

**Enclosed documents:**

- Form CRS
- ADV Part 2A
- ADV Part 2B

**FutureAdvisor, Inc.**  
**Form CRS Customer Relationship Summary, October 21, 2020**

FutureAdvisor, Inc. (“we”; “us”; “our”) is registered with the Securities and Exchange Commission (“SEC”) as an investment adviser. Brokerage and investment advisory services and fees differ and it is important for you to understand these differences. Free and simple tools are available to research firms and financial professionals at [Investor.gov/CRS](https://investor.gov/CRS), which also provides educational materials about broker-dealers, investment adviser, and investing.

**What investment services and advice can you provide me?**

We offer investment advisory services to certain retail investors by providing portfolio analysis and automated, goal-based investment management services through proprietary algorithms as part of our standard service (the “Managed Service”). The Managed Service includes personalized advice and daily automated investment monitoring, portfolio analysis, portfolio rebalancing, and tax-loss harvesting strategies based on financial and other information you provide to us.

The Managed Service is provided through an online advisory platform and through third-party financial institutions, including banks and other investment advisers (“Intermediaries”) with whom we have entered into agreements to offer advisory services. There are requirements for enrolling in the Managed Service, including having at least \$5,000 of investable assets. Where we provide the Managed Service through an Intermediary, the Intermediary may impose different account requirements.

Our investment advisory personnel are responsible for periodic monitoring of client accounts, including reviewing trading activity and other automated reports. Where we provide the Managed Service through an Intermediary, the Intermediary may also (?) conduct account reviews. Our Managed Service is “discretionary,” which means that we will execute transactions for your accounts based on the recommendations of our algorithms.

We primarily offer investment advice on the following investment categories: equities, emerging markets, fixed income, and real estate. In these categories, we recommend investments in exchange traded funds (“ETFs”), exchange traded notes (“ETNs”), mutual funds, and real estate investment trusts (“REITs”). Managed Service provided through Intermediaries employ investment models and other parameters that are chosen after consulting with the Intermediary.

The recommendations we provide are (i) not intended to comprise your complete investment program since we do not manage all of your assets in our Managed Service; (ii) highly reliant on the accuracy of the information you and your custodians provide us; and (iii) limited to the information that you provide us.

**More detailed information about our services is available in our Form ADV Brochure [here](#).**

**Conversation Starter. Ask your financial professional—**

- Given my financial situation, should I choose an investment advisory service? Why or why not?
- How will you choose investments to recommend to me?
- What is your relevant experience, including your licenses, education and other qualifications? What do these qualifications mean?

**What fees will I pay?**

**Management Fee.** Our standard management fee (“Management Fee”) is 0.50% of assets under management (“AUM”). Where our service is provided through an Intermediary, we receive a portion of advisory fees charged by the Intermediary to clients (usually between 0–0.25% of AUM). The Management Fee is generally paid monthly or quarterly in advance based on AUM as of the prior business day close of the relevant billing month or quarter, respectively.

Because we charge an asset-based fee, the more assets in your account, the more you will pay in fees, and we may therefore have an incentive to encourage you to increase the assets in your account. Where we provide our services through an Intermediary, we may separately receive negotiated implementation fees and fixed platform fees from the Intermediary.

You will incur brokerage costs and may incur other costs pursuant to the terms of your custodial and brokerage agreements. In addition, you may be charged “transfer out” fees by brokers when transferring

accounts from such brokers to add an account with our Managed Service.

*You will pay fees and costs whether you make or lose money on your investments. Fees and costs will reduce any amount of money you make on your investments overtime. Please make sure you understand what fees and costs you are paying.*

**For additional information about fees and costs, please see our Form ADV Brochure [here](#).**

**Conversation Starter. Ask your financial professional—**

- Help me understand how these fees and costs might affect my investments. If I give you \$10,000 to invest, how much will go to fees and costs, and how much will be invested for me?

***What are your legal obligations to me when acting as my investment adviser? How else does your firm make money and what conflicts of interest do you have?***

**When we act as your investment adviser, we have to act in your best interest and not put our interest ahead of yours. At the same time, the way we make money creates some conflicts with your interests. You should understand and ask us about these conflicts because they affect the recommendations we provide you. Here are some examples to help you understand what this means.**

We are a wholly owned subsidiary of BlackRock, Inc. (“BlackRock”), which is a global financial services organization. We may invest in mutual funds or ETFs for which BlackRock serves as investment adviser, such as iShares ETFs. As a subsidiary of BlackRock, when we invest in affiliated products, BlackRock receives advisory fees and other compensation from the affiliated product that are in addition to the fees we receive for the Managed Service. To help mitigate such potential conflicts of interest, we maintain policies and procedures that stress that investment decisions are to be made in accordance with the fiduciary duties owed to our clients and without consideration of BlackRock’s or our financial interests.

With respect to clients subject to the Employee Retirement Income Security Act of 1974, as amended (“ERISA”) or Section 4975 of the Internal Revenue Code of 1986, as amended (the “Code”), we may offset the Management Fee that we receive with respect to such clients in an amount that reflects at least the compensation that BlackRock affiliates receive from iShares ETFs or other BlackRock affiliated registered investment companies in which a client’s ERISA account is invested, or will comply with an exemption from the prohibited transaction rules in ERISA or the Section 4975 of the Code. We may also, in our sole discretion, waive or offset fees for clients not subject to ERISA or Section 4975 of the Code. For additional information, please see our Form ADV Brochure [here](#).

**Conversation Starter. Ask your financial professional—**

- How might your conflicts of interest affect me, and how will you address them?

For additional information, please see our Form ADV Brochure [here](#).

***How do your financial professionals make money?***

The compensation to our financial professionals includes a variety of cash and non-cash components. The principal components include a base salary, a performance-based discretionary bonus, participation in various benefits programs and one or more of the incentive compensation programs established by BlackRock.

***Do your financial professionals have legal or disciplinary history?***

Yes, disclosure related to disciplinary history of certain of our financial professionals is currently reported on Form U4. Visit [investor.gov/CRS](http://investor.gov/CRS) for a free and simple search tool to research us and our financial professionals.

**Conversation Starter. Ask your financial professional—**

- As a financial professional, do you have any disciplinary history? For what type of conduct?

For additional information about our services, or if you would like additional, up-to-date information or a copy of this disclosure, please call 1-800-975-7199.

**Conversation Starter. Ask your financial professional—**

- Who is my primary contact person? Is he or she a representative of an investment-adviser or a broker-dealer? Who can I talk to if I have concerns about how this person is treating me?

This page intentionally left blank

**Item 1 Cover Page****FutureAdvisor, Inc.**

400 Howard St.

San Francisco, CA 94105

+1 (800) 975-7199

[www.FutureAdvisor.com](http://www.FutureAdvisor.com)

March 27, 2020

**FORM ADV PART 2A: THE BROCHURE**

This brochure provides information about the qualifications and business practices of FutureAdvisor, Inc. ("FutureAdvisor" or the "Adviser"), an investment adviser registered with the United States Securities and Exchange Commission (the "SEC") under the Investment Advisers Act of 1940, as amended (the "Advisers Act"). Such registration does not imply a certain level of skill or training. If you have any questions about the contents of this brochure, please contact us at the telephone number provided above or by email at [compliance@futureadvisor.com](mailto:compliance@futureadvisor.com). The information in this brochure has not been approved or verified by the SEC or by any state securities authority.

Additional information about FutureAdvisor is available on the SEC's website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).

This brochure is for informational purposes only. It does not convey an offer of any type and is not intended to be, and should not be construed as, an offer to sell, or the solicitation of an offer to buy, any interest in any entity, investment, or investment vehicle.

## Item 2 Material Changes

### Material changes from July 17, 2018 to September 25, 2018:

- **Item 5: Timing and Payment of Advisory Fees** – Clarification that the Management Fee is based on net assets under management as of the prior business day close of the relevant billing period.

### Material changes from September 26, 2018 to October 22, 2018:

- **Item 5: Fees and Compensation** – Revised to include a description of management fees the Adviser receives in connection with services provided through an Intermediary.
- **Item 8: Methods of Analysis, Investment Strategies, and Risk of Loss** – Updated to describe risks and limitations associated with the Adviser's approach to tax loss harvesting, client-imposed "cash hold restrictions," and the Adviser's policies in the event of a serious market disruptions.
- **Item 12: Brokerage Practices** – Updated to describe that the Adviser requires clients to establish accounts at specific broker-dealers, and where the Adviser acts as a sub-adviser through an Intermediary, accounts may be required to use a broker that is designated by the account's primary investment adviser.

### Material changes from October 23, 2018 through March 29, 2019:

- **Item 8: Methods of Analysis, Investment Strategies and Risk of Loss** – Technology and Cybersecurity Risk: Information was added regarding technology and cybersecurity risk.
- **Item 10: Other Financial Industry Activities and Affiliations** – Affiliated Registered Investment Advisers: Information was added regarding the merger of Tennenbaum Capital Partners, LLC and its subsidiary SVOF/MM, LLC, with and into a wholly-owned indirect subsidiary of BlackRock, Inc.
- **Item 11: Code of Ethics, Participation or Interest in Client Transactions and Personal Trading** – Additional information was added regarding potential conflicts associated with certain proprietary transactions.

### Material changes from March 29, 2019 through March 27, 2020:

- **Item 8 Methods of Analysis, Investment Strategies and Risk of Loss** - Investment Strategy Risks: Information about certain investment strategy risks have been updated (e.g., index-related risk, market risk).
- **Item 10 Other Financial Industry Activities and Affiliations** - Information was included to further describe Client Portfolio Solutions, a business unit within BlackRock. Disclosure was added regarding BlackRock's acquisition of eFront Holding SAS ("eFront®"), a provider of investment management systems for alternative assets.
- **Item 11 Code of Ethics, Participation or Interest in Client Transactions and Personal Trading** - Information was included regarding the United Kingdom formally ceasing membership of the European Union on January 31, 2020 ("Brexit") and entering a transition period to last until December 31, 2020.

Any revisions made and not otherwise noted here were non-substantive and formatting changes.

## Item 3 Table of Contents

Item 1 Cover Page .....	i
Item 2 Material Changes .....	ii
Item 3 Table of Contents .....	iii
Item 4 Advisory Business .....	1
Item 5 Fees and Compensation .....	3
Item 6 Performance-Based Fees and Side-By-Side Management.....	5
Item 7 Types of Clients .....	6
Item 8 Methods of Analysis, Investment Strategies and Risk of Loss .....	7
Item 9 Disciplinary Information.....	16
Item 10 Other Financial Industry Activities and Affiliations .....	17
Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading .....	24
Item 12 Brokerage Practices .....	43
Item 13 Review of Accounts.....	44
Item 14 Client Referrals and Other Compensation .....	45
Item 15 Custody.....	46
Item 16 Investment Discretion .....	47
Item 17 Voting Client Securities .....	48
Item 18 Financial Information .....	49

## Item 4 Advisory Business

### OVERVIEW

FutureAdvisor is a Delaware corporation and an investment adviser registered with and regulated by the SEC under the Advisers Act. FutureAdvisor operates an Internet-based investment advisory business that uses algorithms and other technological means for the provision of investment advisory services to individual investors. FutureAdvisor is a wholly-owned subsidiary of BlackRock, Inc., which is publicly traded company. 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”). FutureAdvisor has been in business since May 2010. BlackRock is a global leader in investment management, risk management, and advisory services for institutional and retail clients. As used in this brochure, the term “the Adviser” refers to FutureAdvisor, except where the context otherwise requires.

The Adviser specializes in digital investment advisory services provided through its secure website and mobile application, and through third-party financial institutions, including banks and other investment advisers with whom the Adviser has entered into agreements to offer advisory or technological services (“Intermediaries”). The Adviser employs automated asset allocation, portfolio analysis, portfolio rebalancing, portfolio selection, and tax-loss harvesting strategies on behalf of its advisory clients and clients of Intermediaries. In general, the Adviser’s services and strategies are applied to all supported account-types linked or aggregated by a client through the Adviser’s website. The Adviser provides personalized goal-based advice and trade recommendations to each advisory client and Intermediary client based on information provided by the client during the sign up and account creation process, which process includes a series of questions including risk tolerance, age, and years to investment goal.

The Adviser bases its advice to clients on the investment objectives and restrictions set forth in the applicable investment management agreement, Intermediary services agreement, and terms of use (each, a “Governing Document,” and collectively, the “Governing Documents”).

The Adviser offers a discretionary advisory service (the “Managed Service”) for which it charges a management fee as described in Item 5 (“Fees and Compensation”) below. The Adviser also provides non-discretionary educational information to users of the Adviser’s website (the “Educational Service”) for which the Adviser receives no management fee.

### EDUCATIONAL SERVICE

The Educational Service is non-discretionary and includes algorithm-based analysis and educational information based on financial and other information provided by users. Educational Service users do not receive ongoing investment advisory or trading services for their accounts. The Adviser may provide the Educational Service in its entirety or in components to users.

### MANAGED SERVICE

The Managed Service provides algorithmic discretionary advisory services, based on financial and other information provided by the client. As part of the Managed Service, the Adviser provides clients automated portfolio optimization, rebalancing, tax efficient asset placement, and tax loss harvesting strategies. The Adviser may provide the Managed Service in its entirety or in components to clients where the Adviser is serving as a sub-adviser or where an Intermediary has introduced such clients to the Adviser.

The Adviser managed approximately \$1,134,771,771.00 in investment capital on a discretionary basis as of March 27, 2020.

### SERVICES OF AFFILIATES

BlackRock, Inc. operates its investment management business through the Advisers, as well as through multiple affiliates, some of which are also investment advisers registered with the SEC, one of which is a limited purpose national banking association chartered by the U.S. Department of Treasury’s Office of the Comptroller of the Currency, some of which are registered only with non-U.S. regulatory authorities and some of which are registered



#### **Item 4 Advisory Business**

with multiple regulatory authorities. The Advisers use the services of their broker-dealer affiliates which are registered under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and members of the Financial Industry Regulatory Authority (“FINRA”), as needed. For additional information, please refer to Item 10 (“Other Financial Industry Activities and Affiliations”) and Item 12 (“Brokerage Practices”) of this Brochure. The Advisers use the services of one or more BlackRock, Inc. subsidiaries or appropriate personnel of one or more BlackRock, Inc. subsidiaries for investment advice, portfolio execution and trading, operational support, and client servicing in their local or regional markets or their areas of special expertise without specific consent by the client, except to the extent explicitly restricted by the client in or pursuant to its IMA, or inconsistent with applicable law. Arrangements among affiliates take a variety of forms, including but not limited to dual employee, delegation, participating affiliate, sub-advisory, sub-agency, or other servicing agreements. This practice is designed to make BlackRock’s global capabilities available to an Adviser’s clients in as seamless a manner as practical within a varying global regulatory framework. In these circumstances, the Adviser with which the client has its IMA remains fully responsible for the account from a legal and contractual perspective. No additional fees are charged for the affiliates’ services except as set forth in the client’s IMA, governing documents and/or offering memorandum (“OM”).

## Item 5 Fees and Compensation

### ADVISORY FEES

The Adviser's compensation for providing the Managed Service includes an asset-based fee (a "Management Fee"), the terms of which are set forth in the applicable Governing Document. The Management Fee is generally no greater than 0.50% of assets under management. The Adviser may, in its sole discretion, change its Management Fee or charge fees that differ from its standard Management Fee. From time to time, the Adviser will offer promotions in the form of Management Fee waivers where new or existing Managed Service clients can receive some de minimis reward or reduced Management Fee for a period of time. Such promotions may run indefinitely or for a limited period of time. The Adviser reserves the right, in its sole discretion, and to the extent required by applicable law, to waive or offset fees for clients. The Adviser does not provide Educational Service users ongoing investment advisory or trading services and does not charge users an advisory fee for its Educational Service. In addition, where the Adviser provides the Managed Service to clients through an Intermediary pursuant to an investment advisory and technology services agreement, the Adviser receives a portion of advisory fees charged by the Intermediary to clients based on assets under management (the "Variable Fee"). The Variable Fee is negotiated between the Adviser and each Intermediary and generally ranges from 0-0.25% of assets under management. Investment by a client of the Adviser or a user of the Educational Service in an affiliated product may mean that BlackRock and the Adviser receive directly or indirectly advisory fees and other compensation from the affiliated product that are in addition to the fees it will receive from the Adviser's client or user of the Educational Service.

### TIMING AND PAYMENT OF ADVISORY FEES

The Management Fee is generally paid monthly or quarterly in advance based on net assets under management as of the prior business day close of the relevant billing month or quarter, respectively. The Adviser may, in its sole discretion, revise the frequency of Management Fee payment intervals from those that apply at the time a client subscribes to the Managed Service.

### OTHER FEES AND EXPENSES

Each Managed Service client will incur brokerage costs and incur other costs pursuant to the terms of their custodial and brokerage agreements in connection with the Managed Service. In addition, Managed Service clients may be charged "transfer out" fees by brokers when transferring their accounts from such brokers to their Managed Service account broker, or when transferring their accounts from the Managed Service broker after terminating the Managed Service. The Adviser is not involved in any way with the establishment of a Managed Service account broker's fee structures and receives no remuneration from any Managed Service account broker or from brokers who may charge the Adviser's Managed Service clients exit or "transfer out" fees. Please see Item 12 ("Brokerage Practices") of this brochure for a further discussion of the Adviser's brokerage practices. Where the Adviser provides the Managed Service to clients through an Intermediary pursuant to an investment advisory and technology services agreement, the Adviser generally receives implementation fees and fixed platform fees from the Intermediary (in addition to the Variable Fee referenced above). Such fees are negotiated between the Adviser and the Intermediary.

### FEE OFFSETTING

With respect to clients subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA") or Section 4975 of the Internal Revenue Code of 1986, as amended (the "Code"), the Adviser may offset the Management Fee that it receives with respect to such clients in an amount that reflects at least the compensation that BlackRock affiliates receive from U.S. iShares ETFs or other BlackRock affiliated registered investment companies in which a client's ERISA account is invested, or will comply with an exemption from the prohibited transaction rules in ERISA or the Section 4975 of the Code. The Adviser may also, in its sole discretion, waive or offset fees for clients not subject to ERISA or Section 4975 of the Code.

