



ALLIANCEBERNSTEIN*

Code of Business Conduct and Ethics

Personal Trading Policies and
Procedures (Appendix A)

January 2023

501 Commerce Street, Nashville, TN 37203

**A Message from Seth Bernstein,
Chief Executive Officer of AllianceBernstein**

Client trust is the foundation of a financial services company. As we have seen, trust takes years to establish and constant vigilance to maintain but can be destroyed in a matter of days. Honesty, integrity, and high ethical standards must therefore be practiced on a daily basis in order to protect this most critical asset.

Enhancing our sensitivity to our ethical obligations – putting the interests of our clients first and foremost -- and ensuring that we meet those obligations is an imperative for all. AllianceBernstein has long been committed to maintaining and promoting high ethical standards and business practices. We have prepared this Code of Business Conduct and Ethics (the “Code”) in order to establish a common vision of our ethical standards and practices. While not an exhaustive guide to the rules and regulations governing our businesses, the Code is intended to establish certain guiding principles for all of us. Separately, the firm has in place a series of ethics, fiduciary and business-related policies and procedures, which set forth detailed requirements to which employees are subject. We also have prepared various Compliance Manuals, which provide in summary form, an overview of the concepts described in more detail both in this Code and in our other policies and procedures.

You should take the time to familiarize yourself with the policies in this Code and use common sense in applying them to your daily work environment and circumstances. Your own personal integrity and good judgment are the best guides to ethical and responsible conduct. If you have questions, you should discuss them with your supervisor, the General Counsel, the Chief Compliance Officer or a representative of the Legal and Compliance Department or Human Capital. If the normal channels for reporting are not appropriate, or if you feel uncomfortable utilizing them, issues may be brought to the attention of the Company Ombudsman, who is an independent, informal and confidential resource for concerns about AllianceBernstein business matters that may raise issues of ethics or questionable practices.

Our continued success depends on each of us maintaining high ethical standards and business practices. I count on each of you to place our clients’ interests first – and to do so always by applying good ethics and sound judgment in your daily responsibilities.

Seth Bernstein

AllianceBernstein L.P.
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Personal Trading Policies and Procedures

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1. Introduction

This Code of Business Conduct and Ethics (the “Code”) summarizes the values, principles and business practices that guide our business conduct. The Code establishes a set of basic principles and expectations to guide all AllianceBernstein employees, officers and directors, and consultants where applicable. The Code applies to all of our offices worldwide. It is not, however, intended to provide an exhaustive list of all the detailed internal policies and procedures, regulations and legal requirements that may apply to you as an AllianceBernstein employee, officer, director, consultant, and/or a representative of one of our regulated subsidiaries. AllianceBernstein maintains more detailed policies and procedures addressing many of the topics covered by this Code, including the Compliance Manual, available on the Legal and Compliance Department intranet site. All AllianceBernstein employees, officers, and directors are responsible for knowing and abiding by the relevant policies.

All individuals subject to the provisions of this Code must conduct themselves in a manner consistent with the requirements and procedures set forth herein. Adherence to the Code is a fundamental condition of service with us, any of our subsidiaries or joint venture entities, or our general partner (the “AB Group”).

AllianceBernstein L.P. (“AB,” “we” or “us”) is a registered investment adviser and acts as investment manager or adviser to registered investment companies, institutional investment clients, employee benefit trusts, high net worth individuals and other types of investment advisory clients. In this capacity, we serve as fiduciaries. The fiduciary relationship mandates adherence to the highest standards of conduct and integrity.

Personnel acting in a fiduciary capacity must carry out their duties for the **exclusive benefit** of our clients. Consistent with this fiduciary duty, the interests of clients take priority over the personal investment objectives and other personal interests of AB personnel. Accordingly:

- Employees must work to mitigate or eliminate any conflict, or appearance of conflict, between the self-interest of any individual covered under the Code and his or her responsibility to our clients, or to AB and its unitholders.
- Employees must never improperly use their position with AB for personal gain to themselves, their family, or any other person.

The Code is intended to comply with Rule 17j-1 under the (U.S.) Investment Company Act of 1940 (the “1940 Act”) which applies to us because we serve as an investment adviser to registered investment companies. Rule 17j-1 specifically requires us to adopt a code of ethics that contains provisions reasonably necessary to prevent our “access persons” (as defined herein) from engaging in fraudulent conduct, including insider trading. In addition, the Code is intended to comply with the provisions of the (U.S.) Investment Advisers Act of 1940 (the “Advisers Act”), including Rule 204A-1, which requires registered investment advisers to adopt and enforce codes of ethics applicable to their supervised persons. Finally, the Code is intended to comply with Section 303A.10 of the New York Stock Exchange (“NYSE”) Listed Company Manual, which applies to us because the units of AllianceBernstein Holding L.P. (“AllianceBernstein Holding”) are traded on the NYSE.

Additionally, certain entities within the AB Group, such as Sanford C. Bernstein & Co., LLC and Sanford C. Bernstein Limited, have adopted supplemental codes of ethics to address specific regulatory requirements applicable to them. All employees are obligated to determine if any of these codes are applicable to them and to abide by such codes as appropriate.

2. The AB Fiduciary Culture

The primary objective of AB’s business is to provide value, through investment advisory and other financial services, to a wide range of clients, including governments, corporations, financial institutions, high net worth individuals and pension funds.

AB requires that all dealings with, and on behalf of existing and prospective clients be handled with honesty, integrity, and high ethical standards, and that such dealings adhere to the letter and the spirit of applicable laws, regulations and contractual guidelines. As a general matter, AB is a fiduciary that owes its clients a duty of undivided loyalty, and each employee has a responsibility to act in a manner consistent with this duty.

When dealing with or on behalf of a client, every employee must act solely in the best interests of that client. In addition, various comprehensive statutory and regulatory structures such as the 1940 Act, the Advisers Act and the Employee Retirement Income Security Act (“ERISA”) impose specific responsibilities governing the behavior of personnel in carrying out their responsibilities. AB and its employees must comply fully with these rules and regulations. Legal and Compliance Department personnel are available to assist employees in meeting these requirements.

All employees are expected to adhere to the high standards associated with our fiduciary duty, including care and loyalty to clients, competency, diligence and thoroughness, and trust and accountability. Further, all employees must actively work to avoid the possibility that the advice or services we provide to clients is, or gives the appearance of being, based on the self-interests of AB or its employees and not the clients’ best interests.

Our fiduciary responsibilities apply to a broad range of investment and related activities, including sales and marketing, portfolio management, securities trading, allocation of investment opportunities, client service, operations support, performance measurement and reporting, new product development as well as your personal investing activities. These obligations include the duty to avoid material conflicts of interest (and, if this is not possible, to provide full and fair disclosure to clients in communications), to keep accurate books and records, and to supervise personnel appropriately. These concepts are further described in the Sections that follow.

3. Compliance with Laws, Rules and Regulations

AB has a long-standing commitment to conduct its business in compliance with applicable laws and regulations and in accordance with the highest ethical principles. This commitment helps ensure our reputation for honesty, quality, and integrity. All individuals subject to the Code are required to comply with all such laws and regulations. All U.S. employees, as well as non-U.S. employees who act on behalf of U.S. clients or funds, are required to comply with the U.S. federal securities laws. These laws include, but are not limited to, the 1940 Act, the Advisers Act, ERISA, the Securities Act of 1933 (“Securities Act”), the Securities Exchange Act of 1934 (“Exchange Act”), the Sarbanes-Oxley Act of 2002, Title V of the Gramm-Leach-Bliley Act, any rules adopted by the SEC under any of these statutes, the Bank Secrecy Act as it applies to our activities, and any rules adopted thereunder by the Securities and Exchange Commission (“SEC”), Department of the Treasury or the Department of Justice. As mentioned above, as a listed company, we are also subject to specific rules promulgated by the NYSE. Similarly, our non-US affiliates are subject to additional laws and regulatory mandates in their respective jurisdictions, which must be fully complied with.

Our obligation to comply with all applicable laws, regulations, and rules, and to act in an honest and ethical manner, trumps all other considerations, including the interests of our clients. Policies referenced in this Code provide additional details and requirements to ensure compliance. A violation under any of these policies may be deemed a violation of the Code.

4. Policy Against Discrimination and Sexual and Unlawful Harassment

AB is committed to providing a working environment free from all forms of discrimination and harassment on the basis of race, color, religion, creed, ancestry, national origin, sex, age, disability, marital status, citizenship status, sexual orientation, gender identity expression, military or veteran status, or any other basis that is by applicable law. Harassment or discrimination by any AB employee, officer, or director will not be tolerated.

AB's policies on nondiscrimination and sexual or unlawful harassment and how to report instances of such conduct can be found in the Employee Handbook. All employees, officers, and directors are responsible for knowing and abiding by these policies. Anyone who reports in good faith an incident of discrimination or harassment will not be subject to reprisals. Anyone who is found to have engaged in conduct inconsistent with these policies will be subject to appropriate disciplinary action, up to and including termination of employment or dismissal from the Board.

