

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

400 Howard St.  
San Francisco, CA 94105  
+1 (800) 975-7199  
[www.FutureAdvisor.com](http://www.FutureAdvisor.com)

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**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 March 29, 2018, through July 16, 2018:

**Cover Page.** Change of address to 400 Howard Street, San Francisco, CA 94105

### 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.** Update 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.** Update 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 disruption.

**Item 12: Brokerage Practices.** Update 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.

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

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## 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”). 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” or “Sponsors”). 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, as the case may be (each, a “Governing Document,” and collectively, the “Governing Documents”).

The Adviser offers two types of service: (i) a non-discretionary educational service (the “Educational Service”) for which the Adviser receives no management fee, and (ii) a discretionary advisory service (the “Managed Service”) for which it charges a management fee as described in Item 5 (“Fees and Compensation”) below.

### 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 \$1,213,079,043 in investment capital on a discretionary basis as of March 20, 2018.

### SERVICES OF AFFILIATES

BlackRock operates its investment management business through the Adviser, as well as through multiple affiliates, some 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, and some of which are registered only with non-U.S. regulatory authorities and some of which are registered with multiple

regulatory authorities. The Adviser uses the services of one or more BlackRock subsidiaries or appropriate personnel of one or more BlackRock subsidiaries for model portfolio research, market commentary, portfolio order management, operational support, and client servicing in 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 Governing Documents, 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 the 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 entered into Governing Documents, 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 Governing Documents.

## 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 may 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 may 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 other brokers when transferring their accounts from such brokers to their Managed Service account broker. 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 may receive 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 an 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 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,

## Item 5 Fees and Compensation

the Adviser will remit a pro-rated refund for the unused portion of the Management Fee to each client whose access 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 Fees 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 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.

The Educational Service and the Managed Service are generally not designed for users or clients with an investment horizon of less than two years.

In certain Intermediary relationships, including sub-advisory relationships, the Adviser may implement or employ 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, may be 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 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.

**CYBER SECURITY RISK**

With the increased use of technologies such as the Internet to conduct business, a portfolio is susceptible to operational, information security and related risks. In general, cyber incidents can result from deliberate attacks or unintentional events include, but are not limited to, gaining unauthorized access to digital systems, misappropriating assets or sensitive information, corrupting data, or causing operational disruption, including the denial-of-service attacks on websites. Cyber security failures or breaches by a third party service provider and the issuers of securities in which the portfolio invests, 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, regulatory fines, penalties, reputational damage, reimbursement or other compensation costs, and/or additional compliance costs, including the cost to prevent cyber incidents.

**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 may have in a registered investment company. A client’s positions in ETPs are subject to a number of risks associated with the management and market conditions of the ETP. These include (but are not limited to): (i) Delisting—An ETP may be delisted and liquidated at the discretion of its issuer. Should a client 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**

Generally, Underlying Indices are developed by index providers that are not affiliated with BlackRock, but in some circumstances, BlackRock Index Services, LLC (“BIS”), an affiliate of the Adviser, is the index provider.

Index strategies are passively managed and do not take defensive positions in declining markets. The investment objective is to achieve investment results, before fees and expenses that correspond generally to the total return performance, of a particular index (“Underlying Index”). There is no guarantee that a portfolio managed to an index strategy (“index portfolio”) will achieve a high degree of correlation to its Underlying Index and therefore achieve its investment objective. Market disruptions 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. Errors in index data, index computations and/or the construction of the Underlying Index in accordance with its methodology occur from time to time without being identified and corrected for a period of time or at all, which may have an adverse

impact on a portfolio managed to the index. BlackRock does not provide any warranty or guarantee against index providers' errors. The index provider does not provide any warranty or accept any liability in relation to the quality, accuracy or completeness of data in respect of their indices, and does not guarantee that the index will be in line with its described index methodology. Errors and rebalances carried out by the index provider to the Underlying Index could increase the costs and market exposure risk of a portfolio.

Please see Item 10 ("Affiliated Index Provider") for more information about BIS.

### **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**

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. Generally, the market value of the instruments in which a portfolio invests may go up or down in response to the prospects of individual companies, particular sectors or governments and/or general economic conditions throughout the world due to increasingly interconnected global economies and financial markets.

