Global Benchmark Indexes	0.40%
U.S. Domestic Benchmark Indexes with SRI/ESG	0.45%
Foreign/Global Benchmark Indexes with SRI/ESG	0.50%

Wrap Fees

The annual fees received by Aperio from each Wrap Sponsor are generally equal to either: (a) a percentage of the total assets in the Wrap Sponsor's Wrap Program accounts for which Aperio provides investment management services; or (b) a percentage of the Wrap Fees actually collected by the Wrap Sponsor from Wrap Clients to whom we provide investment management services.

Each Wrap Sponsor generally pays Aperio on a quarterly basis, generally in advance, or as outlined in each written agreement between Aperio and the Wrap Sponsor. With respect to each Wrap Program in which we participate, the standard fees received by us from each Wrap Sponsor can vary depending on the investment style selected and other factors. The annual fees currently range up to 0.40%, depending on the product offered.

Aperio is not informed of the specific fee arrangement negotiated between each Wrap Client and the Wrap Sponsor. Wrap Sponsors charge a minimum annual Wrap Fee to each of their Wrap Clients. Complete information on the services provided and fees charged under a Wrap Program can be found in each Wrap Sponsor's Form ADV, Part 2A—Appendix 1, also known as the Wrap Fee Program Brochure. Wrap Clients should carefully evaluate all information in the applicable brochure to determine whether or not the Wrap Fee paid for the services provided exceeds the aggregate cost of such services if they were to be provided separately.

Wrap accounts are generally managed in the same or similar manner as other separately managed accounts. However, Wrap Programs may impose specific restrictions and investment guidelines that are more restrictive than fully discretionary Client accounts; this is discussed in the Wrap Sponsor's Wrap Program Brochure. In addition, Wrap Programs may mandate that Aperio direct transactions to a specific broker-dealer, which may restrict Aperio's ability to seek best execution or to aggregate trades. As a result, the performance of such wrap accounts may vary from that of fully discretionary accounts. Please refer to Item 12 of this Brochure, which describes our brokerage practices in detail.

Aperio negotiates fees with some Clients who pay lower fees than the fees shown above. Also, lower fees for comparable services may be available from other sources.

Mutual Fund Clients

For our sub-advised mutual fund Clients, we receive annual sub-advisory fees, which are based on the funds' average daily net assets. The annual sub-advisory fees are paid monthly in arrears by the funds' advisers and range from 0.08% to 0.20%.

Deduction of Fees

The consent for deduction of fees is generally contained in the written agreement that each Client enters into with Aperio, or otherwise is contained in the sub-advisory agreement between Aperio and each Client's financial advisor (Intermediary). In some cases, Clients or their Intermediary may negotiate different billing terms, such as requiring direct invoices and providing payment through means other than deduction of fees directly from the Client's custodial account.

Clients' custodians will deliver a periodic (at least quarterly) account statement directly to Clients. The statement will include all transactions that took place in the account during the period covered and reflect any advisory fees deducted and paid to Aperio. Clients are encouraged to review their account statements for accuracy and compare them to the reports received from Aperio. Should there be any discrepancies, Clients should rely on the information in their custodians' account statements.

Other Fees

Clients should understand that the fees discussed above are specific to what Aperio charges and do not include certain charges that may be imposed by third parties, such as custodial fees, exchange-traded fund and mutual fund fees and expenses, and additional fees charged by Wrap Sponsors (although we have generally described some of those additional fees in specific sections of this Brochure.) Client assets also can be, depending on the type of account and the types of investments in the account, subject to asset-based transaction fees, brokerage fees and commissions, and other fees and taxes on brokerage accounts and securities transactions.

Clients should understand that all custodial fees and any other charges, fees, and commissions incurred in connection with transactions for a Client's account are generally paid out of the assets in the account and are in addition to the investment management fees charged by Aperio. Please refer to Item 12 of this Brochure for additional important information about our brokerage and transactional practices, including considerations for selecting broker-dealers for Client transactions.

For Clients who direct Aperio to manage ETFs that are Affiliated Funds (see Item 4) in an Aperio account portfolio, Clients may pay fees and expenses for such Affiliated Funds in addition to Aperio's management fee, which is based on a percentage of the Client's account value including the value of the Affiliated Funds held in such account. For information regarding a potential conflict of interest concerning Aperio management of Affiliated Funds which may pay fees to Aperio affiliates that are in addition to any fees received by Aperio for providing discretionary investment services, please refer to *Item 11: Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading*.

Clients should review the fees charged to their account(s) to fully understand the total amount of all fees charged. Clients should understand that lower fees for comparable services may be available from other investment advisory firms.

No supervised person of Aperio receives transaction-based compensation related to investment recommendations or advice that could be considered a conflict of interest.

Fees in Advance

The management fee is typically billed quarterly in advance based on the account value at the end of the prior quarter. Such invoices may include prorated adjustments for deposits and withdrawals made in the previous quarter. A small number of accounts are billed quarterly in arrears based on the account value at the end of the period. Aperio also manages certain accounts that are part of Wrap Programs. Details on Wrap Fees are described in a separate section of Item 5.

Since investment advisory fees are typically billed quarterly in advance, if the agreement is terminated during a quarter, the portion of the fee paid for the remainder of the period will be refunded. The amount refunded will be prorated according to the portion of the quarter that was prepaid and not earned. For fees charged in arrears, the amount billed is prorated for the period in which services were earned.

Compensation of Supervised Persons

No supervised person of Aperio receives transaction-based compensation related to investment recommendations or advice that could be considered a conflict of interest.

ITEM 6: PERFORMANCE-BASED FEES AND SIDE-BY-SIDE MANAGEMENT

Aperio does not charge performance-based fees (i.e., fees calculated based on a share of capital gains on or capital appreciation of the Client's assets or any portion of the Client's assets). Consequently, Aperio does not engage in side-by-side management of accounts that are charged a performance-based fee with accounts that are charged another type of fee (such as fees based on assets under management). As described above, we provide our services based upon a percentage of assets under management, in accordance with Advisers Act Rule 205-(a)(1). Notably, accounts that are managed in the same investment style by Aperio (e.g., based on risk profile) are not always managed the same way due to the Client's overall investment objective, discretion of the investment professional assigned to the account, asset size, and account restrictions.

ITEM 7: TYPES OF CLIENTS

Description

As discussed in Item 4 ("Advisory Business") of this Brochure, Aperio Clients generally include the following:

- Registered Investment Advisers and Consultants;
- Family and Multi-Family Offices;
- Individuals, High-Net-Worth Individuals, and Trusts;
- Charitable Organizations including Endowments and Foundations;
- Pooled Investment Vehicles and Investment Companies including Registered Mutual Funds;
- Wrap Programs and Other Wealth Management Platforms; and
- Pension and Profit-Sharing Retirement Plans.

For registered investment advisors and consultants, their clients may include, but are not limited to: financial institutions, registered investment companies, pension funds and other retirement accounts, insurance companies, charitable and endowment organizations, corporations, limited liability companies, banks and thrift institutions, estates and trusts, and

other institutional type accounts (both taxable and tax-exempt), government agencies, government-chartered corporations, quasi-governmental agencies, state and local governments and non-U.S. pension funds, national banks, as well as high-net-worth and other individuals and family offices.

For ERISA Clients, Aperio provides certain required disclosures to the “responsible plan fiduciary” (as such term is defined in ERISA) in accordance with Section 408(b)(2), regarding the services we provide and the direct and indirect compensation we receive from such Clients. Generally, these disclosures are contained in this Brochure, in the Client agreement, and in separate ERISA disclosure documents, and are designed to enable the ERISA plan’s fiduciary to: (1) determine the reasonableness of all compensation received by Aperio; (2) identify any potential conflicts of interests; and (3) satisfy reporting and disclosure requirements to plan participants.

Conditions for Managing Accounts

For accounts managed by Aperio, both through an Intermediary or directly, the Client must use the services of a custodian to hold the securities in their account. For Aperio to accept an account for management, Aperio must have an established relationship with that custodian or alternatively must agree to establish one. The Client is required to grant Aperio the authority to manage their account by signing a Limited Power of Attorney (“LPOA”). The LPOA grants Aperio discretionary authority to manage the portfolio according to agreed-upon guidelines, to buy and sell securities, invest cash, implement Client instructions, deduct fees, and perform other actions consistent with managing the portfolio.

Wrap Program accounts are usually subject to minimum account sizes and program fees in addition to Aperio fees, which are outlined in the Wrap Sponsor’s ADV, Part 2A–Appendix 1.

There may be times when certain restrictions are placed by a Client that prevent us from accepting or continuing to service the Client’s account. Aperio reserves the right not to accept and/or to terminate a Client’s account if it feels that the Client-imposed restrictions would limit or prevent it from meeting and/or maintaining its objectives. Furthermore, pursuant to provisions in the Investment Advisory Agreement, Aperio may elect to terminate a Client should changes occur to Client-imposed restrictions, Client investment objectives, and/or other business or regulatory circumstances where Aperio believes it can no longer manage the Client’s assets effectively.

Please see the discussion in Item 11 for further information regarding potential restrictions on Aperio as a BlackRock-affiliated Investment Adviser.

ITEM 8: METHODS OF ANALYSIS, INVESTMENT STRATEGIES, AND RISK OF LOSS

Methods of Analysis

Aperio uses mathematical models and software to manage our Client strategies. Investment strategies are typically customized to Client specifications and have a defined benchmark and a set of Client restrictions/targets. To create portfolios, Aperio typically uses broad

universes consisting of stocks that are screened for liquidity and capitalization. Portfolios are constructed using optimization techniques and generally hold between 50 and 1,000 stocks, depending on the benchmark, strategy, and Client constraints. For taxable Clients, portfolios are rebalanced using a tax-efficient approach to maximize loss harvesting and minimize capital gains. Aperio's methodologies consider portfolio risk, transactions costs, and taxes when making investment decisions.

Investment Strategies

For the Active Tax Management strategy, Aperio constructs a portfolio comprising individual stocks that track a target benchmark and utilizes software designed to systematically harvest losses within the portfolio and immediately replace the securities sold at a loss with others of similar type and risk. The losses realized are available to offset gains created in other portions of the Client's portfolio (including those not managed by Aperio) such as those portions managed by active managers, hedge funds, or through the sale of low-cost-basis stock. Any savings realized by the reduction in taxes paid or postponed can improve returns when measured after-tax. This after-tax return benefit presumes that Clients have capital gains from active managers, hedge funds, sale of low-cost-basis stock, or other sources suitable for offset. Changes in tax law and/or the treatment of capital gains could impact the after-tax returns from this strategy.

The Factor Tilts and values-aligned strategies are customized portfolios of equity securities that are designed to meet specific Client-driven objectives. These strategies are suitable for both taxable and non-taxable portfolios and include values-aligned screening as well as other factor strategies. values-aligned portfolios are designed to track the major market indexes using a universe of securities that meet specific criteria and standards of conduct as determined by the values expressed by the Client.

Factor Tilts enable Clients to gain exposure to quantitative factors like quality, value, momentum, low volatility, etc., in a low-cost, tax-efficient strategy. Clients can also tilt portfolios based on industries, sectors, and countries. Clients can work with Aperio to develop customized factor tilts or choose "standard" customized tilt strategies offered by Aperio.

Strategies that incorporate short selling, in a long/short active tax management strategy, seek to provide diversified exposure to U.S. equities using margin and shorting to increase loss-harvesting potential, which may lead to higher tax alpha (the after-tax excess return minus any pre-tax excess return, which is a measure of the value added through active tax management). The appropriateness of this strategy depends on several factors, including, but not limited to, consideration of financing and shorting costs, margin calls, tax costs, and limited custodian availability and custodian-specific requirements.

Risk of Loss

Aperio's separately managed equity portfolios consist of stocks with the objective that the portfolio perform in line with the selected index benchmark. As a result, the value of the managed portfolios will generally rise and fall with the stock markets. With all separately managed portfolios, there is a significant risk that accounts will decline in value from time to time, and Clients should be prepared to accept the risk of potential loss. In addition, accounts may hold small amounts of cash.

Aperio uses quantitative tools to measure the estimated tracking error of the portfolio versus the benchmark index. Estimated tracking error is a statistic that forecasts how much a portfolio is likely to deviate from the benchmark index on an annualized basis and represents a one-standard-deviation event. For example, if the estimated tracking error of a portfolio is 1% and the benchmark index goes up 10%, there is an approximately 68% chance that the portfolio performance will be between 9% and 11%, assuming what statisticians refer to as a “normal distribution.” There is also the possibility that the account could experience a two-, three-, or higher standard-deviation outcome. While not expected, the risk of a significant deviation from the benchmark index is possible. If the deviation is negative versus the benchmark index, the portfolio will underperform—perhaps significantly—versus the benchmark index. Some accounts will perform worse than the benchmark index due to random variation.

The Factor Tilt strategies add an additional and potentially significant level of tracking error risk as the themes emphasized by these strategies move in and out of favor.

Values-aligned strategies add an additional level of tracking error risk due to the investing constraints such a style of investing introduces to the management of a portfolio. An optional participation in a shareholder advocacy program requires a commitment from the Client to hold its position in the impacted company for a specific period of time. Participation in this program is directed by the Client, who accepts the potential for risk of loss due to the holding period requirement.

Some additional general investment risks a Client should be aware of include, but are not limited to, the following:

Business Risk

These risks are associated with a particular industry or a particular company within an industry. For example, oil-drilling companies depend on finding oil and then refining it (a lengthy process), before they can generate a profit. They carry a higher risk of profitability than an electric company that generates its income from a steady stream of customers who buy electricity no matter what the economic environment is like.

Borrowing Risk

For portfolios using a long/short strategy, borrowing may exaggerate changes in the net assets and returns of a portfolio. Borrowing will cost the portfolio interest expense and other fees, potentially reducing a portfolio’s return. This can at times result in a need for the portfolio to liquidate positions when it may not be advantageous to do so to satisfy its borrowing obligations. Borrowing arrangements can be used to meet short-term investment and liquidity needs or to employ forms of leverage that entails risks, including the potential for higher volatility and greater declines of a portfolio’s value, and fluctuations of dividend and other distribution payments.

Currency Risk

Certain portfolios can hold investments denominated in currencies other than the currency in which the portfolio is denominated. Currency exchange rates can be volatile, particularly during times of political or economic unrest or as a result of actions taken by

central banks. A change in the exchange rates has the potential to produce significant losses to a portfolio, particularly if unhedged in whole or in part.

Developed Countries Risk

Investments in developed countries subject a portfolio to regulatory, political, currency, security, demographic, and economic risk specific to developed countries. Developed countries are impacted by changes to the economic health of certain key trading partners, regulatory burdens, debt burdens, and the price or availability of certain commodities. Developed countries tend to represent a significant portion of the global economy and have generally experienced slower economic growth than some other countries or regions.

Emerging Markets Risk

Investments in emerging markets can be subject to a greater risk of loss than investments in more developed markets, as they are more likely to experience inflation risk, political turmoil, and rapid changes in economic conditions. Investing in the securities of emerging markets involves certain considerations not typically associated with investing in more developed markets, including, but not limited to, the small size of such securities markets and the low volume of trading (possibly resulting in potential lack of liquidity and in price volatility), and political risks of emerging markets, which can include unstable governments, government intervention in securities or currency markets, nationalization, restrictions on foreign ownership and investment, laws preventing repatriation of assets, and legal systems that do not adequately protect property rights. Further, emerging markets can be affected adversely by changes to the economic health of certain key trading partners, such as the U.S., regional and global conflicts, and terrorism and war. Emerging markets often have less uniformity in accounting and reporting requirements, unreliable securities valuation, and greater risk associated with custody of securities.

Equity Markets Risk

Since the strategies invest in equity securities, they are subject to the risk that stock prices can fall over short or extended periods of time. Historically, the equity markets have moved in cycles, and the value of each strategy's equity securities may fluctuate drastically from day-to-day. Individual companies may report poor results or be negatively affected by industry and/or economic trends and developments. The prices of securities issued by such companies may suffer a decline in response. These factors contribute to price volatility, which is the principal risk of investing in the strategies we offer.

Financial Risk

Excessive borrowing to finance business operations may increase the risk of profitability, because a company must meet the terms of its obligations in good times and bad. During periods of financial stress, the inability to meet loan obligations can result in bankruptcy and/or a declining market value.

Foreign and Emerging Markets Risk

The value of a Client portfolio may be adversely affected by changes in currency exchange rates and political and economic developments across multiple borders. In emerging or less developed countries, these risks can be more significant than in major markets in developed countries. Generally, investment markets in emerging countries are smaller, less liquid, and more volatile, and as a result, the value of a portfolio investing in emerging markets may be more volatile. Emerging-market investments often are subject to speculative trading, which typically contributes to volatility. Emerging-market countries also may have relatively unstable governments and economies. Trading in foreign and emerging markets usually involves higher expenses than trading in the United States. A Client may have difficulties enforcing legal or contractual rights in a foreign country for any portfolio invested in these markets. Depositary receipts are subject to many of the risks associated with investing directly in foreign securities, including political and economic risks.

Geopolitical Risk

The European financial markets have recently experienced volatility and adverse trends due to concerns about economic downturns in, or rising government debt levels of, several European countries, as well as acts of war in the region. These events may spread to other countries in Europe and may affect the value and liquidity of Clients' portfolio investments.

Russia launched a large-scale invasion of Ukraine on February 24, 2022. The extent and duration of the military action, resulting sanctions, and resulting future market disruptions in the region are impossible to predict but could be significant and have a severe adverse effect on the region, including significant negative impacts on the economy and the markets for certain securities and commodities, such as oil and natural gas, as well as other sectors.