### ACCOUNT TERMINATION

The Adviser may terminate a user's access to the Educational Service or a client's access to the Managed Service if it believes the user or client is in breach of the Adviser's Governing Documents or other agreements with the user or client. The Adviser may also terminate a user's or client's access to the Educational Service or the Managed Service in the Adviser's sole discretion and without cause. If the Adviser or a client terminates access to the Managed Service, the Adviser will remit a pro-rated refund for the unused portion of the Management Fee to each client whose access

## **Item 5 Fees and Compensation**

to the Managed Service is terminated. For terminations that occur intra-month, the amount of the pro-rated refund will be rounded to the end of the month in which termination occurs such that a client will receive a refund of a full month in these situations.

## **Item 6 Performance-Based Compensation and Side-By-Side Management**

The Adviser does not charge performance-based advisory fees or receive incentive allocations. The Adviser's Management Fee is based on a fixed percentage of assets under management (with or without breakpoints).

Side-by-side management of separately managed account programs raises potential conflicts of interest where the Adviser's advisory fee arrangements, which are based on a fixed percentage of assets under management, vary by and for Intermediary programs. To help mitigate such potential conflicts of interest, the Adviser's policies and procedures stress that investment decisions are to be made in accordance with the fiduciary duties owed to each such account and without consideration of BlackRock's or the Adviser's (or either of their personnel's) pecuniary, investment, or other financial interests.

## **Item 7 Types of Clients**

The Adviser offers its advisory services to individuals and their related accounts, including individual retirement accounts, who are U.S. residents and maintain one or more accounts at a broker-dealer custodian.

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

### METHODS OF ANALYSIS AND INVESTMENT STRATEGIES

The Adviser utilizes proprietary, automated, computer algorithms which are designed to minimize costs and expenses associated with investing and achieving certain diversification requirements and requirements under its Governing Documents. The Adviser employs a variety of methods and strategies to make investment decisions and recommendations. The Adviser primarily offers investment advice on the following types of securities or securities-linked investments: equities, emerging markets, fixed income, and real estate, the exposure of which is obtained through investments and trading in exchange traded funds ("ETFs"), exchange traded notes ("ETNs"), mutual fund shares, and securities issued by real estate investment trusts ("REITs"). The Adviser may also invest in various other exchange-traded instruments pursuant to an investment sub-advisory agreement or other Intermediary agreement.

The Adviser's main sources of information for client account recommendations and transactions include data about mutual funds and ETFs provided by third party data vendors and client portfolio information from third party custodians.

The Adviser's investment strategies are primarily based on the following principles and strategies: (i) equities, as an asset class, generally have a high probability of outperforming other broadly accessible and liquid asset classes over a 10-year period; (ii) adjusted for fees, low cost passive approaches, implemented using low-cost index-based ETFs, generally outperform higher cost (i.e., non-index based) active funds; (iii) a bias towards value, implemented through value, small capitalization, and emerging markets stocks, generally has a higher probability of improving returns over the long-term; and (iv) a rules-based approach, using algorithms, to improving tax efficiency in buy/sell/hold decisions, generally can improve after-tax returns through the reduction and deferral of taxes.

The Adviser employs the following portfolio risk management strategies: (a) international diversification through low-cost ETFs to lower the volatility of returns; (b) using fixed income assets to hedge against equity drawdown (losses); and (c) using REITs to help manage inflation risk and minimally impact returns given the equity composition or REITs.

In certain Intermediary relationships, including sub-advisory relationships, the Adviser generally implements or employs the investment models, asset allocation, asset classes, list of eligible securities, and model parameters provided by the Intermediary.

### GENERAL RISK FACTORS

The operating results, financial condition, activities, and prospects of an investment by the Adviser on behalf of clients could be materially adversely affected by changes or instability in market, economic, political, technological, regulatory, and social conditions, and by numerous other factors outside the control of the Adviser.

In addition, the Adviser's investment strategies and/or investments are likely to be exposed to risks relating to weaknesses in various global economies and risks relating to the economic cycle. Numerous factors affecting the performance of the Adviser's investment strategies, such as market volatility, interest rates, commodity prices, equity prices, currency prices, credit spreads, and deflationary and inflationary pressures, are affected by the economic cycle and long-term economic trends. Predictions about financial market conditions and economic factors are highly uncertain, and the presence, duration, and impact of any market or economic conditions could have a materially adverse effect on the Adviser's investment strategies.

The Adviser may choose not to attempt to, or be unable to, hedge the risk exposures outlined in this brochure, and there can be no assurance that any hedging attempted by the Adviser would reduce applicable risks.

In recent years, disruptions in the global financial markets, the scope and severity of which are without precedent in recent financial history, have had materially adverse, and in certain cases catastrophic, consequences for the values, liquidity, and stability of certain types of investments, including the types of investments the Adviser's clients may pursue. Similar or dissimilar disruptions may occur in the future, and the duration, severity, and ultimate effect of such disruptions are difficult to forecast. These disruptions may lead to additional regulations or laws, which could

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

have a material adverse effect on the Adviser and its clients. In the event of a serious market disruption, the Adviser may, pursuant to policies and procedures it has established, delay or suspend order submissions in respect of client accounts. Such trading delays or suspensions may result in increased tracking error, lower returns and/or an inability of the Adviser to effect portfolio strategies such as tax loss harvesting and rebalances.

The models and techniques expected to be deployed by the Adviser are based on the information and data available to it as well as on its assumptions, assessments, and estimates, all of which are subject to error. As a result, such models and techniques may not account for all relevant factors or may not account for any such factors correctly. More generally, there can be no assurance that such models and techniques would be effective.

With respect to both its Educational Service and Managed Service, the Adviser does not make any assurance that its recommendations will result in profitable investing or avoidance of loss. Investing in securities involves risk of loss that clients should understand and be prepared to bear. The Adviser makes no guarantee or representation that its investment recommendations will be successful. Investment performance can never be predicted or guaranteed and the value of each client's account will fluctuate due to market conditions and other factors. Past performance is no guarantee of future results.

### **GENERAL RISK FACTORS; RELIANCE ON CLIENT INFORMATION**

For the Educational Service, the financial information and sample analysis provided by the Adviser are not intended to comprise any user's complete investment program because the Adviser is not necessarily aware of the user's aggregate investible and invested assets and does not manage the client's accounts and assets on a discretionary basis. For the Managed Service, the recommendations provided by the Adviser are not intended to comprise the client's complete investment program in cases where the Adviser is not permitted or enabled to manage the client's investible and invested assets held in employer retirements plans, which are subject to ERISA, or other accounts that the client has not aggregated for the Adviser's discretionary advisory services.

The Adviser's recommendations are highly reliant on the accuracy of the information provided to the Adviser by its clients and their custodians. If a client were to provide the Adviser with inaccurate information, this could materially impact the quality and applicability of the Adviser's recommendations. In addition, the Adviser's recommendations are limited in scope to the questions the Adviser asks through the Adviser's website and the information that clients provide to the Adviser. There may be additional information or other financial circumstances not considered by the Adviser based on the questions asked at the time a client establishes their investment goals that would inform the investment advice and recommendations provided by the Adviser. Clients are invited to call a licensed financial counselor to discuss any such additional information or other financial circumstances that a client believes may be relevant to the advice provided by the Adviser.

### **CASH HOLD RESTRICTION RISK**

In the event that a client imposes a "cash hold restriction" on one or more of their accounts, the Adviser may be unable to maintain portfolio asset allocations pursuant to assigned target weights. This may result in increased tracking error to the target portfolio(s) risk and return and higher transaction costs if the Adviser effects additional transactions in order to fulfill and maintain a client-requested cash balance. In addition, cash hold restrictions may precipitate additional realized gains on securities, thereby resulting in a higher tax burden for the client.

### **COMMODITY SECURITY RISK**

The Adviser may recommend or invest client assets in funds that invest in commodities linked securities (i.e., commodity-based ETFs and ETNs). Negative changes in a commodity market could have an adverse impact on the value of commodity-linked investments including companies that are susceptible to fluctuations in commodity markets. The value and/or liquidity of commodity-linked investments may be affected by changes in overall market movements, taxation, terrorism, nationalization or expropriation, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as, weather (e.g., drought, flooding), livestock disease, embargoes, international trade, tariffs and international economic, political and regulatory developments. The prices of sector commodities (e.g., energy, metals, agriculture and livestock) may fluctuate widely due to factors such as changes in value, supply and demand and governmental regulatory policies.

### CURRENCY RISK

Certain segments of the strategies deployed by the Adviser may maintain material unhedged exposure, whether intentional or unintentional, to various market movements, and other sources of risk, whether known or unknown. Currency risk is implicit in the Adviser's exposure to, without limitation, foreign bonds, foreign real estate, and foreign equity investments. Such sources of risk may include changes in current or future levels and/or volatility of interest rates, currency prices, commodity prices, sovereign credit spreads, corporate credit spreads, and equity and other markets, as well as correlations between any such risks. There can be no assurance that an investment of a portfolio managed by the Adviser would improve the risk/return profile of any client's or investor's overall portfolio or otherwise improve the performance of such portfolio, and such an investment may in fact result in material losses.

### DEBT MARKET CONDITIONS

The Adviser may recommend or invest client assets in funds that, in turn, invest in fixed-rate securities of varying maturities, including bonds or debentures issued by corporations, government agencies, and government-sponsored entities. In recent years, disruptions in debt markets have affected the price of, as well as clients' ability to make, certain types of investments, and there can be no assurance that these disruptions will not reoccur in the future. Any such disruptions may negatively affect a wide range of issuers and may increase the likelihood that such issuers will be unable to make principal and interest payments on, or refinance, outstanding debt when due. Moreover, the risk that such disruptions will affect an issuer's ability to pay its debts and obligations when due is enhanced if such issuer in turn provides credit to third parties or otherwise participates in the credit markets. In the event of a default by an issuer, the Adviser's clients could lose both capital invested in, and anticipated profits from, any affected investment. The reoccurrence of the events described in this paragraph, or other similar or dissimilar events, could have an adverse impact on the availability of credit to businesses generally and may lead to an overall weakening of the U.S. and other economies around the world. In addition, any disruptions of this kind may affect a client's ability to procure its own financing arrangements and/or the terms of any such arrangements.

### DEVELOPED COUNTRIES RISK

The Adviser may recommend or invest client assets in funds that to track the investment results of indices composed of developed market equities. Investment in developed countries may subject a portfolio to regulatory, political, currency, security, demographic, and economic risk specific to developed countries. Developed countries may be 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.

### EQUITY SECURITY RISK

The Adviser may recommend or invest client assets in funds that, in turn, track the returns of broad-based equity indices. Equity securities are subject to changes in value and their values may be more volatile than other asset classes. The value of equity securities varies in response to many factors. These factors include, without limitation, factors specific to an issuer and the industry in which the issuer's securities are subject to market risk. Historically, U.S. and non-U.S. stock markets have experienced periods of substantial price volatility and may do so again in the future.

The Adviser may invest in certain mutual funds and exchange-traded products ("ETPs"), including, but not limited to, registered investment companies such as ETFs. Investments in an ETP are subject to the fees and expenses of the ETP, which may include a management fee, other fund expenses and a distribution fee. The Investment Company Act of 1940, as amended, (the "Company Act") places certain restrictions on the percentage of ownership that a private investment fund has in a registered investment company. A client's positions in ETPs are subject to a number of risks associated with the management and market conditions of the ETP. These include (but are not limited to): (i) Delisting—An ETP may be delisted and liquidated at the discretion of its issuer. Should a client of the Adviser hold a position in an ETP when it is delisted, such client may be subject to costs associated with the ETP's liquidation, counterparty risk against the issuer, and additional taxes due to cash distributions from the liquidation. (ii) Market Maker Instability—The supply and demand of ETP shares are kept in balance by its authorized participants. The authorized participants of an ETP may, purposefully or by mistake, destabilize the supply-demand balance of an ETP, causing tracking error of the ETP to its constituent instruments that may negatively affect the value of an entity's



position in the ETP. (iii) Hidden Illiquidity—The liquidity of an ETP is determined not only by the ETP's own market liquidity but how easy or difficult it is to transact in the ETP's constituent instruments. If one or more of an ETP's constituent instruments becomes difficult to buy or sell, the ETP may become difficult to transact or experience tracking error that negatively affects the value of positions held in the ETP. Trading volume and liquidity may vary and may affect the ability to buy or sell ETP shares or cause the market price of ETP shares to experience significant premiums or discounts relative to value of the assets underlying the shares.

### **FIXED INCOME SECURITIES**

The Adviser may recommend or invest client assets in ETFs that, in turn, invest in fixed income investments that are subject to interest rate risk. Generally, the value of fixed income instruments will change inversely with changes in interest rates. As interest rates rise, the market value of such instruments tends to decrease. Conversely, as interest rates fall, the market value of such instruments tends to increase. This risk will typically be greater for instruments based on longer-term interest rates than for instruments based on shorter-term interest rates.

### **EMERGING MARKETS FIXED INCOME SECURITIES**

The Adviser may also recommend or invest client assets in emerging market fixed income securities. Evaluating credit risk for non-U.S. fixed income securities involves uncertainty because credit rating agencies throughout the world have different standards, making comparisons across countries difficult. Because investors generally perceive that there are greater risks associated with such emerging market instruments, the yields or prices of such fixed income securities may tend to fluctuate more than those for higher-rated fixed income securities.

### **INCOME RISK**

A portfolio's income may decline when interest rates decrease. During periods of falling interest rates an issuer may be able to repay principal prior to the security's maturity ("prepayment"), causing the portfolio to have to reinvest in securities with a lower yield, resulting in a decline in the portfolio's income.

### **INDEX RELATED RISK**

Index strategies 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 indices 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.

### **INTEREST RATE RISK**

The Adviser's investments on behalf of clients and methods may be subject to interest rate risk in connection with its investments in debt securities. Generally, the value of debt securities will change inversely with changes in interest rates. As interest rates rise, the market value of debt securities tends to decrease. Conversely, as interest rates fall, the market value of debt securities tends to increase. This risk will be greater for long-term securities than for short-term securities. Interest rate risks may include the directional movement in interest rates, correlation of rates, volatilities of interest rates.

### **INTERNATIONAL INVESTMENTS, INCLUDING EMERGING MARKETS**

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

The Adviser may recommend or invest client assets in funds that, in turn, invest in markets and/or issuers domiciled or operating outside the U.S., including in certain developing or emerging markets. International investing and trading involve special risks not typically associated with trading in investments relating to markets and/or issuers solely in the U.S. Depending on the particular countries and investments involved and on the nature of the particular transactions executed outside of the U.S., these special risks may include changes in exchange rates and exchange control regulations; downgrades in sovereign credit ratings; devaluations or non-convertibility of non-U.S. currencies; failures or disruptions in central banks, banking systems, markets, or financial exchanges; changes in monetary policies, interest rates, or interest-rate policies; political, social, and economic instability; adverse diplomatic developments; investment and repatriation restrictions; the nationalization and/or expropriation of assets; government intervention in the private sector; default by public and private issuers on their financial obligations (and limited recourse in connection with such defaults); the imposition of non-U.S. taxes; discrimination against foreign investors; and less liquid markets, less information, higher transaction costs, less information regarding legal and regulatory risks, less uniform accounting and auditing standards, greater price volatility, less reliable clearance and settlement procedures, and/or less government supervision of exchanges, brokers, market intermediaries, issuers, and other markets and market participants than is generally the case in the U.S.

Further, individual non-U.S. economies may differ favorably or unfavorably from the U.S. economy in various respects, such as pace of economic growth, rate of inflation, amount of capital reinvestment, degree of resource self-sufficiency, and balance of payments position. For example, inflation and rapid fluctuations in inflation rates have had and may continue to have very negative effects on the economies and securities markets (both public and private) of certain countries in which the Adviser may invest, and may therefore have a material adverse effect on the Adviser's investment methods.

The foregoing risks are likely to be more pronounced in connection with investments in countries with developing or emerging markets.

### **MARKET RISK**

The Adviser's investments on behalf of clients and methods will be subject to 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 indices 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.

### **REAL ESTATE SECURITIES RISK**

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

### **LIMITED DIVERSIFICATION; CORRELATION**

The portfolios of the Adviser's clients may be concentrated in particular countries, industries, exchanges, strategies, types of investments, issuers, companies, or other shared characteristics. Any such concentration would magnify risks associated with the investments held in such portfolios, including the risk of significant losses. In general, less

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

diversification will tend to expose the applicable client to greater volatility and/or risk than would be the case with a more broadly diversified portfolio. Even if a particular client's portfolio were diversified, however, there can be no assurance that such diversification would reduce volatility or risk.

Portfolios managed by the Adviser may achieve returns that are not correlated with various market indices or the returns of other investment vehicles. Further, it is anticipated that certain investments made by the Adviser will experience returns that individually or in the aggregate are correlated (possibly highly) with various market indices or other strategies, including various equity, debt, or other markets around the world.

Moreover, certain of the strategies deployed by the Adviser may maintain unhedged exposure, whether intentional or unintentional, to various market movements, style factors, and other sources of risk, whether known or unknown, while other strategies deployed on behalf of a client may have such unhedged exposures from time to time. Such sources of risk may include changes in current or future levels and/or volatility of interest rates, currency prices, commodity prices, sovereign credit spreads, corporate credit spreads, and equity and other markets, as well as correlations between any such risks. There can be no assurance that an investment of a portfolio managed by the Adviser would improve the risk/return profile of any client's or investor's overall portfolio or otherwise improve the performance of such portfolio, and such an investment may in fact result in material losses.