### **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 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.

### **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 may 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 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 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 BlackRock Investment Advisers have business arrangements with related persons/companies that are material to the BlackRock Investment Advisers' advisory business or to their clients. In some cases, these business arrangements create the 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 BlackRock Investment 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 offering memoranda and/or investment management agreements.

### AFFILIATED BROKER-DEALERS

BlackRock Investments, LLC ("BRIL") and BlackRock Execution Services ("BES") are broker-dealers registered under Section 15 the Securities Exchange Act of 1934 (the "Exchange Act") and are members of the Financial Industry Regulatory Authority. BRIL and BES are indirect wholly-owned subsidiaries of BlackRock, Inc.

- BRIL is primarily engaged in the wholesale marketing of certain BlackRock US Funds to other registered broker-dealers, investment advisers, banks, and other entities, marketing Rule 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 BlackRock Investment Advisers and BlackRock Institutional Trust Company, N.A. ("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 INVESTMENT ADVISERS

The following BlackRock affiliates are registered investment advisers with the SEC:

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

In April 2017 BlackRock Alternatives Management, LLC ("BAMLLC"), an affiliate of the Advisers, registered with the SEC as an investment adviser. On June 2, 2017, BlackRock, Inc. acquired the energy infrastructure business of First Reserve Partners, L.P. and First Reserve Management, L.P. (together, "First Reserve") by acquiring 100% of the equity interests of First Reserve Energy Infrastructure Advisors, L.L.C., (now known as Global Energy & Power Infrastructure Advisors, L.L.C.) and First Reserve Advisors, L.L.C., (now known as Global Energy & Power Infrastructure II Advisors, L.L.C.) and the entities that control, or serve as, the general partners of First Reserve Energy Infrastructure Fund, L.P., (now known as Global Energy & Power Infrastructure Fund I, L.P.), First Reserve

## Item 10 Other Financial Industry Activities and Affiliations

Energy Infrastructure Fund II, L.P., (now known as Global Energy & Power Infrastructure Fund II, L.P.) and their respective alternative investment vehicles and co-investment vehicles.

### **AFFILIATED COMMODITY POOL OPERATORS / COMMODITY TRADING ADVISOR**

Certain of the Adviser's affiliated investment advisers serve as commodity pool operators and commodity trading advisers to the accounts of clients, including the following entities.

- BlackRock Financial Management, Inc., BlackRock Investment Management, LLC, BlackRock Fund Advisors, BlackRock Advisors, LLC, and BTC are registered as commodity pool operators and commodity trading advisers.
- 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., and BlackRock Capital Investment Advisors, L.L.C. are exempt commodity pool operators and exempt commodity trading advisers.
- BlackRock International Limited is a registered commodity trading advisor.
- iShares Delaware Trust Sponsor LLC is a registered commodity pool operator.
- BlackRock (Singapore) Limited is an exempt commodity pool operator.
- BAMNAL is an exempt commodity trading advisor.

The BlackRock affiliates listed above that are registered as a commodity pool operator and/or commodity trading advisor are members of the National Futures Association.

### **AFFILIATED INDEX PROVIDER**

BIS, an affiliate of the Adviser, develops indices against which index portfolios are managed. Some of these indices are underlying indices of client accounts advised by a BlackRock Investment Adviser and/or of used by ETFs purchased and sold by the Adviser on behalf of clients. BlackRock and BIS have established a governance framework designed to prevent the undue influence of BlackRock Investment Advisers in the operation of any index developed by BIS ("BIS Index"). This framework includes information barriers to restrict the sharing of confidential information and a committee that approves index methodology changes and is independent of portfolio management and trading. Where BIS is the index provider for an index portfolio advised a BlackRock Investment Adviser, BlackRock pays BIS licensing fees for use of a BIS Index or index name when permissible under applicable law. Please see Item 8 ("Methods of Analysis, Investment Strategies, and Risk of Loss") for more information concerning index-related risks.

### **NATIONAL BANKING ASSOCIATION**

BTC is a national banking association organized under the laws of the U.S. and operating as a limited purpose trust company.

### **MUNICIPAL ADVISOR**

BTC is registered as a Municipal Advisor with both the SEC and the Municipal Securities Rulemaking Board.