5. Conflicts of Interest / Unlawful Actions

A "conflict of interest" may exist when a person's private interests are contrary to, or inconsistent with, the interests of AB's clients or to the interests of AB or its unitholders.

A conflict situation can arise when an AB employee, officer, or director takes actions or has interests (business, financial or otherwise) that may make it difficult to perform his or her work objectively and effectively. Conflicts of interest may arise, for example, when an AB employee, or a member of his or her family,¹ receives improper personal benefits (including personal loans, services, or payment for services that the AB employee performs in the course of AB business) as a result of his or her position at AB, or gains personal enrichment or benefits through access to confidential information. Conflicts may also arise when an AB employee, or a member of his or her family, holds a significant financial interest in a company that does an important amount of business with AB or has outside business interests that may result in divided loyalties or compromise independent judgment. Moreover, conflicts may arise when making securities investments for personal accounts or when determining how to allocate trading opportunities. Conflicts of interest can also arise because of personal relationships with others within or outside AB (such as family relationships, romantic relationships, or close friendships) that may compromise objectivity and independent judgment.

AB has adopted policies, procedures, and controls designed to manage conflicts of interest, including the Compliance Manual, *Policy and Procedures for Giving and Receiving Gifts and Entertainment*, copies of which can be found on the Legal and Compliance Department intranet site. These policies highlight additional potential conflicts of interest.

Conflicts of interest can arise in many common situations, despite one's best efforts to avoid them. This Code does not attempt to identify all possible conflicts of interest. Literal compliance with each of the specific procedures will not shield you from liability for personal trading or other conduct that violates your fiduciary duties to our clients. All AB employees, officers, and directors are encouraged to seek clarification of, and discuss questions about, potential conflicts of interest. If you have questions about a particular situation or become aware of a conflict or potential conflict, you should bring it to the attention of your supervisor, the General Counsel, the Conflicts Officer, the Chief Compliance Officer or a representative of the Legal and Compliance Department or Human Capital.

In addition to the specific prohibitions contained in the Code, you are, of course, subject to a general requirement not to engage in any act or practice that would defraud our clients. This general prohibition (which also applies specifically in connection with the purchase and sale of a Security held or to be acquired or sold, as this phrase is defined in the Appendix) includes:

- Making any untrue statement of a material fact or employing any device, scheme, or artifice to defraud a client;
- Omitting to state (or failing to provide any information necessary to properly clarify any statements made, in light of the circumstances) a material fact, thereby creating a materially misleading impression;

¹ For purposes of this section of the Code, unless otherwise specifically provided, (i) "family" means your spouse/domestic partner, parents, children, siblings, in-laws by marriage (i.e., mother-in-law, father-in-law, son-in-law, and/or daughter-in-law) and anyone who shares your home; and (ii) "relative" means members of your family (as defined), your aunts and uncles, and your first cousins.

- Accepting any compensation for the purchase or sale of any property to or for a fund or other client account;
- Making investment decisions, changes in research ratings and trading decisions other than exclusively for the benefit of, and in the best interest of, our clients;
- Using information about investment or trading decisions or changes in research ratings (whether considered, proposed or made) to benefit or avoid economic injury to you or anyone other than our clients;
- Taking, delaying or omitting to take any action with respect to any research recommendation, report or rating or any investment or trading decision for a client in order to avoid economic injury to you or anyone other than our clients;
- Purchasing or selling a security on the basis of knowledge of a possible trade by or for a client with the intent of personally profiting from personal holdings in the same or related securities (“front-running” or “scalping”);
- Revealing to any other person (except in the normal course of your duties on behalf of a client) any information regarding securities transactions by any client or the consideration by any client of any such securities transactions; or
- Engaging in any act, practice or course of business that operates or would operate as a fraud or deceit on a client or engaging in any manipulative practice with respect to any client.

AB requires all employees and directors to disclose any Conflicts of Interests that any person may become aware of upon joining AB or during their course of employment or board service.

These disclosures must be made to the Compliance Department through StarCompliance.

6. Insider Trading

There are instances where AB employees or directors may have confidential “inside” information about AB or its affiliates, or about a company with which we do business, or about a company in which we may invest on behalf of clients that is not known to the investing public. AB employees must maintain the confidentiality of such information. If a reasonable investor would consider this information important in reaching an investment decision, the AB employee or director with this information must not buy or sell securities of any of the companies in question or give this information to another person who trades in such securities. This rule is very important, and AB has adopted the following three specific policies that address it: *Policy and Procedures Concerning Purchases and Sales of AB Units*, *Policy and Procedures Concerning Purchases and Sales of AB Closed-End Mutual Funds*, and *Policy and Procedures Regarding Insider Trading and Control of Material Nonpublic Information* (collectively, the “AB Insider Trading Policies”). A copy of the AB Insider Trading Policies may be found on the Legal and Compliance Department intranet site. All AB employees and directors are required to be familiar with these policies² and to abide by them.

7. Personal Trading: Summary of Restrictions

AB recognizes the importance to its employees and directors of being able to manage and develop their own and their dependents’ financial resources through long-term investments and strategies. However, because of the potential conflicts of interest inherent in our business, our industry and AB have implemented certain standards and limitations designed to minimize these conflicts and help ensure that we focus on meeting our duties as a fiduciary for our clients. As a general matter, AB

² The subject of insider trading will be covered in various Compliance training programs and materials.

discourages personal investments by employees in individual securities and encourages personal investments in managed collective vehicles, such as mutual funds.

AB senior management believes it is important for employees to align their own personal interests with the interests of our clients. **Consequently, employees are encouraged to invest in the mutual fund products and services offered by AB, where available and appropriate.**

The policies and procedures for personal trading are set forth in full detail in the AB Personal Trading Policies and Procedures, included in the Code as Appendix A. The following is a summary of the major requirements and restrictions that apply to personal trading by employees, their immediate family members and other financial dependents.

- Employees must disclose all of their brokerage accounts to the Legal and Compliance Department;
- Employees may maintain brokerage accounts only at specified designated broker-dealers (exceptions may apply outside of the U.S.);
- Employees must pre-clear all securities trades with the Legal and Compliance Department (via the StarCompliance Code of Ethics application) prior to placing trades with their broker-dealer (prior supervisory approval is required for portfolio managers, research analysts, traders, persons with access to AB research, and others designated by the Legal and Compliance Department);
- Employees may only make twenty trades in individual securities during any rolling thirty calendar-day period;
- Employee purchases of individual securities, ETFs, ETNs, and closed-end mutual funds (as well as AB managed open-end funds) are subject to a 60-day holding period and 30-day buy-back period (6 months for AB Japan Ltd.);
- Employees may not engage in short-term trading of a mutual fund in violation of that fund's short-term trading policies;
- Employees may not participate in initial public offerings of equity securities;
- Employees must get written approval, and make certain representations, in order to participate in limited or private offerings;
- Employees must submit initial and annual holding reports, disclosing all securities and holdings in mutual funds managed by AB held in personal accounts;
- Employees must, on a quarterly basis, submit or confirm reports identifying all transactions in securities (and mutual funds managed by AB) in personal accounts;
- The Legal and Compliance Department has the authority to deny:
 - a. Any personal trade by an employee if the security is being considered for purchase or sale in a client account, there are open orders for the security on a trading desk, or the security appears on any AB restricted list;
 - b. Any short sale by an employee for a personal account if the security is being held long in AB - managed portfolios; and
 - c. Any personal trade by a portfolio manager or research analyst in a security that is subject to a blackout period as a result of client portfolio trading or recommendations to clients.

- Separate requirements and restrictions apply to Directors who are not employees of AB, as explained in further detail in the AB Personal Trading Policies and Procedures, Appendix A of this document.

This summary should not be considered a substitute for reading, understanding, and complying with the detailed restrictions and requirements that appear in the AB Personal Trading Policies and Procedures, included as Appendix A to the Code.

8. Outside Directorships and Other Outside Activities and Interests

Although activities outside of AB are not necessarily a conflict of interest, a conflict may exist depending upon your position within AB and AB's relationship with the particular activity in question. [Outside activities](#) may also create a potential conflict of interest if they cause an AB employee to choose between that interest and the interests of AB or any client of AB. AB recognizes that the guidelines in this Section are not applicable to directors of AB who do not also serve in management positions within AB.