Governments in the United States and many other countries (collectively, the "Sanctioning Bodies") have imposed sanctions that placed restrictions on dealings with certain Russian entities and individuals, including politicians and Russian corporate and banking entities, as well as other actions, including freezing trading in Russian securities and prohibiting certain business activities relating to Russian assets. The Sanctioning Bodies, or others, could also institute broader sanctions on Russia, including banning Russia from global payments systems that facilitate cross-border payments. These sanctions, or even the threat of further sanctions, may result in the decline of the value and liquidity of Russian securities, including American depositary receipts (ADRs), a weakening of the ruble, or other adverse consequences to the Russian economy. These sanctions could also result in the immediate freeze of Russian securities and/or funds invested in prohibited assets, impairing the ability of a Client to buy, sell, receive, or deliver those securities and/or assets.

Current or future sanctions may result in Russia taking countermeasures or retaliatory actions, which may further impair the value and liquidity of Russian securities. For example, the Russian government has responded with actions to impose capital controls and limit liquidity in Russian securities. These retaliatory measures may include the immediate freeze of Russian assets held in Client portfolios.

It is unknown when, or if, sanctions may be lifted or Aperio's ability to trade in Russian securities will resume.

These sanctions, the decision by Russia to suspend trading on the Moscow Exchange (MOEX) and prohibit nonresident investors from executing security sales, and other events have led to changes in some indexes that serve as benchmarks to Client portfolios, including the removal of Russian securities from certain benchmark indexes.

To the extent that Aperio has any Russian securities in its Client portfolios, or rebalances its Client portfolios and trades in non-Russian securities to seek to track the investment results of certain benchmark indexes, this may result in increased transaction costs and increased tracking error.

General Investing Risk

Our investment strategies are not intended to be a complete investment program. Clients generally should have a long-term investment perspective and be able to tolerate potentially sharp declines in value and/or investment losses. Investment advisers, other market participants, and many securities markets are subject to rules and regulations and the jurisdiction of one or more regulators. Changes to applicable rules and regulations could have an adverse effect on securities markets and market participants, as well as on the ability to execute a particular investment strategy.

Index-Related Risk

Strategies using indexes as benchmarks are passively managed and do not attempt to take defensive positions under any market conditions, including declining markets. Index strategies seek to achieve a return that corresponds generally to the price and yield performance, before fees and expenses, of the Underlying Index as published by the Index Provider. There is no assurance that the Index Provider or any agents that may act on its behalf will compile the Underlying Index accurately, or that the Underlying Index will be determined, composed, or calculated accurately. While the Index Provider provides descriptions of what the Underlying Index is designed to achieve, neither the Index Provider nor its agents provide any warranty or accept any liability in relation to the quality, accuracy, or completeness of the Underlying Index or its related data, and they do not guarantee that the Underlying Index will be in line with the Index Provider's methodology. Errors in respect of the quality, accuracy, and completeness of the data used to compile the Underlying Index may occur from time to time and may not be identified and corrected by the Index Provider for a period of time or at all, particularly where the indexes are less commonly used as benchmarks by funds or managers. Such errors may negatively or positively impact a portfolio managed to an index strategy ("index portfolio"). There is no guarantee that an index portfolio will achieve a high degree of correlation to its Underlying Index and therefore achieve its investment objective. Market exposure and regulatory restrictions could have an adverse effect on the index portfolio's ability to adjust its exposure to the required levels in order to track its Underlying Index.

Leverage Risk

A portfolio utilizing leverage will be subject to heightened risk. Leverage often involves the use of various financial instruments or borrowed capital in an attempt to increase the

return on an investment and is often intrinsic to certain derivative instruments. Leverage can take the form of borrowing funds; trading on margin; derivative instruments that are inherently leveraged, including, but not limited to, forward contracts, futures contracts, options, swaps (including total return financing swaps and interest rate swaps), repurchase agreements, and reverse repurchase agreements; or other forms of direct and indirect borrowings and other instruments and transactions that are inherently leveraged. Any such leverage, including instruments and transactions that are inherently leveraged, can result in the portfolio's market value exposure being in excess of the net asset value of the portfolio. A portfolio could need to liquidate positions when it is not advantageous to do so to satisfy its borrowing obligations. The use of leverage entails risks, including the potential for higher volatility and greater declines of a portfolio's value, and fluctuations of dividend and other distribution payments.

Long/Short Strategy Risk

There is no guarantee that returns on a portfolio's long or short positions will produce high, or even positive, returns, and the portfolio could lose money if either or both the portfolio's long and short positions produce negative returns.

Management Risk

A portfolio is subject to management risk, which is the risk that the investment process, techniques, and analyses applied will not produce the desired results, and those securities or other financial instruments selected for a portfolio will result in returns that are inconsistent with the portfolio's investment objective. Portfolios advised by Aperio are subject to threshold limitations on aggregate and/or portfolio-level ownership interests in certain companies and commodities, arising from statutory, regulatory, or self-regulatory organization requirements or company ownership restrictions (e.g., poison pills or other restrictions in organizational documents). In addition, legislative, regulatory, or tax developments affect the investment techniques or opportunities available in connection with managing the portfolio and can also adversely affect the ability of the portfolio to achieve its investment objective (e.g., where aggregate and/or portfolio-level ownership thresholds or limitations must be observed, a portfolio is subject to investment limitations in certain companies arising from statutory, regulatory, or self-regulatory organization requirements or company ownership restrictions).

Market Risk

Market risk is the risk that one or more markets in which the portfolio invests will go down in value, including the possibility that the markets will go down sharply and unpredictably. The value of a security or other asset may decline due to changes in general market conditions, economic trends, or events that are not specifically related to the issuer of the security or other asset, or factors that affect a particular issuer or issuers, exchange, country, group of countries, region, market, industry, group of industries, sector, or asset class. Local, regional, or global events such as war, acts of terrorism, the spread of infectious illness or other public health issue, recessions, or other events could have a significant impact on the portfolio and its investments. Selection risk is the risk that the securities selected will underperform the markets, the relevant indexes, or the securities selected by other investment managers for other portfolios with similar investment objectives and investment strategies. This means the portfolio may lose money.

Market Disruption, Health Crises, Terrorism, and Geopolitical Risk

A Client is subject to the risk that war, terrorism, global health crises or similar pandemics, and other related geopolitical events may lead to increased short-term market volatility and have adverse long-term effects on world economies and markets generally, as well as adverse effects on issuers of securities and the value of a Client's investments. War, terrorism, and related geopolitical events, as well as global health crises and similar pandemics have led, and in the future may lead, to increased short-term market volatility and may have adverse long-term effects on world economies and markets generally. Those events as well as other changes in world economic, political, and health conditions also could adversely affect individual issuers or related groups of issuers, securities markets, interest rates, credit ratings, inflation, investor sentiment, and other factors affecting the value of a Client's investments. At such times, a Client's exposure to a number of other risks described elsewhere in this section can increase.

Model and Data Risk

In the design and execution of our portfolio management strategies, we rely heavily on quantitative models and information and data supplied by third parties ("Models and Data"). Models and Data are specifically used to help us construct portfolios, and the various transactions and investments in the course of our management of Client accounts. If the Models and Data we use were ever to be proven to be incorrect or incomplete, any decisions made in reliance thereon expose our Clients to potential risks. Some of the models Aperio uses may be predictive in nature. The use of predictive models has inherent risks. Because predictive models are usually constructed based on historical data supplied by third parties, the success of relying on such models may depend on the accuracy and reliability of the supplied historical data, and Client investments bear the risk that the quantitative models used by Aperio will not be successful in selecting the transactions in securities consistent with Client investment objectives. All models rely on correct data inputs. If incorrect data is entered into even a well-founded model, the resulting information will be incorrect. Aperio, in our sole discretion, will continue to test, evaluate, and add new models, which may result in the modification of existing models from time to time. There can be no assurance that model modifications will enable Clients to achieve their investment objective.

Non-U.S. Securities Risk

Investments in the securities of non-U.S. issuers are subject to the risks associated with non-U.S. markets in which those non-U.S. issuers are organized and operate, including, but not limited to, risks related to foreign currency; limited liquidity; less government regulation; privatization; the possibility of substantial volatility due to adverse political, economic, or geographic events, or other developments; differences in accounting, auditing, and financial reporting standards; the possibility of repatriation, expropriation, or confiscatory taxation; adverse changes in investment or exchange controls; or other regulations and potential restrictions on the flow of international capital. These risks are often heightened for investments in smaller capital markets, emerging markets, developing markets, or frontier markets.

Operational and Operating Events Risk

A portfolio may suffer a loss arising from shortcomings or failures in internal processes, people, or systems, or from external events. Operational risk can arise from many factors ranging from routine processing errors to potentially costly incidents related to, for example, major systems failures.

Trade errors and other operational mistakes (“Operating Events”) occasionally occur in connection with Aperio’s management of funds and Client accounts (“Portfolios”). Aperio has policies and procedures that address identification and correction of Operating Events, consistent with applicable standards of care and Client documentation. An Operating Event generally is compensable by Aperio to a Client when it is a mistake (whether an action or inaction) in which Aperio has, in Aperio’s reasonable view, deviated from the applicable investment guidelines or the applicable standard of care in managing a Portfolio, subject to the considerations set forth below.

Operating Events may include, but are not limited to: (1) the placement of orders (either purchases or sales) in excess of the amount of securities intended to trade for a Portfolio; (2) the purchase (or sale) of a security when it should have been sold (or purchased); (3) the purchase or sale of a security not intended for the Portfolio; (4) the purchase or sale of a security contrary to applicable investment guidelines or restrictions; (5) incorrect allocations of trades; and (6) transactions with a non-authorized counterparty. Operating Events can also occur in connection with other activities that are undertaken by Aperio, such as net asset value calculation, management fee calculations, calculations of carried interest or incentive fees, trade recording and settlement, and other matters that are non-advisory in nature.

Aperio makes determinations regarding Operating Events pursuant to our policies on a case-by-case basis, in our discretion, based on factors we consider reasonable, including regulatory requirements, contractual obligations, and business practices. Not all Operating Events will be considered compensable mistakes. Relevant factors Aperio considers when evaluating whether an Operating Event is compensable include, among others, the nature of the service being provided at the time of the event, specific applicable contractual and legal requirements and standards of care, whether an applicable investment objective or guideline was contravened, the nature of the Client’s investment program, and the nature of the relevant circumstances.

Operating Events may result in gains or losses or could have no financial impact. Clients are entitled to retain any gain resulting from an Operating Event. Operating Events involving erroneous transactions in Intermediary program accounts generally are corrected in accordance with the procedures established by the particular Intermediary and/or custodian. Clients should contact their program sponsor, Intermediary, or custodian for information on how Operating Events are corrected in such programs.

When Aperio determines that reimbursement is appropriate, the Client will be compensated as determined in good faith by Aperio. Aperio will determine the amount to be reimbursed, if any, based on what we consider reasonable guidelines regarding these matters in light of all of the facts and circumstances related to the Operating Event. In general, compensation is expected to be limited to direct and actual losses, which may be calculated relative to comparable conforming investments, market factors, and

benchmarks and with reference to related transactions and/or other factors Aperio considers relevant. Compensation generally will not include any amounts or measures that we determine are indirect, consequently, speculative, or uncertain.

Political and Legislative Risk

Companies face a complex set of laws and circumstances in each country in which they operate. The political and legal environment can change rapidly and without warning, with significant impact, especially for companies operating outside the United States or those companies that conduct a substantial amount of their business outside the United States.

Quantitative Model Risk

When executing an investment strategy using various proprietary quantitative or investment models, securities or other financial instruments selected can perform differently than expected, or from the market as a whole, as a result of a model's component factors, the weight placed on each factor, changes from the factors' historical trends, and technical issues in the construction, implementation, and maintenance of the models (e.g., data problems, software issues, etc.). There can be no assurance that a model will achieve its objective.

Risk of Reliance on Technology; Backup Measures

Aperio's investment activities and investment strategies are dependent upon various computer and telecommunications technologies, many of which are provided by or are dependent upon third parties such as data feed, data center, telecommunications, or utility providers. The successful deployment, implementation, and/or operation of such activities and strategies, and various other critical activities of Aperio on behalf of our Clients, could be severely compromised by system or component failure, telecommunications failure, power loss, a software-related "system crash," unauthorized system access or use (such as "hacking"), computer viruses and similar programs, fire or water damage, human errors in using or accessing relevant systems, or various other events or circumstances. Such events or circumstances may affect Aperio directly and/or may affect one or more third parties that provide services to Aperio and/or our Clients.

It is not possible to provide comprehensive and foolproof protection against all such events, and no assurance can be given about the ability of applicable third parties to continue providing their services. Any event that interrupts such computer and/or telecommunications systems or operations could have a material adverse effect on our Clients, including by preventing Aperio from trading, modifying, liquidating, and/or monitoring our Clients' investments. Moreover, any unauthorized access to Aperio's information systems or those of certain third parties could result in the loss, disclosure, or improper use of information relating to investments and/or personally identifiable information of Aperio's Clients; any such loss, disclosure, or use could have a material adverse effect on such Clients or investors.

Aperio maintains backup electronic books and records at a third-party disaster recovery site, which is a fully operational data center facility. In the case of events that interrupt Aperio's computer and/or telecommunications systems or operations, Aperio hopes to resume trading, modifying, liquidating, and/or monitoring our Clients' investments

relatively promptly, subject to any circumstances that are outside Aperio's control. In the case of severe business disruptions (e.g., regional power outage or loss of personnel), Aperio may not resume such activities for one or more business days because (among other things) such resumption is dependent on other critical business constituents, such as brokers and exchanges, and on the nature of the disruption. Although the foregoing reflects Aperio's objectives, designs, and/or plans, no assurance can be given that these objectives, designs, and/or plans will be realized, or that, in particular, Aperio would be able to resume operations following a business disruption. Although the foregoing reflects Aperio's objectives, designs, and/or plans, no assurance can be given that these objectives, designs, and/or plans will be realized, or that, in particular, Aperio would be able to resume operations following a business disruption, and any such disruption could have a material adverse effect on Aperio's Clients.

Small Companies Risk

Smaller companies are subject to greater price fluctuations, limited liquidity, higher transaction costs, and higher investment risk. Such companies may have limited product lines, markets, or financial resources; may be dependent on a limited management group; or may lack substantial capital reserves or an established performance record. There is generally less publicly available information about such companies than for larger, more established companies. Stocks of these companies frequently have lower trading volumes, making them more volatile and potentially more difficult to value.

Tax-Managed Investing Risk

Investment strategies that seek to enhance after-tax performance may be impacted by various factors. Market conditions may limit the ability to generate tax losses. In addition, wash sale violations can potentially negate the benefits of active loss harvesting. Examples of instances in which wash sales can occur include: (1) a tax loss realized by a U.S. investor after selling a security would be negated if the investor purchases the security within thirty days; or (2) a U.S. investor purchasing a security cannot realize a loss on that position if sold within thirty days. Although Aperio attempts to avoid wash sales whenever possible, a wash sale may be triggered by Aperio under a number of conditions including, but not limited to, managing tracking error and client requests such as deposits or withdrawals. Future tax legislation, Treasury regulations, and/or changes in guidance issued by the Internal Revenue Service can impact the tax treatment of assets in a Client portfolio, including the character, timing, and/or amount of taxable income or gains attributable to an account. The benefit of tax-managed investing to an individual investor is dependent upon the tax liability of that investor. Over time, the ability of an investor in a tax-managed strategy to harvest losses may decrease and gains may build up in a securities portfolio.

Tracking Error Risk

Tracking error risk refers to the risk that the performance of a Client portfolio may not match or correlate to that of the benchmark index it attempts to track, either on a daily or aggregate basis. Factors that contribute to tracking error generally include: fees and trading expenses, imperfect correlation between the portfolio's investments and the benchmark index, changes to the composition of the benchmark index, regulatory policies, and high portfolio turnover. Tracking error risk may cause the performance of a Client portfolio to be less or more than expected.

Technology and Cybersecurity Risk

Aperio and our BlackRock, Inc., affiliates are dependent on the effectiveness of the information and cybersecurity policies, procedures, and capabilities we maintain to protect the confidentiality, integrity, and availability of our computer and telecommunications systems and the data that resides on or is transmitted through them. An externally caused information-security incident, such as a cyberattack including a phishing scam, malware, or denial-of-service attack, or an internally caused incident, such as failure to control access to sensitive systems, could materially interrupt business operations or cause disclosure or modification of sensitive or confidential Client or competitive information. Moreover, our increased use of cloud and other technologies could heighten these and other operational risks, as certain aspects of the security of such technologies may be complex, unpredictable, or beyond our control.

Our growing exposure to the public Internet, as well as any reliance on mobile or cloud technology or any failure by third-party service providers to adequately safeguard their systems and prevent cyberattacks, could disrupt our operations and result in misappropriation, corruption, or loss of personal, confidential, or proprietary information. In addition, there is a risk that encryption and other protective measures may be circumvented, particularly to the extent that new computing technologies increase the speed and computing power available. Moreover, due to the complexity and interconnectedness of BlackRock's systems, the process of upgrading existing capabilities, developing new functionalities, and expanding coverage into new markets and geographies, including to address Client or regulatory requirements, may expose us to additional cyber- and information-security risks or system disruptions, for Aperio, as well as for Clients who rely upon, or have exposure to, our systems. Although we have implemented policies and controls, and take protective measures, to strengthen our computer systems, processes, software, technology assets, and networks to prevent and address potential data breaches, inadvertent disclosures, cyberattacks and cyber-related fraud, there can be no assurance that any of these measures will prove effective.