### **RELATIONSHIPS OR ARRANGEMENTS AND/OR RELATED PERSONS**

BlackRock, Inc. is a publicly traded company incorporated in the State of Delaware. At December 31, 2017, The PNC Financial Services Group, Inc. (together with its subsidiaries, "PNC") held 21.2% of BlackRock's voting common stock and 21.7% of BlackRock's capital stock, which includes outstanding common and non-voting preferred stock.

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, BlackRock 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. Further, BlackRock offers independent assistance in the estimated valuation of complex securities, assets and derivatives, and can assist in developing investment and hedging strategies to meet specific client needs and constraints. BRS makes available its proprietary enterprise trading system and risk reporting tools to other firms or companies. BRS also provides advisory services

## Item 10 Other Financial Industry Activities and Affiliations

with respect to regulatory capital and balance sheet strategies and risk frameworks for capital market exposures, as well as enterprise risk management strategies.

## **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 BlackRock Investment Adviser, the Adviser has adopted the BlackRock Code of Business Conduct and Ethics (the "Code of Ethics"), which is consistent with the requirements of Rule 204A-1 under the Advisers Act. The Adviser requires its personnel to represent that they will comply with the Code of Ethics to help to avoid actual and potential conflicts of interest and comply with applicable provisions of laws. A copy of the Code of Ethics is available to clients upon request. The Adviser's employees may invest in the same mutual funds, ETFs, or other securities that the Adviser recommends to its clients.

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.

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 that invest primarily in other affiliated or unaffiliated investment vehicles ("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 general advisory services under the BRS brand 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, electronic communication network authorized participant for US iShares ETFs, derivative or swap counterparty, underwriter, municipal securities dealer, index provider, lender, futures commission merchant, or agent.

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

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

made or fees paid directly by the investment companies or other funds, and recipients of such payments in some instances are affiliates of PNC.

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, as well as PNC and its respective other affiliates, directors, partners, trustees, managers, members, officers, and employees, 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.

### **BLACKROCK'S GLOBAL PERSONAL TRADING POLICY**

BlackRock's and the Adviser's 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 or the Adviser's clients.

As these situations involve potential conflicts of interest, BlackRock and the Adviser 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 Advisers Act Rule 204A-1. 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 Advisers Act Rule 204A-1, 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 the Code of Ethics, 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 and the Adviser 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 particular 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 conflicts relating to the use of inside information and to participating in outside activities.

Any BlackRock personnel covered by the Code of Ethics who fail 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.

**BLACKROCK'S GLOBAL OUTSIDE ACTIVITY POLICY**

BlackRock personnel have a duty to act solely in the interest of BlackRock's clients; as such BlackRock's Global Outside Activity Policy requires that BlackRock personnel obtain approval 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.

**BLACKROCK'S U.S. POLITICAL CONTRIBUTIONS POLICY**

BlackRock's political contributions policy establishes the requirements that apply when BlackRock and its employees make or solicit U.S. political contributions or engage in political activities in the U.S. The policy prohibits BlackRock and its employees from making or soliciting U.S. political contributions for the purpose of obtaining or retaining business. The policy requires employees to 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 determines share BlackRock's values and goals.

**FINANCIAL OR OTHER INTERESTS IN UNDERLYING FUNDS**

The accounts managed by the Adviser often acquire a financial interest in certain underlying funds which generally will, but not always 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.

**BLACKROCK'S GLOBAL INSIDER TRADING POLICY**

Under applicable law, BlackRock personnel are generally prohibited from disclosing or using material non-public information for their personal benefit or for the benefit of any other person, regardless of whether that person is a BlackRock client. BlackRock has adopted a Global Insider Trading Policy, which establishes procedures reasonably designed to prevent the misuse of material non-public information by BlackRock and its personnel. Under the Global Insider Trading Policy, the Adviser is 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 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 precluded from taking action on behalf of its clients.