Important Note for Research Analysts: *Notwithstanding the standards and prohibitions that follow in this section, any employee who acts in the capacity of a research analyst is prohibited from serving on any board of directors or trustees or in any other capacity with respect to any company, public or private, whose business is directly or indirectly related to the industry covered by that research analyst.*

a. Board Member or Trustee

- i. AB employees are prohibited from serving on any board of directors or trustees or in any other management capacity of any unaffiliated public company. However, under certain limited circumstances, Compliance will consider exceptions to this prohibition where the employee has received prior written approval from both AB's Chief Executive Officer and their supervisor. Once the necessary business approvals have been obtained, the employee must submit an [Outside Business Activities Approval Form](#) for review and approval by Compliance.
- ii. No AB employee shall serve on any board of directors or trustees or in any other management capacity of any private company (other than not-for-profit organizations, see below) without prior written approval from the employee's supervisor and Compliance Department via an [Outside Business Activities Approval Form](#). This approval is also subject to review by, and may require the approval of, AB's Chief Executive Officer. The decision as to whether to grant such authorization will be based on a determination that such service would not be inconsistent with the interests of any client, as well as an analysis of the time commitment and potential personal liabilities and responsibilities associated with the outside affiliation.³ Any AB employee who serves as a director, trustee or in any other management capacity of any private company must resign that position prior to the company becoming a publicly traded company.
- iii. Not-for-Profit Organizations: Generally, no approval is required to serve as a trustee/board member of not-for-profit organizations such as religious organizations, foundations, educational institutions, co-ops, private clubs etc., provided that (a) the organization has not issued, and does not have future plans to issue, publicly held securities, including debt obligations; and/or (b) the employee does not act in any investment-related advisory capacity

³ Such authorization requires an agreement on the part of the employee to not hold him or herself out as acting on behalf of AB (or any affiliate) and to use best efforts to ensure that AB's name (or that of any AB affiliated company) is not used in connection with the proposed affiliation (other than in a "bio" section), and in particular, activities relating to fundraising or to the advancement of a specific entity mission or agenda.

(i.e., any direct or indirect role relating to investment advice or choosing investment advisers; serving on investment committee).⁴ If the employee does act in such a capacity, or the organization has issued or plans to issue, public securities, the [Not-For-Profit Activities Disclosure Form](#) must be submitted and approved.

- iv. This approval requirement applies regardless of whether an AB employee plans to serve as a director of an outside business organization (1) in a personal capacity or (2) as a representative of AB or of an entity within the AB Group holding a corporate board seat on the outside organization (e.g., where AB or its clients may have a significant but non-controlling equity interest in the outside company).
- v. New employees with pre-existing relationships are required to resign from the boards of public companies and seek and obtain the required approvals to continue to serve on the boards of private companies.

b. Other Affiliations

AB discourages employees from committing to secondary employment, particularly if it poses any conflict in meeting the employee's ability to satisfactorily meet all job requirements and business needs. Before an AB employee accepts a second job, that employee must:

- Complete and submit an [Outside Business Activities Approval Form](#);
- Ensure that AB's business takes priority over the secondary employment;
- Ensure that no conflict of interest exists between AB's business and the secondary employment (see also footnote 3); and
- Require no special accommodation for late arrivals, early departures, or other special requests associated with the secondary employment.

For employees associated with any of AB's registered broker-dealer subsidiaries, written approval of the Chief Compliance Officer for the subsidiary is also required.⁵ New employees with pre-existing relationships are required to ensure that their affiliations conform to these restrictions, and must obtain the requisite approvals. On a periodic basis, such employees will be required to confirm that the circumstances of the approved activities have not changed.

c. Outside Financial or Business Interests

AB employees should be cautious with respect to personal investments that may lead to conflicts of interest or raise the appearance of a conflict. Conflicts of interest in this context may arise in cases where an AB employee, a member of his or her family, or a close personal acquaintance, holds a substantial interest in a company that has significant dealings with AB or any of its subsidiaries

⁴ Indeed, AB recognizes that its employees often engage in community service in their local communities and engage in a variety of charitable activities, and it commends such service. However, it is the duty of every AB employee to ensure that all outside activities, even charitable or pro bono activities, do not constitute a conflict of interest or are not otherwise inconsistent with employment by AB. Accordingly, although no approval is required, each employee must use his/her best efforts to ensure that the organization does not use the employee's affiliation with AllianceBernstein, including his/her corporate title, in any promotional (other than a "bio" section) or fundraising activities, or to advance a specific mission or agenda of the entity. Such positions also must be reported to the firm pursuant to other periodic requests for information (e.g., the AB 10-K questionnaire).

⁵ In the case of AB subsidiaries that are holding companies for consolidated subgroups, unless otherwise specified by the holding company's Chief Executive Officer, this approval may be granted by the Chief Executive Officer or Chief Financial Officer of each subsidiary or business unit within such a consolidated subgroup.

either on a recurring or “one-off” basis. For example, holding a substantial interest in a family-controlled or other privately-held company that does business with, or competes against, AB or any of its subsidiaries may give rise to a conflict of interest or the appearance of a conflict. In contrast, holding shares in a widely held public company that does business with AB from time to time may not raise the same types of concerns. Prior to making any such personal investments, AB employees must pre-clear the transaction, in accordance with the Personal Trading Policies and Procedures, attached as Appendix A of this Code, and should consult as appropriate with their supervisor, the Conflicts Officer, General Counsel, Chief Compliance Officer or other representative of the Legal and Compliance Department.

AB employees should also be cautious with respect to outside business interests that may create divided loyalties, divert substantial amounts of their time and/or compromise their independent judgment. If a conflict of interest situation arises, you should report it to your supervisor, the Conflicts Officer, General Counsel, Chief Compliance Officer and/or other representative of AB’s Human Capital or Legal and Compliance Department. Business transactions that benefit relatives or close personal friends, such as awarding a service contract to them or a company in which they have a controlling or other significant interest, may also create a conflict of interest or the appearance of a conflict. AB employees must consult their supervisor and/or the Conflicts Officer, General Counsel, Chief Compliance Officer or other representative of AB’s Human Capital or Legal and Compliance Department before entering into any such transaction. New employees that have outside financial or business interests (as described herein) should report them as required and bring them to the attention of their supervisor immediately.

9. Gifts, Entertainment, and Inducements

Business gifts and entertainment are designed to build goodwill and sound working relationships among business partners. However, under certain circumstances, gifts, entertainment, favors, benefits, and/or job offers may be or appear to be attempts to “purchase” favorable treatment. Accepting or offering such inducements could raise doubts about an AB employee’s ability to make independent business judgments in our clients’ or AB’s best interests. For example, a problem would arise if (i) the receipt by an AB employee of a gift, entertainment or other inducement would compromise, or could be reasonably viewed as compromising, that individual’s ability to make objective and fair business decisions on behalf of AB or its clients, or (ii) the offering by an AB employee of a gift, entertainment or other inducement appears to be an attempt to obtain business through improper means or to gain any special advantage in our business relationships through improper means.

These situations can arise in many different circumstances (including with current or prospective suppliers and clients) and AB employees should keep in mind that certain types of inducements may constitute illegal bribes, pay-offs or kickbacks. In particular, the rules of various securities regulators place specific constraints on the activities of persons involved in the sales and marketing of securities. AB has adopted the [Policy and Procedures for Giving and Receiving Gifts and Entertainment](#) to address these and other matters. AB employees must familiarize themselves with this policy and comply with its requirements, which include reporting the acceptance of most business meals, gifts and entertainment to the Compliance Department. A copy of this policy can be found on the Legal and Compliance Department intranet site, and will be supplied by the Compliance Department upon request.

Each AB employee must use good judgment to ensure there is no violation of these principles. If you have any question or uncertainty about whether any gifts, entertainment or other types of inducements are appropriate, please contact your supervisor or a representative of AB’s Legal and Compliance Department and/or the Conflicts Officer, as appropriate. If you feel uncomfortable utilizing the normal channels, issues may be brought to the attention of the Company Ombudsman, who is a neutral, independent, informal and confidential resource to assist employees with concerns about AB business matters that may implicate issues of ethics or questionable practices. Please see Section 25 for additional information on the Company Ombudsman.

10. Compliance with Anti-Corruption Laws

AB employees should be aware that AB strictly prohibits the acceptance, offer, payment or authorization, whether directly or via a third party, of any bribe, and any other form of corruption, whether involving a government official or an employee of a public or private commercial entity. Therefore, it is the responsibility of all AB employees to adhere to all applicable anti-corruption laws and regulations in the jurisdictions in which they do business, including the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and similar international laws regulating payments to public and private sector individuals (collectively, the “Anti-Corruption Laws”).

We expect all AB employees to refuse to make or accept questionable and/or improper payments. As a component of this commitment, no AB employee may give money, gifts, or anything else of value (which include providing jobs or internships) to any official or any employee of a governmental or commercial entity if doing so could reasonably be construed as an attempt to provide AB with an improper business advantage. In addition, any proposed payment or gift to a government official, including employees of government-owned or controlled enterprises (e.g., sovereign wealth and pension funds, public utilities, and national banks), must be reviewed in advance by a representative of the Legal and Compliance Department, even if such payment is common in the country of payment (see discussion of the Anti-Corruption Laws below and in the firm’s [Anti-Bribery and Corruption Policy](#)). AB employees should be aware that they do not actually have to make the payment to violate AB’s policy and the law — merely offering, promising or authorizing it will be considered a violation.