In addition, due to our interconnectivity with third-party vendors, advisers, and other financial institutions, we may be adversely affected if any of them are subject to a successful cyberattack or other information-security event, including those arising due to the use of mobile technology or a third-party cloud environment. BlackRock, including Aperio, also routinely transmits and receives personal, confidential, or proprietary information by email and other electronic means. We collaborate with Clients, vendors, and other third parties to develop secure transmission capabilities and protect against cyberattacks. However, we cannot ensure that we or such third parties have all appropriate controls in place to protect the confidentiality of such information.

Any information-security incident or cyberattack against us or third parties with whom we are connected, or issuers of securities or instruments in which our Client portfolios invest, including any interception, mishandling, or misuse of personal, confidential, or proprietary information, has the ability to cause disruptions and impact business operations, potentially resulting in financial losses, the inability to transact business, violations of applicable privacy and other laws, loss of competitive position, regulatory fines and/or sanctions, breach of Client contracts, reputational harm, or legal liability.

Values-Aligned: ESG or Sustainable Investing Risk

A portfolio that employs a sustainable investing strategy may seek to achieve sustainability-related outcomes, to achieve exposure to positive ESG characteristics or particular ESG themes, and/or to screen out particular companies and industries. Such sustainable investing strategies may reduce or increase a portfolio's exposure to certain companies or industries, and the portfolio may forego certain investment opportunities as a result. Such portfolio's performance results and ability to track a benchmark index may be lower than those of other portfolios that do not seek to invest in issuers based on ESG characteristics or that use different criteria when screening out particular companies and industries.

In evaluating a security or an issuer's ESG characteristics, Aperio is dependent upon information and data from third-party providers, which may be incomplete, inaccurate, or unavailable. As a result, there is a risk that Aperio could incorrectly assess a security or issuer. There is also a risk that Aperio may not apply the relevant ESG criteria correctly or that a portfolio could have indirect exposure to issuers that do not meet the relevant ESG criteria used by such portfolio. Aperio does not make any representation or warranty, express or implied, with respect to the fairness, correctness, accuracy, reasonableness, or completeness of such ESG assessment. Further, there may be limitations with respect to the readiness of ESG data in certain sectors, as well as limited availability of investments with relevant ESG characteristics in certain sectors. Aperio may change its ESG assessment of an issuer over time.

Volatility Risk; Volatility of Investment Returns

The performance of investment strategies Aperio deploys on behalf of our Clients may be volatile (both in absolute terms and relative to realized returns), potentially resulting in increased risks, including the risk of losses. Such strategies may have volatility, a greater chance of losses or negative returns, lower average returns, correlation with certain macroeconomic risk factors, asset class concentrations, and/or other significant risks, whether in absolute terms, relative to expected returns, or relative to certain other strategies that are deployed by Aperio on behalf of other Clients.

There can be no assurance that a Client's investment objectives will be obtained, and no inference to the contrary is being made. Prior to entering into an agreement with Aperio, a Client should carefully consider: (1) committing to management only those assets that the Client believes will not be needed for current purposes and that can be invested on a long-term basis, usually a minimum of three to five years; (2) that volatility from investing in the stock market can occur; and (3) that over time, the value of the Client's assets can fluctuate and at any time be worth more or less than the amount invested.

Aperio does not represent, guarantee, or imply that our services or methods of analysis can or will predict future results, successfully identify market tops or bottoms, or insulate Clients from losses due to market corrections or declines.

ITEM 9: DISCIPLINARY INFORMATION

There are no adverse disciplinary events affecting Aperio that would be deemed material to a Client's decision to use Aperio's investment advisory services or the integrity of Aperio's management.

ITEM 10: OTHER FINANCIAL INDUSTRY ACTIVITIES AND AFFILIATIONS

BlackRock is a broad financial services organization. In some cases, the Advisers have business arrangements with related persons/companies that are material to the Advisers' advisory business or to their clients. In some cases, these business arrangements create a potential conflict of interest, or the appearance of a conflict of interest between the Adviser and a Client. The services that BlackRock provides its Clients through its Advisers or through investments in a BlackRock investment product, as well as related conflicts of interest, are discussed in *Item 11: Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading* of this Brochure.

From time-to-time Aperio refers Clients or prospects to wealth managers, accountants, tax specialists, attorneys, and other professionals. Furthermore, such professionals have referred and may continue to refer their Clients or prospects to Aperio. Referrals both to and from Aperio are made without any compensation or other commitment, with the exception of a handful of accounts that were opened at Aperio before December 31, 2006, as disclosed in Item 14 of this Brochure.

Aperio does not recommend or select other investment advisers for Clients.

ITEM 11: CODE OF ETHICS, PARTICIPATION OR INTEREST IN CLIENT TRANSACTIONS, AND PERSONAL TRADING

Aperio makes decisions for its Clients in accordance with its fiduciary obligations. BlackRock is a worldwide asset management, risk management, investment system outsourcing, and financial services organization, and a major participant in global financial and capital markets. As such, Aperio's evaluation of and policies and procedures governing any potential or actual conflicts of interest necessarily take into consideration its broader affiliate relationships.

BlackRock's Code of Business Conduct and Ethics

BlackRock's Code of Business Conduct and Ethics (referred to, collectively with related policies and procedures, such as the Global Personal Trading Policy, as the "Code") requires employees to comply with the applicable federal securities laws, as well as fiduciary principles applicable to BlackRock's business, including that employees must avoid placing their own personal interests ahead of BlackRock Clients. We will provide a copy of the Code to any Client or prospective Client upon request.

Participation or Interest in Client Transactions

As allowed under the Code, Aperio employees are permitted to purchase for their own or for related accounts the same securities that are recommended and purchased for Aperio's Clients. Aperio's policy is that, in all circumstances, the interests of our Clients take precedence over the interests of employees or personal relationships. Any conflicts or potential conflicts of interest must be disclosed. In addition, to address these conflicts, employee trading is continually monitored, to help prevent conflicts of interest between our Clients and us.

Aperio is a sub-adviser to registered investment companies (mutual funds) and could participate in calls or programs informing potential investors about such mutual funds. Since Aperio derives investment management fees from these mutual funds, the potential for a conflict of interest would be prominently disclosed.

Although our BlackRock affiliates may do so, Aperio does not directly conduct any principal or agency cross-securities transactions for Client accounts, nor do we conduct cross-trades between Client accounts. Principal transactions are generally defined as transactions where an adviser, acting as principal for its own account or the account of an affiliated broker-dealer, buys from or sells any security to any advisory Client. An agency cross-transaction is defined as a transaction where a person acts as an investment adviser in relation to a transaction in which the investment adviser, or any person controlled by or under common control with the investment adviser, acts as broker for both the advisory Client and for another person on the other side of the transaction. Should Aperio decide to conduct principal trades or cross-trades in Client accounts, we will comply with the provisions of Rule 206(3) of the Advisers Act and Rule 17a-7 of the Investment Company Act of 1940, as applicable.

Client Holdings in the Securities of BlackRock, Inc.

Certain Client accounts invested in index-based separately managed account strategies may hold securities of BlackRock, Inc., which correspond to the approximate weighting of BlackRock securities in the index strategy followed by such accounts. BlackRock Investment Advisers, including Aperio, have a conflict of interest, because BlackRock, its subsidiaries, and their personnel benefit from transactions that support or increase the market demand and price for BlackRock securities. The conflict is mitigated, because purchases and sales of BlackRock securities in the Client account are limited to transactions that align the weighting of BlackRock securities in the Client account to the current weightings of the index to which the Client account is benchmarked.

Client Holdings in BlackRock Affiliated Funds

Certain Client accounts may hold shares of BlackRock Affiliated Funds. BlackRock Investment Advisers, including Aperio, face potential conflicts when recommending the purchase of, or allocating the assets of, a Client or Private Fund to one or more Affiliated Funds with respect to which BlackRock receives fees and/or other compensation. In hindsight, circumstances could be construed that such recommendation, allocation or inclusion conferred a benefit upon the Affiliated Fund or BlackRock Investment Adviser, to the detriment of the Client. This conflict is mitigated, however, because Aperio does not recommend purchases of BlackRock Affiliated Funds in Aperio portfolios, but instead only

integrates Affiliated Funds into a portfolio at the Client's direction when circumstances warrant and doing so is in the best interest of such Client.

Personal Trading

Aperio employees are subject to BlackRock's Code of Business Conduct and Ethics, as well as policies incorporated therein, including, but not limited to, its Global Personal Trading Policy, Outside Activity Policy, Political Contribution Policy, as well as restrictions involving proprietary information, material non-public information, and potential restrictions on investment adviser activity. Each of these policies governs the conduct of BlackRock's directors, managers, members, officers, and employees—including all Aperio employees — (collectively, the "BlackRock Group") and are described in detail below.

BlackRock's Global Personal Trading Policy and Other Ethical Restrictions

Members of the BlackRock Group buy, sell, and hold for their own and their family members' accounts public securities, private securities, and other investments in which such BlackRock personnel have a pecuniary interest, whether because they are also bought, sold, or held for BlackRock Clients or through accounts (or investments in funds) managed by BlackRock Investment Advisers or otherwise. As a result of differing trading and investment strategies or constraints, positions taken by BlackRock directors, officers, and employees can be the same as or different from, or made contemporaneously with or at different times than, positions taken for BlackRock Clients.

As these situations involve potential conflicts of interest, BlackRock has adopted policies and procedures relating to personal securities transactions, insider trading, and other ethical considerations, including the Global Personal Trading Policy in accordance with Rule 17j-1 under the Investment Company Act and Rule 204A-1 under the Advisers Act (the "Rules"). These policies and procedures are intended to identify and prevent actual conflicts of interest with Clients and to resolve such conflicts appropriately if they do occur.

In conformity with the Rules, the Global Personal Trading Policy contains provisions regarding employee personal trading and reporting requirements that are designed to address potential conflicts of interest that might interfere, or appear to interfere, with making decisions in the best interest of BlackRock Clients. Together with BlackRock's Code, the Global Personal Trading Policy requires employees to comply with the applicable federal securities laws, as well as fiduciary principles applicable to BlackRock's business, including that employees must avoid placing their own personal interests ahead of BlackRock Clients' interests.

The Global Personal Trading Policy requires that employees at BlackRock conduct all personal investment transactions in a manner consistent with applicable federal securities laws, the Global Insider Trading Policy, and other BlackRock policies. These requirements include reporting personal investment accounts, preclearing personal trading and private investment transactions. The Global Personal Trading Policy also generally prohibits employees from acquiring securities in initial public offerings, and contains prohibitions against profiting from short-term trading, subject to very limited exceptions. The Global Personal Trading Policy additionally imposes "blackout" periods on certain employees, including portfolio management personnel, prohibiting transactions in certain securities during time periods surrounding transactions in the same securities by BlackRock Client

accounts. Moreover, the Global Personal Trading Policy and other BlackRock policies contain provisions that are designed to prevent the use of material non-public information.

Any member of the BlackRock Group covered by the Code who fails to observe its requirements, or those contained in related BlackRock policies and procedures, is subject to potential remedial action. BlackRock will determine on a case-by-case basis what remedial action should be taken in response to any violation, including potential voiding or reversal of a trade, the cost of which will be borne by the employee or owner of the account, or limiting an employee's personal trading for some period of time.

Members of the BlackRock Group have a duty to act solely in the interest of BlackRock's Clients. BlackRock's Global Outside Activity Policy requires that BlackRock employees obtain approval from their line manager and Compliance before engaging in any outside activities so that BlackRock has the opportunity to consider whether such activities create actual or potential conflicts of interest. The Global Outside Activity Policy is intended to identify activities that have the potential to conflict with an employee's role at BlackRock and/or BlackRock's activities.

Political Contributions

BlackRock's political contributions policy establishes the requirements that apply when BlackRock and its employees make or solicit U.S. political contributions or engage in political activities in the U.S. The policy prohibits BlackRock and its employees from making or soliciting U.S. political contributions for the purpose of obtaining or retaining business. The policy requires employees to preclear U.S. political contributions before they, their spouse, domestic partner, or dependent children make any contributions to a political candidate, government official, political party, or political action committee ("PAC") in the U.S.

The BlackRock PAC, a nonpartisan political action committee, is supported voluntarily by eligible U.S. employees to help elect U.S. federal candidates who the PAC's Board of Directors determine share BlackRock's values and goals.

Material Non-Public Information/Insider Trading

BlackRock Group receives material non-public information in the ordinary course of its business. This is information that is not available to other investors or other confidential information which, if disclosed, would likely affect an investor's decision to buy, sell, or hold a security. This information is received voluntarily and involuntarily and under varying circumstances, including, but not limited to, upon execution of a nondisclosure agreement, as a result of serving on the board of directors of a company, serving on ad hoc or official creditors' committees and participation in risk, advisory, or other committees for various trading platforms, clearinghouses, and other market infrastructure-related entities and organizations. Under applicable law, members of the BlackRock Group are generally prohibited from disclosing or using such information for their personal benefit or for the benefit of any other person, regardless of whether that person is a BlackRock Client.

Accordingly, should a member of the BlackRock Group obtain, either voluntarily or involuntarily, material non-public information with respect to an issuer, it may limit the ability of BlackRock Clients to buy, sell, or hold investments and may result in an

underlying security or investment being priced inconsistently across BlackRock Clients. BlackRock has no obligation or responsibility to disclose the information to, or use such information for the benefit of, any person (including BlackRock Clients), even if requested by BlackRock or its affiliates and even if failure to do so would be detrimental to the interests of that person. BlackRock has adopted a Global Insider Trading Policy and a Global Material Non-public Information Barrier Policy, which establish procedures reasonably designed to prevent the misuse of material non-public information by BlackRock and its personnel. Under the Global Insider Trading Policy, BlackRock Investment Advisers generally are not permitted to use material non-public information obtained by any department or affiliate of BlackRock in the course of its business activities or otherwise, in effecting purchases and sales in securities transactions for BlackRock Clients, or for their personal accounts.

BlackRock also has adopted policies establishing information barriers to minimize the likelihood that particular investment advisory units or teams will inadvertently come into possession of material non-public information known by some other unit or team at BlackRock and thereby also minimizing the likelihood that a particular unit or team will be inadvertently precluded from taking action on behalf of its Clients. Nonetheless, the investment flexibility of one or more of the BlackRock Investment Advisers or business units on behalf of BlackRock Clients may be constrained as a consequence of BlackRock's policies regarding material non-public information and insider trading and related legal requirements.

Consequently, BlackRock Investment Advisers' investment activities likely will be impacted by receipt of such information, even if a failure to act on such information is ultimately detrimental to BlackRock Clients. In addition, in certain circumstances, the use of such information would also be prohibited by BlackRock's Global Insider Trading Policy.

From time to time, certain BlackRock employees use paid expert networks and other industry experts (subject to the BlackRock policies regarding the handling and restricted use of material non-public information). BlackRock has adopted specific policies and procedures to prevent and address the receipt of any material non-public information from such expert networks.

BlackRock's Business Practices and Potential Conflicts of Interest

In addition to Aperio's supervised persons being immediately subject to the BlackRock compliance policies and procedures described above, we also describe herein certain BlackRock business practices and the potential conflicts of interest presented, and how conflicts of interest that may arise are addressed.

On occasion, BlackRock, including its affiliates, may invest in a company, or otherwise seek to acquire a controlling or noncontrolling stake in a company, for strategic purposes. Such activity could result in a restriction on the ability of BlackRock Clients to engage with such company as a counterparty or otherwise invest in such company's securities, either at the time of such engagement or at a later date. In addition, BlackRock may take action with respect to its proprietary account(s) that competes or conflicts with the advice a BlackRock Investment Adviser may give to, or an investment action a BlackRock Investment Adviser may take on behalf of, a BlackRock Client. Such activity gives rise to a potential conflict of interest.

BlackRock Investment Advisers make decisions for their Clients in accordance with their fiduciary obligations to such Clients. As a global provider of investment management, risk management, and advisory services to institutional and retail Clients, BlackRock engages in a broad spectrum of activities, including sponsoring and managing a variety of public and private investment funds, funds of funds, and separate accounts across fixed income, cash management, equity, multi-asset, alternative investment, and real estate strategies; providing discretionary and non-discretionary financial advisory services; providing enterprise trading systems, risk analytics, investment accounting, and trading support services under the BlackRock Solutions business; and engaging in certain broker-dealer activities, transition management services, mortgage servicing, and other activities. BlackRock acts as, among other things, an investment manager, investment adviser, broker-dealer and, under certain circumstances, an index provider.

BlackRock Investment Advisers manage the assets of BlackRock Clients in accordance with the investment mandate selected by each BlackRock Client and applicable law, and will seek to give advice to, and make investment decisions for, such BlackRock Client that the BlackRock Investment Adviser believes to be in the best interests of such BlackRock Client. However, from time to time, investment allocation decisions are made which adversely affect the size or price of the assets purchased or sold for a BlackRock Client, and the results of the investment activities of a BlackRock Client may differ significantly from the results achieved by the BlackRock Investment Advisers for other current or future BlackRock Clients. Thus, the management of numerous accounts for BlackRock Clients and other services provided by the BlackRock Investment Advisers creates a number of potential conflicts of interest.

Additionally, regulatory and legal restrictions (including those relating to the aggregation of positions among different funds and accounts) and BlackRock's internal policies and procedures restrict certain investment activities of BlackRock Investment Advisers for BlackRock Clients.

These and other potential conflicts are discussed generally herein or in the relevant investment management agreement and/or governing documents of the investments managed or served by the various BlackRock Investment Advisers, including Aperio, which should be reviewed in conjunction with any investment with such BlackRock Investment Adviser. Given the interrelationships among the BlackRock Group and the changing nature of the business, affiliations, and opportunities, as well as legislative and regulatory developments, there may be other or different potential conflicts that arise in the future or that are not covered by this discussion. As a fiduciary to the BlackRock Clients, however, BlackRock is committed to putting the interests of BlackRock Clients ahead of its own in the provision of investment management and advisory services.