**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 U.S. Department of Labor.

Although the stockholder agreement between BlackRock 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 and BlackRock investment advisers, its shareholdings could be deemed to affect the best judgment of the BlackRock investment adviser as a fiduciary. This could raise conflict of interest concerns under Section 406(b) of ERISA if a fund or account (each, an "Account") within this section of the Brochure) advised by the BlackRock investment adviser were to enter into a transaction with an MPS; provided however that subsequent changes in the relevant facts and circumstances could change this determination. In addition, an MPS may be a "party-in-interest" to ERISA plans that have a BlackRock-advised

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

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 Code, with respect to which the exemptions commonly utilized by the BlackRock Investment Adviser with respect to non-MPS entities may not be available. Because of these potential limits, the Department of Labor 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 Adviser is 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 ETFs under the 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, 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 originator or 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.

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

Subject to applicable law and contractual duties to clients, BlackRock, including the Advisers, from time to time, and without notice to BlackRock clients, will in-source or outsource to third-parties, including parties which are affiliated 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 will 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.

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

Side-by-side management by BlackRock Investment Advisers of US Registered Funds, separate accounts, institutional accounts (“SMA”), SMA program accounts, private funds and collective trust fund also involve potential conflicts of interest, including those associated with any differences in fee structures, as well as other pecuniary and investment interests the BlackRock 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 SMA program account results in potential incentive for the applicable BlackRock Investment Adviser to favor the Private Fund or institutional account over the US Registered Fund or SMA program account when, for example,

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

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 stress 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 Fees and Side-by-Side Management") of this Brochure.

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.

### 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 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 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 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

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

discretion, deem it appropriate in light of potential regulatory or corporate restrictions on ownership 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 to the issuer's weighting in the applicable benchmark used by BlackRock to manage the BlackRock Client account or fund. 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 "Competing or Complementary Investments and Trade Aggregation" in Item 12 ("Brokerage Practices") of this brochure.

In addition to the foregoing, other ownership 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 Sponsor or 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)

July 16, 2018

**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, Bo Lu, 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**

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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)**

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December 2012 - Present, BlackRock, Director, Multi-Asset Strategies

June 2011 - December 2012, BlackRock, Director, iShares

CFA charterholder<sup>1</sup>

### **Disciplinary Information**

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Not Applicable

### **Other Business Activities**

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

### **Additional Compensation**

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Not Applicable

### **Supervision**

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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.

Michael Gates reports to Bo Lu. Bo Lu serves as the Chief Executive Officer of the Adviser and is responsible for overseeing advisory activities of the Adviser, including those of Michael Gates. Bo Lu can be reached at 1 (800) 975-7199.

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<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

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### **Educational Background**

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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)**

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2014 - Present FutureAdvisor, Portfolio Manager

2007 - 2014 Fisher Investments, Research Analyst

Series 65

CFA charterholder<sup>2</sup>

### **Disciplinary Information**

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Not Applicable

### **Other Business Activities**

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Not Applicable

### **Additional Compensation**

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Not Applicable

### **Supervision**

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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 reports to Bo Lu. Bo Lu serves as the Chief Executive Officer of the Adviser and is responsible for overseeing advisory activities of the Adviser, including those of Gary Hall. Bo Lu can be reached at 1 (800) 975-7199.

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<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.

## Business Group: FutureAdvisor

**Bo Lu**

Born: 1983

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

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### **Educational Background**

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University of Illinois at Urbana-Champaign, BS, Computer Science, 2004

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

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

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2010 - Present, FutureAdvisor, Chief Executive Officer

May 2010 - March 2014 and August 2015 - October 2015, FutureAdvisor, Chief Compliance Officer  
Series 65

### **Disciplinary Information**

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Not Applicable

### **Other Business Activities**

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Not Applicable

### **Additional Compensation**

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Not Applicable

### **Supervision**

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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.

Bo Lu serves as the Chief Executive Officer of the Adviser and as such is not subject to additional supervision. Bo Lu may be contacted at 1 (800) 975-7199.

## 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**

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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)**

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2014 - Present, FutureAdvisor, Financial Advisor

2010 - 2014, United States Marine Corps, IT Department Manager  
Series 65

### **Disciplinary Information**

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Not Applicable

### **Other Business Activities**

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Not Applicable

### **Additional Compensation**

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Not Applicable

### **Supervision**

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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 reports to Bo Lu. Bo Lu serves as the Chief Executive Officer of the Adviser and is responsible for overseeing advisory activities of the Adviser, including those of Gary Hall. Bo Lu can be reached at 1 (800) 975-7199.