In order to ensure that AB fully complies with the requirements of the Anti-Corruption Laws, employees must be familiar with the firm’s [Anti-Bribery and Corruption Policy](#). Generally, the Anti-Corruption Laws make it illegal (with civil and criminal penalties) for AB, and its employees and agents, to provide anything of value to public or private sector employees, directly or indirectly, for the purpose of obtaining an improper business advantage (which can include improperly securing government licenses and permits). Accordingly, the use of AB funds or assets (or those of any third party) to make a payment directly or through another person or company for any illegal, improper and/or corrupt purpose is strictly prohibited.

It is often difficult to determine at what point a business courtesy extended to another person crosses the line into becoming excessive, and what ultimately could be considered a bribe. Therefore, no entertainment or gifts may be offered to, or travel or hotel expenses paid for, any public official, including employees of government-owned or controlled enterprises, under any circumstances, without the express prior written approval (e-mail correspondence is acceptable) of the General Counsel, Chief Compliance Officer, or their designees in the Legal and Compliance Department.

11. Political Contributions/Activities

a. By or on behalf of AB

Election laws in many jurisdictions generally prohibit political contributions by corporations to candidates. Many local laws also prohibit corporate contributions to local political campaigns. In accordance with these laws, AB does not make direct contributions to any candidates for national or local offices where applicable laws make such contributions illegal. In these cases, contributions to political campaigns must not be, nor appear to be, made with or reimbursed by AB assets or resources. AB assets and resources include (but are not limited to) AB facilities, personnel, office supplies, letterhead, telephones, electronic communication systems and fax machines. This means that AB office facilities may not be used to host receptions or other events for political candidates or parties which include any fund raising activities or solicitations. In limited circumstances, AB office facilities may be used to host events for public office holders as a public service, but only where steps have been taken (such as not providing to the office holder a list of attendees) to avoid the facilitation of fund raising solicitations either during or after the event, and where the event has been pre-approved in writing by the General Counsel or Deputy General Counsel.

Please see the [Policy and Procedures for Giving and Receiving Gifts and Entertainment](#), which can be found on the Legal and Compliance Department intranet site, for a discussion relating to political contributions suggested by clients.

Election laws in many jurisdictions allow corporations to establish and maintain political action or similar committees, which may lawfully make campaign contributions. AB or companies affiliated with AB may establish such committees or other mechanisms through which AB employees may make political contributions, if permitted under the laws of the jurisdictions in which they operate. Any questions about this policy should be directed to the General Counsel or Chief Compliance Officer.

b. By Employees / Directors

AB employees who hold or seek to hold political office must do so on their own time, whether through vacation, after work hours or on weekends. Additionally, the employee must notify the General Counsel or Chief Compliance Officer prior to running for political office to ensure that there are no conflicts of interest with AB business.

AB employees may make personal political contributions as they see fit in accordance with all applicable laws and the guidelines in the [Policy and Procedures for Giving and Receiving Gifts and Entertainment](#), the [Pay-to-Play: Political Contributions Policy](#), as well as the pre-clearance requirement as described below.

Certain employees involved with the offering or distribution of municipal fund securities (e.g., a “529 Plan”) or acting as a director for certain subsidiaries must also adhere to the restrictions and reporting requirements of the Municipal Securities Rulemaking Board.

Several (U.S.) states and localities have enacted “pay-to-play” laws. Some of these laws could prohibit AB from entering into a government contract for a certain number of years if a covered employee makes or solicits a covered contribution. Other jurisdictions require AB to report contributions made by certain employees, without the accompanying ban on business. In certain jurisdictions, the laws also cover the activities of the spouse and dependent children of the covered person. In response to these laws, in addition to SEC Rule 206(4)-5, which also prohibits certain political contributions, AB has in place a pre-clearance requirement, under which all employees must pre-clear with the Compliance Department through StarCompliance, all personal political contributions (including those of their spouses and dependent children) made to, or solicited on behalf of, any (U.S.) federal, state or local candidate, political party, or political entity.

Similarly, members of the AB Board of Directors are covered by the Policy Regarding Pre-Clearance of Personal Political Contributions by AllianceBernstein Directors, which also requires that they pre-clear with the Compliance Department all personal political contributions (including those of their spouses and dependent children) made to, or solicited on behalf of, any U.S. federal, state or local candidate or political party.

12. “Ethical Wall” Policy

AB has established a policy entitled Insider Trading and Control of Material Non-Public Information (“[Ethical Wall Policy](#)”), a copy of which can be found on the Legal and Compliance Department intranet site. This policy was established to prevent the flow of material non-public information about a listed company or its securities from AB employees who receive such information in the course of their employment to those AB employees performing investment management activities. If “Ethical Walls” are in place, AB’s investment management activities may continue despite the knowledge of material non-public information by other AB employees involved in different parts of AB’s business. “Investment management activities” involve making, participating in, or obtaining information regarding purchases or sales of securities of public companies or making, or obtaining information about, recommendations with respect to purchases or sales of such securities. Given AB’s extensive

investment management activities, it is very important for AB employees to familiarize themselves with AB's Ethical Wall Policy and abide by it.

13. Use of Client Relationships

As discussed previously, AB owes fiduciary duties to each of our clients. These require that our actions with respect to client assets or vendor relationships be based solely on the clients' best interests and avoid any appearance of being based on our own self-interest. Therefore, we must avoid using client assets or relationships to inappropriately benefit AB.

Briefly, AB regularly acquires services directly for itself, and indirectly on behalf of its clients (e.g., brokerage, investment research, custody, administration, auditing, accounting, printing and legal services). Using the existence of these relationships to obtain discounts or favorable pricing on items purchased directly for AB or for clients other than those paying for the services may create conflicts of interest. Accordingly, business relationships maintained on behalf of our clients may not be used to leverage pricing for AB when acting for its own account unless all pricing discounts and arrangements are shared ratably with those clients whose existing relationships were used to negotiate the arrangement and the arrangement is otherwise appropriate under relevant legal/regulatory guidelines. For example, when negotiating printing services for the production of AB's Form 10-K and annual report, we may not ask the proposed vendor to consider the volume of printing business that they may get from AB on behalf of the investment funds we manage when proposing a price. On the other hand, vendor/service provider relationships with AB may be used to leverage pricing on behalf of AB's clients.

In summary, while efforts made to leverage our buying power are good business, efforts to obtain a benefit for AB as a result of vendor relationships that we structure or maintain on behalf of clients may create conflicts of interest, which should be escalated to your line manager and Compliance so that they can be reviewed and addressed.

14. Corporate Opportunities and Resources

AB employees owe a duty to AB to advance the firm's legitimate interests when the opportunity to do so arises and to use corporate resources exclusively for that purpose. Corporate opportunities and resources must not be taken or used for personal gain or promotion. AB employees are prohibited from:

- Taking for themselves personally opportunities that are discovered through the use of company property, information or their position;
- Using company property, information, resources, or their company position for personal gain or promotion;
- Creating personal websites related to the financial services industry or which promote themselves and their skills based on their responsibilities at AB;
- Using company property, information or their company position on personal websites or social media platforms (e.g. YouTube, Twitter, LinkedIn, Facebook, etc.) or other marketing channels in a way that is inconsistent with AB's [Use of Social Media Policy](#); and
- Competing with AB directly or indirectly.

Please also refer to the [Policy and Procedures for Giving and Receiving Gifts and Entertainment](#), and its Appendix B, the Code of Conduct Regarding the Purchase of Products and Services on Behalf of AB and its Clients, which can be found on the Legal and Compliance Department intranet site.

AB directors also owe AB a duty of loyalty, which requires, among other things, that they may not misappropriate company opportunities or misuse company assets for their personal benefit.

15. Antitrust and Fair Dealing

AB believes that the welfare of consumers is best served by economic competition. Our policy is to compete vigorously, aggressively, and successfully in today's increasingly competitive business climate and to do so at all times in compliance with all applicable antitrust, competition and fair dealing laws in all the markets in which we operate. We seek to excel while operating honestly and ethically, never through taking unfair advantage of others. Each AB employee should endeavor to deal fairly with AB's customers, suppliers, competitors, and other AB employees. No one should take unfair advantage through manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any other unfair dealing practices.

The antitrust laws of many jurisdictions are designed to preserve a competitive economy and promote fair and vigorous competition. We are all required to comply with these laws and regulations. AB employees involved in marketing, sales and purchasing, contracts or in discussions with competitors have a particular responsibility to ensure that they understand our standards and are familiar with applicable competition laws. Because these laws are complex and can vary from one jurisdiction to another, AB employees are urged to seek advice from the General Counsel, Chief Compliance Officer or Corporate Secretary if questions arise. Please also refer to the Policy and Procedures for Giving and Receiving Gifts and Entertainment, which can be found on the Legal and Compliance Department intranet site, for a discussion relating to some of these issues.