### TECHNOLOGY AND CYBERSECURITY RISK

BlackRock is dependent on the effectiveness of the information and cybersecurity policies, procedures and capabilities it maintains to protect the confidentiality, integrity, and availability of its computer and telecommunications systems and the data that resides on or is transmitted through them. An externally caused information security incident, such as a cyber-attack 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, BlackRock's increased use of mobile and cloud technologies could heighten these and other operational risks, as certain aspects of the security of such technologies may be complex, unpredictable or beyond BlackRock's control. BlackRock's 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 cyber-attacks, could disrupt BlackRock's 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 BlackRock to additional cyber- and information-security risks or system disruptions, for BlackRock, as well as for clients who rely upon, or have exposure to, BlackRock's systems. Although BlackRock has implemented policies and controls, and takes protective measures, to strengthen its computer systems, processes, software, technology assets and networks to prevent and address potential data breaches, inadvertent disclosures, cyber-attacks and cyber-related fraud, there can be no assurance that any of these measures prove effective.

In addition, due to BlackRock's interconnectivity with third-party vendors, advisers, central agents, exchanges, clearing houses and other financial institutions, BlackRock may be adversely affected if any of them are subject to a successful cyber-attack or other information security event, including those arising due to the use of mobile technology or a third-party cloud environment. BlackRock also routinely transmits and receives personal, confidential or proprietary information by email and other electronic means. BlackRock collaborates with clients, vendors and other third parties to develop secure transmission capabilities and protect against cyber-attacks. However, BlackRock cannot ensure that it or such third parties have all appropriate controls in place to protect the confidentiality of such information.

Any information security incident or cyber-attack against BlackRock or third parties with whom it is connected, or issuers of securities or instruments in which the client portfolios invests, including any interception, mishandling or misuse of personal, confidential or proprietary information, have 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

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

harm or legal liability. Furthermore, many jurisdictions in which BlackRock operates have laws and regulations relating to data privacy, cybersecurity and protection of personal information, including the General Data Protection Regulation, which expands data protection rules for individuals within the European Union and for personal data exported outside the European Union. Any determination of a failure to comply with any such laws or regulations could result in fines and/or sanctions against the BlackRock.

### OPERATIONAL RISK AND OPERATING EVENTS

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 the Adviser’s management of funds and client accounts (“Portfolios”). The Adviser 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 the Adviser to a client or fund when it is a mistake (whether an action or inaction) in which the Adviser has, in the Adviser’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: (i) the placement of orders (either purchases or sales) in excess of the amount of securities intended to trade for a Portfolio; (ii) the purchase (or sale) of a security when it should have been sold (or purchased); (iii) the purchase or sale of a security not intended for the Portfolio; (iv) the purchase or sale of a security contrary to applicable investment guidelines or restrictions; (v) incorrect allocations of trades; and (vi) transactions with a non-authorized counterparty. Operating Events can also occur in connection with other activities that are undertaken by the Adviser and its affiliates, 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.

The Adviser makes its determinations regarding Operating Events pursuant to its policies on a case-by-case basis, in its discretion, based on factors it considers reasonable, including regulatory requirements, contractual obligations, and business practices. Not all Operating Events will be considered compensable mistakes. Relevant factors the Adviser 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 and contact their program sponsors, Intermediary, or custodian for information on how Operating Events are corrected in such programs.

When the Adviser determines that reimbursement by the Adviser is appropriate, the client will be compensated as determined in good faith by the Adviser. The Adviser will determine the amount to be reimbursed, if any, based on what it considers 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 the Adviser considers relevant. Compensation generally will not include any amounts or measures that BlackRock determines are indirect, consequently, speculative or uncertain.

### RELIANCE ON DATA

The Adviser’s methods are highly reliant on data from third-party and other external sources. The Adviser will use its discretion to determine what data to gather with respect to any strategy or method, which may have an impact on trading decisions. In addition, due to the automated nature of such data gathering and the fact that much of this data comes from third-party sources, not all desired and/or relevant data will be available to, or processed by, the Adviser

## Item 8 Methods of Analysis, Investment Strategies and Risk of Loss

at all times. There is no guarantee that any specific data or type of data will be utilized in generating or making trading decisions on behalf of the clients, nor is there any guarantee that the data actually utilized in making investment and trading decisions on behalf of clients will be (i) the most accurate data available or (ii) free of errors.

### **RELIANCE ON TECHNOLOGY; BACK-UP MEASURES**

The Adviser'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 the Adviser on behalf of its 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 the Adviser directly and/or may affect one or more third parties that provide services to the Adviser and/or its 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 the Adviser's clients, including by preventing the Adviser from trading, modifying, liquidating, and/or monitoring its clients' investments. Moreover, any unauthorized access to the information systems of the Adviser or certain third parties could result in the loss, disclosure, or improper use of information relating to investments and/or personally identifiable information of the Adviser's clients; any such loss, disclosure, or use could have a material adverse effect on such clients or investors.

The Adviser maintains back-up 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 the Adviser's computer and/or telecommunications systems or operations, the Adviser hopes to resume trading, modifying, liquidating, and/or monitoring its clients' investments relatively promptly, subject to any circumstances that are outside the control of the Adviser. In the case of severe business disruptions (e.g., regional power outage or loss of personnel), the Adviser 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 the Adviser'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, the Adviser would be able to resume operations following a business disruption. Although the foregoing reflects the Adviser'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, the Adviser would be able to resume operations following a business disruption, and any such disruption could have a material adverse effect on the Adviser's clients.

### **ORDER EXECUTION RISK (MANAGED SERVICE CLIENTS)**

The Adviser is authorized by each Managed Service client to execute transactions on such client's behalf. The Adviser executes securities transactions as soon as reasonably practical after generating each trade recommendation. However, for numerous reasons there could be material delays in the amount of time it takes the Adviser, or the relevant executing broker, to execute each transaction. Any delays in the Adviser's executing transactions could reduce, perhaps materially, any profit earned by such clients or could cause a material loss.

The Adviser generally executes transactions by placing "market orders". A "market order" is an order to buy or sell an investment immediately at the best available current price. Because market orders are executed immediately (as opposed to an order that specifies a target price at which the security should be bought or sold and remains open for a longer period of time, during which the price of the security may or may not hit the target price) market orders bear inherent risks, particularly in times of high volatility and for investments that are thinly traded. This could result in the Adviser's clients paying a higher purchase price or receiving a lower sale price when the Adviser places market orders on the client's behalf. It could also result in higher execution fees charged by the brokers handling these transactions. The Adviser may, at its discretion use other order types and conditions (e.g., time-in-force), as appropriate, to achieve best execution.



### REGULATORY CHANGE RISK

It is possible that changes in applicable laws and regulations may affect the Adviser's operations. In addition, a number of substantial regulatory changes are pending or in the process of changing in certain markets. However, the consequences of additional regulation on the liquidity and the functioning of the markets in which the Adviser trades cannot be predicted and may materially diminish the profitability of client investments.

### TAX RISK

With respect to Managed Service, the Adviser's methods for achieving tax efficient portfolio management are only one of many methods that may comprise an individual's tax management plan. Clients should obtain tax advice, which advice is outside the scope of the services the Adviser provides, and may be necessary to minimize the impact of tax liabilities a client could incur. The tax-efficient investment strategies that the Adviser recommends or implements do not comprise a comprehensive tax management plan, are not intended to be tax advice, and the Adviser does not represent that any particular tax consequences will be obtained. Clients should consult with their personal tax advisors regarding the tax consequences of investing.

### TAX LOSS HARVESTING

Clients should confer with their personal tax advisor regarding the tax consequences of investing with the Adviser and engaging in the tax-loss harvesting strategy, based on their particular circumstances. Clients and their personal tax advisors are responsible for how the transactions in clients' account are reported to the Internal Revenue Service ("IRS") or any other taxing authority. The Adviser assumes no responsibility to you for the tax consequences of any transaction. The performance of the new securities purchased through for tax-loss harvesting purposes may have different expenses, returns, volatility and other characteristics relative to the securities that are sold for tax-loss harvesting purposes. The effectiveness of the tax-loss harvesting strategy to reduce the tax liability of a client will depend on the client's entire tax and investment profile, including purchases and dispositions in a client's (or client's spouse's) accounts outside of the Adviser and type of investments (e.g., taxable or nontaxable) or holding period (e.g., short-term or long-term). The utilization of losses harvested through the strategy will depend upon the recognition of capital gains in the same or a future tax period, and in addition may be subject to limitations under applicable tax laws, e.g., if there are insufficient realized gains in the tax period, the use of harvested losses may be limited to a \$3,000 deduction against income and distributions. Losses harvested through the strategy that are not utilized in the tax period when recognized (e.g., because of insufficient capital gains and/or significant capital loss carryforwards), generally may be carried forward to offset future capital gains, if any. The Adviser only monitors for wash sales for accounts managed by the Adviser. Clients are responsible for monitoring their and their spouse's accounts managed by investment advisers other than the Adviser to ensure that transactions in the same security or a substantially similar security do not create a "wash sale." A wash sale is the sale at a loss and purchase of the same security or substantially similar security within 30 days of each other. If a wash sale transaction occurs, IRS may disallow or defer the loss for current tax reporting purposes. More specifically, the wash sale period for any sale at a loss consists of 61 calendar days: the day of the sale, the 30 days before the sale, and the 30 days after the sale. The wash sale rule postpones losses on a sale, if replacement shares are bought around the same time. The Adviser may lack visibility to certain wash sales, should they occur as a result of external or unlinked accounts, and therefore the Adviser may not be able to provide notice of such wash sale.

### VOLATILITY RISK; VOLATILITY OF INVESTMENT RETURNS

The performance of investment strategies the Adviser deploys on behalf of its 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 the Adviser on behalf of other clients.

## **Item 9 Disciplinary Information**

There are no adverse disciplinary events affecting the Adviser that would be deemed material to a client's decision to use the Adviser's investment advisory services.

## 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. Potential conflicts of interest are also discussed in other governing documents, including but not limited to in an OM and/or IMA.

### AFFILIATED BROKER-DEALERS

BlackRock Investments, LLC ("BRIL") and BlackRock Execution Services ("BES") are indirect wholly-owned subsidiaries of BlackRock, Inc. registered under the Exchange Act.

- BRIL is primarily engaged in the distribution of BlackRock proprietary and third-party registered investment companies, including through wholesale marketing, to other registered broker-dealers, investment advisers, banks and other entities as well as through self-directed online treasury management platforms, marketing 529 municipal fund securities and the sale of certain other investment products to institutional investors. BRIL also acts as placement agent for certain Private Funds advised by the Advisers and BTC, and acts as the distributor for US iShares ETFs.
- BES provides account introduction and execution services to certain transition accounts of BlackRock Investment Advisers and affiliates that have been authorized or directed by the transition clients to use BES to the extent consistent with applicable laws.

### AFFILIATED REGISTERED INVESTMENT ADVISERS

The Advisers have affiliates that are direct or indirect wholly-owned subsidiaries of BlackRock, Inc., registered as investment advisers with the SEC. Additional information about the Advisers' and affiliated registered investment advisers is available on the SEC's website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov)

- BlackRock (Singapore) Limited
- BlackRock Advisors, LLC
- BlackRock Alternatives Management, LLC
- Global Energy & Power Infrastructure Advisors, L.L.C.<sup>1</sup>
- Global Energy & Power Infrastructure II Advisors, L.L.C.<sup>2</sup>
- BlackRock Asset Management North Asia Limited
- BlackRock Asset Management Schweiz, AG
- BlackRock Capital Investment Advisors, LLC
- BlackRock Capital Management, Inc.
- BlackRock Financial Management, Inc.
- BlackRock Fund Advisors
- BlackRock International Limited
- BlackRock Investment Management, LLC
- BlackRock Realty Advisors, Inc.
- SVOF/MM, LLC

### AFFILIATED COMMODITY POOL OPERATOR / COMMODITY TRADING ADVISOR

Certain Advisers serve as commodity pool operators and commodity trading advisors to accounts of clients.

---

<sup>1</sup> Global Energy & Power Infrastructure Advisors, L.L.C. is a relying adviser to BlackRock Alternatives Management, LLC

<sup>2</sup> Global Energy & Power Infrastructure II Advisors, L.L.C. is a relying adviser to BlackRock Alternatives Management, LLC



## Item 10 Other Financial Industry Activities and Affiliations

- BlackRock Advisors, LLC, BlackRock Financial Management, Inc., BlackRock Fund Advisors, BlackRock Investment Management, LLC ("BIM") and BlackRock Institutional Trust Company, N.A. ("BTC") are registered as commodity pool operators and commodity trading advisors.
- BlackRock International Limited is registered as a commodity trading advisor.
- iShares Delaware Trust Sponsor, LLC is registered as a commodity pool operator.
- BlackRock (Singapore) Limited, BlackRock Asset Management North Asia Limited, BlackRock Capital Investment Advisors, LLC, BlackRock Alternatives Management, LLC, BlackRock Capital Management, Inc., BlackRock Investment Management (UK) Limited, Global Energy & Power Infrastructure Advisors, L.L.C., Global Energy & Power Infrastructure II Advisors, L.L.C., SVOF/MM, LLC and Tennenbaum Capital Partners, LLC are exempt commodity pool operators and exempt commodity trading advisors.
- BlackRock Realty Advisors, Inc. is an exempt commodity trading advisor.

All of the non-exempt Advisers listed above are members of the National Futures Association (the "NFA"). The NFA and CFTC each administer a comparable regulatory system covering futures contracts, swaps and various other financial and derivative instruments in which certain investment management clients of BlackRock ("BlackRock Clients") invest.

### RELATIONSHIPS OR ARRANGEMENTS WITH AFFILIATES AND/OR RELATED PERSONS

BlackRock, Inc. is a publicly traded company incorporated in the State of Delaware. At December 31, 2019, The PNC Financial Services Group, Inc. (together with its subsidiaries, "PNC") held 22.0% of BlackRock's voting common stock and 22.4% of BlackRock's capital stock, which includes outstanding common and non-voting preferred stock.

From time to time, PNC Capital Markets, LLC participates in underwritings of initial common and/or preferred share offerings of BlackRock closed-end investment companies. Midland Loan Services, a division of PNC Bank, National Association, can act as primary servicer, master servicer and/or special servicer to BlackRock Clients.

BlackRock Advisors, LLC as of December 31, 2019 owned approximately 36.5% economic interest, and 4.9% voting interest in 52nd Street Capital Advisors LLC.

BTC, an indirect subsidiary of BlackRock, Inc., is a national banking association organized under the laws of the U.S. and operates as a limited purpose trust company. BTC provides investment management and other fiduciary services for client accounts, including trust accounts, common trust funds and group trusts maintained by BTC and other unregistered investment vehicles. BTC also provides securities lending services to certain registered and unregistered investment funds managed by BlackRock. BTC is registered as a Municipal Advisor with both the SEC and the Municipal Securities Rulemaking Board.

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in PennyMac Financial Services, Inc. ("PFSI"). PFSI is a publicly traded financial services firm (NYSE: PFSI) with a focus on correspondent lending and investing in and servicing residential mortgage assets. PFSI is the managing member of, and conducts most of its operations through Private National Mortgage Acceptance Company, LLC ("PNMAC"). PNMAC owns PNMAC Capital Management, LLC, an SEC registered investment adviser, that manages PennyMac Mortgage Investment Trust, a publicly traded REIT (NYSE: PMT), and other investment funds.

A subsidiary of BlackRock, Inc. and Chubb Limited ("Chubb") partially funded the creation of a reinsurance company, ABR Reinsurance Capital Holdings Ltd. (together with its wholly owned subsidiary ABR Reinsurance Ltd., "ABR Re"), pursuant to which BlackRock has a non-controlling ownership interest ("ABR Re Transaction"). Chubb is a publicly traded company whose securities are held in BlackRock Client accounts. The subsidiary of BlackRock, Inc. and Chubb have representation on the board of directors of ABR Re. Certain employees and executives of BlackRock have a less than 1/2 of 1% ownership interest in ABR Re. BFM manages the investment portfolio of ABR Re. ABR Re participates as a reinsurer with respect to a portfolio of reinsurance contracts written by subsidiaries of Chubb.

BlackRock, Inc. owns indirectly through BFM a non-controlling interest in a joint venture, Luminex Trading & Analytics LLC ("Luminex"). Luminex is an independent equity trading venue owned and operated by a consortium of leading investment management firms. It provides a platform for investment managers to trade large blocks of stock with other investment managers at a lower cost and uses transparent trading rules and protocols.

## Item 10 Other Financial Industry Activities and Affiliations

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in iCapital Networks (“iCapital”). iCapital is a financial technology platform that provides access to alternative investments for high-net-worth investors and their financial advisors. iCapital’s platform provides combination of due diligence capabilities, technology and relationships with alternative asset managers to facilitate investments in hedge funds and private equity funds, including BlackRock. Certain executives of BlackRock serve on iCapital’s Board of Directors. iCapital may serve as the managing member or general partner of, and/or other service provider to, certain investment funds managed by BlackRock.

BlackRock, Inc. indirectly owns a non-controlling interest in Acorns Grow Incorporated (“Acorns”). Acorns is a personal investment application that allows Acorn clients to automatically invest spare change in ETFs, including ETFs advised by a BlackRock Investment Adviser. BlackRock has an observer on Acorns’ Board of Directors.

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in Envestnet Inc. (“Envestnet”). Envestnet provides unified wealth management technology and products to financial advisors and other institutions. Their flagship product is an advisory platform that integrates the services and software used by financial advisors in wealth management. Certain funds recommended by Envestnet may be advised by a BlackRock Investment Adviser.

BlackRock, Inc. indirectly owns a non-controlling interest in Gallatin Point Capital LLC (“Gallatin”). A BlackRock subsidiary provides certain analytics and related services to Gallatin. Gallatin is an alternative investment firm. One of Gallatin’s founders is a consultant for BlackRock.

Through a holding company subsidiary, BlackRock, Inc. owns a minority position in Scalable Capital GmbH (“Scalable”). Scalable is a European robo-advisor that recommends or invests client assets in ETFs, including ETFs advised by a BlackRock Investment Adviser. BlackRock has a board member and an observer on Scalable’s Board of Directors.

Through a holding company subsidiary, BlackRock, Inc. owns a non-controlling interest in Managed Account Partners (Holdings) Limited, a company that provides managed account services through its wholly-owned subsidiary, Managed Account Partners Limited.