Potential Conflicts Relating to BlackRock Investment Advisory Activities

The results of the investment activities provided to a BlackRock Client can differ significantly from the results achieved by BlackRock Investment Advisers for other current or future BlackRock Clients. BlackRock Investment Advisers will manage the assets of a BlackRock Client in accordance with the investment mandate selected by such BlackRock Client. However, members of the BlackRock Group (including BlackRock Investment Advisers) may give advice and take action with respect to their own account or any other

BlackRock Client that competes or conflicts with the advice a BlackRock Investment Adviser may give to, or an investment action a BlackRock Investment Adviser may take on behalf of, a BlackRock Client (or a group of BlackRock Clients), or advice that may involve different timing than that of a BlackRock Client. The potential conflicts include, in particular, members of the BlackRock Group and one or more BlackRock Clients buying or selling positions while another BlackRock Client is undertaking the same or a differing, including potentially opposite, strategy. Similarly, BlackRock Investment Advisers' management of BlackRock Client accounts may benefit members of the BlackRock Group including, to the extent permitted by applicable law and contractual arrangements, investing BlackRock Client accounts directly or indirectly in the securities of companies in which a member of the BlackRock Group, or other BlackRock Client for itself or its Clients, has an equity, debt, or other interest.

In addition, to the extent permitted by applicable law and contractual arrangements, BlackRock Clients may engage in investment transactions which may result in other BlackRock Clients being relieved of obligations or otherwise having to divest or cause BlackRock Clients to have to divest certain investments. In some instances, the purchase, holding, and sale, as well as voting of investments by BlackRock Clients may enhance the profitability or increase or decrease the value of a BlackRock Group member's or other BlackRock Clients' own investments in such companies. This may give rise to potential conflicts of interest.

Potential Restrictions and Conflicts Relating to Information Possessed or Provided by BlackRock

In connection with the activities of BlackRock, Inc., and BlackRock Investment Advisers, certain persons within the BlackRock Group receive information regarding proposed investment activities for BlackRock and BlackRock Clients that is not generally available to the public. Also, BlackRock Investment Advisers have access to certain fundamental analyses, research, and proprietary technical models developed internally or by other members of the BlackRock Group, certain third parties, and their respective personnel. There will be no obligation on the part of such persons or any BlackRock Investment Adviser to make available for use by a BlackRock Client, or to effect transactions on behalf of a BlackRock Client on the basis of, any such information, strategies, analyses, or models known to them or developed in connection with their own proprietary or other activities. In many cases, such persons will be prohibited from disclosing or using such information for their own benefit or for the benefit of any other person, including BlackRock Clients. In other cases, fundamental analyses, research, and proprietary models developed internally are used by various BlackRock Investment Advisers and personnel on behalf of different BlackRock Clients, which could result in purchase or sale transactions in the same security at different times (and could potentially result in certain transactions being made by one portfolio manager on behalf of certain BlackRock Clients before similar transactions are made by a different portfolio manager on behalf of other BlackRock Clients), or could also result in different purchase and sale transactions being made with respect to the same security. Further information regarding inconsistent investment positions and timing of competing transactions is set forth in "Potential Conflicts Relating to BlackRock Investment Advisory Activities," above.

Similarly, one or more BlackRock Clients could have, as a result of receiving Client reports or otherwise, access to information regarding BlackRock Investment Advisers' transactions or views, including views on voting proxies, which are not available to other BlackRock Clients, and may act on such information through accounts managed by persons other than a BlackRock Investment Adviser. The foregoing transactions may negatively impact BlackRock Clients through market movements or by decreasing the pool of available securities or liquidity. BlackRock Clients could also be adversely affected when cash flows and market movements result from purchase and sale transactions, as well as increases of capital in, and withdrawals of capital from, accounts of other BlackRock Clients. These effects can be more pronounced in thinly traded securities and less liquid markets.

Potential Restrictions on BlackRock Investment Adviser Activity

From time to time, BlackRock will be restricted from or limited in purchasing, selling, or voting securities, derivative instruments, or other assets, including affiliated accounts, on behalf of BlackRock Clients because of corporate or regulatory and legal requirements, as well as contractual restrictions, applicable to BlackRock or the securities held by BlackRock on behalf of its Clients. BlackRock has developed internal policies, to the extent necessary, designed to comply with, limit the applicability of, or otherwise relate to such requirements, as well as address potential conflicts of interest. These restrictions can impact or limit BlackRock's ability to purchase, vote, or sell certain securities, derivative instruments, or other assets on behalf of certain BlackRock Clients at the same time as other BlackRock Clients. A Client not advised by BlackRock will not necessarily be subject to the same considerations.

In some cases, BlackRock Investment Advisers do not initiate or recommend certain types of transactions, or will otherwise restrict or limit their advice with respect to securities or instruments issued by, or related to, companies, for which BlackRock is performing advisory or other services, or companies in which BlackRock has an interest. Such limitations or restrictions can arise solely from actions taken or initiated by BlackRock and have a negative effect on BlackRock Clients. For example, from time to time, when BlackRock is engaged to provide advisory or risk management services for a company, BlackRock Investment Advisers will be prohibited from, or limited in, purchasing or selling securities of that company for BlackRock Client accounts, particularly where such services result in BlackRock obtaining material non-public information about the company.

Similar situations could arise if: (1) BlackRock personnel serve as directors or officers of companies the securities of which BlackRock wishes to purchase or sell; (2) BlackRock has an ownership or other interest in a company; (3) BlackRock is provided with material non-public information with respect to the issuer of securities; (4) BlackRock Investment Advisers on behalf of BlackRock Clients or BlackRock, Inc., participate in a transaction (including a controlled acquisition of a U.S. public company) that results in the requirement to restrict all purchases and voting of equity securities of such target company; or (5) regulations, including portfolio affiliation rules or stock exchange rules, prohibit participation in offerings by an issuer when BlackRock's Clients' have prior holdings of such issuer's securities. However, where permitted by applicable law, and where consistent with BlackRock's policies and procedures (including the implementation of appropriate information barriers), BlackRock can purchase or sell securities or instruments that are issued by such companies or are the subject of an advisory or risk management assignment

by BlackRock, or in cases in which BlackRock personnel serve as directors or officers of the issuer.

In certain circumstances where BlackRock invests in securities issued by companies that operate in certain regulated industries or in certain emerging or international markets, or are subject to corporate or regulatory ownership restrictions, there will be limits on the aggregate and/or portfolio-level amount permitted to be invested or voted by BlackRock that can be exceeded only with the grant of a license, waiver, regulatory relief, or corporate consent. As a result, BlackRock Investment Advisers on behalf of BlackRock Clients may limit purchases, sell existing investments, or otherwise restrict, forgo, or limit the exercise of rights (including transferring, outsourcing or limiting voting rights or foregoing the right to receive dividends) when BlackRock Investment Advisers, in their sole discretion, deem it appropriate in light of potential regulatory or corporate restrictions on ownership, voting rights, or other consequences resulting from reaching investment thresholds. Similar limitations apply to derivative instruments or other assets or instruments, including futures, options, or swaps.

In those circumstances where ownership thresholds or limitations must be observed, BlackRock seeks to equitably allocate limited investment opportunities among BlackRock Clients, taking into consideration a security's benchmark weight and investment strategy. When BlackRock's ownership in certain securities nears an applicable threshold, BlackRock will limit purchases in such securities in index portfolios to the issuer's weighting in the applicable benchmark used by BlackRock to manage the BlackRock Client account or fund and in actively managed portfolios to the issuer's weighting in the applicable risk benchmark, adjusted on the basis of scaling factors that recognize additional degrees of freedom of active mandates over index mandates. If BlackRock's Clients' holdings of an issuer exceed an applicable threshold and BlackRock is unable to obtain relief to enable the continued holding of such investments, it will be necessary to sell down these positions to meet the applicable limitations, possibly during deteriorating market conditions. In these cases, benchmark overweight positions will be sold prior to benchmark positions being reduced to meet applicable limitations.

In addition to the foregoing, other ownership or voting thresholds may trigger or require reporting, applications, licenses, or other special obligations to governmental and regulatory authorities, and such reports, applications, or licenses may entail the disclosure of the identity of the BlackRock Client or BlackRock's intended strategy with respect to such securities, instruments, or assets. Where applicable, BlackRock can elect to forego or limit certain investments or opportunities, including limitations on voting or other investor rights, rather than incur the costs of an application, registration, or license.

Under certain circumstances, BlackRock will restrict a purchase or sale of a security, derivative instrument, or other asset on behalf of BlackRock Clients in anticipation of a future conflict that may arise if such purchase or sale would be made. Any such determination will take into consideration the interests of the relevant BlackRock Clients, the circumstances that would give rise to the future conflict, and applicable laws. Such determination will be made on a case-by-case basis.

When evaluating non-index investments on behalf of its Clients, especially in the case of private and real assets, BlackRock may consider the reputational risks of such investments

to itself or its Clients. As a result, BlackRock may, from time to time, forego making or disposing of non-index investments on behalf of its Clients based on BlackRock's evaluation of these risks, even in circumstances where such investments are legally permissible and consistent with Client guidelines. With respect to index investing, however, BlackRock manages to each applicable index without regard to these risks.

ITEM 12: BROKERAGE PRACTICES

Selection Criteria

Selection of the broker-dealer used for executing transactions is dependent on several factors including the choice of custodian, which is typically driven by the Client. Aperio has relationships with many custodians. Aperio will inform Clients which custodians are available; however, Clients make the actual selection. When a Client chooses a custodian that is compensated for its custodial services through trading commissions, except for very unusual circumstances, it is typically most cost effective for the Client to trade through that custodian's broker-dealer. The custodian/trading relationships used by Aperio offer competitive trading costs, electronic order execution, and competent back-office support including technological links with Aperio's information systems. In addition, other products and services are available to Aperio from Charles Schwab & Co., Inc. ("Schwab"), National Financial Services LLC and Fidelity Brokerage Services LLC (together with all affiliates, "Fidelity"), and other similar custodians/brokers, as discussed (and as defined, in the case of Fidelity), below. For broker-dealers where Aperio has discretion, the following selection criteria are used, including but not limited to: execution quality, commissions, and clearing and settlement capabilities of the broker-dealer; the broker-dealer's experience and ability to place difficult trades; access to markets; and the reputation, financial strength, and stability of the broker-dealer.

Wrap Accounts

Clients choosing to participate in certain Wrap Programs or platforms may use Aperio investment management services. Brokerage and other trading fees in such cases are between the Client and the brokerage/custodial firm. In most cases, since the fees paid by the Client include commissions, Aperio places Wrap Client trades with the Wrap Sponsor for execution. While Aperio may have discretion to select broker-dealers other than the Wrap Sponsor to execute trades for wrap accounts in a particular program, trades are generally executed through the Wrap Sponsor.

A Wrap Sponsor may instruct Aperio not to execute transactions on behalf of the wrap accounts in that program with certain broker-dealers. When a Wrap Sponsor restricts Aperio in this way, it may affect Aperio's ability to negotiate favorable commission rates or volume discounts, the availability of certain spreads, and the timeliness of execution. This may consequently result in a less advantageous price being realized by the account. Aperio endeavors to treat all wrap accounts fairly and equitably over time in the execution of Client orders. Depending on various factors, such as the size of the order and the type and availability of a security, orders for wrap accounts may be executed throughout the day. When orders are placed with broker-dealers, such trades may experience sequencing delays and market impact costs, which Aperio attempts to minimize.

In certain Wrap Programs where Aperio is not directed to use a particular broker-dealer, Aperio has discretion to select broker-dealers to fulfill its duty to seek best execution for its Clients' accounts. However, because brokerage commissions and other charges for equity transactions not effected through the Wrap Sponsor can be charged to the Client, whereas the Wrap Fee generally covers the cost of brokerage commissions and other transaction fees on equity transactions effected through the Wrap Sponsor, it is likely that most, if not all, equity transactions for Clients of such Wrap Programs will be effected through the Wrap Sponsor. In certain instances, the Wrap Sponsor requires Aperio, and not the Client, to bear the cost of brokerage commissions and other transaction fees for equity transactions not effected through the Wrap Sponsor. In such circumstances, Aperio will have an incentive to select the Wrap Sponsor or, if the Wrap Sponsor cannot effect a particular equity transaction, such other broker-dealer with the lowest transaction fees in order to minimize the costs to be borne by Aperio, which incentive may conflict with Aperio's duty to seek best execution for its Clients' accounts. Aperio seeks to mitigate this potential conflict of interest by selecting broker-dealers to obtain best execution based on the factors noted above in *Item 12: Brokerage Practices* under "Selection Criteria."

A Client who participates in a Wrap Program should consider that, depending on the level of the Wrap Fee charged by the Wrap Sponsor, the amount of portfolio activity in the Client's account, the value of the custodial and other services that are provided under the arrangement, and other factors, the Wrap Fee may or may not exceed the aggregate cost of such services if they were provided separately.

Matters Impacting Charles Schwab, Fidelity, and Other Similar Custodian/Broker Relationships

Firms such as Charles Schwab and Fidelity generally do not charge separately for custody services but are compensated by charging commissions or other fees on trades they execute or that settle into their accounts. For some accounts, these firms may charge a percentage of the dollar amount of assets in the account in lieu of commissions. These firms' commission rates and asset-based transaction fees are negotiated by the Client. In addition to commissions or asset-based fees, custodians such as Schwab charge a flat dollar amount as a "trade away" fee for each trade that we have executed by a different broker-dealer but where the securities bought or the funds from the securities sold are deposited (settled) into a Client's Schwab or other similar custodian's account. These fees are in addition to the commissions or other compensation Clients pay the executing broker-dealer. Because of this, to minimize Client trading costs, we have the custodian/broker execute most trades for Client accounts.

Soft Dollar Arrangements

Aperio currently has no third-party soft dollar arrangements in place with any broker-dealers to receive research or brokerage services. Soft dollar benefits would be defined as non-Client execution services received by Aperio, such as research or brokerage services, and provided to Aperio in exchange for executing Client transactions through a particular broker-dealer. Broker-dealers and other parties sometimes provide those benefits to advisers through arrangements involving soft dollar credits based on the commission rate and volume of trades executed through the broker-dealer. Section 28(e) of the Securities Exchange Act

of 1934 (the “Exchange Act”) permits advisers to pay more than the lowest commission rate available in exchange for such research and brokerage services.

Although certain soft dollar benefits are permitted by applicable law, Aperio does not have any such arrangements. Aperio will send trades to brokers that provide brokerage services that directly relate to the execution of trades and that otherwise are expected to satisfy Aperio’s selection criteria for providing best execution. Broker-dealers do, however, provide unsolicited research and brokerage services that could be considered to be soft dollar benefits for Aperio, some of which are provided on a standard basis to many Clients that use those broker-dealers. Some of these services provide no benefit to Aperio, and others have some value. These brokerage services include trading software used to route orders electronically to market centers and the provision of FIX connections used to electronically effect securities transactions. Aperio will only continue to use such services when it believes any higher commission is reasonable given the value of the research or brokerage services received, consistent with Section 28(e) of the Exchange Act. Other examples of services include electronic access to account information; trade order processing systems; trade analysis software; on-line pricing services; communication services relating to execution, clearing, and settlement; and message services used to transmit orders, conferences, and seminars.

There are times when Aperio, to manage Client portfolios, expresses a preference that a Client establish brokerage accounts with firms that offer automated reconciliation and trading, such as Fidelity and/or Schwab, to maintain custody of Clients’ assets and to effect trades for their accounts. Schwab and Fidelity are both SEC-registered broker-dealers and members of the Financial Industry Regulatory Authority/Securities Investor Protection Corporation (“FINRA/SIPC”). There is no direct link between the investment advice given to Clients and Aperio’s recommendation to use the custodial or brokerage services of Fidelity or Schwab, although certain benefits are received by Aperio due to these arrangements. Aperio has adopted written policies and procedures regarding our trading practices, including, but not limited to, best execution and soft dollar reviews.

Brokerage for Client Referrals

Aperio does not seek or receive Client referrals from any discretionary broker-dealers and does not consider Client referrals in selecting or recommending discretionary broker-dealers, nor does it intend to do so for the foreseeable future.

Aperio’s Interest in Schwab’s Services

Due to the size of Client assets maintained with Aperio, Aperio does not pay for Schwab’s services. While Aperio does not recommend specific custodians, the benefits provided by Schwab for maintaining accounts there has the potential to be a conflict of interest. We believe, however, that Aperio’s support for Clients who have chosen to use Schwab as their custodian and broker is consistent with being in the best interests of our Clients. This is primarily due to the scope, quality, and price of Schwab’s overall services and not Schwab’s services that benefit only us. We have a significant amount of Client assets under management at Schwab as well as at other custodians and do not believe that maintaining assets at Schwab is related in any way to Aperio’s avoiding the payment of service fees to Schwab or presents a material conflict of interest. It is important for Clients to consider and compare the significant differences between having assets held with a broker-dealer, bank,

or other custodian prior to opening an account with Aperio. Some of these differences include, but are not limited to, total account costs, trading freedom, commission rates, and security and technology services.

Fidelity Custodian Arrangement

Aperio has an arrangement with Fidelity through which Fidelity provides Aperio with Fidelity's "platform" services. The platform services include, among others, brokerage, custodial, administrative support, record keeping, and related services that are intended to support intermediaries like Aperio in conducting business and in serving the best interests of their Clients but that also benefit Aperio. Aperio is not affiliated with Fidelity.