16. Recordkeeping and Retention

Properly maintaining and retaining company records is of the utmost importance. AB employees are responsible for ensuring that AB's business records are properly maintained and retained in accordance with applicable laws and regulations in the jurisdictions where it operates. AB Employees should familiarize themselves with these laws and regulations. Please see the Record Retention Policy on the Legal and Compliance intranet site for more information.

As AB onboards new electronic communications platforms, employees are required to comply with with the [Use of Electronic Communications](#) policy. Additional information on AB's requirements around electronic communications can be found on the [Electronic Communications](#) section of the Compliance Manual.

17. Improper Influence on Conduct of Audits

AB employees, and persons acting under their direction, are prohibited from taking any action to coerce, manipulate, mislead, hinder, obstruct or fraudulently influence any external auditor, internal auditor or regulator engaged in the performance of an audit or review of AB's financial statements and/or procedures. AB employees are required to cooperate fully with any such audit or review.

The following is a non-exhaustive list of actions that might constitute improper influence:

- Offering or paying bribes or other financial incentives to an auditor, including offering future employment or contracts for audit or non-audit services;
- Knowingly providing an internal or external auditor or regulator with inaccurate or misleading data or information;
- Threatening to cancel or canceling existing non-audit or audit engagements if the auditor objects to the company's accounting;

- Seeking to have a partner or other team member removed from the audit engagement because such person objects to the company's accounting;
- Knowingly altering, tampering or destroying company documents;
- Knowingly withholding pertinent information; or
- Knowingly providing incomplete information.

Under the (U.S.) Sarbanes Oxley Law, any false statement -- that is, any lie or attempt to deceive an investigator -- may result in criminal prosecution.

18. Accuracy of Disclosure

Securities and other laws impose public disclosure requirements on AB and require it to regularly file reports and financial information and make other submissions to various regulators and stock market authorities around the globe. Such reports and submissions must comply with all applicable legal requirements and may not contain misstatements or omit material facts.

AB employees who are directly or indirectly involved in preparing such reports and submissions, or who regularly communicate with the press, investors and analysts concerning AB, must ensure within the scope of the employee's job activities that such reports, submissions and communications are (i) full, fair, timely, accurate and understandable, and (ii) meet applicable legal requirements. This applies to all public disclosures, oral statements, visual presentations, press conferences and media calls concerning AB, its financial performance and similar matters. In addition, members of AB's Board, executive officers and AB employees who regularly communicate with analysts or actual or potential investors in AB securities are subject to the AB [Regulation FD Compliance Policy](#). A copy of the policy can be found on the Legal and Compliance Department intranet site.

19. Confidentiality

Subject to Section 23, AB employees must maintain the confidentiality of sensitive non-public and other confidential information entrusted to them by AB or its clients and vendors and must not disclose such information to any persons except when disclosure is authorized by AB or mandated by regulation or law. However, disclosure may be made to (1) other AB employees who have a bona fide "need to know" in connection with their duties, (2) persons outside AB (such as attorneys, accountants or other advisers) who need to know in connection with a specific mandate or engagement from AB or who otherwise have a valid business or legal reason for receiving it and have executed appropriate confidentiality agreements, or (3) regulators pursuant to an appropriate written request (see Section 23).

Confidential information includes all non-public information that might be of use to competitors, or harmful to AB or our clients and vendors, if disclosed. The identity of certain clients may also be confidential. Intellectual property (such as confidential product information, trade secrets, patents, trademarks, and copyrights), business, marketing and service plans, databases, records, salary information, unpublished financial data and reports as well as information that joint venture partners, suppliers or customers have entrusted to us are also viewed as confidential information. Please note that the obligation to preserve confidential information continues even after employment with AB ends.

To safeguard confidential information, AB employees should observe at least the following procedures:

- Special confidentiality arrangements may be required for certain parties, including outside business associates and governmental agencies and trade associations, seeking access to confidential information;

- Papers relating to non-public matters should be appropriately safeguarded;
- Appropriate controls for the reception and oversight of visitors to sensitive areas should be implemented and maintained;
- Document control procedures, such as numbering counterparts and recording their distribution, should be used where appropriate;
- If an AB employee is out of the office in connection with a material non-public transaction, staff members should use caution in disclosing the AB employee's location;
- Sensitive business conversations, whether in person or on the telephone, should be avoided in public places and care should be taken when using portable computers and similar devices in public places; and
- E-mail messages and attachments containing material non-public information should be treated with similar discretion (including encryption, if appropriate), and recipients should be made aware of the need to exercise similar discretion.

Nothing herein, or in any contractual confidentiality provision to which any employee is subject, prohibits employees from reporting possible violations of law or regulation to any governmental agency or entity, or self-regulatory authority, or from making other disclosures that are protected under the whistleblower provisions of state or federal law or regulation. Employees do not need AB's prior authorization to make any such reports or disclosures and are not required to notify AB that they have made such reports or disclosures.

Please see the [Privacy Policy](#) on the Legal and Compliance intranet site for more information.

20. Protection and Proper Use of AB Assets

AB employees have a responsibility to safeguard and make proper and efficient use of AB's property. Every AB employee also has an obligation to protect AB's property from loss, fraud, damage, misuse, theft, embezzlement or destruction. Acts of fraud, theft, loss, misuse, carelessness and waste of assets may have a direct impact on AB's profitability. Any situations or incidents that could lead to the theft, loss, fraudulent or other misuse or waste of AB property should be reported to your supervisor or a representative of AB's Human Capital or Legal and Compliance Department as soon as they come to an employee's attention. Should an employee feel uncomfortable utilizing the normal channels, issues may be brought to the attention of the Company Ombudsman, who is a neutral, independent, informal and confidential resource to assist employees with concerns about AB business matters that may implicate issues of ethics or questionable practices. Please see Section 25 for additional information on the Company Ombudsman.

21. Policy on Intellectual Property

a. Overview

Ideas, inventions, discoveries, and other forms of so-called "intellectual property" are becoming increasingly important to all businesses, including ours. Recently, financial services companies have been applying for and obtaining patents on their financial product offerings and "business methods" for both offensive and defensive purposes. For example, business method patents have been obtained for information processing systems, data gathering and processing systems, billing and collection systems, tax strategies, asset allocation strategies and various other financial systems and strategies. The primary goals of the AB policy on intellectual property are to preserve our ability to use our own proprietary business methods, protect our IP investments and reduce potential risks and liabilities.

b. Employee Responsibilities

- **New Products and Methods.** Employees must maintain detailed records and all work papers related to the development of new products and methods in a safe and secure location.
- **Trademarks.** Clearance must be obtained from the Legal and Compliance Department before any new word, phrase or slogan, which we consider proprietary and in need of trademark protection, is adopted or used in any written materials. To obtain clearance, the proposed word, phrase or slogan and a brief description of the products or services for which it is intended to be used should be communicated to the Legal and Compliance Department sufficiently well in advance of any actual use in order to permit any necessary clearance investigation.

c. Company Policies and Practices

- **Ownership.** Employees acknowledge that any discoveries, inventions, or improvements (collectively, "Inventions") made or conceived by them in connection with, and during the course of, their employment belong, and automatically are assigned, to AB. AB can keep any such Inventions as trade secrets or include them in patent applications, and Employees will assist AB in doing so. Employees agree to take any action requested by AB, including the execution of appropriate agreements and forms of assignment, to evidence the ownership by AB of any such Invention.
- **Use of Third Party Materials.** In performing one's work for, or on behalf of AB, Employees will not knowingly disclose or otherwise make available, or incorporate anything that is proprietary to a third party without obtaining appropriate permission.
- **Potential Infringements.** Any concern regarding copyright, trademark, or patent infringement should be immediately communicated to the Legal and Compliance Department. Questions of infringement by AB will be investigated and resolved as promptly as possible.

By certifying in accordance with Section 27 of this Code, the individual subject to this Code agrees to comply with AB's policies and practices related to intellectual property as described in this Section 21.

22. Exceptions from the Code

In addition to the exceptions contained within the specific provisions of the Code, the General Counsel, Chief Compliance Officer (or his or her designee) may, in very limited circumstances, grant other exceptions under any Section of this Code on a case-by-case basis. In these situations, the following may be required as deemed necessary considering the circumstances:

a. Written Statement and Supporting Documentation

The individual seeking the exception may need to furnish to the Chief Compliance Officer, or designee, as applicable:

- i. A written statement detailing the request or efforts made to comply with the requirement from which the individual seeks an exception;
- ii. A written statement containing a representation and warranty that (i) compliance with the requirement would impose a severe undue hardship on the individual and (ii) the exception would not, in any manner or degree, harm or defraud a client, violate the general principles herein or compromise the individual's or AB's fiduciary duty to any client; and/or
- iii. Any supporting documentation that the Chief Compliance Officer may require.

b. Compliance Interview

The Chief Compliance Officer (or designee) may conduct an interview with the individual or take such other steps deemed appropriate in order to determine whether granting the exception will not, in any manner or degree, harm or defraud a client, violate the general principles herein or compromise the individual's or AB's fiduciary duty to any client; and shall maintain all written statements and supporting documentation, as well as documentation of the basis for granting the exception.