Cachematrix Holdings, LLC is an indirect, wholly-owned subsidiary of BlackRock, Inc., that together with its subsidiaries, provides technology to banks and other clients, where the purpose of such technology is to facilitate online trading in money market funds (managed by BlackRock, as well as third-party asset managers) and other products.

On September 21, 2018 BlackRock Mexico Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversion (“BlackRock Mexico Operadora”), based in Mexico, became an indirect, wholly-owned subsidiary of BlackRock, Inc. BlackRock Mexico Operadora, among other services, manages Mexican mutual funds and offers investment management services in Mexico.

BlackRock uses BES to provide account introduction and execution services on behalf of BlackRock’s Clients in accordance with policies and procedures that are designed to provide for compliance with the requirements of (and BlackRock’s duties under) the Advisers Act, Investment Company Act, the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), other laws and regulations and related relief, as applicable to the transaction. These policies and procedures, and the related laws and regulations, address the potential for conflicts of interest arising in connection with using an affiliate to provide trade execution services on behalf of such BlackRock Clients.

BIS Indices can be utilized by funds, accounts and other investment products and tools. When permitted, BIS Indices may include certain US Registered Funds advised by an Adviser as an index constituent. Certain of these indices are Underlying Indices of investment vehicles, including certain US Registered Funds advised by an Adviser. Please see Item 11 (“Management of Index Funds”) of this Brochure for more information.

### ***Securities Lending***

BlackRock, Inc. has three subsidiaries, BIM, BTC and BlackRock Advisors (UK) Limited that act as securities lending agents (collectively, “Lending Agents”). Lending on behalf of US Registered Funds is done by BTC and BIM pursuant to applicable SEC exemptive relief, enabling BIM and BTC to act as securities lending agent to, and receive a share of securities lending revenues from, such US Registered Funds. As part of its securities lending program, BlackRock indemnifies the US Registered Funds against a shortfall in collateral in the event of borrower default. BTC and BIM also bear all operational costs directly related to securities lending. BALUK acts as lending agent solely to non-U.S. entities.

Typically, BlackRock manages the fund or investment vehicle utilized for the reinvestment of cash collateral provided by securities borrowers to secure their obligations to the Lending Agents’ clients. The U.S. domiciled Lending Agents, based on the arrangement, typically will be authorized to reinvest cash collateral on a discretionary basis in accordance with the investment objectives, policies, and guidelines set forth in a securities lending agency agreement or similar arrangement between the Lending Agent and its client. If permitted pursuant to guidelines, cash collateral can be invested in money market funds or other cash management vehicles sponsored or advised by BlackRock pursuant to applicable legal restrictions. In such cases, the client may bear (and, accordingly, BlackRock will receive) any advisory or other relevant fees associated with such funds or cash management vehicles in addition to the fee paid for securities lending services. Securities lending fees are generally based on a percentage of securities lending revenue generated for each client, and are generally paid on a monthly basis in arrears.

When BlackRock acts as both Lending Agent and manager of cash collateral for the same client, there is a potential conflict of interest as a Lending Agent may have an incentive to increase the amount of securities on loan to maximize the amount of collateral it manages, instead of maximizing the overall revenue generated for the client from securities lending. Also, for certain clients, BlackRock provides an indemnity for any collateral shortfall in the event of a borrower’s default. This borrower default indemnification ultimately subjects BlackRock, Inc. to the risk of collateral shortfall upon a borrower default (“shortfall risk”). Management of the shortfall risk (including limits on asset type, collateral type and/or revenue profile) can affect the amount of securities lending activity the Lending Agents conduct at any given point in time, impacting clients differently by reducing the volume of lending opportunities for certain types of loans and increasing the volume of lending opportunities for other types of loans.

### ***Transition Management***

Certain BlackRock Investment Advisers offer transition management (“TRIM”) services to institutional clients seeking to transition their portfolio holdings from one investment manager to another and/or from one investment strategy to another. Such investment manager can include the Advisers or an affiliate. Relevant BlackRock Investment Advisers give advice to TRIM clients regarding trading strategies, including recommending trading baskets of securities rather than individual securities when deemed to be in the best interest of the TRIM clients and to the extent consistent with applicable laws. For TRIM services, fees typically are earned through trading commissions paid to an affiliated broker-dealer, BES, but in some cases are invoiced directly, or are expressed as a percentage of net assets under management, a flat-fee agreed upon with a TRIM client, or as a combination of such fees.

### ***BlackRock Solutions®***

Blackrock Solutions (“BRS”), a business unit within BlackRock, provides a broad range of risk management, investment accounting and trade processing tools to a variety of clients, including insurance companies, asset managers, pension funds, investment consultants, real estate investment trusts, commercial and mortgage banks, savings institutions, government agencies, and central banks. Using proprietary technology, analytics, and product knowledge, BRS is able to assist these clients in measuring financial risks in their portfolios and across their lines of business on both the asset and liability sides of their balance sheets. BRS makes available its proprietary enterprise trading system and risk reporting tools to other firms or companies. In 2019 BlackRock acquired eFront Holding SAS (“eFront®”), a provider of investment management systems for alternative assets. The eFront business is part of BRS and enables BRS to provide technology solutions across public and private assets.

### ***Client Portfolio Solutions***

Client Portfolio Solutions (“CPS”), a business unit within BlackRock, provides customized, multi-asset class services to institutional clients and intermediated retail clients, which may include market commentary, asset allocation,

## Item 10 Other Financial Industry Activities and Affiliations

analytics-based advice, model portfolio recommendations, and portfolio and risk management services. CPS generally utilizes BlackRock's internal resources, which may include, but is not limited to, its manager due diligence team for pre-investment due diligence and ongoing manager due diligence with respect to products and strategies managed by BlackRock Investment Advisers and non-affiliated investment advisers (such diligence, "Manager Research"), in order to offer clients a wide variety of investment options across asset classes, jurisdictions and liquidity profiles.

### *Method of Analysis:*

CPS' investment process for Multi-Asset Strategies begins with analysis of the client's objectives, constraints and preferences. CPS generates its portfolio construction using a combination of different asset allocation analyses, which may include strategic asset allocation, tactical asset allocation, and Manager Research and security selection.

- *Strategic Asset Allocation ("SAA")* - Designing a portfolio based on long-term investment beliefs and market condition assumptions which will track broad asset class indices or liability benchmarks.
- *Tactical Asset Allocation ("TAA")* – Blending diversified excess return sources, including factor and market timing, over a shorter-time horizon.
- *Manager Research and Security Selection* - Conducting pre-investment due diligence and ongoing due diligence with respect to products and strategies managed by BlackRock Investment Advisers and non-affiliated investment advisers.

CPS strategy and portfolio management teams seek to select the products and managers that correlate to the assumptions used to produce the SAA and reflect the group's investment insights and convictions, with consideration of applicable Manager Research, fees and diversification if applicable.

The applicable investment guidelines of a client mandate may authorize CPS to select or recommend: (i) investment strategies managed by BlackRock Investment Advisers, including Affiliated Funds, or (ii) investment strategies managed by non-affiliated investment advisers ("External Products"), or (iii) investment strategies managed by both the BlackRock Investment Advisers, including Affiliated Funds, and non-affiliated investment advisers, including External Products. To the extent permitted by a client's investment guidelines, where CPS implements certain types of investment on a client's behalf, including illiquid or alternative products, there may be an opportunity to negotiate the terms of the related investment documentation. When such products are serviced by BlackRock Investment Advisers, CPS will not negotiate such terms on the client's behalf.

If Manager Research services are provided, then before recommending or allocating client assets to actively managed investment strategies managed by portfolio manager teams within the BlackRock Investment Advisers or to non-affiliated investment advisers, CPS professionals will consider Manager Research including (i) due diligence at the enterprise level, which compares managers to peer firms, based on consideration of factors, including, without limitation, each firm's global compliance processes, corporate governance, and regulatory disclosure documents and (ii) investment due diligence for both BlackRock Investment Advisers and non-affiliated investment advisers, which considers such advisers' investment teams, investment philosophies and processes, investment performance and fee structures. In some cases, the due diligence process for BlackRock Investment Advisers and Affiliated Funds may be different than that for non-affiliated investment advisers and External Products with limited operational due diligence performed on certain offerings. Generally, with respect to portfolio manager teams within the BlackRock Investment Advisers or non-affiliated investment advisers that manage passive investment strategies, Manager Research performs operational due diligence on such managers and investment due diligence at the index platform level.

CPS will not review the entire universe of available External Products that may be appropriate for a CPS client account, but rather will only review a subset of such External Products that have been reviewed and approved by CPS as determined in its sole discretion. As a result, there may be one or more External Products that would be a more appropriate addition to the client account than the investment product selected by CPS, from the standpoint of

## Item 10 Other Financial Industry Activities and Affiliations

the factors that CPS has taken into consideration or other factors. Such External Products may outperform the investment product selected for the CPS client account.

In connection with a client account or an asset class within a client account that, pursuant to its guidelines invests only in Affiliated Funds, CPS will not review or consider External Products. As a result, there may be one or more External Products that would be a more appropriate addition to the CPS client account than the Affiliated Fund selected by CPS, from the standpoint of the factors that CPS has taken into consideration or other factors. Such External Products may outperform the Affiliated Fund selected for the CPS client account.

Where the terms of the governing agreement between CPS and its client grant CPS the authority to choose between products or strategies in a particular asset class managed by BlackRock Investment Advisers (including Affiliated Funds) and non-affiliated investment advisers, CPS faces conflicts of interest when it makes an investment decision or recommendation to allocate to one or more products or strategies managed by BlackRock Investment Advisers, in circumstances where BlackRock receives additional fees and/or other compensation in connection with such Affiliated Fund. Because BlackRock will on an overall basis receive higher fees, compensation and other benefits if the assets of a client account that pay two layers of fees (i.e., client accounts that do not invest on a fee-free basis or that do not receive an offset or credit) are allocated to Affiliated Funds rather than solely to External Products, CPS will be incentivized to recommend or allocate the assets of client accounts to Affiliated Funds. Furthermore, CPS will have an interest in allocating or recommending the assets of client accounts to Affiliated Funds that impose higher fees than those imposed by other Affiliated Funds or that provide other benefits to BlackRock. Correspondingly, CPS may be disincentivized to consider or recommend the removal of a client's assets from, or the modification of a client's allocations to, a BlackRock Investment Adviser or Affiliated Fund at a time that it otherwise would have where doing so would decrease the fees, compensation and other benefits to BlackRock, including where disposal of an Affiliated Fund by the client account would likely adversely affect the Affiliated Fund with respect to its liquidity position or otherwise.

In addition, the fee structure of certain client accounts (pursuant to which CPS may be required to compensate non-affiliated investment advisers out of the fee it receives from the client account) may incentivize CPS to select non-affiliated investment advisers with lower compensation levels (including non-affiliated investment advisers that discount their fees based on aggregate account size or other relationships) in order to increase the net fee to CPS, and not select other non-affiliated investment advisers that might also be appropriate for the client account. Fee breakpoints in a client account may also be affected by BlackRock's business relationships and the size of accounts other than a CPS client account and may directly or indirectly benefit BlackRock and other client accounts. CPS client accounts will not be entitled to any compensation with respect to such benefits received by BlackRock and other client accounts.

The terms of the governing agreement between CPS and its client may limit the client account to utilize only Affiliated Funds or only External Products or for particular asset classes or strategies within the client account. However, in other cases, the governing agreement provides that both Affiliated Funds and External Funds may be utilized for the client account or for particular asset classes or strategies within the client account. In such cases, the governing agreement may provide that the CPS client must consent to, or may permit the client to veto, CPS' investment in Affiliated Funds or strategies managed by BlackRock Investment Advisers. Alternatively, or in addition, the governing agreement between CPS and its client may incorporate portfolio targets where the portfolio has an expected minimum percentage of Affiliated Funds.

In some circumstances the governing agreement between CPS and its client may provide for a single layer of fees. In such circumstances CPS will have an incentive to select or recommend External Products as BlackRock does not receive additional fees from such client accounts in respect of investments in investment strategies managed by BlackRock Investment Advisers, including Affiliated Funds even though BlackRock is providing additional services to the client accounts. However, in such circumstances there may be countervailing considerations outside of the best interests of the client that may incentivize CPS to select or recommend investment strategies in BlackRock Investment Advisers including Affiliated Funds (e.g. increased assets under management) over External Products.

BlackRock has established information barriers between CPS and BlackRock's other product groups to restrict CPS' access to material non-public information. As a result of internal information barriers maintained by BlackRock



## Item 10 Other Financial Industry Activities and Affiliations

between CPS and the other investment teams, CPS is generally restricted from having access to material non-public information regarding Affiliated Funds in which CPS portfolios are invested. If CPS does not have access to certain information with respect to an Affiliated Fund, CPS may determine not to consider such investment for a client account or fund, which could adversely affect such client account or fund. Conversely, CPS may select an Affiliated Fund for the client account notwithstanding that certain information is unavailable to it. Any allocation to (or continued holding of) such an investment could adversely affect the client account.

### *Conflicts Relating to the Use of Tactical Tilts*

CPS may utilize tactical investment ideas derived from short-term market views ("Tactical Tilts") for client accounts. There are material risks related to the use of Tactical Tilts for client accounts. For example, the timing for implementing a Tactical Tilt or unwinding a position can materially affect the performance of such Tactical Tilt. For various reasons, other businesses within BlackRock may implement a Tactical Tilt or unwind a position for client accounts or on their own behalf at a different time than CPS does on behalf of CPS client accounts, or may implement a Tactical Tilt that is different from the Tactical Tilt implemented by CPS on behalf of CPS client accounts, which could have an adverse effect on CPS client accounts and may result in poorer performance by CPS client accounts than by BlackRock or other client accounts. In addition, unless otherwise agreed in the agreement governing the client account, CPS monitors a client account's Tactical Tilt positions only on a periodic basis. Therefore, changes in market conditions and other factors may result in substantial losses to a client account, and no assurance can be given that a Tactical Tilt position will be unwound before the client account suffers losses. The use of Tactical Tilts also may include the risk of reliance on models.

### *Conflicts Relating to the Use of Target Ranges and Rebalancing*

Certain client accounts, either generally or with respect to particular asset classes and/or product classes, may allocate to both Affiliated Funds and External Products in accordance with target allocations or target ranges. For these client accounts, the conflicts and risks described above with respect to allocating assets to both Affiliated Funds and External Products apply. In addition, to the extent a client designates target allocations or target ranges for Affiliated Funds and External Products within a client account or a particular asset class or strategy within a client account, allocations of a client account's assets may, from time to time, be out of balance with the client account's target ranges for extended periods of time or at all times due to various factors, such as fluctuations in, and variations among, the performance of the investment products to which the assets are allocated and reliance on estimates in connection with the determination of percentage allocations. Any rebalancing by CPS of the client account's assets may have an adverse effect on the performance of the client account. For example, the client account's assets may be allocated away from an over-performing investment product and allocated to an under-performing investment product, which could be harmful to the client account. In addition, the achievement of any intended rebalancing may be limited by several factors, including the use of estimates of the net asset values of the investment products, and, in the case of investments in investment products that are pooled investment vehicles, restrictions on additional investments in and redemptions from such investment products. Similarly, the use of target ranges in respect of product classes may result in a client account containing a significantly greater percentage of Affiliated Funds than would otherwise be the case, including during periods in which Affiliated Funds underperform External Products. In such circumstances, there may be one or more External Products that would be a more appropriate addition to a client account than the Affiliated Funds then in the client account. Such External Products may outperform the Affiliated Funds then in the client account.

### *Financial Markets Advisory*

BlackRock's Financial Markets Advisory Group ("FMA") works with financial institutions, official institutions and market intermediaries and utilities globally, and provides advice on balance sheet and capital markets exposures, as well as a wide range of other strategic, regulatory and operational challenges. FMA also delivers capital markets, risk management, and investment management capabilities to advise holders or prospective holders of complex, difficult to value or special-situation portfolios, including advice relating to the management, retention, restructuring, disposition and valuation of such assets.

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

The Adviser, as set forth in BlackRock policies and procedures, makes decisions for its clients in accordance with its fiduciary obligations to such clients. 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. PNC, one of the largest diversified financial services organizations in the U.S., has a significant economic interest in BlackRock; as a result, PNC may be treated as an “affiliate” of BlackRock.

When deemed appropriate, the Adviser in accordance with applicable laws, will purchase on behalf of or recommend to its clients, shares of mutual funds or ETFs for which a BlackRock Investment Adviser serves as investment adviser or sub-adviser, such as the U.S. iShares ETFs advised by BlackRock Fund Advisors (“Affiliated Funds”). As a subsidiary of BlackRock, the Adviser may face potential conflicts when recommending to its clients affiliated products with respect to which a BlackRock Affiliate receives fees and/or other compensation. In hindsight, circumstances could be construed that such recommendation conferred a benefit upon the affiliated product or the BlackRock Investment Adviser to the detriment of the Adviser’s client. Certain of these Affiliated Funds may be index funds. While attempting to have an index fund’s performance track its Underlying Index (subject to position limits and other constraints), it is possible that, consistent with applicable law, the BlackRock Investment Adviser trades in securities issued by an affiliate that are included in the index fund’s Underlying Index.

From time to time, BlackRock may, temporarily, in order to provide initial seed capital, hold a proprietary interest for a period of time after the inception of an affiliated product, including mutual funds and ETFs. When BlackRock disposes of their interest, the shares may be sold, directly or indirectly to clients of BlackRock. In addition, BlackRock’s disposition of its interest in the affiliated product may have an impact on the price or liquidity of the affiliated product being sold.

On occasion, BlackRock, including its affiliates, may invest in a company or otherwise seek to acquire a controlling or non-controlling 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. 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. PNC, one of the largest diversified financial services organizations in the U.S., has a significant economic interest in BlackRock; as a result, under certain regulatory regimes PNC may be treated as an “affiliate” of BlackRock.