Fidelity charges brokerage commissions and transaction fees for effecting certain securities transactions (i.e., commissions are charged for individual equity and debt securities transactions). Fidelity's commission rates are generally considered discounted from customary retail commission rates. However, the commissions and transaction fees charged by Fidelity may be higher or lower than those charged by other custodians and broker-dealers. As part of the arrangement between Fidelity and Aperio, Fidelity also makes available to Aperio, at no additional charge to us, certain brokerage services, which are used by Aperio in the management of accounts for which Aperio has investment discretion.

Aperio also receives additional services, which include services that do not directly benefit Aperio Clients. As a result of receiving these services for no additional cost, Aperio has an incentive to continue to use or expand the use of Fidelity's services, which creates a potential conflict of interest. Aperio examined this conflict when it chose to enter into the relationship with Fidelity and has determined that the relationship is in the best interests of Clients. As part of the custodian arrangement, a Client may pay a commission/transaction fee that is higher than another qualified broker-dealer might charge to effect the same transaction where Aperio determines in good faith that the commission/transaction fee is reasonable in relation to the value of the brokerage services received.

Best Execution

For a Client using a traditional bank or trust company custodian but without the trade execution, broker-dealer selection is at the discretion of Aperio and will be based on, among other things, low transaction costs, the quality of executions, and electronic order and trade settlement capabilities. While Aperio is under common ownership with certain entities, which include one or more broker-dealers (the "Broker-Dealer Affiliates"), Aperio does not have any business dealings with the Broker-Dealer Affiliates in connection with any of the advisory services we provide to our Clients, we do not share operations with any of the Broker-Dealer Affiliates, we do not refer Clients or business to the Broker-Dealer Affiliates and the Broker-Dealer Affiliates do not provide business or Clients to us, we do not share supervised persons or premises with the Broker-Dealer Affiliates, and have no reason to believe that our relationship with the Broker-Dealer Affiliates otherwise creates a conflict of interest with our Clients. We do not consider the promotion or sale of investment products affiliated with or managed by Aperio or our affiliates when selecting brokers to execute Client transactions.

As a fiduciary, Aperio has an obligation to use its best efforts to seek to obtain the best qualitative available price and most favorable execution given the circumstances, with

respect to all portfolio transactions placed by Aperio on behalf of its Clients. Thus, Aperio carefully monitors and evaluates transaction costs and the quality of execution across all strategies and Client portfolios. This process is commonly referred to as seeking “best execution.” Aperio conducts its best execution analysis on a regular basis through its Trade Oversight Committee, which in turn reports to BlackRock’s Best Execution Committee and other relevant teams as needed.

In analyzing best overall execution, the Trade Oversight Committee considers various factors, including but not limited to: specific market and trading impact, number of shares being traded relative to market volume, execution price, trading costs, and other material inputs.

Other specific factors considered in the best execution analysis include: the nature of the portfolio transaction; the size of the transaction; the execution, clearing, and settlement capabilities of the broker-dealer; the broker-dealer’s experience and ability to place difficult trades; access to markets; the reputation, financial strength, and stability of the broker-dealer; availability of alternative trading platforms; the desired timing of the transaction; and the importance placed on confidentiality. Aperio always seeks to effect transactions at the price and commission that provide the most favorable total overall cost or proceeds reasonably attainable given the circumstances.

Unless otherwise agreed to, Aperio has discretion to place buy and sell orders with or through such brokers or dealers as it deems appropriate. Our general policy is to place Clients’ trades with their broker custodian (e.g., Fidelity, Schwab, etc.) as we believe, based on our reviews, the broker custodian is providing the best overall deal for the Client, and it remains competitive in relation to executions and the cost of each transaction. We also continually monitor the broker custodian performance in the Trade Oversight Committee review, as discussed above.

For transactions for our registered investment company (mutual fund) Clients, Aperio places trades with brokers that we believe can provide best execution, and in accordance with each mutual fund’s written policies and procedures regarding brokerage selection and soft dollars.

Although Aperio seeks to obtain best execution for Clients’ securities transactions, we are not required to solicit competitive bids and we are not obligated to seek the lowest available commission cost. In seeking best execution, the determinative factor is not the lowest possible cost but whether the transaction represents the overall best qualitative execution, taking into consideration the full range of a broker-dealer’s services, as stated above. Consistent with the foregoing, Aperio may not necessarily obtain the lowest possible commission rates for Client transactions. Aperio’s Trade Oversight Committee performs periodic evaluations of our trading practices and utilized brokers/custodians in an ongoing effort to help ensure that Aperio is fulfilling its best execution obligation.

Directed Brokerage

A Client may instruct Aperio to execute some or all securities transactions for its account with or through one or more brokers designated by the Client. In such cases, the Client is generally responsible for negotiating the terms and conditions (including, but not limited to, commission rates) relating to all services to be provided by such broker and his or her own satisfaction with such terms and conditions.

Aperio will, if requested by the Client, attempt to negotiate the terms and conditions relating to the services provided by the broker. Under these arrangements, we do not assume any responsibility for obtaining the best prices or any particular commission rates for transactions with or through any such broker for such Client's account. The Client must recognize that it may not obtain commission rates as low as it might otherwise obtain if we had discretion to select brokers other than those chosen by the Client and, as a result, may not receive best execution on transactions due to the Client's direction.

Clients should also be aware that conflicts may arise between a Client's interest in receiving best execution with respect to transactions effected for the Client's account and our interest in potentially receiving future Client referrals from the broker. To mitigate these conflicts, Aperio's Trade Oversight Committee, in accordance with Aperio's fiduciary duty, performs periodic reviews of Client trade execution and brokerage services provided to help ensure Clients are receiving the best overall execution on their transactions.

Order Aggregation

Although each Client account is individually managed, Aperio often purchases and/or sells the same securities for several accounts at the same time. Aperio aggregates contemporaneous transactions in the same securities for Clients. Aperio aggregates trades at regular intervals throughout the day and considers all trades in a particular interval to be contemporaneous. When it does so, participating accounts are allocated the resulting securities or proceeds (and related transaction expenses) on an average price basis. Aperio believes combining orders in this way is, over time, advantageous to all participating Clients.

However, the average price resulting from any particular aggregated transaction could be less advantageous to a particular Client than if the Client had been the only account effecting the transaction or had completed its transactions in the security before the other participants.

Despite the advantages that can arise from aggregation of orders, in many cases, Aperio is not able to aggregate orders for all Clients seeking to buy or sell the same security. This is often because orders for directed brokerage Clients generally must be, or should be, executed by the applicable program sponsor (or its affiliated or designated brokers). Aperio is unable to aggregate transactions executed through different program sponsors and/or through different brokerage firms that Aperio selects for nondirected brokerage Clients on the basis of execution quality. In addition, one or more Clients may direct Aperio to use a particular broker-dealer for some or all of that Client's transactions, preventing Aperio from aggregating that Client's transactions with transactions executed with other broker-dealers. Clients whose transactions are filled before or after other Clients' transactions may receive less favorable prices. Where Aperio cannot aggregate all trades, it will typically follow a random rotation sequence of order placement for all executing brokers.

ITEM 13: REVIEW OF ACCOUNTS

Aperio monitors Client accounts on a daily basis for cash reinvestment and tax loss-harvesting opportunities. Accounts are rebalanced at least once per quarter to take advantage of tax-loss harvesting opportunities, reduce forecast tracking error, and maintain consistency

with the investment strategy and other Client constraints. On a monthly basis, Aperio's performance reporting team monitors each account to determine if any account's active returns exhibit statistically significant deviations from expectations based on forecast tracking error. On a quarterly basis, Aperio's Investment Committee reviews the performance of all of Aperio's investment strategies and any accounts whose performance shows statistically significant deviations from expectations.

In addition to Aperio's periodic account reviews, Client accounts are also reviewed when there are any changes to Client investment strategy, constraints, or circumstances.

Aperio prepares and provides to each investment management Client written monthly performance summary reports. Included in the performance summary reports are specific period returns for each portfolio compared to its relevant benchmark index (both pre- and after-tax, if applicable), summary portfolio characteristics, portfolio sector weightings and country/region weightings (if applicable) versus the benchmark, as well as summary tax information for taxable accounts. The custodian also delivers monthly or quarterly reports to Clients showing current investment positions and account activity during the previous period.

ITEM 14: CLIENT REFERRALS AND OTHER COMPENSATION

Aperio Client Referral Arrangement from Schwab

Prior to December 31, 2006, Aperio received Client referrals from Schwab through Aperio's participation in the Schwab Advisor Network (the "Service"). Aperio no longer receives new referrals through the Service and has fewer than five accounts as of the date of this Brochure that are still subject to this arrangement. With respect to these accounts, Aperio pays Schwab a participation fee, all of which were for Client referrals received through the Service prior to December 31, 2006.

ITEM 15: CUSTODY

Aperio does not maintain custody of Client assets, except, pursuant to Rule 206(4)-2 of the Advisers Act, where Aperio is deemed to have custody of Client funds solely because it has the authority and ability to debit its advisory fees directly from Clients' accounts. To mitigate any potential conflicts of interests, Aperio's Client account assets are maintained with independent qualified custodians.

Notably, in most cases, a Client's broker-dealer also may act as the custodian of the Client's assets for little or no extra cost. Clients should be aware, however, of the differences between having their assets held with a broker-dealer versus at a bank or trust company. Some of these differences include, but are not limited to, custodian costs, trading issues, security of assets, Client reporting, and technology.

Aperio will implement investment management recommendations only after the Client has arranged for and furnished Aperio with all information and authorizations regarding its accounts held at the designated qualified custodian.

Clients will receive statements on at least a quarterly basis directly from the qualified custodian that holds and maintains their assets. Clients are urged to carefully review all custodial statements and compare them to the statements provided by Aperio. Aperio statements can vary from custodial statements based on accounting procedures, reporting dates, or valuation methodologies of certain securities. Please refer to Item 12 for additional important disclosure information relating to our brokerage practices and relationships with custodians.

ITEM 16: INVESTMENT DISCRETION

In general, Aperio receives discretionary investment authority at the outset of an advisory relationship, either delegated in an advisory agreement by the Client, in a sub-advisory agreement with a Client's Intermediary (through its authority to select a third-party investment manager under its advisory agreement with the Client), or in a Wrap Program agreement with a Wrap Sponsor (which approves investment managers to offer services to Clients as part of the Wrap Program). Please see Item 4 ("Advisory Business") for more information concerning Wrap Programs.

Depending on the terms of the applicable advisory agreement, Aperio's authority could include the ability to select brokers and dealers through which to execute transactions on behalf of its Clients, and to negotiate the commission rates, if any, at which transactions are effected. In making decisions as to which securities are to be bought and sold and the amounts thereof, Aperio is guided by the mandate selected by the Client and any Client-imposed guidelines or restrictions. If granted discretionary investment authority, Aperio generally is not required to provide notice to, consult with, or seek the consent of its Clients prior to engaging in transactions. Please see Item 12 ("Brokerage Practices") of this Brochure for more information.

For Aperio's participation in the Model-Based SMA Program, Aperio shares investment discretion with the Wrap Sponsor of the Model-Based SMA Program under the terms of the agreement with the Wrap Sponsor. Please see Item 4 ("Advisory Business") for more information concerning the Model-Based SMA Program.

ITEM 17: VOTING CLIENT SECURITIES

Proxy Voting Guidelines

Aperio generally votes proxies for Clients, unless directed otherwise by a Client in writing. Aperio uses third-party services to vote proxies consistent with what the Firm determines is in its Clients' best interests. Aperio currently offers four proxy voting guidelines for Clients to select (with certain limitations as described below): Governance, Management Aligned, Catholic, and SRI. From time to time, Aperio may adopt additional or replace existing third-party proxy voting guidelines.

Aperio's Governance proxy voting guidelines (the "Governance Guidelines") apply criteria provided and implemented by a third-party proxy service provider, Broadridge Financial Solutions ("Broadridge"), and modified by Aperio to emphasize transparency of information

as further described below. All other proxy voting guidelines apply criteria and are implemented by Institutional Shareholder Services (“ISS”), another third-party proxy service provider.

Aperio generally establishes default proxy voting guidelines for its strategies, which will be used unless the Client selects another guideline. For non-values aligned strategies, the default proxy voting guidelines are generally the Governance Guidelines. For Clients who select Aperio’s Catholic Values strategies, the default proxy voting guidelines are the ISS Catholic Faith-Based proxy voting guidelines (the “Catholic Guidelines”). For all other values-aligned strategies, the default proxy voting guidelines are ISS SRI proxy voting guidelines (the “SRI Guidelines”). For certain Clients, including some Wrap Program Clients, where implementing the foregoing default proxy voting guidelines is costly or operationally burdensome, Aperio may choose to implement different default proxy voting guidelines.

Clients may generally select an alternative proxy guideline that differs from Aperio’s default guidelines for their chosen strategy, including the Management Aligned proxy voting guidelines (the “Management Aligned Guidelines”). In some cases, depending on the Client’s custodian and other factors, additional costs may apply.

The Governance Guidelines will generally cast proxy votes in favor of proposals that Broadridge believes may increase shareholder value and will generally cast proxy votes against proposals deemed to have the opposite effect. The Governance Guidelines tend to favor transparency of information and, therefore, typically favor resolutions that increase transparency of information. However, this preference is not applied in every instance. In cases where a resolution’s adoption would involve significant company resources, for example, the Governance Guidelines are inclined to oppose resolutions even when framed as requests for reports, disclosure, or transparency. The Governance Guidelines will also vote against management when certain criteria are not met related to gender diversity on the board of directors and the compensation of named executive officers.

The Management Aligned Guidelines may be selected by any Aperio Client. For Clients who select these guidelines, all proxies will be voted in alignment with the recommendations of company management, if such information is available to ISS. In instances where such information is unavailable, these ballots will not be voted.

In exceptional cases where a Client requests that we vote in a specific way on a particular company issue, Aperio will make efforts to accommodate that request. Clients interested in creating custom proxy voting guidelines, which differ from Aperio’s currently available proxy voting guidelines, may consult with Aperio for development of alternative guidelines at potential additional cost to such Client.

Proxy Service Setup Period

During the period when a Client’s custodian is setting up a connection with one of our proxy voting service providers (the “Proxy Setup Period”), Aperio may receive paper ballots. This Proxy Setup Period can be as short as a few days for some custodians or last several months or more for other custodians. During the Proxy Setup Period, Aperio will generally vote all paper ballots received in line with each issuer’s management recommendations, regardless of the proxy voting guidelines selected by the Client. Aperio has determined that this

practice would be in our Clients' best interest due to several factors, including, but not limited to, the risk of error in manually voting to align with different proxy voting guidelines and the fact that the majority of paper ballots received will tend to concern issues where voting in accordance with management will be consistent with the proxy voting guidelines selected by the Client.

Considerations in Voting

Aperio may also choose not to vote proxies in certain situations or for certain accounts, such as: (1) where a Client has informed Aperio that it wishes to retain the right to vote the proxy, in which case, Aperio will instruct the custodian to send the proxy material directly to the Client; (2) where Aperio deems the cost of voting would exceed any anticipated benefit to the Client, or where additional information is required to submit the vote that is not readily available to Aperio; (3) where a proxy is received for a Client account that has been terminated with Aperio; (4) where a proxy is received for a security Aperio no longer manages (e.g., the entire position was previously sold); (5) for proxy ballots not received by Aperio during the portfolio setup process or during breaks in connectivity between the Client's custodian and the third-party proxy voting service provider; or (6) when voting a proxy would restrict the ability to trade the shares.

Conflicts of Interest

Aperio's Proxy Voting Committee monitors for, and seeks to resolve, potential material conflicts ("Material Conflicts") in the course of proxy voting. Specifically, the Proxy Voting Committee seeks to identify potential Material Conflicts including, but not limited to, those presented by (a) public company status of Aperio Clients, intermediaries, custodians, and/or key service providers; and (b) other existing and/or potential relationships between Aperio (and/or Aperio employees) and publicly traded companies.

Potential or actual conflicts of interest may arise in proxy voting due to business or personal relationships Aperio or BlackRock maintains with persons having an interest in the outcomes of certain votes. This can include Aperio, BlackRock and/or its affiliates, Aperio or BlackRock employees, or any service providers or their employees. For example, Aperio or its supervised persons may have a business or personal relationship with other proponents of proxy proposals, shareholder advocacy groups, participants in proxy contests, corporate directors, or candidates for directorships. If, at any time, Aperio and/or a third-party service provider becomes aware of any type of potential or actual conflict of interest relating to a particular proxy proposal, they will promptly report such conflict to the Proxy Voting Committee and Compliance.

Aperio's general policy is to vote proxies presenting potential Material Conflicts as it would vote any other proxy, in a manner consistent with its Proxy Voting Policy and the proxy voting guidelines selected by the Client. The Proxy Voting Committee will regularly review all voting of proxies identified as presenting potential Material Conflicts at its regularly scheduled meetings to seek to ensure adherence to this standard.

Where a proxy proposal raises a Material Conflict between Aperio's interests and a Client's interest, including a mutual fund Client, Aperio will generally resolve such a conflict in the manner described below with regard to the affected resolutions:

- Where the Client’s chosen proxy voting guidelines outline the voting position, as either “for” or “against” such proxy proposal, voting will generally be in accordance with the proxy voting guidelines.
- Where the Client’s chosen proxy voting guidelines outline the voting position to be determined on a “case by case” basis for such proxy proposal, or such proposal is not listed in the proxy voting guidelines, then one of the following methods will be selected, depending upon Aperio’s analysis of the facts and circumstances of each situation:
 - Voting the proxy pursuant to Client direction to the extent that Aperio has discretion and ability to deviate from the proxy voting guidelines with respect to the proposal in question. In such instances, Aperio will endeavor to disclose the conflict to the relevant Clients and obtain their consent to the proposed vote prior to voting the securities.