PLEASE NOTE: To the extent required by law or NYSE rule, any waiver or amendment of this Code for AB's executive officers (including AB's Chief Executive Officer, Chief Financial Officer, and Principal Accounting Officer) or directors shall be made at the discretion of the Board of AllianceBernstein Corporation and promptly disclosed to the unitholders of AllianceBernstein Holding pursuant to Section 303A.10 of the NYSE Exchange Listed Company Manual.

23. Regulatory Inquiries, Investigations and Litigation

a. Requests for Information

Governmental agencies and regulatory organizations may from time to time conduct surveys or make inquiries that request information about AB, its customers or others that generally would be considered confidential or proprietary.

All regulatory inquiries concerning AB are to be handled by the Chief Compliance Officer or General Counsel. Employees receiving such inquiries should refer such matters immediately to the Legal and Compliance Department.

b. Types of Inquiries

Regulatory inquiries may be received by mail, e-mail, telephone or personal visit. In the case of a personal visit, demand may be made for the immediate production or inspection of documents. While any telephone or personal inquiry should be handled in a courteous manner, the caller or visitor should be informed that responses to such requests are the responsibility of AB's Legal and Compliance Department. Therefore, the visitor should be asked to wait briefly while a call is made to the Chief Compliance Officer or General Counsel for guidance on how to proceed. In the case of a telephone inquiry, the caller should be referred to the Chief Compliance Officer or General Counsel or informed that his/her call will be promptly returned. Letter or e-mail inquiries should be forwarded promptly to the Chief Compliance Officer or General Counsel, who will provide an appropriate response.

c. Responding to Information Requests

Subject to Section 23, under no circumstances should any documents or material be released to a regulator without prior approval of the Chief Compliance Officer or General Counsel. Likewise, no employee should have substantive discussions with any regulatory personnel without prior consultation with either of these individuals.

d. Use of Outside Counsel

It is the responsibility of the Chief Compliance Officer or General Counsel to retain and provide information to AB's outside counsel in those instances deemed appropriate and necessary.

e. Regulatory Investigation

Any employee that is notified that they are the subject of a regulatory investigation, whether in connection with his or her activities at AB or at a previous employer, must immediately notify the Chief Compliance Officer or General Counsel.

f. Litigation

Any receipt of service or other notification of a pending or threatened action against the firm should be brought to the immediate attention of the General Counsel or Chief Compliance Officer. These individuals also should be informed of any instance in which an employee is sued in a matter involving his/her activities on behalf of AB. Notice also should be given to either of these individuals upon receipt of a subpoena for information from AB relating to any matter in litigation or receipt of a garnishment lien or judgment against the firm or any of its clients or employees. The General Counsel or Chief Compliance Officer will determine the appropriate response.

24. Compliance and Reporting of Misconduct / “Whistleblower” Protection

No Code can address all specific situations. Accordingly, each AB employee is responsible for applying the principles set forth in this Code in a responsible fashion and with the exercise of good judgment and common sense. Whenever uncertainty arises, an AB employee should seek guidance from an appropriate supervisor or a representative of Human Capital or the Legal and Compliance Department before proceeding.

All AB employees should promptly report any practices or actions the employee believes to be inappropriate or inconsistent with any provisions of this Code. In addition, all employees must promptly report any actual violations of the Code to the General Counsel, the Chief Compliance Officer or a designee. Any person reporting a violation in good faith, or asserting any right provided by law or in exercising their duties as set forth in our policies, will be protected against reprisals. If you have information about Code or other AB policy violations or potentially illegal or unethical activity, visit the Legal & Compliance Loop site for further information or visit <https://secure.ethicspoint.com/domain/media/en/gui/44414/index.html>.

If you feel uncomfortable utilizing the formal channels, issues may be brought to the attention of the Company Ombudsman, who is a neutral, independent, informal and confidential resource to assist employees with concerns about AB business matters that may implicate issues of ethics or questionable practices. Please see Section 25 for additional information on the Company Ombudsman.

Nothing herein, or in any contractual confidentiality provision to which any employee is subject, prohibits employees from reporting possible violations of law or regulation to any governmental agency or entity, or self-regulatory authority, or from making other disclosures that are protected under the whistleblower provisions of state or federal law or regulation. Employees do not need AB’s prior authorization to make any such reports or disclosures and are not required to notify AB that they have made such reports or disclosures.

25. Company Ombudsman

AB’s Company Ombudsman provides a neutral, confidential, informal and independent communications channel where any AB employee can obtain assistance in surfacing and resolving work-related issues. The primary purpose of the Ombudsman is to help AB:

- Safeguard its reputation and financial, human and other company assets;
- Maintain an ethical and fiduciary culture;
- Demonstrate and achieve its commitment to “doing the right thing;” and
- Comply with relevant provisions of the Sarbanes-Oxley Act of 2002, the U.S. Sentencing Guidelines, as well as AB’s 2003 SEC Order, New York Stock Exchange Rule 303A.10 and other laws, regulations and policies.

The Ombudsman seeks to provide early warnings and to identify changes that will prevent malfeasance and workplace issues from becoming significant or recurring. The Ombudsman has a reporting relationship to the AB CEO, the Audit Committee of the Board of Directors of AllianceBernstein Corporation and independent directors of AB's U.S. mutual fund boards.

Any type of work-related issue may be brought to the Ombudsman, including potential or actual financial malfeasance, security matters, inappropriate business practices, compliance issues, unethical behavior, violations of law, health and safety issues, and employee relations issues. The Ombudsman supplements but does not replace existing formal channels for reporting work-related issues, such as Human Capital, Legal and Compliance, Internal Audit and line management.

26. Sanctions

Upon learning of a violation of this Code, any member of the AB Group, with the advice of the General Counsel, the Chief Compliance Officer and/or the AB Code of Ethics Oversight Committee, may impose such sanctions as such member deems appropriate, including, among other things, restitution, censure, suspension or termination of service. Persons subject to this Code who fail to comply with it may also be violating the U.S. federal securities laws or other federal, state or local laws within their particular jurisdictions.

27. Annual Certifications

Each person subject to this Code must certify at least annually to the Chief Compliance Officer that he or she has read and understands the Code. As part of these certifications, the employee confirms that they are (1) subject to and have complied with the Code's provisions, (2) disclosed or reported all personal securities transactions, conflicts of interests and other items required, and (3) understand and complied with the policies for electronic communications. The Chief Compliance Officer may require interim certifications for significant changes to the Code.

APPENDIX A

AllianceBernstein L.P.

PERSONAL TRADING POLICIES AND PROCEDURES

1. Overview

a. Introduction

AB recognizes the importance to its employees of being able to manage and develop their own and their dependents' financial resources through long-term investments and strategies. However, because of the potential conflicts of interest inherent in our business, our industry and AB have implemented certain standards and limitations designed to minimize these conflicts and help ensure that we focus on meeting our duties as a fiduciary for our clients. **Employees should be aware that their ability to liquidate positions may be severely restricted under these policies, including during times of market volatility.** Therefore, as a general matter, AB discourages personal investments by employees in individual securities and encourages personal investments in managed collective vehicles, such as mutual funds.

AB senior management believes it is important for employees to align their own personal interests with the interests of our clients. **Consequently, employees are encouraged to invest in the mutual fund products and services offered by AB, where available and appropriate.**

b. Definitions

The following definitions apply for purposes of this Appendix A of the Code; however additional definitions are contained in the text itself.¹

1. **"AllianceBernstein" or "AB"** mean AllianceBernstein L.P., its subsidiaries and its joint venture entities.
2. **"Beneficial Ownership"** is interpreted in the same manner as in determining whether a person is subject to the provisions of Section 16 of the Securities Exchange Act of 1934 ("Exchange Act"), Rule 16a-1 and the other rules and regulations thereunder and includes ownership by any person who, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares a direct or indirect pecuniary interest in a Security. For example, an individual has an indirect pecuniary interest in any Security owned by the individual's spouse. Beneficial Ownership also includes, directly or indirectly, through any contract, arrangement, understanding, relationship, or otherwise, having or sharing "voting power" or "investment power," as those terms are used in Section 13(d) of the Exchange Act and Rule 13d-3 thereunder.
3. **"Client"** means any person or entity, including an investment company, for which AB serves as investment manager or adviser.
4. **"Chief Compliance Officer"** refers to AB's Chief Compliance Officer.
5. **"Code of Ethics Oversight Committee"** refers to the committee of AB's senior officers that is

¹Due to the importance that AB places on promoting responsible personal trading, we have applied the definition of "access person," as used in Rule 17j-1 under the 1940 Act and Rule 204A-1 under the Advisers Act, and related requirements to all AB employees and officers. We have drafted special provisions for directors of AB who are not also employees of AB.

responsible for monitoring compliance with the Code.