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 BRS 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; additionally, PNC may act as, among other things, an investor, investment banker, commercial banker, research provider, investment adviser, custodian, administrator, trustee, financier, adviser, market maker, placement agent, proprietary trader, prime broker, commodity firm, pricing vendor, solicitor, broker, dealer, transfer agent, record keeper, alternative trading systems (“ATS”), electronic communication network (“ECN”), authorized participant for US iShares ETFs, derivative or swap counterparty, underwriter, municipal securities dealer, index provider, lender, futures commission merchant, or agent. Midland Loan Services, a division of PNC Bank, National Association, acts as primary servicer, master servicer, and/or special servicer to certain BlackRock Clients.

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

BlackRock, makes payments, out of its own profits or other sources, to affiliated or unaffiliated financial institutions, broker-dealers or other entities for distribution and sales support activities, including participation in marketing activities, educational programs, conferences, and technology development and reporting, or sub-accounting, administrative, shareholder processing or other services related to shares or shareholders of investment companies and other funds for which BlackRock provides investment advisory services, or for other services or activities that facilitate investments by BlackRock Clients in such funds. These payments would be in addition to any payments made or fees paid directly by the investment companies or other funds.

Each of BlackRock and PNC have direct and indirect interests in the global fixed income, currency, commodity, equity, and other markets in which BlackRock Clients invest. As a result, BlackRock and its directors, managers, members, officers, and employees (collectively, the “BlackRock Group”), as well as PNC and its respective other affiliates, directors, partners, trustees, managers, members, officers, and employees (collectively, “PNC Entities”), including those involved in the management, sales, investment activities, business operations, or distribution of BlackRock’s services and products, are engaged in businesses and have interests other than that of managing the assets of BlackRock Clients. These activities and interests include potential multiple advisory, transactional, financial, and other interests in securities, instruments, and companies that are directly or indirectly purchased or sold by or on behalf of BlackRock Clients by BlackRock and other persons.

As a result of the various activities and interests of the BlackRock Group and of PNC Entities as described below, BlackRock Clients could have multiple business relationships with members of the BlackRock Group and the PNC Entities and BlackRock Investment Advisers will, on behalf of BlackRock Clients, invest in, engage in transactions with, make voting decisions with respect to, or obtain services from entities for which the BlackRock Group and PNC Entities perform, or seek to perform, risk management, investment system outsourcing, financing, investment banking, lending, loan servicing, or other services. BlackRock Clients could also likely undertake transactions in securities in which one or more PNC Entities make a market or otherwise have direct or indirect interests. Although the relationships and activities of the BlackRock Group and the PNC Entities tend to offer attractive opportunities and services to BlackRock Clients, such relationships and activities may under certain circumstances give rise to potential conflicts of interest between or among the BlackRock Group and BlackRock Clients or have other negative effects on BlackRock Clients. Additionally, consistent with applicable law, BlackRock, PNC and their respective affiliates and personnel can receive greater compensation or greater profit in connection with an account for which BlackRock serves as an adviser than with an account advised by an unaffiliated investment adviser. Differentials in compensation result from, among other reasons, BlackRock paying a portion of its advisory fee to its affiliate or other compensation arrangements, including for portfolio management, brokerage transactions, or account servicing. Any differential in compensation creates a potential financial incentive on the part of BlackRock, PNC, their affiliates and personnel to recommend BlackRock over unaffiliated investment advisers, to effect transactions differently in one account over another, or to favor accounts in which they have more significant interests over those in which they have a lesser (or no) interest.

The 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 IMA, offering documents and/or governing documents of the investment funds managed or served by the various BlackRock Investment Advisers, which should be reviewed in conjunction with any investment in that fund. Given the interrelationships among the BlackRock Group and PNC Entities and the changing nature of such firms’ businesses, affiliations and opportunities,



## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

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 and those of PNC Entities in the provision of investment management and advisory services.

### **BLACKROCK'S GLOBAL PERSONAL TRADING POLICY AND OTHER ETHICAL RESTRICTIONS**

BlackRock's and the Advisers' directors, officers, and employees 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 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, and together with BlackRock's Code of Business Conduct and Ethics (referred to collectively 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' interests.

The Global Personal Trading Policy requires that employees at BlackRock conduct all of their personal investment transactions in a manner that is consistent with applicable federal securities laws, the BlackRock Global Insider Trading Policy and other policies of BlackRock. These requirements include reporting of personal investment accounts, pre-clearance of personal trading transactions, as well as reporting 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 also 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. The Global Personal Trading Policy will be made available to a BlackRock Client or prospective client upon request.

### **OUTSIDE ACTIVITIES**

Members of the BlackRock Group have a duty to act solely in the interest of BlackRock's Clients; as such 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

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

and its employees from making or soliciting U.S. political contributions for the purpose of obtaining or retaining business. The policy requires employees to pre-clear 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 non-partisan 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.

### **POTENTIAL CONFLICTS RELATING TO 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), as well as PNC Entities (to the extent they have independent relationships with BlackRock Clients), may give advice and take action with respect to their own account, any other BlackRock Client or, in the case of a PNC Entity, their own accounts or a client of a PNC Entity, 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, the PNC Entities 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 and PNC Entities, 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, or a PNC Entity, 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, or proprietary or client accounts of a PNC Entity, being relieved of obligations or otherwise have 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, or of the investments in a PNC Entity's proprietary or client account with respect to such companies. This may give rise to potential conflicts of interest.

### ***Financial or Other Interests in Underlying Funds***

Funds of Funds or other accounts managed by an Adviser often acquire a financial interest in certain underlying funds which generally, but not always will include direct or indirect receipt of a portion of any management or performance-based fees paid by the underlying funds to their respective general partner, managing member, or investment adviser. These interests can involve additional rights such as board representation or other means to influence the management or business decisions of such underlying fund. These relationships create the potential for conflicts of interest between Funds of Funds or accounts receiving such interests and other funds or accounts managed by an Adviser.

### ***Cross Trades***

In certain circumstances, BlackRock Investment Advisers effect purchases and sales between BlackRock Clients or clients of affiliates ("cross trades") if BlackRock Investment Advisers believe such transactions are appropriate based on each party's investment objectives and guidelines, subject to each client's governing documents, applicable law and regulation (but are not required to effect such cross-trades). In this regard, BlackRock maintains a cross-trading program covering various strategies pursuant to which securities are bought and sold among BlackRock Clients. Cross trades for accounts subject to ERISA are made in accordance with applicable U.S. Department of Labor ("DOL") regulations and relevant exemptions. Where a US Registered Fund participates in a cross trade, the Advisers will comply with the US Registered Fund's procedures adopted pursuant to Rule 17a-7 under the Investment Company Act and related regulatory authority. In certain circumstances, based on product and account type, an independent pricing source might be used. BlackRock Investment Advisers seek to assure that the price used in a cross trade is fair and appropriate, and in keeping with, or as required by the relevant regulations. In addition, a BlackRock Client account may enter into "agency cross transactions," in which a member of the BlackRock Group may act as broker for such BlackRock Client account and for the other party to the transaction, to the extent permitted under applicable

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

law and subject to the terms of the governing documents of such BlackRock Client account. In such cases, the relevant BlackRock Investment Adviser and such affiliate may have a potentially conflicting division of loyalties and responsibilities regarding both parties to the transaction. The authority of the BlackRock Investment Advisers to conduct such agency cross-transactions is subject to the right of the BlackRock Client account investors to revoke such authority by the affirmative vote of a majority of those BlackRock Client account investors who are not directly or indirectly affiliated with the relevant BlackRock Investment Adviser, voting as a single class or, in the case of certain BlackRock Client accounts, the approval of the respective advisory boards of such BlackRock Client accounts. To the extent that any provision of Section 11(a) of the Exchange Act or any of the rules promulgated thereunder is applicable to any transactions effected by the relevant BlackRock Investment Adviser, such transactions will be effected in accordance with the requirements of such provisions and rules.

### ***Inconsistent Investment Positions and Timing of Competing Transactions***

From time to time, BlackRock takes an investment position or action for one or more accounts that is different from, or inconsistent with, an action or position taken for one or more other accounts having similar or differing investment objectives, resulting in potential adverse impact, or in some instances benefit, to one or more affected accounts. For example, a BlackRock Client may buy a security and another BlackRock Client may establish a short position in that same security. The subsequent short sale could result in a decrease in the price of the security which the first BlackRock Client holds. Conversely, a BlackRock Investment Adviser may establish a short position in a security for a BlackRock Client and another BlackRock Investment Adviser may buy that same security for a different BlackRock Client. The subsequent purchase may result in an increase of the price of the underlying position in the short sale exposure to a BlackRock Client's detriment. Similarly, transactions in investments by one or more BlackRock Clients and members of the BlackRock Group may have the effect of diluting or otherwise disadvantaging the values, prices or investment strategies of another BlackRock Client, particularly, but not limited to, in small capitalization, emerging market, or less liquid strategies. This may occur when portfolio decisions regarding a BlackRock Client account are based on research or other information that is also used to support portfolio decisions for other client accounts. When one BlackRock Investment Adviser implements a portfolio decision or strategy ahead of, or contemporaneously with, similar portfolio decisions or strategies of another BlackRock Investment Adviser (whether or not the portfolio decisions emanate from the same research analysis or other information), market impact, liquidity constraints, or other factors could result in one or more BlackRock Clients receiving less favorable trading results, the costs of implementing such portfolio decisions or strategies could be increased or such BlackRock Clients could otherwise be disadvantaged. On the other hand, potential conflicts also arise when portfolio decisions regarding a BlackRock Client benefit other BlackRock Clients, for example, where the sale of a long position or establishment of a short position for a BlackRock Client decreases the price of the same security sold short by (and therefore benefit) a BlackRock Group member or other BlackRock Clients, or the purchase of a security or covering of a short position in a security for a BlackRock Client results in an increase in the price of the same security held by (and therefore benefit) a BlackRock Group member or other BlackRock Clients.

Under certain circumstances, if a BlackRock Client (or a group of BlackRock Clients) invests in a transaction in which one or more other BlackRock Clients are expected to participate, or already have made or will seek to make, an investment, such BlackRock Clients (or groups of BlackRock Clients) may have conflicting interests and objectives in connection with such investments, including with respect to views on the operations or activities of the portfolio company involved, the targeted returns from the investment and the timeframe for, and method of, exiting the investment. For example, the BlackRock Investment Advisers' decision on behalf of other client accounts to sell, redeem from, or otherwise liquidate a security in which a BlackRock Client account is invested may adversely affect such BlackRock Client account, including by causing such investment to be less liquid or more concentrated, or by causing such BlackRock Client account to lose the benefit of certain negotiated terms. Conflicts will also arise in cases where different BlackRock Clients (or groups of BlackRock Clients) invest in different parts of an issuer's capital structure, including circumstances in which one or more BlackRock Clients own private securities or obligations of an issuer and other BlackRock Clients own public securities of the same issuer. For example, a BlackRock Client (or group of BlackRock Clients) acquiring a loan, loan participation, or loan assignment of a particular borrower in which one or more other BlackRock Clients have an equity investment. In addition, different BlackRock Clients investing in securities of an issuer that have different voting rights, dividend or repayment priorities or other features that could be in conflict with one another. In negotiating the terms and conditions of any such investments, or any subsequent amendments or waivers, the BlackRock Investment Advisers' interests, BlackRock Client (or group of BlackRock Clients) interests, and/or the interests of one or more other BlackRock Clients could conflict. If an issuer in which a

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

BlackRock Client (or group of BlackRock Clients) and one or more other BlackRock Clients hold different classes of securities (or other assets, instruments or obligations issued by such issuer) encounters financial problems, decisions over the terms of any workout will raise conflicts of interest (including, for example, conflicts over proposed waivers and amendments to debt covenants). For example, a debt holder who could be paid in full likely will be better served by a liquidation of the issuer, whereas an equity holder or junior debt holder would be better served by a reorganization that holds the potential to create value for the equity holders. Any of the foregoing conflicts of interest will be discussed and resolved on a case-by-case basis. Any such discussions will take into consideration the interests of the relevant BlackRock Clients, the circumstances giving rise to the conflict and applicable laws. When considering whether to pursue applicable claims on behalf of BlackRock Clients, BlackRock considers various factors, including the cost of pursuing the claim and the likelihood of the outcome, and may not pursue every potential claim. BlackRock may elect not to pursue a claim on behalf of a BlackRock Client, rely on third parties to pursue such claim, actively or otherwise, on BlackRock's behalf or otherwise rely on alignment with other third parties to act on behalf of a class of securities or tranche of loans held by the applicable BlackRock Client. BlackRock Clients (and investors in Private Funds) should be aware that conflicts will not necessarily be resolved in favor of their interests. There can be no assurance that any actual or potential conflicts of interest will not result in a particular BlackRock Client or group of BlackRock Clients receiving less favorable investment terms in certain investments than if such conflicts of interest did not exist.

Similarly, BlackRock Investment Advisers advise entities regarding estimated valuation, risk management, transition management, and potential restructuring or disposition activities in connection with their proprietary or client investment portfolios. Such activities create potential conflicts of interest, as BlackRock, on behalf of BlackRock Clients, may seek to purchase securities or other assets from the foregoing portfolios and may engage, without limitation, in related activities to bid down the price of assets in such portfolios, which may have an adverse effect on those portfolios.

### ***Conflicts Relating to Portfolio Management of Various Accounts***

BlackRock Investment Advisers make decisions for BlackRock Clients based on the investment mandates selected by such BlackRock Clients. In doing so, as a result of similarities or differences in such mandates or otherwise, BlackRock Investment Advisers have potential conflicts in connection with the investments of, and transactions effected for, BlackRock Clients, including in situations in which members of the BlackRock Group have a pecuniary or investment interest. Certain clients are limited by rules issued by regulators or self-regulatory organizations, such as short sale limits and trading halts. For additional information regarding conflicts relating to side-by-side management, please refer to Item 6 ("Performance-Based Compensation and Side-By-Side Management") and "Side-By-Side Management" in Item 11 ("Code of Ethics, Participation or Interest in Client Transactions and Personal Trading") of this Brochure.

### **SIDE-BY-SIDE MANAGEMENT**

Side-by-side management by BlackRock Investment Advisers of US Registered Funds, separate accounts, institutional accounts, SMA Program accounts, Private Funds and collective trust funds also involves potential conflicts of interest, including those associated with any difference in fee structures, as well as other pecuniary and investment interests the BlackRock Group may have in an account managed by BlackRock. US Registered Funds and SMA Program accounts, for example, generally pay management fees based on a fixed percentage of assets under management, whereas institutional accounts and Private Funds often have more varied fee structures, including a combination of asset- and performance-based compensation. The prospect of achieving higher compensation from one client or account than from another results in a potential incentive for the applicable BlackRock Investment Adviser to favor the higher paying client or account when, for example, placing securities transactions that the applicable BlackRock Investment Adviser believes could more likely result in favorable performance or engaging in cross trades. Similarly, other incentives include where BlackRock or its affiliates or employees have a significant proprietary investment in a fund or account, and where a BlackRock Investment Adviser has an incentive to favor such a fund or account to the detriment of other funds or accounts. BlackRock's policies and procedures state that investment decisions are to be made without consideration of BlackRock's or its employees' pecuniary or investment interests but, instead, in accordance with BlackRock's or an Adviser's (or either of their personnel's) fiduciary duties to its client accounts. For additional information regarding side-by-side management, please refer to Item 6 ("Performance-Based Compensation and Side-by-Side Management") of this Brochure.

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

In certain situations, a BlackRock Investment Adviser can influence the structure of an underlying portfolio investment for tax purposes. Such structuring may not benefit all accounts under management. The BlackRock Investment Adviser will seek to structure the underlying portfolio in a way that is fair under the circumstances but there is no guarantee a particular client account will not be harmed. Under certain circumstances, a BlackRock Investment Adviser is required to sell or exit an investment on behalf of a BlackRock Client at the direction of the BlackRock Client or due to a need for liquidity of a BlackRock Client, so as to meet the ongoing obligations of the BlackRock Client. Such transactions potentially are not in the best interests of all BlackRock Clients and could result in a reduced sales price from current market values.

### **MANAGEMENT OF INDEX FUNDS**

BlackRock provides investment advisory services to a series of US Registered Funds and other pooled investment vehicles, including those commonly referred to as index funds, whose investment objectives are to provide investment results, before fees and expenses, which correspond generally to the price and yield performance of its Underlying Index. The Underlying Index generally is developed by an index provider that is not affiliated with BlackRock, but in some circumstances, BIS is the index provider. Index funds seek to track the performance of securities indices and may use the name of the index in the fund name. Index providers are paid licensing fees for use of their index or index name. Where BIS is the index provider, BlackRock may pay BIS licensing fees for use of a BIS Index or index name, but only when permissible under applicable law and exemptive relief.

While attempting to have an index fund's performance track its Underlying Index (subject to position limits and other constraints), it is possible that, consistent with applicable law, BlackRock may trade in securities issued by an affiliate that are included in the index fund's Underlying Index.

### **CERTAIN PRINCIPAL TRANSACTIONS IN CONNECTION WITH THE ORGANIZATION OF A PRIVATE FUND AND BLACKROCK US FUND**

Subject to the terms of the governing documents of the relevant BlackRock Client account, a member of the BlackRock Group may enter into "principal transactions" with a BlackRock Client account within the meaning of Section 206(3) of the Advisers Act in which such member of the BlackRock Group acts as principal for its own account with respect to the sale of a security or other asset to, or purchase of a security or other asset from, such BlackRock Client account. Principal transactions will be completed in compliance with applicable law and the terms of the governing documents of the relevant BlackRock Client account. In analyzing such principal transactions, the applicable BlackRock Investment Adviser will have a conflict between acting in the best interests of a BlackRock Client account and assisting itself or its affiliates by selling or purchasing a particular security.