The disclosure to the Client will include sufficient detail regarding the matter to be voted on and the nature of the conflict so that the Client will be able to make an informed decision regarding the vote. If a Client does not respond to such a conflict disclosure request or denies the request, Aperio will refrain from voting the securities held in that Client’s account.

- In certain limited circumstances, Aperio may forward proxies for which it has a Material Conflict of interest to an identified, independent third party for review and recommendation. If Aperio receives such independent party’s recommendation on a timely basis, it will vote the proxies accordingly. If the third party’s recommendations are not received on a timely basis, Aperio will refrain from voting the securities held in that Client account.

Where BlackRock or a BlackRock affiliate is the subject of a shareholder proxy, it is anticipated that voting will generally be in accordance with the proxy voting guidelines. However, the Proxy Voting Committee will be informed of each situation where this situation arises. For any proxies involving BlackRock or a BlackRock affiliate that require manual review and voting, the Proxy Voting Committee will, as a preferred option, hire an independent third party for review and recommendation on how to vote the proxies. If Aperio receives such independent party’s recommendation on a timely basis, it will vote the proxies accordingly. If the third party’s recommendation is not received on a timely basis, Aperio will refrain from voting the BlackRock or BlackRock affiliate securities held in that Client account.

Proxy Voting Policy and Guidelines

Clients (typically through their Intermediary) may request a complete copy of Aperio’s current proxy voting policies and procedures and voting guidelines, or information on how Aperio has voted proxies by policy. On behalf of Clients, Intermediaries can submit such requests through Aperio’s Client Portal at www.aperiogroup.com/portal.

No Authority to Vote Proxies

As noted above, certain Clients may elect to vote their own proxies. In these instances, the Client handles aspects associated with proxy voting directly and independent of Aperio, while Aperio is delegated the responsibility with respect to securities held in the Client’s

account to make all elections concerning any mergers, acquisitions, tender offers, bankruptcy proceedings, or other corporate actions except class action lawsuits.

Shareholder Proposals

Aperio Clients may choose to participate in a service that connects them with shareholder advocacy groups, where Aperio Clients may evaluate and submit shareholder proposals in line with their values. It is generally expected that if any Aperio Client sponsors a shareholder proposal that is the subject of a proxy vote (a “Sponsoring Client”), Aperio will vote such proposals consistently with the chosen proxy voting guidelines of each Aperio Client and the principles set forth in Aperio’s Proxy Voting Policy, including its conflict-of-interest provisions. This could result in situations where Aperio votes on behalf of Aperio Clients (including a Sponsoring Client) against a Sponsoring Client’s shareholder proposal.

ITEM 18: FINANCIAL INFORMATION

Aperio does not require or solicit prepayment of more than \$1,200 in fees per Client, six months or more in advance, and therefore is not required to provide a balance sheet.

APERIO GROUP, LLC

Brochure Supplement

(Form ADV, Part 2B)

March 2023

Lawrence Bevir
Michael Branch
Steve Britton
Taotao Cai
Leyland Chin
Jonathan Chow
Matthew Czuj
Jack Delaney
Christine Fernandez
Sebastian Frei
Jameel Gould
Brian Ko
Willie Kwan
Petar Lalovic
Ran Leshem
Anselm Liu
Jialing Lu
Robert Quimjian

Lucas Reisdorf
Michael Saporito
Benjamin Schneider
Harrison Selwitz
Michelle Shkedi
Frank Song
Eric Su
Annie Tan
William (Bill) Tantalla
Amanda Turner
Robert Tymoczko
Simge Ulucam
Julie VanDervort
Chris Vinyard
Dorian Young
Susan Zhou
Chris Zweigle

Three Harbor Drive, Suite 204
Sausalito, CA 94965
Phone: (415) 339-4300
Fax: (415) 339-4301
www.aperiogroup.com

This Brochure Supplement provides information about the individuals listed herein that supplements the Aperio Group, LLC, Form ADV, Part 2A Brochure. You should have received a copy of that brochure. Please contact our Head of Compliance at (415) 339-4300 if you did not receive a copy of the brochure or if you have any questions about the contents of this supplement.

Additional information about the individuals described herein is available on the SEC's website at www.adviserinfo.sec.gov.

Aperio Group, LLC

Three Harbor Drive, Suite 204 | Sausalito, CA 94965
+1.415.339.4300

Investment Strategy: US Wealth Advisors - Aperio

Lawrence Bevir

1993

3 Harbor Drive, Suite 204 | Sausalito, CA, United States | 415.339.4300

This brochure supplement provides information about Lawrence Bevir that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of California, Davis, Davis, CA, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Lawrence Bevir may have obtained other than college or university degrees.

Business Experience (preceding five years)

2020–Present, Aperio Group, LLC, Associate Portfolio Manager

2019–2020 UBS Private Wealth Management, Senior Wealth Strategy Associate

2016–2019 Natixis Investment Management, Trade Quality Control Analyst

Item 3 - Disciplinary Information

There is no disciplinary information to report about Lawrence Bevir

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Lawrence Bevir receives no additional compensation for providing advisory services

Item 6 - Supervision

Lawrence Bevir provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Lawrence Bevir should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

Aperio Group, LLC

Three Harbor Drive, Suite 204 | Sausalito, CA 94965
+1.415.339.4300

Investment Strategy: US Wealth Advisors - Aperio

Michael Branch

1982

3 Harbor Drive. Suite 204 | Sausalito, CA, United States | 415.339.4300

This brochure supplement provides information about Michael Branch that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of Arizona, Eller School of Business, Tucson, AZ, B.S. - Finance

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Michael Branch may have obtained other than college or university degrees.

Business Experience (preceding five years)

2012-Present, Aperio Group, LLC, Senior Portfolio Manager and Manager of Portfolio Research

Item 3 - Disciplinary Information

There is no disciplinary information to report about Michael Branch

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Michael Branch receives no additional compensation for providing advisory services

Item 6 - Supervision

Michael Branch provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Michael Branch should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

Aperio Group, LLC

Three Harbor Drive, Suite 204 | Sausalito, CA 94965
+1.415.339.4300

Investment Strategy: US Wealth Advisors - Aperio

Steve Britton

1985

2929 Arch St, Philadelphia PA, FL 16 19104 | Philadelphia, PA, United States | 302-797-2144

This brochure supplement provides information about Steve Britton that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

Saint Joseph's University, Philadelphia, PA, M.B.A. - Applied Investment Management and Data Science

Saint Joseph's University, Philadelphia, PA, B.S. - Food Marketing

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Steve Britton may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022- Present, Aperio by BlackRock, Associate Portfolio Manager

2013-March 2022, BlackRock, Client Order Management Associate

Item 3 - Disciplinary Information

There is no disciplinary information to report about Steve Britton

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Steve Britton receives no additional compensation for providing advisory services

Item 6 - Supervision

Steve Britton provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Steve Britton should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

Aperio Group, LLC

Three Harbor Drive, Suite 204 | Sausalito, CA 94965
+1.415.339.4300

Investment Strategy: US Wealth Advisors - Aperio

Taotao Cai

1990

3 Harbor Drive. Suite 204 | Sausalito, CA, United States | 415.339.4300

This brochure supplement provides information about Taotao Cai that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of Chicago, Chicago, IL, M.S. - Financial Mathematics

University of Toronto, Toronto, ON, Canada, B.C. - Finance & Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Taotao Cai may have obtained other than college or university degrees.

Business Experience (preceding five years)

2017-Present, Aperio Group, LLC, Quantitative Researcher

Item 3 - Disciplinary Information

There is no disciplinary information to report about Taotao Cai

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Taotao Cai receives no additional compensation for providing advisory services

Item 6 - Supervision

Taotao Cai provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Taotao Cai should be directed to Ran Leshem, Co-Head of Aperio and Chief Investment Officer, at 415.339.4300

Aperio Group, LLC

Three Harbor Drive, Suite 204 | Sausalito, CA 94965
+1.415.339.4300

Investment Strategy: US Wealth Advisors - Aperio

Leyland Chin

1997

3 Harbor Drive. Suite 204 | Sausalito, CA, United States | 415.339.4300

This brochure supplement provides information about Leyland Chin that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of California, Los Angeles, Los Angeles, CA, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Leyland Chin may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Associate Portfolio Specialist
2019-2021, Engage Hospitality, LLC, General Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Leyland Chin

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Leyland Chin receives no additional compensation for providing advisory services

Item 6 - Supervision

Leyland Chin provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Leyland Chin should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

Aperio Group, LLC

Three Harbor Drive, Suite 204 | Sausalito, CA 94965
+1.415.339.4300

Investment Strategy: US Wealth Advisors - Aperio

Jonathan Chow

1985

3 Harbor Drive. Suite 204 | Sausalito, CA, United States | 415.339.4300

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Item 2 - Education Background

University of California, Irvine, CA, B.A. - International Studies
University of San Francisco, San Francisco, CA, M.S.

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Jonathan Chow may have obtained other than college or university degrees.

Item 2 - Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Associate Portfolio Manager
2020-2021, Oaktree Capital Management, Portfolio Analytics, Risk and Reporting
2018-2020, Union Bank, Foreign Exchange Sales and Trading

Item 3 - Disciplinary Information

There is no disciplinary information to report about Jonathan Chow

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Jonathan Chow receives no additional compensation for providing advisory services

Item 6 - Supervision

Jonathan Chow provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Jonathan Chow should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Matthew Czuj

1993

2929 Arch Street, 16th Floor | Philadelphia, PA, United States | 415.339.4300

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Item 2 –

Education Background

Lebanon Valley College, Annville, PA, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Matthew Czuj may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Associate Portfolio Manager
2018-2021, BlackRock, Inc., Portfolio Specialist

Item 3 - Disciplinary Information

There is no disciplinary information to report about Matthew Czuj

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Matthew Czuj receives no additional compensation for providing advisory services

Item 6 - Supervision

Matthew Czuj provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Matthew Czuj should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Jack Delaney

1993

400 Howard Street | San Francisco, CA, United States | 415.339.4300

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Item 2 –

Education Background

University of Rhode Island, Kingston, RI, B.A. - Finance and Political Science

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Jack Delaney may have obtained other than college or university degrees.

Business Experience (preceding five years)

2020–Present, Aperio Group, LLC, Portfolio Manager - ESG Implementation
2019–2020, Aperio Group, LLC, Associate Portfolio Manager,
2019, Aperio Group, LLC, Senior Investment Operations Analyst

Item 3 - Disciplinary Information

There is no disciplinary information to report about Jack Delaney

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Jack Delaney receives no additional compensation for providing advisory services

Item 6 - Supervision

Jack Delaney provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Jack Delaney should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Christine (Sinicrope) Fernandez

1992

50 Hudson Yards | New York, NY, United States | 415.339.4300

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Item 2 –

Education Background

University of Miami, Miami, FL, B.A. - Business Management

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Christine Fernandez may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Associate Portfolio Manager

2017-2021, Edward Jones, Investment Manager Research Analyst

Item 3 - Disciplinary Information

There is no disciplinary information to report about Christine Fernandez

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Christine Fernandez receives no additional compensation for providing advisory services

Item 6 - Supervision

Christine Fernandez provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Christine Fernandez should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Sebastian Frei

1995

60 State Street, 19th Floor | Boston, MA, United States | 617-357-1200

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Item 2 –

Education Background

Arizona State University, AZ, B.S. - Finance and Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Sebastian Frei may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio Group LLC, Portfolio Trader

2020-2022, Aperio Group LLC, Investment Operations Analyst

2019-2020, Aperio Group LLC, Junior Operations Associate

Item 3 - Disciplinary Information

There is no disciplinary information to report about Sebastian Frei

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Sebastian Frei receives no additional compensation for providing advisory services

Item 6 - Supervision

Sebastian Frei provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Sebastian Frei should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Jameel Gould

1993

50 Hudson Yards | New York, NY, United States | 415.339.4300

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Item 2 –

Education Background

University of Maryland, College Park, MD, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Jameel Gould may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Associate Portfolio Manager

2019-2021, AllianceBernstein LP, Middle Office Associate

2016-2019, Morgan Stanley, Derivative Middle Office/Product Controller

Item 3 - Disciplinary Information

There is no disciplinary information to report about Jameel Gould

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Jameel Gould receives no additional compensation for providing advisory services

Item 6 - Supervision

Jameel Gould provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Jameel Gould should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Brian Ko

1985

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Item 2 –

Education Background

Saint Mary's College of California, Moraga, CA, M.S. - Financial Analysis
University of California, Davis, Davis, CA, B.S. - Managerial Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Brian Ko may have obtained other than college or university degrees.

Business Experience (preceding five years)

2017-Present Aperio Group, LLC, Lead Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Brian Ko

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Brian Ko receives no additional compensation for providing advisory services

Item 6 - Supervision

Brian Ko provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Brian Ko should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Willie Kwan

1980

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Item 2 –

Education Background

Brandeis University, Waltham, MA, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Willie Kwan may have obtained other than college or university degrees.

Business Experience (preceding five years)

2020-Present, Aperio Group, LLC, Lead Portfolio Manager

2019-2020, Aperio Group, LLC, Portfolio Manager

2016-2019, Aperio Group, LLC, Associate Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Willie Kwan

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Willie Kwan receives no additional compensation for providing advisory services

Item 6 - Supervision

Willie Kwan provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Willie Kwan should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Petar Lalovic

1984

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Item 2 –

Education Background

Graduate Institute of International and Development Studies, Geneva, Switzerland, M.A. - International Relations

London School of Economics and Political Science, London, England, MSc - International Political Economy

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Petar Lalovic may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Investment Strategist

2020-2021, Aperio Group, LLC, Portfolio Manager

2018-2020, Aperio Group, LLC, Associate Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Petar Lalovic

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Petar Lalovic receives no additional compensation for providing advisory services

Item 6 - Supervision

Petar Lalovic provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Petar Lalovic should be directed to Dorian Young, Senior Investment Strategist, at 415.339.4300

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Ran Leshem

1974

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Item 2 –

Education Background

University of California, Berkeley, M.B.A.

University of Waterloo, Ontario, Canada, B.S. - Mathematics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Ran Leshem may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Co-Head of Aperio Group and Chief Investment Officer

2014-Present, Aperio Group, LLC, Chief Investment Officer

Item 3 - Disciplinary Information

There is no disciplinary information to report about Ran Leshem

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Ran Leshem receives no additional compensation for providing advisory services

Item 6 - Supervision

Ran Leshem provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Ran Leshem should be directed to Liz Michaels, Co-Head of Aperio, at 415.339.4300

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Anselm Liu

1995

400 Howard Street | San Francisco, CA, United States | 415.339.4300

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Item 2 –

Education Background

University of California, San Diego, La Jolla, CA, B.S. - Management Science

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Anselm Liu may have obtained other than college or university degrees.

Business Experience (preceding five years)

2020-Present, Aperio Group, LLC, Associate Portfolio Manager
2017-2020, Optivest Inc., Investment Analyst

Item 3 - Disciplinary Information

There is no disciplinary information to report about Anselm Liu

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Anselm Liu receives no additional compensation for providing advisory services

Item 6 - Supervision

Anselm Liu provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Anselm Liu should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Jialing Lu

1992

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Item 2 –

Education Background

University of Chicago, Chicago, IL, B.A. - Economics and Statistics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Jialing Lu may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio Group, LLC, Lead Portfolio Manager - Research, Performance, and Risk Management

2019-2021, Aperio Group, LLC, Portfolio Manager - Portfolio Research

2017-2019, Aperio Group, LLC, Associate Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Jialing Lu

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Jialing Lu receives no additional compensation for providing advisory services

Item 6 - Supervision

Jialing Lu provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Jialing Lu should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Robert Quimjian

1987

50 Hudson Yards | New York, NY, United States | 415.339.4300

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Item 2 –

Education Background

Miami University, Miami, OH, B.S. - Finance

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Robert Quimjian may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Head of Portfolio Trading
2019-2021, Aperio Group, LLC, Portfolio Manager - Portfolio Trading
2018-2019, Aperio Group, LLC, Associate Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Robert Quimjian

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Robert Quimjian receives no additional compensation for providing advisory services

Item 6 - Supervision

Robert Quimjian provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Robert Quimjian should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Lucas Reisdorf

1993

60 State Street, 19th Floor | Boston, MA, United States | 415.339.4300

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Item 2 –

Education Background

SUNY Brockport, Brockport, NY, B.S. - Mathematics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Lucas Reisdorf may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Lead Portfolio Manager

2020-2021, Aperio Group, LLC, Portfolio Manager

2018-2019, Aperio Group, LLC, Associate Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Lucas Reisdorf

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Lucas Reisdorf receives no additional compensation for providing advisory services

Item 6 - Supervision

Lucas Reisdorf provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Lucas Reisdorf should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Michael Saporito

1990

725 Ponce de Leon Ave NE, , GA 30306 | Atlanta, GA, United States | 415.339.4300

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Item 2 –

Education Background

Drexel University, B.S. - Business Administration

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Michael Saporito may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio Group, LLC, Associate Portfolio Manager
2017-2022 BlackRock, Investment Operations

Item 3 - Disciplinary Information

There is no disciplinary information to report about Michael Saporito

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Michael Saporito receives no additional compensation for providing advisory services

Item 6 - Supervision

Michael Saporito provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Michael Saporito should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Benjamin Schneider

1984

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Item 2 –

Education Background

University of Southern California, Los Angeles, CA, Masters - Accounting
University of California, Berkeley, CA, Masters - Financial Engineering
University of Southern California, Los Angeles, CA, B.S. - Business Administration

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Benjamin Schneider may have obtained other than college or university degrees.