6. **“Conflicts Officer”** refers to AB’s Conflicts Officer, who reports to the Chief Compliance Officer.
7. **“Control”** has the meaning set forth in Section 2(a)(9) of the 1940 Act.
8. **“Director”** means any person who serves in the capacity of a director of AllianceBernstein Corporation. **“Affiliated Outside Director”** means any Director who is not an Employee (as defined below) but who is an employee of an entity affiliated with AB. **“Outside Director”** means any Director who is neither an Employee (as defined below) nor an employee of an entity affiliated with AB.
9. **“Employee”** refers to any person who is an employee or officer of AB, including part-time employees and consultants (acting in the capacity of a portfolio manager, trader or research analyst, or others at the discretion of the Compliance Department) under the Control of AB.
10. **“Initial Public Offering”** means an offering of equity Securities registered under the Securities Act of 1933 (the “1933 Act”), the issuer of which, immediately before the registration, was not subject to the reporting requirements of Sections 13 or 15(d) of the Exchange Act, as well as similar offerings of Securities issued outside the United States.
11. **“Investment Personnel”** refers to:
 - a. Any Employee who acts in the capacity of a portfolio manager, research analyst or trader or any other capacity (such as an assistant to one of the foregoing) and in connection with his or her regular duties makes or participates in making, or is in a position to be aware of, recommendations regarding the purchase or sale of securities by a Client;
 - b. Any Employee who receives or has access to AB equity research or Bernstein Research via Outlook distribution, Factset, Bloomberg, Research Wire or other medium/platform;
 - c. Any other Employee designated as such by the Legal and Compliance Department; or
 - d. Any natural person who Controls AB and who obtains information concerning recommendations made to a Client regarding the purchase or sale of securities by the Client.
12. **“Limited Offering”** means an offering that is exempt from registration under the 1933 Act pursuant to Sections 4(2) or 4(6) thereof or pursuant to Rules 504, 505 or 506 under the 1933 Act, as well as similarly exempted offerings of Securities issued outside the United States. Investments in hedge funds are typically sold in a limited offering setting.
13. **“Ombudsman” aka “Ombuds”** means the Company Ombudsman of AB, or any of his/her staff members.
14. **“Personal Account”** refers to any account (including, without limitation, a custody account, safekeeping account and an account maintained by an entity that may act in a brokerage or a principal capacity) in which any type of Security (as defined in Section 2(a)(36) of the Investment Company Act of 1940) may be traded or custodied, and in which an Employee has any Beneficial Ownership, and any such account maintained by or for a financial dependent of an Employee. For example, this definition includes Personal Accounts of:
 - a. An Employee’s spouse/domestic partner (of same or opposite gender), including a legally separated or divorced spouse who is a financial dependent;
 - b. Financial dependents of an Employee, including both those residing with the Employee and those not residing with the Employee, such as financially dependent children away at college; and
 - c. Any person or entity for which the Employee acts as a fiduciary (e.g., acting as a Trustee) or who has given investment discretion to the Employee, other than accounts over which the

employee has discretion as a result of his or her responsibilities at AB.

Personal Accounts include any account meeting the above definition even if the Employee has given discretion over the account to someone else.

15. **“Purchase or Sale of a Security”** includes, among other transactions, the writing or purchase of an option to sell a Security and any short sale of a Security.
16. **“Security”** has the meaning set forth in Section 2(a)(36) of the Investment Company Act and includes any derivative thereof, commodities, options or forward contracts, except that it shall not include:
 - a. Securities issued by the government of the United States;
 - b. Short-term debt securities that are government securities within the meaning of Section 2(a)(16) of the Investment Company Act;
 - c. Shares issued by money market funds;
 - d. Shares issued by open-end mutual funds, **other than Exchange-Traded Funds (“ETFs”), and mutual funds managed by AB**; and
 - e. Bankers’ acceptances, bank certificates of deposit, commercial paper, high quality short-term debt instruments and such other instruments as may be designated from time to time by the Chief Compliance Officer.

IMPORTANT NOTES:

- i. Exchange-Traded Funds are covered under this definition of Security, and therefore **are subject** to the governing rules. (See exceptions in Sections 2(d)(ii) and 2(e)(ii) of this Appendix.)
 - ii. *Direct investment* in **Bitcoin** or other crypto currencies are currently not covered under this definition of Security. However, as global regulators move closer to regulating them, the lack of prohibition and our position on pre-clearance and/or reporting, will likely change.
17. A Security is **“Being Considered for Purchase or Sale”** when:
 - a. An AB Growth research analyst issues research information regarding initial coverage of, or changing a rating with respect to, a Security;
 - b. A portfolio manager has indicated his or her intention to purchase or sell a Security; or
 - c. An open order² in the Security exists on any buy-side trading desk.

This is not an exhaustive list. At the discretion of the Legal and Compliance Department, a Security may be deemed “Being Considered for Purchase or Sale” even if none of the above events have occurred, particularly if a portfolio manager is contemplating the purchase or sale of that Security, as evidenced by e-mails or the manager’s preparation of, or request for, research.

18. **Security held or to be acquired or sold”** means:
 - a. Any Security which, within the most recent 15 days (i) is or has been held by a Client in an AB-managed account or (ii) is being or has been considered by AB for purchase or sale for the Client; and/or
 - b. Any option to purchase or sell, and any Security convertible into or exchangeable for, a

²Defined as any client order on a Growth trading desk which has not been completely executed, as well as any “significant” open Value client orders, or Value “priority” purchases or sales, as those terms are defined by the applicable Value SBU CIO.

Security.

19. “**StarCompliance Code of Ethics application**” means the web-based application used to electronically pre-clear personal securities transactions and file many of the reports required herein. The application can be accessed via the AB network at: <https://alliance-ng.starcompliance.com>.
20. “**Subsidiary**” refers to entities with respect to which AB, directly or indirectly, through the ownership of voting securities, by contract or otherwise has the power to direct or cause the direction of management or policies of such entity.

2. Requirements and Restrictions – All Employees

The following are the details of the standards which must be observed:

a. General Standards

Employees have an obligation to conduct their personal investing activities and related Securities transactions lawfully and in a manner that avoids actual or potential conflicts between their own interests and the interests of AB and its clients. Employees must carefully consider the nature of their AB responsibilities - and the type of information that he or she might be deemed to possess in light of any particular securities transaction - before engaging in any investment-related activity or transaction.

- i. *Material Nonpublic Information*: Employees in possession of material nonpublic information about or affecting Securities, or their issuer, are prohibited from buying or selling such Securities, or advising any other person to buy or sell such Securities. Similarly, they may not disclose such information to anyone without the permission of the General Counsel or Chief Compliance Officer. Please see the AB [Insider Trading Policies](#), which can be found on the Legal and Compliance Department intranet site.
- ii. *Short-Term Trading*: Employees are encouraged to adopt long-term investment strategies (see Section 2(f) for applicable holding and buy-back periods for individual securities). Similarly, purchases of shares of most mutual funds should be made for investment purposes. Employees are therefore prohibited from engaging in transactions in a mutual fund that are in violation of the fund’s prospectus, including any applicable short-term trading or market-timing prohibitions.

With respect to the AB funds, Employees are prohibited from short-term trading, and may not effect a purchase and redemption, regardless of size, in and out of the same mutual fund within any sixty (60) day period.³

- iii. *Personal Responsibility*: It is the responsibility of each Employee to ensure that all Securities transactions in Personal Accounts are made in strict compliance with the restrictions and procedures in the Code and this Appendix A, and otherwise comply with all applicable legal and regulatory requirements.

Affiliated Directors and Outside Directors: The personal trading restrictions of Appendix A of the Code do not apply to any Affiliated Director or Outside Director, *provided that at the time of the*

³ These restrictions shall not apply to investments in mutual funds through professionally managed asset allocation programs; automatic reinvestment programs; automatic investments through 401(k) and similar retirement accounts; and any other non-volitional investment vehicles. These restrictions also do not apply to transactions in money market funds and other short duration funds used as checking accounts or for similar cash management purposes.

transaction, he or she has no actual knowledge that the Security involved is “Being Considered for Purchase or Sale.” Affiliated Directors and Outside Directors, however, are subject to reporting requirements as described in Section 8 below.

b. Disclosure of Personal Accounts

All Employees must disclose their Personal Accounts to the Compliance Department (and take all necessary actions to close any accounts held with non-designated brokers, see next section). It is each Employee’s responsibility to ensure that the Compliance Department is appropriately notified of all accounts and to direct the broker to provide the Compliance Department with electronic and/or paper brokerage transaction confirmations and account statements (and verify that it has been done). Do not assume that the broker-dealer will automatically arrange for this information to be set up and forwarded correctly.

c. Designated Brokerage Account

Personal Accounts of an Employee that are maintained as brokerage accounts must be held only at the following approved designated broker-dealers [Approved Designated Broker-Dealer List](#) (each a “Designated Broker”).^{4 5}

Under limited circumstances, the Compliance Department may grant exceptions to this policy and approve the use of other broker-dealers or custodians (such as in the case of proprietary products that can only be held at specific firms). In addition, the Chief Compliance Officer may in the future modify this list.