On occasion and subject to applicable law and applicable governing documents, BlackRock or a related person (including its affiliates or its officers, directors or employees) purchases investments on behalf of and in anticipation of opening a Private Fund for investment. Such investments are transferred to the Private Fund. Generally, to the extent permitted by law, the Private Fund pays a market rate of interest and purchases the investment at cost. Since prior to transfer, such investments would be owned by BlackRock or a related person, conflicts of interest arise regarding the decision of whether or not to transfer such investments and the timing of such transfers. In addition, from time to time, BlackRock or a related person, in order to provide initial investment capital, holds a temporary proprietary interest for a period of time after the inception of a Private Fund. BlackRock's or the related person's disposition of such seed investment can have an impact on the value or liquidity of such Private Fund. More information on these arrangements can be found in the OM of the particular Private Fund.

From time to time, BlackRock or a related person, in order to provide initial investment capital, holds a temporary proprietary interest for a period of time after the inception of a BlackRock US Fund. When BlackRock or the related person disposes of their interest, the shares are generally not permitted to be redeemed in conjunction with a purchase by a client account for which BlackRock serves as advisor. BlackRock's or the related person's disposition of shares can have an impact on the price or liquidity of the shares being sold.

### **CERTAIN PROPRIETARY TRANSACTIONS BY BLACKROCK**

On occasion, BlackRock, including its affiliates, may invest in a company or otherwise seek to acquire a controlling or non-controlling 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



## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

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.

### **POTENTIAL RESTRICTIONS AND CONFLICTS RELATING TO INFORMATION POSSESSED OR PROVIDED BY BLACKROCK**

#### ***Availability of Proprietary Information***

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, PNC Entities, 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 Advisory Activities" in Item 11 ("Code of Ethics, Participation or Interest in Client Transactions and Personal Trading") of this Brochure. 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.

In addition, BlackRock Investment Advisers have no obligation to seek information from or share with any BlackRock Client any information, investment strategies, opportunities, or ideas known to members or affiliates of the BlackRock Group or developed or used in connection with other clients or activities. For example, it is possible that a client account invests in securities of companies with which an affiliate has or is trying to develop investment banking relationships, strategic partnerships, as well as securities of entities in which BlackRock, or one of its affiliates has significant debt or equity investments, in which an affiliate makes a market or in which an affiliate provides or anticipates someday providing research coverage. Such investments could cause conflicts between the interests of a client account and the interests of other clients of BlackRock or another affiliate, or cause BlackRock to be exposed to material non-public information about an issuer. Moreover, conflicts of interest could arise where members and personnel of the BlackRock Group, including BlackRock Investment Advisers' personnel or other BlackRock personnel advising or otherwise providing services to BlackRock Clients, have possession of information not available to all BlackRock personnel, and such personnel act on the basis of such information, or are required to refrain from acting, in ways that have adverse effects on BlackRock Clients.

#### ***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 non-disclosure agreement, as a result of serving on the board of directors of a company, serving on ad hoc or official creditors' committees and participation

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

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.

### **POTENTIAL CONFLICTS THAT ARISE WITH RESPECT TO SERVICES PROVIDED BY OR THROUGH VARIOUS BLACKROCK ENTITIES AND THE PNC ENTITIES**

Subject to applicable law and contractual arrangements, BlackRock Clients have a choice of engaging the securities and futures brokerage or dealer, custodial, derivatives, trustee, agency, mortgage servicing, lending, banking, advisory services and other commercial services of, or investing in one of a spectrum of investment products provided or sponsored by, another BlackRock Investment Adviser, other members of the BlackRock Group or a PNC Entity. Additionally, the BlackRock Investment Advisers rely on information from, or utilize the services provided by, such persons in managing a BlackRock Client's account. These services and certain other relationships among various members of the BlackRock Group, PNC Entities, and their respective subsidiaries and related persons, with or without respect to BlackRock Clients, give rise to potential conflicts of interest and could have potentially adverse effects on BlackRock Clients, described generally below.

When these persons provide such services to BlackRock Clients, and when BlackRock Clients invest in these investment products, relevant BlackRock entities or PNC Entities will be entitled, subject to applicable laws and contractual arrangements, to assess and retain fees and other amounts that they receive in connection with such products and services, without being required to account to any BlackRock Client. Additionally, subject to applicable laws and contractual arrangements, advisory fees, or other compensation payable by BlackRock Clients may not be reduced or offset by reason of receipt by BlackRock or a PNC Entity of any such fees or other amounts. In some instances, members of the BlackRock Group or a PNC Entity, when acting in such commercial capacities, take commercial steps in their own interests, which can be adverse to those of the BlackRock Clients. Except as otherwise

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

described herein, a BlackRock Investment Adviser may not take actions to negotiate terms between a BlackRock Client and BlackRock affiliates who provide these services, nor will the BlackRock Investment Adviser generally be responsible with respect to any losses or harms suffered by the BlackRock Client in connection with the BlackRock Client's use of services or products of such persons. Additionally, as with relationships with unaffiliated counterparties as described above, BlackRock Clients will be required to establish these business or commercial relationships with BlackRock affiliates, if at all, based on the BlackRock Client's own credit standing; such persons will not consider or rely on, and neither BlackRock nor any BlackRock Investment Adviser will be required to allow the credit standing of BlackRock or any BlackRock Investment Adviser to be used in connection therewith.

### ***Services Provided to a BlackRock Client by other BlackRock Investment Advisers or through Investments in a BlackRock Investment Product***

As discussed under "Services of Affiliates" in Item 4 ("Advisory Business") of this Brochure, BlackRock Investment Advisers use the personnel or services of other BlackRock entities in a variety of ways to make available BlackRock's global capabilities to BlackRock Clients. While BlackRock believes this practice is generally in the best interests of its clients, it can give rise to certain conflicts of interest, with respect to: (i) allocation of investment opportunities; (ii) execution of portfolio transactions; (iii) client servicing; and (iv) fees. Additionally, BlackRock Clients utilizing the services of BlackRock affiliates can be disadvantaged as a result of, among other things: (i) differences in regulatory requirements of various jurisdictions or organizations to which such BlackRock affiliates are subject; (ii) time differences; (iii) the terms of BlackRock's and such affiliates' internal policies and procedures, the client's investment advisory and other agreements; or (iv) the terms of the governing documents for a Private Fund, US Registered Fund or other investment product. BlackRock and its affiliates will seek to mitigate conflicts that arise by determining not to utilize the personnel or services of a particular affiliate in circumstances where it believes the potential conflict or adverse impact of ameliorative steps outweighs the potential benefits of the relationship.

### ***BlackRock's Registered Investment Companies, Private Funds and Other Investment Products***

BlackRock Investment Advisers, when appropriate and in accordance with applicable laws, investment objectives and guidelines, will purchase on behalf of BlackRock Clients, or will recommend to BlackRock Clients that they purchase, shares of Affiliated Funds. Certain BlackRock Investment Advisers that are domiciled outside of the U.S. serve as investment manager to ETFs domiciled outside of the U.S. (the "Foreign iShares ETFs"). Certain Foreign iShares ETFs may, from time to time, invest in the securities of the US iShares ETFs pursuant to a no-action letter issued by the SEC staff. In connection with any proxies solicited by the US iShares ETFs, the Foreign iShares ETFs, if required by applicable law, will either (i) seek instructions from their security holders and vote the proxies in accordance with such instructions ("pass through voting") or (ii) vote the securities in the same proportion as the vote of all other holders of such securities ("mirror voting" or "echo voting"). However, if these voting methods are unavailable, the Foreign iShares ETFs will either abstain from voting or withhold voting, or if a quorum is reasonably expected to be achieved without any action, refrain from voting. BlackRock Investment Advisers also invest BlackRock Client assets in other portfolios managed by BlackRock Investment Advisers (collectively, "Affiliated Accounts"). In the case of Funds of Funds or separate accounts managed in a similar style, this may take the form of an investment in other BlackRock Private Funds, or separate accounts managed by BlackRock affiliates.

With respect to Research and Digital Services, BFA includes (and, in certain instances, only includes) Affiliated Funds in research portfolios and digital tool outputs and analysis provided to Research and Digital Service Recipients.

The BlackRock Investment Advisers face potential conflicts when recommending the purchase of, or allocating the assets of, a BlackRock Client or Private Fund to one or more Affiliated Funds or Affiliated Accounts with respect to which BlackRock receives fees and/or other compensation. In hindsight, circumstances could be construed that such recommendation or allocation conferred a benefit upon the Affiliated Fund, Affiliated Account, or BlackRock Investment Adviser, to the detriment of the BlackRock Client or Private Fund, or vice versa.

As a shareholder in a pooled investment vehicle, a BlackRock Client will pay a proportionate share of the vehicle's fees and expenses. Investment by a BlackRock Client in an Affiliated Fund means that, subject to applicable laws and the terms of any such investment, BlackRock will receive directly or indirectly advisory fees and/or other compensation from the Affiliated Fund that are in addition to the fees it will receive from the BlackRock Client for managing the separate account or Private Fund. Similarly, BlackRock Clients who invest in an Affiliated Fund through



## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

a Private Fund or separate account managed by another BlackRock Investment Adviser are subject to advisory fees charged in connection therewith.

Some Affiliated Funds could be considered “start-up” or early stage funds with low assets under management. In addition, BlackRock might have its own seed capital invested in certain Affiliated Funds and/or could have discretionary control of a significant amount of BlackRock Client assets invested in such Affiliated Funds. Withdrawing seed capital or BlackRock Client assets from such Affiliated Funds could disadvantage the other BlackRock Clients and investors invested in the Affiliated Fund.

BlackRock Clients who fund their separate accounts with shares of Affiliated Funds may incur deferred sales charges upon the sale of such shares by BlackRock, which could result in compensation to BlackRock or an affiliate that is in addition to the fees BlackRock will receive for managing the separate account. BlackRock Clients should notify BlackRock if they do not want their separate account assets or Private Fund investments to be invested in Affiliated Funds. Certain BlackRock Clients can invest directly in certain Affiliated Funds or other US Registered Funds outside of their separate accounts without paying additional separate account management fees to BlackRock. Consistent with applicable law, BlackRock may waive fees and/or reimburse fees or expenses for some BlackRock Clients while not waiving fees or reimbursing fees or expenses for other BlackRock Clients.

The separate account management fees paid by certain retirement accounts (including certain accounts subject to ERISA) that invest in US Registered Funds from which BlackRock or an affiliate receives compensation (including management fees or fees paid pursuant to Rule 12b-1 under the Investment Company Act) will be reduced by the account's pro rata share of such compensation, to the extent required by applicable law. In certain circumstances, (e.g., at BlackRock's discretion, or if required by applicable contractual arrangements), BlackRock, in order to avoid duplication of advisory fees, will waive or credit all or a portion of its separate account investment management fee with respect to any assets of a BlackRock Client invested in shares of any such US Registered Funds or other pooled investment vehicles, or separately managed accounts of another BlackRock Investment Adviser. To the extent permissible under applicable law and the terms of any relevant contractual arrangement, BlackRock will institute, waive, or alter the terms of such a waiver from time to time in its sole and absolute discretion. Similar conflicts may apply where the fund or account is managed by a PNC Entity.

To the extent permitted by applicable laws, BlackRock and its affiliates make payments to financial intermediaries relating to the placement of interests in Private Funds. These payments are in addition to or in lieu of any placement fees payable by investors in those Private Funds. These payments, potentially significant to the financial intermediary and/or its representatives, can create an incentive for the financial intermediary to recommend the Private Fund over other products.

BlackRock, Inc. has entered into an arrangement with Markit Indices Limited, the index provider for certain underlying fixed income indexes used by US iShares ETFs, related to derivative fixed-income products that are based on such US iShares ETFs. For such fixed-income derivative products, BlackRock receives certain payments in connection with their development, for licensing intellectual property belonging to BlackRock and for facilitating data in connection with such fixed-income derivative products, which may include payments based on the trading volumes of, or revenues generated by, the derivative products. Funds and accounts managed by BlackRock Investment Advisers may from time to time transact in such fixed-income derivative products. BlackRock will waive any such payments with respect to such derivative products entered into by BlackRock advised funds and accounts. Trading activity in the derivative products could potentially lead to increased purchase activity with respect to the US iShares ETFs and increased assets under management for BFA.

Certain Private Funds, their Advisers and other BlackRock Investment Advisers may conform to regulations under the Bank Holding Company Act of 1956, as amended, resulting in limits or restrictions on investments in certain companies, and underlying funds. These potential restrictions are generally discussed in each applicable Private Fund's OM.

In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank”) was signed into law in the U.S. Dodd-Frank is expansive in scope and requires the adoption of extensive regulations and numerous regulatory decisions, many of which have been adopted. BlackRock has a conformance program to address certain

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

regulations adopted under Dodd-Frank, as well as financial reforms that have been introduced as part of the SEC's investment company modernization initiatives.

In addition, the SEC, banking regulators, the Internal Revenue Service and the CFTC each continue to review practices and regulations relating to the use of futures, swaps and other derivatives. Such reviews could result in regulations that restrict or limit the use of such products by funds or accounts. If adopted, these limitations could require BlackRock to change certain business practices or implement new compliance processes, which could result in additional costs and/or restrictions.

In the referendum held on June 23, 2016 the United Kingdom (UK) voted to leave the European Union (EU) following which a continued period of political and economic instability and volatility in the financial markets of the UK and more broadly across Europe has prevailed. On January 31, 2020 the UK formally ceased membership of the EU and entered a transition period lasting until December 31, 2020. During the transition period, the UK's existing arrangements with the EU remain unchanged while the terms of future arrangements between the UK and the EU are negotiated and agreed upon by December 31, 2020.

BlackRock has implemented a number of steps to prepare for various Brexit outcomes, including effecting organizational, governance and operational changes, applying for and receiving licenses and permissions in the EU, and engaging in client communications. Depending on the terms of the future arrangements between the UK and the EU, BlackRock may experience organizational and operational challenges, incur additional costs or face other execution risks in connection with its European operations beyond December 31, 2020.

### ***Rule 12b-1 Plans of BlackRock US Registered Funds and Additional Payments***

Some of the BlackRock US Funds (outside the US iShares ETF Complex) have adopted plans under Rule 12b-1 of the Investment Company Act (the "Plans") with respect to certain share classes that allow such BlackRock US Funds to pay distribution fees for the sale of its shares and shareholder servicing fees for certain services provided to its shareholders. The distribution fees are permitted to be used to pay an affiliate of BlackRock or others for distribution and sales support services provided and related expenses in connection with the sale of certain classes of shares of such BlackRock US Funds. Shareholder servicing fees payable pursuant to the Plans are fees payable for general shareholder liaison and other services and are not costs which are primarily intended to result in the sale of BlackRock US Funds' shares.

From time to time, BlackRock and its affiliates are permitted to pay affiliated and unaffiliated entities compensation for the sale and distribution of shares of the BlackRock US Funds or for other services to the BlackRock US Funds and their shareholders. These payments ("Additional Payments") are not made pursuant to the Plans or otherwise paid by a BlackRock US Fund. Such Additional Payments are made from BlackRock's own assets and are not an additional charge to a BlackRock US Fund or its shareholders. Additional Payments made to affiliated and unaffiliated entities are in addition to the Plan payments described in such BlackRock US Fund's prospectuses and/or statements of additional information. BlackRock can also make such Additional Payments with respect to products other than the BlackRock US Funds. In some circumstances, these such Additional Payments create a potential incentive for the entity receiving such payments, its employees or associated persons, to recommend or sell shares of a BlackRock US Fund or other fund or product. BlackRock or an affiliate of BlackRock also make payments for administrative and sub-transfer agency, operational and recordkeeping, networking and shareholder servicing with respect to the BlackRock US Funds (as disclosed in the BlackRock US Fund's prospectuses and statements of additional information).

### ***Use of PNC Entities to Provide Services or Execute Transactions***

Subsidiaries of PNC are registered broker-dealers (collectively, "PNC Broker-Dealers"). PNC Broker-Dealers effect securities transactions or other investment transactions as principal and agent for compensation for BlackRock Clients advised by BlackRock Investment Advisers in accordance with applicable law. These activities give rise to potential conflicts of interest. For ERISA specific information see "Considerations for ERISA Clients" below.

### ***Transactions in Securities, Futures and Similar Instruments***

BlackRock Investment Advisers, on behalf of BlackRock Clients, from time to time enter into relationships with, or engage in transactions with or through, various PNC Entities that act as agent or principal for compensation, including

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

securities, futures and/or options on futures contracts, foreign exchange transactions, swaps, and other derivatives transactions, either on a securities or commodities exchange or otherwise, subject to limitations and prohibitions applicable to certain transactions for accounts subject to ERISA and for accounts of US Registered Funds. For information specific to ERISA see “Considerations for ERISA Clients” below.

A PNC Broker-Dealer may effect, as broker or agent, futures and/or options on futures contracts on a commodity exchange for compensation for BlackRock Clients that are not subject to ERISA.

In other cases, BlackRock Investment Advisers place orders on behalf of BlackRock Clients with unaffiliated brokers or dealers to buy or sell securities for which PNC Entities act as a market maker. A buy or sell order placed by a BlackRock Investment Adviser on behalf of a BlackRock Client for execution on the floor of a securities or commodities exchange (or through an ECN, ATS, “dark pool” or other similar system) potentially will be matched with an order from another BlackRock Investment Adviser, a member of the BlackRock Group or a PNC Entity, or a client of a PNC Entity, without the BlackRock Investment Adviser’s knowledge. Similarly, from time to time in the ordinary course of business, an order to buy or sell an investment, contract or position placed by a BlackRock Investment Adviser with a PNC Broker-Dealer on behalf of a BlackRock Client potentially will be matched with an order from that PNC Broker-Dealer or a customer of such PNC Broker-Dealer, without the BlackRock Investment Adviser’s knowledge. However, BlackRock and each PNC Broker-Dealer are separate entities, and BlackRock has neither advance knowledge of, nor control over, the counterparty. Nonetheless, BlackRock seeks, to the extent practicable, to conduct such transactions in a manner consistent with BlackRock’s obligations to its clients and in compliance with applicable legal, regulatory, and contractual requirements. In connection with transactions in which a PNC Broker-Dealer will act as principal, the BlackRock Investment Adviser will disclose to that BlackRock Client that the trade will be conducted on a principal basis and obtain the approvals required by Section 206(3) of the Advisers Act. For US Registered Funds, PNC Broker-Dealers can effect securities transactions as agent for compensation for such US Registered Funds.