Business Experience (preceding five years)

2017-Present, Aperio Group, LLC, Senior Investment Strategist

Item 3 - Disciplinary Information

There is no disciplinary information to report about Benjamin Schneider

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Benjamin Schneider receives no additional compensation for providing advisory services

Item 6 - Supervision

Benjamin Schneider provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Benjamin Schneider should be directed to Ran Leshem, Co-Head of Aperio and Chief Investment Officer, at 415.339.4300

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Harrison Selwitz

1989

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Item 2 –

Education Background

Tulane University, A.B. Freeman School of Business, New Orleans, LA, B.S.M. - Finance

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Harrison Selwitz may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Quantitative Research Analyst
2020-2021, Aperio Group, LLC, Lead Portfolio Manager
2019-2020, Aperio Group, LLC, Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about Harrison Selwitz

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Harrison Selwitz receives no additional compensation for providing advisory services

Item 6 - Supervision

Harrison Selwitz provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Harrison Selwitz should be directed to Ran Leshem, Co-Head of Aperio and Chief Investment Officer, at 415.339.4300

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Michelle Shkedi

1989

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Item 2 –

Education Background

Wellesley College, Wellesley, MA, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Michelle Shkedi may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio Group, LLC, Head of Investment Policy, Process & Product

2020-2022, Aperio Group, LLC, Lead Portfolio Manager - Research, Process & Systems

2019-2020, Aperio Group, LLC, Portfolio Manager - Portfolio Investment Research

Item 3 - Disciplinary Information

There is no disciplinary information to report about Michelle Shkedi

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Michelle Shkedi receives no additional compensation for providing advisory services

Item 6 - Supervision

Michelle Shkedi provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Michelle Shkedi should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Frank Song

1986

50 Hudson Yards | New York, NY, United States | 415.339.4300

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Item 2 - Education Background

University of California, Berkeley, B.A. - Political Economy

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Frank Song may have obtained other than college or university degrees.

Item 2 - Business Experience (preceding five years)

2022 – Present, Associate Portfolio Manager, Aperio Group, LLC

2018 – 2022, BlackRock - Associate / Core Portfolio Manager, Fundamental Active Equity

Item 3 - Disciplinary Information

There is no disciplinary information to report about Frank Song

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Frank Song receives no additional compensation for providing advisory services

Item 6 - Supervision

Frank Song provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Frank Song should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Eric Su

1995

50 Hudson Yards | New York, NY, United States | 415.339.4300

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Item 2 –

Education Background

Villanova University, Philadelphia, PA, B.B.A. - Finance

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Eric Su may have obtained other than college or university degrees.

Item 2 – Business Experience (preceding five years)

2022-Present, Aperio Group, LLC, Portfolio Manager

2019-2021, Aperio Group, LLC, Associate Portfolio Manager

2017-2018, Vanguard, Fund Financial Analyst

Item 3 – Disciplinary Information

There is no disciplinary information to report about Eric Su

Item 4 – Other Business Activities

n/a

Item 5 – Additional Compensation

Eric Su receives no additional compensation for providing advisory services

Item 6 – Supervision

Eric Su provides portfolio management, trading, and analytical support for client portfolios.

Questions regarding the supervision of Eric Su should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Annie Tan

1988

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Item 2 –

Education Background

University of San Francisco, San Francisco, CA, M.S. - Financial Analysis

University of California, Davis, Davis, CA, B.A. - Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Annie Tan may have obtained other than college or university degrees.

Business Experience (preceding five years)

2018-Present, Aperio Group, LLC, Manager of ESG Implementation

Item 3 - Disciplinary Information

There is no disciplinary information to report about Annie Tan

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Annie Tan receives no additional compensation for providing advisory services

Item 6 - Supervision

Annie Tan provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Annie Tan should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

Aperio Group, LLC

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Investment Strategy: US Wealth Advisors - Aperio

William (Bill) Tantalla

1989

2929 Arch Street, 16th Floor | Philadelphia, PA, United States | 415.339.4300

This brochure supplement provides information about William (Bill) Tantalla that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

Temple University, Philadelphia, PA, B.A. - Finance

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that William (Bill) Tantalla may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021–Present, Aperio Group, LLC, Associate Portfolio Manager

2018–2021, Miller Investment Management, Assistant Portfolio Manager

Item 3 - Disciplinary Information

There is no disciplinary information to report about William (Bill) Tantalla

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

William (Bill) Tantalla receives no additional compensation for providing advisory services

Item 6 - Supervision

William (Bill) Tantalla provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of William (Bill) Tantalla should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Deputy Chief Investment Officer, at 415.339.4300

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Amanda Turner

1984

2970 Market St. 16th Floor | Philadelphia, PA, United States | 609-282-2177

This brochure supplement provides information about Amanda Turner that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

Loyola College, Baltimore, MD, B.A. - Finance and Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Amanda Turner may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022–Present, Aperio Group, LLC, Team Lead to Portfolio Specialist Team.

2018–2022, BlackRock Princeton Core PM SMA Group, Team Lead for Equity Implementation Team

2018, Associate Portfolio Manager and Portfolio Specialist for the BlackRock Private Investors SMA Team

Item 3 - Disciplinary Information

There is no disciplinary information to report about Amanda Turner

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Amanda Turner receives no additional compensation for providing advisory services

Item 6 - Supervision

Amanda Turner provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Amanda Turner should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Robert Tymoczko

1970

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This brochure supplement provides information about Robert Tymoczko that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of Chicago, Graduate School of Business, Chicago, IL, M.B.A. - Finance and Econometrics

Stanford University, Stanford, CA, B.A. - Quantitative Economics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Robert Tymoczko may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio Group, LLC, Director of Portfolio Management and Deputy Chief Investment Officer

2012-Present, Aperio Group, LLC, Director of Portfolio Management

Item 3 - Disciplinary Information

There is no disciplinary information to report about Robert Tymoczko

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Robert Tymoczko receives no additional compensation for providing advisory services

Item 6 - Supervision

Robert Tymoczko provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Robert Tymoczko should be directed to Ran Leshem, Co-Head of Aperio and Chief Investment Officer, at 415.339.4300

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Investment Strategy: US Wealth Advisors - Aperio

Simge Ulucam

1978

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This brochure supplement provides information about Simge Ulucam that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of California, Berkeley, Berkeley, CA, Masters - Financial Engineering
Yildiz Technical University, Istanbul, Turkey, BSc - Mathematical Engineering

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Simge Ulucam may have obtained other than college or university degrees.

Business Experience (preceding five years)

2019–Present, Aperio Group, LLC, Quantitative Researcher
2016–2019, Aperio Group, LLC, Portfolio Manager - Research Lead

Item 3 - Disciplinary Information

There is no disciplinary information to report about Simge Ulucam

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Simge Ulucam receives no additional compensation for providing advisory services

Item 6 - Supervision

Simge Ulucam provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Simge Ulucam should be directed to Ran Leshem, Co-Head of Aperio and Chief Investment Officer, at 415.339.4300

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Investment Strategy: US Wealth Advisors - Aperio

Julie VanDervort

1984

2970 Market St. 16th Floor | Philadelphia, PA, United States | 415.339.4300

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Item 2 –

Education Background

Loyola Marymount University, Los Angeles, CA, MBA - Finance

Monmouth University, West Long Branch, NJ, B.S. - Business Administration

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Julie VanDervort may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021–Present, Aperio Group, LLC, Associate Portfolio Manager

2018–2021, Fisher Investments, Portfolio Evaluation Analyst

Item 3 - Disciplinary Information

There is no disciplinary information to report about Julie VanDervort

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Julie VanDervort receives no additional compensation for providing advisory services

Item 6 - Supervision

Julie VanDervort provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Julie VanDervort should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Investment Strategy: US Wealth Advisors - Aperio

Chris Vinyard

1981

3 Harbor Drive. Suite 204 | Sausalito, CA, United States | 415.339.4300

This brochure supplement provides information about Chris Vinyard that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

San Francisco State University, San Francisco, CA, B.S. - Financial Services/Corporate Finance

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Chris Vinyard may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio Group, LLC, Portfolio Manager

2019-2021, Aperio Group, LLC, Associate Portfolio Manager

2015-2019, FactSet, Senior ETF Analyst/Product Development Analyst, ETFs

Item 3 - Disciplinary Information

There is no disciplinary information to report about Chris Vinyard

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Chris Vinyard receives no additional compensation for providing advisory services

Item 6 - Supervision

Chris Vinyard provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Chris Vinyard should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Investment Strategy: US Wealth Advisors - Aperio

Dorian Young

1964

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This brochure supplement provides information about Dorian Young that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

University of Chicago, Booth School of Business, Chicago, IL, M.B.A. - Financial Management & International Business

Harvard University, Cambridge, MA, A.B. - Applied Mathematics

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Dorian Young may have obtained other than college or university degrees.

Business Experience (preceding five years)

2015-Present, Aperio Group, LLC, Senior Investment Strategist

Item 3 - Disciplinary Information

There is no disciplinary information to report about Dorian Young

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Dorian Young receives no additional compensation for providing advisory services

Item 6 - Supervision

Dorian Young provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Dorian Young should be directed to Ran Leshem, Co-Head of Aperio and Chief Investment Officer, at 415.339.4300

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Investment Strategy: US Wealth Advisors - Aperio

Susan Zhou

1993

3 Harbor Drive, Suite 204, Sausalito, CA 94965 | Sausalito, CA, United States | 415.339.4300

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Item 2 –

Education Background

University of Delaware - Newark, DE, M.S. - Accounting and Finance

University of Delaware - Newark, DE, B.S. - Accounting

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Susan Zhou may have obtained other than college or university degrees.

Business Experience (preceding five years)

2022-Present, Aperio by Blackrock, Associate Portfolio Manager

2017-June 2022, BlackRock, Collateral Management Associate

Item 3 - Disciplinary Information

There is no disciplinary information to report about Susan Zhou

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Susan Zhou receives no additional compensation for providing advisory services

Item 6 - Supervision

Susan Zhou provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Susan Zhou should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

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Investment Strategy: US Wealth Advisors - Aperio

Chris Zweigle

1985

3 Harbor Drive. Suite 204 | Sausalito, CA, United States | 415.339.4300

This brochure supplement provides information about Chris Zweigle that supplements the Aperio Group, LLC brochure. You should have received a copy of the Aperio Group, LLC brochure. Please contact your relationship manager if you did not receive it or if you have any questions about the contents of that brochure or this supplement.

Item 2 –

Education Background

Seattle University, Seattle, WA, M.B.A. - Finance

University of Washington, Seattle, WA, B.A. - Comparative History of Ideas

Educational Background in this brochure supplement does not reflect professional qualifications or post-secondary education that Chris Zweigle may have obtained other than college or university degrees.

Business Experience (preceding five years)

2021-Present, Aperio Group, LLC, Portfolio Trader

2017-2020, Russell Investments, Securities Trading Analyst

Item 3 - Disciplinary Information

There is no disciplinary information to report about Chris Zweigle

Item 4 - Other Business Activities

n/a

Item 5 - Additional Compensation

Chris Zweigle receives no additional compensation for providing advisory services

Item 6 - Supervision

Chris Zweigle provides portfolio management, trading, and analytical support for client portfolios. Questions regarding the supervision of Chris Zweigle should be directed to Robert Tymoczko, Director of Portfolio Management and Deputy Chief Investment Officer, at 415.339.4300

FACTS**WHAT DOES APERIO GROUP, LLC DO WITH YOUR PERSONAL INFORMATION?****Why?**

Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.

What?

The types of personal information we collect and share depend on the product or service you have with us. This information can include:

- Social Security number and income
- Assets and account balances
- Investment experience and risk tolerance
- Tax planning information
- Information about your beneficiaries

When you are *no longer* our customer, we continue to share your information as described in this notice.

How?

All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information; the reasons Aperio Group, LLC chooses to share; and whether you can limit this sharing.

Reasons we can share your personal information	Does Aperio Group share?	Can you limit this sharing?
For our everyday business purposes— such as to process your transactions, maintain your account(s), respond to court orders and legal investigations, or report to credit bureaus	Yes	No
For our marketing purposes— to offer our products and services to you	Yes	No
For joint marketing with other financial companies	No	We do not share
For our affiliates' everyday business purposes— information about your transactions and experiences	Yes	No
For our affiliates' everyday business purposes— information about your creditworthiness	No	We do not share
For our affiliates to market to you	No	We do not share
For nonaffiliates to market to you	No	We do not share

Questions?

Go to www.aperiogroup.com

Who we are	
Who is providing this notice?	Aperio Group, LLC (“Aperio”), which is an indirect wholly-owned subsidiary of BlackRock, Inc.
What we do	
How does Aperio protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings.
How does Aperio collect my personal information?	<p>We collect your personal information, for example, when you</p> <ul style="list-style-type: none"> • Open an account or enter into an investment advisory contract • Give us your income information or provide employment information • Tell us about your investment portfolio or give us your contact information <p>We also collect your personal information from other companies.</p>
Why can't I limit all sharing?	<p>Federal law gives you the right to limit only</p> <ul style="list-style-type: none"> • sharing for affiliates' everyday business purposes—information about your creditworthiness • affiliates from using your information to market to you • sharing for nonaffiliates to market to you <p>State laws and individual companies may give you additional rights to limit sharing. See below for more on your rights under certain state law.</p>

Definitions	
Affiliates	<p>Companies related by common ownership or control. They can be financial and nonfinancial companies.</p> <ul style="list-style-type: none"> • BlackRock Investment Management, LLC and other companies with the BlackRock name are affiliates of Aperio Group.
Nonaffiliates	<p>Companies not related by common ownership or control. They can be financial and nonfinancial companies.</p> <ul style="list-style-type: none"> • Aperio Group doesn't share with non-affiliates so they can market to you.
Joint marketing	<p>A formal agreement between nonaffiliated financial companies that together market financial products or services to you.</p> <ul style="list-style-type: none"> • Aperio Group doesn't jointly market.

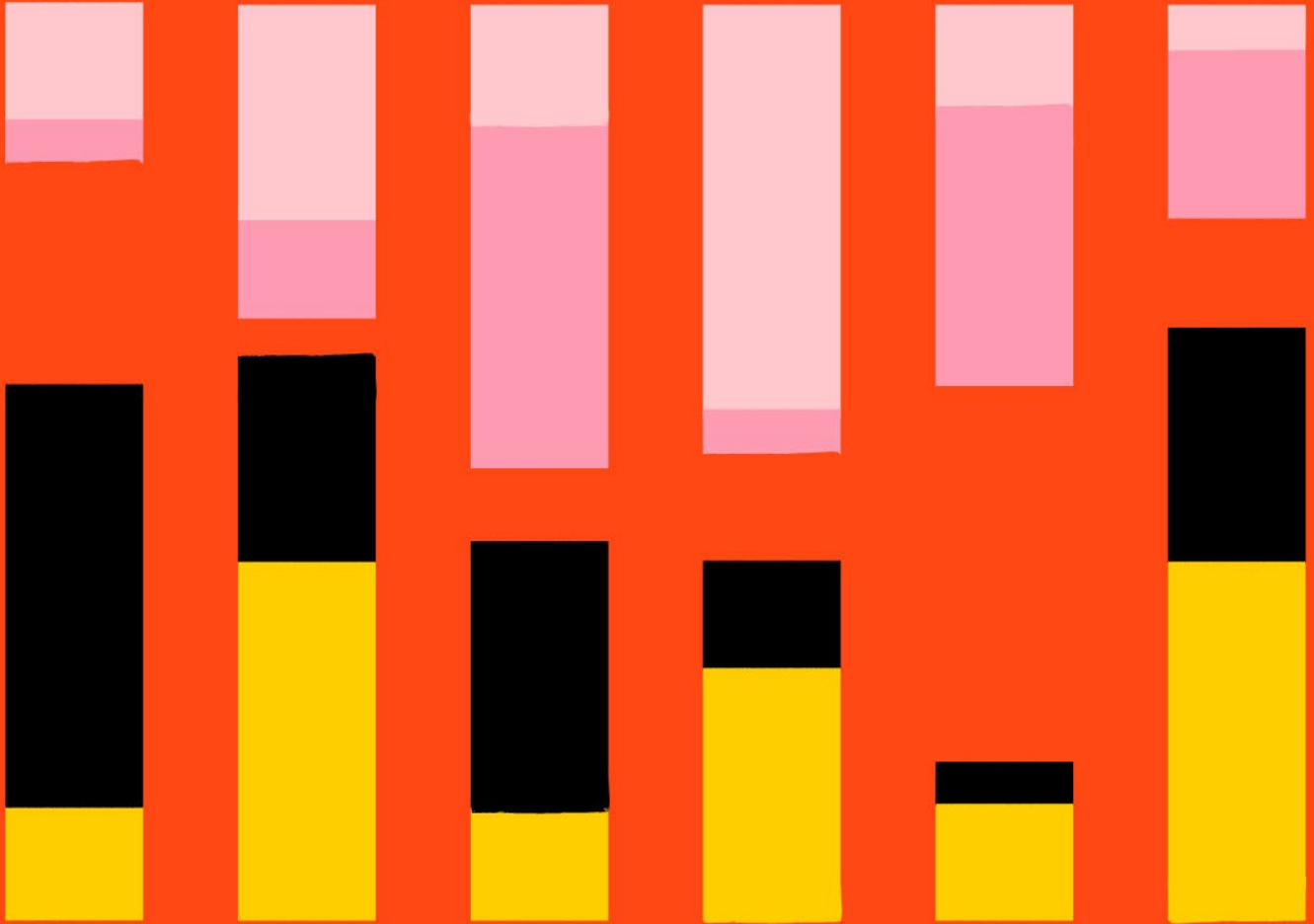
Other important information	
<p>Vermont residents: We will not share information we collect about you with nonaffiliated third parties, except as permitted by law, including, for example, with your consent or to service your account.</p>	
<p>California residents: In accordance with California law, we will not share information we collect about you with nonaffiliates, unless the law permits it. For example, we may share information with your consent or to service your account. We will limit sharing among our affiliated companies to the extent required by California law.</p>	
<p>Nevada residents: Nevada law requires us to disclose that you may request to be placed on our “do not call” list at any time by calling 415-339-4300. To obtain further information, contact the Bureau of Consumer Protection, Office of the Nevada Attorney General at 555 E. Washington Ave., Suite 3900, Las Vegas, NV 89101; phone 1-702-486-3132; or email BCPINFO@ag.state.nv.us.</p>	



BlackRock Client and Vendor Privacy Notice

BlackRock is committed to processing personal information in line with all applicable privacy and data protection laws. For more information on the collection, use and disclosure of personal information by BlackRock including Aperio, please see the BlackRock Client and Vendor Privacy Notice which is available at:

<https://www.blackrock.com/corporate/compliance/privacy-policy>



Aperio Group, LLC, Proxy Voting Policy

March 2023

aperio
by BlackRock

1. Summary

Rule 206(4)-6 under the Investment Advisers Act of 1940 (the “Rule”) requires every investment advisor who exercises voting authority with respect to client securities to adopt and implement written policies and procedures reasonably designed to ensure that an advisor votes proxies in the best interest of its clients (“Proxy Voting Policy”). The procedures must address material conflicts that may arise in connection with proxy voting. The Rule further requires an advisor to provide a concise summary of the advisor’s proxy voting process and offer to provide copies of the complete Proxy Voting Policy and procedures to clients upon request. Lastly, the Rule requires that the advisor disclose to clients how they may obtain information on how the advisor voted their proxies.