### ***Purchases of Unregistered Securities through a PNC Broker-Dealer***

From time to time, BlackRock Investment Advisers purchases on behalf of BlackRock Clients unregistered securities for which a PNC Broker-Dealer acts as placement agent. This results in additional fees paid to the PNC Broker-Dealer and/or assist the PNC Broker-Dealer in meeting its contractual obligations, although the BlackRock Investment Adviser will not take these factors into account when making the purchase.

### ***Purchases of Securities for which a PNC Broker-Dealer or an Affiliate is an Underwriter***

From time to time, BlackRock Investment Advisers may purchase, on behalf of BlackRock Clients, securities in offerings with respect to which a PNC Broker-Dealer serves as a lead underwriter, manager or member of the underwriting syndicate. Where permitted, the purchase may be made from a party that is a PNC Broker-Dealer. Where the purchase is made from an entity that is not a PNC Broker-Dealer, the PNC Broker-Dealer nevertheless may benefit from such transactions. All such transactions will be effected in accordance with applicable law. When a PNC Broker-Dealer is engaged in an underwriting or other distribution of securities or bank loans of a company, BlackRock Investment Advisers are prohibited, for certain types of BlackRock Clients, from purchasing or recommending the purchase of certain securities or bank loans of that company for such BlackRock Clients. Notwithstanding the circumstances described above, a client on its own initiative may direct BlackRock to place orders for specific securities transactions in a client account. Purchases for BlackRock Clients that are subject to ERISA are made in accordance with the provisions of the Exemption as described under “Considerations for ERISA Clients” below.

For US Registered Funds, when an affiliate, as defined under the Advisers Act or the Investment Company Act, is a member of the underwriting syndicate, the purchase of securities in the underwriting on behalf of the US Registered Fund will be in accordance with procedures adopted by the US Registered Funds’ boards of directors/trustees pursuant to Rule 10f-3 under the Investment Company Act.

### ***Borrowing or Lending Funds or Securities***

Each US Registered Fund, including the ETFs advised by a BlackRock Investment Adviser, relies on an exemptive order from the SEC permitting it to retain BTC or BIM, as applicable, as an affiliated securities lending agent for a fee as well as lend portfolio securities to affiliated borrowers. The lending agent fee paid to BTC or BIM is generally based on a share of the overall returns from securities lending. In connection with securities lending activities, BTC or BIM, as applicable, shall, on behalf of a US Registered Fund, invest cash collateral received by the US Registered Fund

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

for such loans, among other things, in a private or US registered money market fund or other cash management vehicle sponsored, advised or managed by a BlackRock Investment Adviser. If a US Registered Fund acquires shares in such private fund, cash management vehicle or affiliated money market fund, shareholders will bear both their proportionate share of the US Registered Fund's expenses and, indirectly, the expense of such other entities. Such shares will not be subject to a sales load, redemption fee, distribution fee or service fee, or in the case of the shares of an affiliated money market fund, the payment of any such sales load, redemption fee, distribution fee or service fee will be offset by the manager's waiver of a portion of its advisory fee.

### ***Pricing and Valuation of Securities and Other Investments***

In many cases, BlackRock's fees are based on the value and performance of the assets held in the client account. BlackRock generally does not price securities or other assets for purposes of determining fees. However, to the extent permitted by applicable laws, including ERISA, from time to time, BlackRock or an affiliate will be charged with the responsibility of, or have a role in, determining in good faith asset values with respect to BlackRock products or accounts and BlackRock, or such an affiliate, will be required to price a portfolio holding when a market price is not readily available or when BlackRock has reason to believe in good faith that the market price is unreliable. To the extent BlackRock's fees are based on the value or performance of client accounts, BlackRock would benefit by receiving a fee based on the impact, if any, of the increased value of assets in an account.

When pricing a security, BlackRock attempts, in good faith and in accordance with applicable laws, to determine the fair value of the security or other assets in question. BlackRock generally relies on prices provided by third-party pricing services, custodians, broker-dealers, index providers or other external sources for valuation purposes. When market quotations are not readily available or are believed in good faith by BlackRock to be unreliable, the security or other asset or liability is valued by BlackRock in accordance with BlackRock's valuation procedures. Valuation procedures for certain separate accounts and/or Private Funds are described in the relevant IMA, OM and/or other governing documents. With respect to Funds of Funds and other BlackRock products or accounts which invest in privately placed pooled investment vehicles managed by third parties and/or investments sponsored by such third-party managers, BlackRock generally relies on pricing information provided by the Private Fund or its manager or other service provider. While BlackRock expects that such persons will provide appropriate valuations, such persons face conflicts similar to those described above and certain investments can be complex or difficult to value. BlackRock may also perform its own valuation analysis, but generally will not independently assess the accuracy of such valuations. For certain clients, at the clients' request, BlackRock has agreed to provide "reasonable assistance" involving the valuation of securities. This typically does not include proactively communicating BlackRock's valuation judgments to such clients.

From time to time, BlackRock, an affiliate, or a PNC Entity will be engaged to provide valuation assistance to certain clients with respect to certain securities or other investments. Valuation recommendations made by BlackRock for a client account can differ from the valuations for the same securities or investments assigned by a client's custodian or pricing vendors, especially if such valuations are based on broker-dealer quotes or other data sources unavailable to the client's custodian or pricing vendors. In addition, BlackRock provides a variety of services to clients in connection with the evaluation of certain distressed securities or other assets, including advice relating to the management, retention, restructuring, disposition and valuation of such assets.

In certain instances described below, BlackRock, in good faith based on available information, will determine an asset's fair value using a variety of methodologies. Furthermore, in circumstances where material non-public information is available to one group at BlackRock but, consistent with BlackRock's compliance policies and procedures, is not available to all groups at BlackRock, asset valuations used for pricing of underlying investments can be inconsistent. Due to specific time and operational constraints related to the daily calculation of net asset value certain BlackRock-sponsored funds value certain assets that are held in other non-registered funds or other accounts using different pricing sources than are used by other funds and accounts. BlackRock's Global Valuation Methodologies Committee (the "GVMC") reports to and derives its authority from the Valuation Oversight Committee, which consists of senior members of RQA, BRS, Legal & Compliance and other groups at BlackRock. The GVMC is responsible for overseeing valuation and pricing issues impacting BlackRock and its clients, including the design and implementation of pricing controls and the development of valuation policies and procedures.

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

For certain assets that BlackRock manages on behalf of BlackRock Clients, pricing and valuation will be unavailable or unreliable, from time to time, due to market dislocations, loss of pricing coverage, or market-making activities by broker-dealers, mergers and liquidations of broker-dealers or pricing vendors that previously supplied pricing data, the distressed nature of certain forced asset sales due to deleveraging transactions, extreme market volatility in certain asset classes, uncertainty surrounding potential or actual government intervention in the markets for certain assets, and other factors that have diminished the timeliness, accuracy or reliability of asset price information. In such circumstances, a client's investments generally will be valued at fair value ("Fair Value Assets"). Fair Value Assets are valued by BlackRock in accordance with BlackRock's valuation procedures or, when held in a BlackRock-sponsored registered investment company, in accordance with valuation procedures approved by the investment company's board of directors/trustees. BlackRock may conclude that a market quotation is not readily available or is unreliable: (i) if a security or other asset does not have a price source (e.g., due to technology issues, lack of liquidity, etc.); (ii) if BlackRock believes a market quotation from a broker-dealer or other source is unreliable (e.g., where it varies significantly from a recent trade); (iii) where the security or other asset is thinly traded; (iv) where recent asset sales represent distressed sale prices not reflective of the price that a client would reasonably expect to receive from the current sale of that asset in an arm's-length transaction; or (v) where there is a significant material event subsequent to the most recent market quotation. BlackRock's good faith judgment as to whether an event would constitute a "significant event" likely to cause a material change in an asset's market price may, in hindsight, prove to be incorrect, and the fair value determination made by BlackRock may be incorrect as to the direction and magnitude of any price adjustment when compared to the next available market price. In circumstances where BlackRock typically relies on a valuation provided by a third party, if the third party fails to provide a valuation, or if BlackRock believes such valuation is not representative of fair value, BlackRock will determine fair value in good faith in accordance with its valuation policies and procedures.

On a date when the New York Stock Exchange ("NYSE") is open and the primary exchange on which a foreign asset is traded is closed, such asset will generally be valued using the prior day's price, provided that BlackRock is not aware of any significant event or other information that would cause such price to no longer reflect the fair value of the asset. In such case the asset would be treated as a Fair Value Asset.

BlackRock will submit its recommendations regarding the valuation and/or valuation methodologies for Fair Value Assets to BlackRock's GVMC or a subcommittee thereof. The GVMC or its subcommittee will accept, modify, or reject the recommendations. BlackRock's Pricing Group periodically endeavors to confirm the prices it receives from all third-party pricing services, index providers and broker-dealers, and, with the assistance of BlackRock's portfolio managers, to regularly evaluate the values assigned to the securities and other assets held by BlackRock Clients. The pricing of all Fair Value Assets is subsequently reported to the GVMC or a subcommittee thereof with appropriate oversight from the BlackRock's Valuation Oversight Committee and, in the case of assets held in BlackRock US Funds, reviewed and/or ratified by a BlackRock US Fund's board or a committee thereof.

When determining the price for a Fair Value Asset, BlackRock seeks to determine the price that a client would reasonably expect to: (i) receive upon the current sale of the security or asset; or (ii) pay to transfer the liability associated with the security or asset in an orderly arm's-length transaction between market participants on the date on which the security or asset is being valued. The price generally will not be determined based on what a client would reasonably expect to receive for selling an asset at a later time or if it holds the asset to maturity. Fair value determinations will be made in good faith and will be based upon all available factors that BlackRock deems relevant at the time of the determination, and can be based on analytical values determined by BlackRock using proprietary or third-party valuation models such as the Black-Scholes Option Pricing model. Nevertheless, the models and/or underlying valuation assumptions utilized by BlackRock may potentially not correctly capture the fair value of an asset, which could impact the cost paid or proceeds realized by a client upon the purchase or disposition of the asset. BlackRock's fair value determinations may differ from those made by other advisers for the same security.

Fair value represents a good faith approximation of the value of a security. In retrospect, the fair value of one or more securities can differ from the price at which those assets could have been sold during the period in which the particular fair values were used in determining a client's asset value for performance or fee calculation purposes or, in the case of registered investment companies or other pooled investment vehicles, net asset value per share or unit on purchases and redemptions. For investment companies and other pooled investment vehicles, the sale or redemption of its shares or units at net asset value, at a time when a holding or holdings are valued at fair value, can have the



## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

effect of diluting or increasing the economic interest of existing investors and result in a purchasing or redeeming investor receiving too few shares/units or too little cash.

BlackRock will communicate its valuation information or determinations to a client's custodian and/or fund accountants as reasonably requested. There may be instances where the client's custodian, pricing vendors or fund accountants assign a different valuation to a security or other investment than the valuation for such security or investment determined or recommended by BlackRock.

### ***Banking, Custodial and Related Services***

With respect to institutional accounts, from time to time when asked by a BlackRock Client to recommend a custodian for its account, a BlackRock Investment Adviser could recommend that a BlackRock Client deposit assets with financial institutions affiliated with PNC, which receive fees or earn revenues on such deposits. Additionally, PNC and certain of its affiliates maintain custody of certain of BlackRock Clients' funds and securities, including certain Private Funds.

BlackRock or its affiliates own or have an ownership interest in certain trading, portfolio management, operations and/or information systems (the "Systems") used by one or more service providers providing custodial services to BlackRock Clients or funds managed by a BlackRock Investment Adviser (each a "Service Provider"). The Services Providers remunerate BlackRock or its affiliates for the use of the Systems. Such payments to BlackRock or its affiliates for the use of the Systems may enhance the profitability of BlackRock and its affiliates. The receipt of fees by BlackRock or its affiliates from a Service Provider in connection with the use of the Systems may create an incentive for BlackRock to recommend that a BlackRock Client or fund managed by a BlackRock Investment Adviser enter into or renew a custodial arrangement with a Service Provider.

### ***Considerations for ERISA Clients***

When executing transactions with PNC Broker-Dealers or engaging in other activities for BlackRock Clients subject to ERISA, BlackRock Investment Advisers will comply with ERISA and the applicable regulations adopted by the DOL.

Although the stockholder agreement between BlackRock, Inc. and PNC Financial Services Inc. (for convenience, PNC Financial Services, Inc. and its affiliates are collectively referred to as "Minority Passive Shareholder" or "MPS") restricts the ability of an MPS to control the activities of BlackRock, Inc. and BlackRock Investment Advisers, its shareholdings could be deemed to affect the best judgment of the BlackRock Investment Adviser as a fiduciary. This raises conflict of interest concerns under Section 406(b) of ERISA when a fund or account (each, an "Account") advised by the BlackRock Investment Adviser enters into a transaction with an MPS, although subsequent changes in the relevant facts and circumstances could change this determination. In addition, an MPS could be a "party-in-interest" to ERISA plans that have a BlackRock-advised Account as a result of providing services to such plans. Entering into transactions on behalf of an Account with an MPS (or the provision of services by an MPS to an Account) can constitute, or result in, prohibited transactions under Section 406(a) of ERISA or Section 4975 of the Internal Revenue Code of 1986, as amended (the "IRC"), with respect to which the exemptions commonly utilized by the BlackRock Investment Adviser with respect to non-MPS entities are not available. Because of these potential limits, the DOL has granted an exemption to BlackRock, (PTE 2012-09 or the "Exemption"), which is an individual prohibited transaction exemption from the application of certain provisions of ERISA, the Federal Employees' Retirement System Act of 1986, as amended and Section 4975 of the IRC with respect to certain transactions which are summarized in Sections III and IV of the Exemption (the "Covered Transactions"). The Exemption was published in the Federal Register on April 2, 2012 (77 FR19836).

Under the Exemption, the BlackRock Investment Advisers are permitted to enter into certain transactions with or involving an MPS (the "Exempted Transactions") on behalf of an Account. The Exempted Transactions include, but are not limited to, repurchase agreements where an MPS acts as seller; the purchase or sale of fixed income obligations with an MPS acting as a principal or agent; the purchase, holding, and sale of securities issued by an MPS; the purchase, holding, and sale of exchange-traded funds registered under the Investment Company Act and advised by a BlackRock Investment Adviser (such as the US iShares ETFs); the purchase, holding, and sale of asset-backed securities when an MPS is a sponsor, a servicer, an originator, a swap counterparty, a liquidity provider, a trustee, or an insurer; responding to tender offers and exchange offers solicited by an MPS; the purchase, holding,

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

and sale of commercial paper issued by an Asset-Backed Commercial Paper Conduit where an MPS has one or more continuing roles; the purchase, holding, and sale of BlackRock equity securities; the purchase, holding, and sale of loans where an MPS is an arranger and/or has an ongoing function in relation to the loan; and the purchase in a primary offering of securities where an MPS is (i) a manager or member of the underwriting syndicate and/or acts as trustee, and/or (ii) in the case of commercial mortgage-backed securities, a commercial mortgage servicer. The primary offering purchases tend to also include (i) securities where an MPS has either an ongoing function and/or (ii) securities where the proceeds are used to repay a debt to an MPS. The Exemption does not permit an Account to enter into certain transactions with, or involving, an MPS, including without limitation: (i) over-the-counter derivatives; or (ii) executing or clearing futures. Accordingly, as a consequence of the fact that (i) certain transactions with or involving an MPS are not permitted, and (ii) other transactions with an MPS must be entered into in accordance with the conditions of the Exemption, ERISA could materially limit the activities of an Account.

BlackRock has appointed a third party to act as an independent monitor (the “Independent Monitor”), to provide independent review and oversight as a condition of the Exemption. In addition, written policies and procedures reasonably designed to comply with the terms of the Exemption have been adopted and implemented. Additionally, BlackRock has appointed an Exemption Compliance Officer, with the approval of the Independent Monitor, to comply with the Exemption. The Exemption Compliance Officer or his/her designee is responsible for monitoring the Exempted Transactions and reviewing compliance with the conditions of the Exemption.

### **POTENTIAL CONFLICTS RELATING TO PRODUCTS AND SERVICES OF PNC ENTITIES**

#### ***Certain Investment Products or Services of PNC Entities Compete with BlackRock Clients***

From time to time, PNC Entities will sponsor and manage investment funds or other client accounts that compete directly or indirectly with the investment program of BlackRock Clients or make investments with funds sponsored or managed by third-party advisers that would reduce capacity otherwise available to BlackRock Clients in such entities. Additionally, from time to time, various PNC Entities will create, sell, issue, or act as placement agent or distributor of, derivative instruments with respect to BlackRock Clients or with respect to underlying securities, currencies or instruments held by BlackRock Clients, or which are otherwise based on or related to the performance of BlackRock Clients. The structure or other characteristics of such derivative instruments could have an adverse effect on BlackRock Clients. For example, the derivative instruments developed by a PNC Entity could represent leveraged investments in BlackRock Clients, and the leveraged characteristics of such investments could make it more likely, due to events of default or otherwise, that there would be significant changes in the values of securities issued by BlackRock Clients. This could have an adverse effect on the assets owned by, and any resultant investment management and positions, flexibility, and diversification strategies BlackRock Investment Advisers employ for such BlackRock Clients, and consequently on the amount of fees, expenses and other costs incurred directly or indirectly for the account of BlackRock Clients. Similarly, from time to time, members of the BlackRock Group will invest, for BlackRock Clients or themselves, and PNC Entities, subject to applicable laws, may invest, on a proprietary basis or for their clients, in securities issued by BlackRock Clients, and may hedge derivative positions by buying or selling securities issued by BlackRock Clients. These investments can be significant and made without notice to BlackRock or BlackRock Clients.

#### ***Investments in Service Clients of the BlackRock Group or the PNC Entities***

The BlackRock Group and PNC Entities provide a variety of services and advice (including investment banking services, fairness opinions, and extensions of credit provided by PNC Entities) to, various clients (“Service Clients”), including issuers of securities that BlackRock Investment Advisers may purchase or sell for BlackRock investment advisory clients, and may generally receive fees for these services (including fees that are contingent on the successful placement of securities and successful closing of a transaction). As a result of the relationships between BlackRock Group and the PNC Entities, BlackRock may have an incentive to invest in securities issued by Service Clients. BlackRock believes, however, that the nature and range of Service Clients is such that it would be inadvisable to exclude the securities of Service Clients. Accordingly, absent a specific investment restriction or direction or regulatory restriction, it is possible that a BlackRock Client’s account will include the securities issued by Service Clients. In addition, it is possible that the BlackRock Group will receive certain transaction fees from Service Clients the securities of which BlackRock wishes to purchase or sell on behalf of BlackRock Clients in connection with structuring, negotiating, or entering into such investment transactions, as well as ongoing advisory or monitoring



## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

fees. In some instances, fees and expenses will be earned by the BlackRock Group or its personnel if such personnel serve as directors or officers of Service Clients.

### **POTENTIAL CONFLICTS RELATING TO BLACKROCK CLIENTS' USE OF INVESTMENT CONSULTANTS AND BLACKROCK'S RELATIONSHIP WITH PENSION CONSULTANTS**

Many BlackRock Clients work with pension or other institutional investment consultants or outsourced chief investment officers (collectively, "Investment Consultants"), who provide a wide array of services to pension plans and other institutions, including assisting in the selection and monitoring of investment advisers such as BlackRock Investment Advisers. From time to time, BlackRock Clients' Investment Consultants who recommend BlackRock Investment Advisers to, and provide oversight of BlackRock Investment Advisers for, BlackRock Clients also provide services to or purchase services from members of the BlackRock Group and PNC Entities. For example, BlackRock purchases certain index and performance-related databases and human resources-related information from Investment Consultants and their affiliates. BlackRock Investment Advisers also utilize brokerage execution services of Investment Consultants or their affiliates, and members of the BlackRock Group, as well as personnel of PNC Entities attend conferences sponsored by Investment Consultants. Conversely, from time to time, the BlackRock Group and PNC Entities will be hired by Investment Consultants and their affiliates to provide investment management and/or risk management services, creating potential conflicts of interest.

### **BLACKROCK IN-SOURCES OR OUTSOURCES CERTAIN SERVICES TO THIRD PARTIES**

Subject to applicable law and contractual arrangements with clients, BlackRock, including BlackRock Investment Advisers, from time to time, and without notice to BlackRock Clients, will in-source from or outsource to third parties, including parties which are affiliated or unaffiliated with BlackRock, certain processes or functions in connection with a variety of services that they provide to BlackRock Clients in their administrative or other capacities. Such in-sourcing or outsourcing can give rise to potential conflicts of interest, including where BlackRock or other BlackRock Clients receive favorable pricing or other benefits that arise from or are connected to another BlackRock Client's vendor relationships.

### **POTENTIAL RESTRICTIONS ON 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: (i) BlackRock personnel serve as directors or officers of companies the securities of which BlackRock wishes to purchase or sell; (ii) BlackRock has an ownership or other interest in a company; (iii) BlackRock is provided with material non-public information with respect to the issuer of securities; (iv) 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 (v) 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

## **Item 11 Code of Ethics, Participation or Interest in Client Transactions, and Personal Trading**

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 and/or PNC 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. For additional information regarding BlackRock's allocation policy, please refer to Item 12 ("Brokerage Practices") of this Brochure.

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**

Where the Managed Service is made available directly to clients, the Adviser requires that all trade orders for securities transactions on behalf of clients are currently placed with Fidelity Brokerage Services LLC and/or TD Ameritrade, Inc. (the “Approved Brokers”). The Adviser seeks to ensure that its clients receive the best overall execution for securities transactions from the Approved Brokers by continuing to monitor and review the best execution capability of the Approved Brokers. When assessing the best execution capability of the Approved Brokers, the Adviser will consider the following factors: execution speed, price improvement versus the national best bid and offer (NBBO) and overall execution quality among other factors. To the extent that an Approved Broker’s best execution capability does not appear to meet the quality of best execution on a consistent basis, the Adviser would look to remove and replace such Approved Broker. In determining the reasonableness of compensation of the Approved Brokers, the Adviser considers the trading commissions (e.g., whether they are free or flat-rate), as well as general operational support provided.

Where the Managed Service is made available through an Intermediary and the Adviser is acting as a subadvisor, the Adviser places all trade orders for securities transactions on behalf of its clients with a broker-dealer mandated by the applicable Intermediary (each, an “Intermediary Broker”). In such cases, the Intermediary evaluates, in its reasonable judgement, which Intermediary Broker(s) are qualified to meet the brokerage and custodial needs of the Intermediary’s clients. BlackRock generally does not monitor or evaluate the nature and quality of the services clients obtain from Intermediary Brokers and it is possible that Intermediary Brokers provide less advantageous execution of transactions than if BlackRock selected another broker-dealer to execute the transactions.

The Adviser generally does not aggregate orders for a client with orders of other clients. Consequently, seeking fairness to all of its clients, the Adviser submits client transaction orders pursuant to a randomized selection process seeking to ensure that each client has generally equal priority over time. By not aggregating transaction orders for a client with orders of other clients, clients may receive disparate prices from trading at different times during the day and may potentially incur higher (or lower) transactional costs.

### **USE OF COMMISSIONS**

The Adviser does use client commissions to acquire research or brokerage services other than order execution.

### **BROKERAGE FOR CLIENT REFERRALS**

The Adviser does not consider the possibility of receiving client referrals from a particular broker-dealer when selecting or recommending that clients use the broker-dealer.

### **DIRECTED BROKERAGE**

The Adviser does not permit clients to direct brokerage.

## Item 13 Review of Accounts

### EDUCATIONAL SERVICE

Use of the Educational Service results in a portfolio review as of a particular point in time and the Adviser does not provide ongoing monitoring or advice. Users have the option to review their portfolio through automated computer algorithms by returning to the website and conducting another portfolio review. Any such review is self-service. Results may vary with each use and over time.

### MANAGED SERVICE

The Adviser regularly reviews the accounts of its Managed Service clients. Triggering factors may include, but are not limited to, overall market movement, a significant change to one or more of the securities owned by a particular client, or changes in clients' life circumstance if clients report them to the Adviser.

The Adviser conducts account reviews through its automated computer algorithms and by the Adviser's investment advisory personnel responsible for portfolio management and monitoring of client accounts. For each of the Adviser's investment strategies, the portfolio manager and/or other supervisors are responsible for periodically reviewing trading data and other automated reports and overseeing the trading activity performed on behalf of the Adviser's clients within the Adviser's investment strategies. Such reviews include without limitation a verification that actual trading activity is consistent with the intended strategy, an analysis of risks associated with a particular strategy, and a determination that trading is undertaken in compliance with applicable regulations. In addition, the Adviser uses independent third parties to conduct financial audits of the accounts of its clients, and the Compliance Department reviews certain other aspects of regulatory compliance. The frequency of all such reviews is determined as warranted by the purpose of the review and other circumstances.

In addition, where the Adviser is acting as a subadvisor, an Intermediary may conduct account reviews depending on the nature of the client's contractual or advisory relationship with the Intermediary.

The Adviser provides advisory clients with reports through its website on a periodic basis, which reports generally include, among other things, the net asset value or the capital balance of such client's account and a measure of performance based on the change in valuation of such client's account.

## **Item 14 Client Referrals and Other Compensation**

The Adviser may conduct campaigns through advertising networks (e.g., Google AdWords/AdSense, Microsoft AdCenter) and compensate such advertising networks accordingly. In addition, at certain times the Adviser may offer a credit or nominal gift to existing clients that refer new clients to use the Adviser's services. While the amount of the credit or gift is nominal, such credits or gifts may cause a conflict of interest if existing clients make this referral solely to receive the credit or gift.

The Adviser may provide technology and/or consulting services to third party financial entities, including entities that may be registered as investment advisers under the Advisers Act and / or registered as broker-dealers under Section 15 of the Exchange Act. As a technology services provider, the Adviser will have no portfolio management, investment advisory, or fiduciary responsibilities with respect to any end user clients who may use the technology through an Intermediary. When providing technology and/or consulting services to third party financial entities, the Adviser will not manage, monitor, or oversee any trading decisions of any end user client, any client's compliance with the client's investment objectives; or any other aspects of the portfolio management activity of client accounts or portfolios. The Adviser will not enter into a discretionary investment management agreement with a client solely in connection with the provision of technology services to an Intermediary.

## Item 15 Custody

The Adviser generally does not have custody of client assets. Managed Service assets are held in the name of the Managed Service client and are held in the custody of a dealer-broker, which is a qualified custodian as defined under Advisers Act Rule 206(4)-2. However, based on SEC guidance, the Adviser may be deemed to have custody of its advisory clients' assets because certain clients may authorize the Adviser to receive its Management Fee out of the assets in such clients' accounts by sending invoices to the respective custodians of those accounts, the Adviser may be deemed by the SEC to have custody of the assets in those accounts. Such clients generally will receive account statements directly from their third-party custodians for the accounts and should carefully review these statements. Such clients should contact the Adviser immediately if they do not receive account statements from their custodian on at least a quarterly basis. As noted in Item 13 ("Review of Accounts") of this brochure, the Adviser may provide clients with separate reports or account statements providing information about the account. Clients should compare these carefully to the account statements received from the custodian. If clients discover any discrepancy between the account statement provided by the Adviser and the account statement provided by the custodian, then they should contact the Adviser immediately.



## **Item 16 Investment Discretion**

The Adviser receives discretionary investment authority from its clients at the outset of an advisory relationship in connection with the Managed Service. The Adviser requires a limited power of attorney (or other grant of authority required by a Managed Service client's broker-dealer) to act on a discretionary basis for its Managed Service clients, allowing the Adviser to submit order on behalf of these clients. Managed Service clients complete the applicable documentation required by the client's broker-dealer as part of the Managed Service enrollment process.

## **Item 17 Voting Client Securities**

The Adviser does not have the authority to vote user or client securities for Educational Service users or Managed Service clients, nor does it provide advice about particular proxy solicitations. Clients must vote proxies on securities held in their account directly based on information they receive from their custodians.

## **Item 18 Financial Information**

The Adviser does not require or solicit payment of more than \$1,200 in fees per client, six months, or more in advance. The Adviser has no financial condition that is reasonably likely to impair its ability to meet contractual commitments to its clients. The Adviser has not been subject to a bankruptcy petition at any time during the past ten years.

**Item 1 Cover Page****FutureAdvisor, Inc.**

400 Howard St.

San Francisco, CA 94105

+1 (800) 975-7199

[www.FutureAdvisor.com](http://www.FutureAdvisor.com)

September 9, 2019

**FORM ADV PART 2B: THE BROCHURE SUPPLEMENT**

This brochure supplement provides information that supplements the FutureAdvisor, Inc. ("FutureAdvisor" or the "Adviser") Form ADV Part 2A brochure with regard to the following persons: Michael Gates, Gary Hall, and William Tuhacek. You should have received a copy of the FutureAdvisor Form ADV 2A brochure. Please contact FutureAdvisor at the phone number above or by email at [compliance@futureadvisor.com](mailto:compliance@futureadvisor.com) if you did not receive that brochure or if you have any questions about the contents of this brochure supplement.

Additional information about FutureAdvisor is available on the SEC's website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).

This brochure is for informational purposes only. It does not convey an offer of any type and is not intended to be, and should not be construed as, an offer to sell, or the solicitation of an offer to buy, any interest in any entity, investment, or investment vehicle.

## Business Group: FutureAdvisor

### Michael Gates

Born: 1973

400 Howard St. San Francisco, CA 94105 | Phone +1 (800) 975-7199

This brochure supplement provides information about Michael Gates that supplements the FutureAdvisor, Inc. brochure. You should have received a copy of the FutureAdvisor, Inc. brochure. Please contact FutureAdvisor at the phone number above or by email at [compliance@futureadvisor.com](mailto:compliance@futureadvisor.com) if you did not receive that brochure or if you have any questions about the contents of this brochure supplement.

### **Educational Background**

University of California, Davis, MS, Economics, 1998

University of California, Davis, BS, 1997

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

### **Business Experience (preceding five years)**

December 2014 - Present, BlackRock, Managing Director, Multi-Asset Strategies  
CFA charterholder<sup>1</sup>

### **Disciplinary Information**

Not Applicable

### **Other Business Activities**

Michael Gates is a member of Bedrock Pacific Group LLC, a residential real estate investment and property management company.

### **Additional Compensation**

Not Applicable

### **Supervision**

The Adviser's investment decisions are based on an automated analysis of client portfolios and accounts. This analysis relies on proprietary models to generate views on portfolio allocation, rebalancing, and tax loss harvesting. The Adviser's portfolio management team supervises the day-to-day execution of these models and continuously researches ways to enhance their efficiency. Moreover, the Adviser's compliance function monitors the Adviser's investment activities through electronically generated reports designed to audit trading activity and account management. Finally, the Adviser's investment committee periodically reviews the Adviser's investment strategies and risk processes, and approves revisions to those strategies and processes as necessary.

Michael Gates' advisory activities on behalf of the Adviser are supervised by Nish Ajitsaria. Nish Ajitsaria can be reached at 1 (800) 975-7199.

<sup>1</sup> The CFA designation is offered by the CFA Institute. To obtain the CFA charter, candidates must pass three exams demonstrating their competence, integrity and extensive knowledge in accounting, ethical and professional standards, economics, portfolio management, and security analysis, and must also have at least three years of qualifying work experience, among other requirements.

## Business Group: FutureAdvisor

### Gary Hall

Born: 1979

400 Howard St. San Francisco, CA 94105 | Phone +1 (800) 975-7199

This brochure supplement provides information about Gary Hall that supplements the FutureAdvisor, Inc. brochure. You should have received a copy of the FutureAdvisor, Inc. brochure. Please contact FutureAdvisor at the phone number above or by email at [compliance@futureadvisor.com](mailto:compliance@futureadvisor.com) if you did not receive that brochure or if you have any questions about the contents of this brochure supplement.

### **Educational Background**

Oregon State University, BS, General Science, 2003

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

### **Business Experience (preceding five years)**

2014 - Present FutureAdvisor, Portfolio Manager

2007 - 2014 Fisher Investments, Research Analyst

Series 65

CFA charterholder<sup>2</sup>

CFP® certificant<sup>3</sup>

### **Disciplinary Information**

Not Applicable

### **Other Business Activities**

Not Applicable

### **Additional Compensation**

Not Applicable

### **Supervision**

The Adviser's investment decisions are based on an automated analysis of client portfolios and accounts. This analysis relies on proprietary models to generate views on portfolio allocation, rebalancing, and tax loss harvesting. The Adviser's portfolio management team supervises the day-to-day execution of these models and continuously research ways to enhance their efficiency. Moreover, the Adviser's compliance function monitors the Adviser's investment activities through electronically generated reports designed to audit trading activity and account management. Finally, the Adviser's investment committee periodically reviews the Adviser's investment strategies and risk processes, and approves revisions to those strategies and processes as necessary.

Gary Hall's advisory activities on behalf of the Adviser are supervised by Nish Ajitsaria. Nish Ajitsaria can be reached at 1 (800) 975-7199.

<sup>2</sup> The CFA designation is offered by the CFA Institute. To obtain the CFA charter, candidates must pass three exams demonstrating their competence, integrity and extensive knowledge in accounting, ethical and professional standards, economics, portfolio management, and security analysis, and must also have at least three years of qualifying work experience, among other requirements.

<sup>3</sup> Certified Financial Planner Board of Standards Inc. (CFP Board) owns the certification marks CFP®, CERTIFIED FINANCIAL PLANNER™, CFP® (with plaque design), and CFP® (with flame design) in the U.S., which it authorizes use of by individuals who successfully complete CFP Board's initial and ongoing certification requirements.



## Business Group: FutureAdvisor

### William Tuhacek

Born: 1982

400 Howard St. San Francisco, CA 94105 | Phone +1 (800) 975-7199

This brochure supplement provides information about William Tuhacek that supplements the FutureAdvisor, Inc. brochure. You should have received a copy of the FutureAdvisor, Inc. brochure. Please contact FutureAdvisor at the phone number above or by email at [compliance@futureadvisor.com](mailto:compliance@futureadvisor.com) if you did not receive that brochure or if you have any questions about the contents of this brochure supplement.

### **Educational Background**

University of Southern California, BA, International Relations/Business/Chinese, 2006

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

### **Business Experience (preceding five years)**

2014 - Present, FutureAdvisor, Financial Advisor

2010 - 2014, United States Marine Corps, IT Department Manager

Series 65

CFP® certificant<sup>4</sup>

### **Disciplinary Information**

Not Applicable

### **Other Business Activities**

Not Applicable

### **Additional Compensation**

Not Applicable

### **Supervision**

The Adviser's investment decisions are based on an automated analysis of client portfolios and accounts. This analysis relies on proprietary models to generate views on portfolio allocation, rebalancing, and tax loss harvesting. The Adviser's portfolio management team supervises the day-to-day execution of these models and continuously research ways to enhance their efficiency. Moreover, the Adviser's compliance function monitors the Adviser's investment activities through electronically generated reports designed to audit trading activity and account management. Finally, the Adviser's investment committee periodically reviews the Adviser's investment strategies and risk processes, and approves revisions to those strategies and processes as necessary.

William Tuhacek's advisory activities on behalf of the Adviser are supervised by Nish Ajitsaria. Nish Ajitsaria can be reached at 1 (800) 975-7199.

<sup>4</sup> Certified Financial Planner Board of Standards Inc. (CFP Board) owns the certification marks CFP®, CERTIFIED FINANCIAL PLANNER™, CFP® (with plaque design), and CFP® (with flame design) in the U.S., which it authorizes use of by individuals who successfully complete CFP Board's initial and ongoing certification requirements.