Aperio has written agreements with its advisory and sub-advisory clients (each, a “Client”) that generally grant us authority to vote all proxies on behalf of the Client accounts we advise. In exercising voting authority, Aperio has adopted the principles of BlackRock’s proxy voting policy in the BlackRock Compliance Manual and, as a general matter, BlackRock’s Global Corporate Governance and Engagement Principles. Although aligned, Aperio’s proxy voting on behalf of Clients will not mirror, and may differ from, votes cast by BlackRock or other affiliated entities. Aperio will vote proxies for Clients in each Client’s best interest, following the proxy voting guideline profile for each portfolio, with some exceptions noted below. Clients who delegate proxy voting authority to Aperio may be able to select from either Aperio’s Governance Proxy Voting Guidelines (the “Governance Guidelines”), implemented by a third-party proxy service provider, Broadridge Financial Solutions (“Broadridge”), or select proxy voting guidelines from Institutional Shareholder Services (“ISS”), another third-party proxy service provider with whom Aperio has contracted. Aperio has established default proxy voting guidelines for its strategies, as described more fully below. Clients may generally opt for a non-default proxy policy option, with certain Wrap Program platform exceptions described below.

In exceptional cases where a Client requests that we vote in a specific way on a particular company issue, Aperio will make efforts to accommodate that request. Clients interested in creating custom proxy voting guidelines, which differ from Aperio’s currently available proxy voting guidelines, may consult with Aperio for development of alternative guidelines at potential additional cost.

Aperio, in its Form ADV Part 2A Brochure, discloses general information about these policies and procedures and how Clients may obtain information on how the Advisor voted their proxies, when applicable. At any time, a Client may contact Aperio to request information about how and whether it voted proxies for their securities.

2. Proxy Voting Committee

Aperio’s Proxy Voting Policy is evaluated and maintained by the Aperio Proxy Voting Committee, which oversees proxy voting activities for Clients who have delegated such authority to Aperio. The Proxy Voting Committee maintains this Proxy Voting Policy, monitors for potential conflicts of interest, and monitors our third-party proxy service providers. The Proxy Voting Committee must approve any changes to the Governance Guidelines, proxy voting guidelines offered, and the selection of other third-party proxy voting service providers.

The third-party voting services provide the reporting capability to verify that all proxies have been voted and are able to produce reports necessary to document that all electronic proxies have been voted and how they were voted.

Unless the power to vote proxies for a Client is reserved to that Client (or in the case of an employee benefit plan, the plan's trustee or other fiduciaries), the Proxy Voting Committee will designate one or more Aperio employees to (1) coordinate with our third-party proxy service providers to ensure voting of all proxies in line with each account's proxy guidelines profile for those accounts set up with those service providers; (2) ensure that paper ballots during the set-up period are voted in line with management; and (3) determine whether it is in the Client's best interest not to vote a proxy. This employee will report to the Proxy Voting Committee on a periodic basis outlining the issues faced in the above roles.

Periodically, the Proxy Voting Committee, through a designated person or persons, will ensure that a review is conducted to:

- Verify that all required proxies for the securities held in Clients' accounts managed by Aperio have been received and voted in a manner consistent with the Proxy Voting Policy and, as applicable, Client-selected proxy guidelines;
- Review the electronic files available from the voting agent to verify that records of the voting of the proxies have been properly maintained;
- Periodically deliver ballots for Client holdings, reconcile holdings and ballots, with reports presented to the Proxy Voting Committee, to reveal any process failures;
- Periodically perform a due diligence review of the third-party service providers to help ensure that all potential and actual material conflicts have been disclosed to Aperio; and
- Review proxy voting guidelines at least annually, as well as when known new issues arise or circumstances materially change.

3. Governance Proxy Voting Guidelines

Aperio has retained Broadridge to assist in coordinating and voting Client proxies for the Governance Guidelines, which is the default option for accounts that do not use Aperio's values-aligned strategies and do not select a proxy service, or Clients in certain Wrap Program platforms, where these guidelines have been selected by the Wrap Program Sponsor.

The Governance Guidelines use Broadridge's Shareholder Value guidelines as a basis, with additional modifications added by Aperio. The Governance Guidelines will generally cast proxy votes in favor of proposals that Broadridge believes may increase shareholder value and will generally cast proxy votes against proposals deemed to have the opposite effect. The Governance Guidelines tend to favor transparency of information and, therefore, typically favor resolutions that increase transparency of information. However, this preference is not applied in every instance. In cases where a resolution's adoption would involve significant company resources, for example, the Governance Guidelines are inclined to oppose resolutions even when framed as requests for reports, disclosure, or transparency. The Governance Guidelines will also vote against management when certain criteria are not met related to gender diversity on the board of directors and the compensation of named executive officers.

4. ISS proxy voting guidelines

Aperio offers Clients three proxy voting guideline options through ISS: the ISS SRI proxy voting guidelines (the “SRI Guidelines”); the ISS Catholic Faith-Based proxy voting guidelines (“Catholic Guidelines”), and Aperio’s custom Management Aligned proxy voting guidelines (“Management Aligned Guidelines”). For Clients who select Aperio’s Catholic Values strategies for their portfolios, the default proxy guidelines are the Catholic Guidelines. For all other values-aligned strategies, the default proxy voting guidelines are SRI Guidelines. Clients may generally select an alternative proxy guideline that differs from the default of their chosen strategy, including the Management Aligned proxy voting guidelines. In some cases, depending on the Client’s custodian and other factors, additional costs may apply.

The Management Aligned Guidelines may be selected by any Aperio Client. For Clients who select these guidelines, all proxies will be voted in alignment with the recommendations of company management, if such information is available to ISS. In instances where such information is unavailable, these ballots will not be voted.

ISS regularly updates its proxy guidelines, generally on an annual basis. Aperio reviews these guidelines at least annually to ensure they are in line with our Clients’ best interests.

5. Default proxy voting guidelines

Aperio generally establishes default proxy voting guidelines for its strategies, which will be used unless the Client selects another guideline. For non-values-aligned strategies, the default proxy voting guidelines are generally the Governance Guidelines. For Clients who select Aperio’s Catholic Values strategies, the default proxy voting guidelines are the Catholic Guidelines. For all other values-aligned strategies, the default proxy voting guidelines are the SRI Guidelines. For certain Clients, including some Wrap Program Clients, where implementing the foregoing default proxy voting guidelines is costly or operationally burdensome, Aperio may choose to implement different default proxy voting guidelines.

Clients may generally select an alternative to the default proxy guidelines. Certain Wrap Program Sponsors may limit Wrap Program Client choice in proxy guidelines.

6. Proxy voting implementation

Aperio instructs Client custodians to deliver proxy materials for accounts for which we have voting authority to our third-party proxy service providers. During the period when a Client’s custodian is setting up a connection with one of our proxy voting service providers (the “Proxy Setup Period”), Aperio may receive paper ballots. This Proxy Setup Period can be as short as a few days for some custodians or last several months or more for other custodians. During the Proxy Setup Period, Aperio will generally vote all paper ballots received in line with each issuer’s management recommendations, regardless of the proxy voting guidelines selected by the Client. Aperio has determined that this practice would be in our Clients’ best interest due to several factors, including, but not limited to, the risk of error in manually voting to align with different proxy voting guidelines and the fact that the majority of paper ballots received will tend to concern issues where voting in accordance with management will be consistent with the proxy voting guidelines selected by the Client.

Once the set-up process is complete, proxies and ballots are received electronically by our third-party voting services and voted according to the selected proxy guidelines. For the Governance Guidelines, which are not fully automated, Aperio manages the electronic voting, including some manual voting for proxies that fall outside the automated process.

7. Conflicts of interest

Aperio's Proxy Voting Committee monitors for, and seeks to resolve, potential material conflicts ("Material Conflicts") in the course of proxy voting. Potential or actual conflicts of interest may arise in proxy voting due to business or personal relationships Aperio or BlackRock maintains with persons having an interest in the outcomes of certain votes. This can include Aperio, BlackRock and/or its affiliates, Aperio or BlackRock employees, or any service providers or their employees. For example, Aperio or its supervised persons¹ may have a business or personal relationship with other proponents of proxy proposals, shareholder advocacy groups, participants in proxy contests, corporate directors, or candidates for directorships. If, at any time, Aperio and/or a third-party service provider becomes aware of any type of potential or actual conflict of interest relating to a particular proxy proposal, they will promptly report such conflict to the Proxy Voting Committee and Chief Compliance Officer or Head of Aperio Compliance. Conflicts of interest will be handled in various ways depending on their type and materiality.

Aperio's general policy is to vote proxies presenting potential Material Conflicts as it would vote any other proxy, in a manner consistent with its Proxy Voting Policy and the proxy voting guidelines selected by the Client. The Proxy Voting Committee will regularly review all voting of proxies identified as presenting potential Material Conflicts at its regularly scheduled meetings to seek to ensure adherence to this standard.

Where a proxy proposal raises a Material Conflict between Aperio's interests and a Client's interest, including a mutual fund Client, Aperio will generally resolve such a conflict in the manner described below with regard to the affected resolutions:

- Where the Client's chosen proxy voting guidelines outline the voting position, as either "for" or "against" such proxy proposal, voting will generally be in accordance with the proxy voting guidelines.
- Where the Client's chosen proxy voting guidelines outline the voting position to be determined on a "case by case" basis for such proxy proposal, or such proposal is not listed in the proxy voting guidelines, then one of the following methods will be selected, depending upon Aperio's analysis of the facts and circumstances of each situation:
 - Voting the proxy pursuant to Client direction to the extent that Aperio has discretion and ability to deviate from the proxy voting guidelines with respect to the proposal in question. In such instances, Aperio will endeavor to disclose the conflict to the relevant Clients and obtain their consent to the proposed vote prior to voting the securities.

The disclosure to the Client will include sufficient detail regarding the matter to be voted on and the nature of the conflict so that the Client will be able to make an informed decision regarding the vote. If a Client does not respond to such a conflict

¹ Supervised Persons includes any partner, officer, director (or other person occupying a similar status or performing similar functions), or employee of Aperio, or other person who provides investment advice on behalf of Aperio and is subject to the supervision and control of Aperio.

disclosure request or denies the request, Aperio will refrain from voting the securities held in that Client's account.

- In certain limited circumstances, Aperio may forward proxies for which it has a Material Conflict of interest to an identified, independent third party for review and recommendation. If Aperio receives such independent party's recommendation on a timely basis, it will vote the proxies accordingly. If the third party's recommendations are not received on a timely basis, Aperio will refrain from voting the securities held in that Client account.

Where BlackRock or a BlackRock affiliate is the subject of a shareholder proxy, it is anticipated that voting will generally be in accordance with the proxy voting guidelines. However, the Proxy Voting Committee will be informed of situations where this arises. For any proxies involving BlackRock or a BlackRock affiliate that require manual review and voting, the Proxy Voting Committee will, as a preferred option, hire an independent third party for review and recommendation on how to vote the proxies. If Aperio receives such independent party's recommendation on a timely basis, it will vote the proxies accordingly. If the third party's recommendation is not received on a timely basis, Aperio will refrain from voting the BlackRock or BlackRock affiliate securities held in that Client account.

8. Considerations in voting

These procedures are designed to ensure that Aperio votes every eligible share where reasonable to do so. In certain circumstances, however, Aperio may be unable to vote or may determine not to vote a proxy on behalf of one or more Clients. These circumstances may include, but are not limited to:

- Where a Client has informed Aperio that it wishes to retain the right to vote a proxy, Aperio will instruct the custodian to send the proxy material directly to the Client;
- Where Aperio deems the cost of voting would exceed any anticipated Client benefit (e.g., certain foreign proxies, or where additional information is required to submit the vote that is not readily available to Aperio);
- Where a proxy is received for a Client account that has been terminated with Aperio;
- Where a proxy is received for a security Aperio no longer manages (e.g., Aperio previously sold the entire position);
- For proxy ballots not received by Aperio during the Proxy Setup Period or during breaks in connectivity between the Client's custodian and the third-party proxy voting service provider; and
- When voting a proxy would restrict the ability to trade the shares.

Absent special circumstances, Aperio will exercise its proxy voting discretion in accordance with the Client-selected guidelines. However, it is intended that proxy guidelines will be applied with a measure of flexibility. Accordingly, except as otherwise provided in these policies and procedures, Aperio may vote a proxy contrary to the guidelines or not vote proxies, if it is determined that such action is in the best interests of the Client.

9. General voting policy for ERISA accounts

When voting proxies for ERISA Clients, Aperio will vote proxies for those accounts in accordance with the procedures outlined herein. Aperio will act in a prudent and diligent manner intended to enhance the economic value of the assets in the ERISA Client's account. Voting decisions for ERISA accounts must be based on the ultimate economic interest of the plan.

Given the above obligations and objectives, Aperio has established proxy voting guidelines with our third-party proxy voting services that reflect our views of proxy voting decisions that will most likely maximize the ultimate value of assets under management. Specific situations and resolution language will vary, and therefore, continuing judgment must be exercised in applying the guidelines.

10. Maintaining records

Broadridge and/or ISS (or any other third-party service provider Aperio selects) will retain a record of every proxy statement they receive for which Aperio/they have the authority to vote. Aperio will periodically archive proxy data from both proxy service providers into its books and records. Either Aperio and/or the third-party service providers will also retain: (1) a record of the matter(s) to which the proxy statement related, including either the proxy statement itself or the EDGAR reference; (2) whether they voted "yes," "no," "abstained," or "did not respond"; (3) a copy of any document they may have created that was material to making a decision how to vote proxies on behalf of a Client or that memorializes the basis for that decision; (4) a copy of each written Client request for information on how Aperio or a third-party service provider voted proxies on behalf of the Client; and (5) a copy of any written response by Aperio to any (written or oral) Client request for information on how Aperio voted proxies on behalf of the requesting Client.

All books and records required to be made and described above generally will be maintained and preserved in an easily accessible place for a period of not less than six years from the end of the fiscal year during which the last entry was made on such record, the first two years in an appropriate Aperio office or with Broadridge, ISS, or other appropriate third party.

11. Registered investment company Client records

Aperio will coordinate with all Clients registered as investment companies under the Investment Company Act of 1940 to provide information required to be filed by such funds on Form N-PX. Form N-PX will provide information concerning each matter relating to a portfolio security considered at any shareholder meeting with respect to which a mutual fund was entitled to vote. Forms N-PX are filed no later than August 31 of each year and cover all proxy votes with respect to which a mutual fund was entitled to vote for the period July 1 through June 30. Aperio will maintain and provide the following information concerning any shareholder meetings with respect to which a mutual fund it manages was entitled to vote:

- Issuer name, CUSIP, and ticker for the portfolio security;
- Shareholder meeting date and description of the matter voted;
- Whether the issuer or a shareholder put forth the matter that is the subject of the proxy;

- Whether and how the mutual fund voted; and
- Whether the mutual fund voted for or against management.

12. No authority to vote proxies

Certain Clients may elect to vote their own proxies. In these instances, the Client handles aspects associated with proxy voting directly and independent of Aperio, while Aperio is delegated the responsibility with respect to securities held in the Client's account to make all elections concerning any mergers, acquisitions, tender offers, bankruptcy proceedings, or other corporate actions except class action lawsuits.

13. Shareholder proposals submitted on behalf of Aperio Clients

Aperio Clients may choose to participate in a service that connects them with shareholder advocacy groups, where Aperio Clients may evaluate and submit shareholder proposals in line with their values. It is generally expected that if any Aperio Client sponsors a shareholder proposal that is the subject of a proxy vote (a "Sponsoring Client"), Aperio will vote such proposals consistently with the chosen proxy voting guidelines of each Aperio Client and the principles set forth in Aperio's Proxy Voting Policy, including its conflict-of-interest provisions. This could result in situations where Aperio votes on behalf of Aperio Clients (including a Sponsoring Client) against a Sponsoring Client's shareholder proposal.