All Securities in which an Employee has any Beneficial Ownership must be held in Personal Accounts and maintained in accordance with the Designated Broker requirements described above (except that shares of open-end mutual funds may be held directly with the investment company). Additionally, Employees may affect Securities transactions only in Personal Accounts (or directly through a mutual fund’s transfer agent). In limited circumstances, the Chief Compliance Officer, or his designee, may grant an exception to these requirements (see Section 22 of the Code). This requirement applies to all types of Securities and personal Securities transactions including, for example, Securities issued in a Limited Offering or other direct investments.

d. Pre-Clearance Requirement

- i. Subject to the exceptions specified below, an Employee may not purchase or sell, directly or indirectly, any Security (*please note the limited pre-clearance requirement related to AB mutual funds in Section 2(h) below*) in which the Employee has (or after such transaction would have) any Beneficial Ownership unless the Employee obtains the prior approval from the Compliance Department and, *in the case of Investment Personnel, the head of the business unit (or a designated manager) in which the Employee works.*⁶ Pre-clearance requests must be made on

⁴ Exceptions may apply in certain non-U.S. locations. Please consult with your local compliance officer.

⁵ Non-discretionary accounts at Sanford C. Bernstein & Co., LLC. may only be used for the following purposes: (a) Custody of securities and related activities (such as receiving and delivering positions, corporate actions, and subscribing to offerings commonly handled by operations such as State of Israel bonds, etc.); (b) Transacting in US Treasury securities; and (c) Transacting in AB products outside of a private client relationship (such as hedgefunds and AB/SCB mutual funds). All equity and fixed income transactions (other than US Treasuries) are prohibited.

⁶ For purposes of the pre-clearance requirement, all employees in the Value SBU are considered Investment

the date of the contemplated transaction, through the use of the appropriate pre-clearance form, which can be accessed via the StarCompliance Code of Ethics application at <http://starcompliance.acml.com/>. These requests will document (a) the details of the proposed transaction and (b) representations as to compliance with the personal trading restrictions of this Code.

Pre-Clearance requests are reviewed by team members in Nashville and may not be addressed until 8:00 a.m. Central time. Please note that trade requests submitted after 2:30 p.m. Central time will be placed on hold until the following day. The Legal and Compliance Department (including via its electronic pre-clearance utility) will review the request to determine if the proposed transaction complies with the Code, whether that security is restricted for AB personnel, and if appropriate, contact the appropriate supervisor (or a person designated by the supervisor) to determine whether the proposed transaction raises any potential conflicts of interest or other issues. The Compliance Department will communicate to the requesting Employee its approval or denial of the proposed transaction, either in writing (e-mail) or orally. Approvals are good through the day approved plus the following trading day. Good-until-cancel limit orders are not permitted without daily requests for pre-clearance approval. **Employees must wait for Compliance Department approval before placing the order with their broker.**

The Legal and Compliance Department will maintain an electronic log of all pre-clearance requests and indicate the approval or denial of the request in the log.

PLEASE NOTE: When a Security is Being Considered for Purchase or Sale for a Client (see Section 2(i) below) or is being purchased or sold for a Client following the approval on the same day of a personal trading request form for the same Security, the Legal and Compliance Department is authorized to cancel the personal order if (a) it has not been executed and the order exceeds a market value of \$50,000 or (b) the Legal and Compliance Department determines, after consulting with the trading desk and the appropriate business unit head (if available), that the order, based on market conditions, liquidity and other relevant factors, could have an adverse impact on a Client or on a Client's ability to purchase or sell the Security or other Securities of the issuer involved.

ii. **Exceptions: The pre-clearance requirements do not apply to⁷:**

a. **Non-Volitional Transactions, including:**

- Transactions in a Personal Account over which the Employee has no direct or indirect influence or control (i.e., managed for an Employee on a discretionary basis by a third person or entity, when the Employee does not discuss any specific transactions for the account with the third-party manager);
- The receipt of any Security received as part of an Employee's compensation (although any subsequent sales must be pre-cleared);
- Any Securities transaction effected in an Employee's Personal Account pursuant to an automatic investment plan, which means a program in which regular periodic purchases (or withdrawals)

Personnel and are therefore required to have all of their trades pre-approved by the head of their respective departments (or a designee).

⁷Additional Securities may be exempted from the pre-clearance requirement if, in the opinion of the Chief Compliance Officer, no conflict of interest could arise from personal trades in such Security.

are made automatically in (or from) a Personal Account in accordance with a predetermined schedule and allocation, and includes dividend reinvestment plans. Additional purchases and sales that are not automatic, however, are subject to the pre-clearance requirement.

The Legal and Compliance Department may request an Employee to certify as to the non-volitional nature of these transactions.

b. Exercise of Pro Rata Issued Rights

Purchases effected upon the exercise of rights issued by an issuer pro rata to all holders of a class of the issuer's Securities, to the extent such rights were acquired from such issuer, and sales of such rights so acquired. This exemption applies only to the exercise or sale of rights that are issued in connection with a specific upcoming public offering on a specified date, as opposed to rights acquired from the issuer (such as warrants or options), which may be exercised from time-to-time up until an expiration date. This exemption does not apply to the sale of stock acquired pursuant to the exercise of rights.

c. AB Managed Open-end Mutual Funds

Open-end mutual funds managed or sub-advised by AB are covered under the Code's definition of Security and therefore are subject to all applicable Code rules and prohibitions. However, investments in AB-managed funds, if transacted through the ABI Employee Desk or through an employee's Voya-sponsored 401K account, do not require pre-clearance. (If not transacted via ABI or through Voya, pre-clearance is required.)

e. **Limitation on the Number of Trades**

- i. No more than an aggregate of twenty (20) transactions in individual Securities may occur in an Employee's Personal Accounts during any rolling thirty-day period.
- ii. Exceptions:
 - a. The limitation on the permissible number of trades over a 30-day period does not apply to AB-managed funds. **Note that the 60-day hold requirement (see next section) still applies to these Securities.**
 - b. The limitation is also inapplicable to transactions in a Personal Account over which the Employee has no direct or indirect influence or control (i.e., managed for an Employee on a discretionary basis by a third person or entity), or pursuant to an automatic investment plan, including dividend reinvestment plans.

f. **Short-Term Trading**

- i. Employees must always conduct their personal trading activities lawfully, properly and responsibly, and are encouraged to adopt long-term investment strategies that are consistent with their financial resources and objectives. AB discourages short-term trading strategies, and Employees are cautioned that such strategies may inherently carry a higher risk of regulatory and other scrutiny. In any event, excessive or inappropriate trading that interferes with job performance, or compromises the duty that AB owes to its Clients will not be tolerated.

Employees are subject to a mandatory holding period of all Securities for 60 days and a buy-back period of 30 days. By regulation, employees of AB Japan Ltd. are subject to a 6-month

hold. A first-in-first-out accounting methodology will be applied to a series of Securities purchases for determining compliance with this holding rule. As noted in Section 2(a)(ii), the applicable holding period for AB open-end funds is also 60 days.

ii. **Exceptions to the short-term trading rules (i.e., the 60-day hold and 30-day buy-back):**

- a. Securities transactions in Personal Accounts of spouses and domestic partners and other non-Employees (e.g., financially dependent children) which are not directed by the Employee are subject to the mandatory holding and buy-back periods. However, after 30 calendar days, a sell transaction will be permitted for these Personal Accounts if necessary to minimize a loss.
- b. Transactions in a Personal Account over which the Employee has no direct or indirect influence or control (i.e., managed for an Employee on a discretionary basis by a third person or entity).
- c. Transactions in Securities held by the Employee prior to his or her employment with AB.
- d. Shares in the publicly traded units of AB that were acquired in connection with a compensation plan. However, units purchased on the open market must comply with the holding period requirements herein.
- e. Shares received through an employee stock plan or compensation program by a related covered person may be transacted within the 60-day holding period or the 30-day buy-back period,

Any trade made in violation of this section of the Code shall be unwound, or, if that is not practicable, all profits from the short-term trading may be disgorged as directed by the Chief Compliance Officer.

g. Short Sales

The Legal and Compliance Department will prohibit an Employee from engaging in any short sale of a Security in a Personal Account if, at the time of the transaction, any Client has a long position in such Security in an AB-managed portfolio (except that an Employee may engage in short sales against the box and covered call writing provided that these personal Securities transactions do not violate the prohibition against short-term trading).

h. Trading in AB Units and AB Open and Closed-End Mutual Funds

During certain times of the year (typically in the weeks leading up to the firm's quarterly earnings announcement), Employees may be prohibited from conducting transactions in the equity units of AB. Additional restricted periods may be required for certain individuals and events, and the Legal and Compliance Department will announce when such additional restricted periods are in effect. Transactions in AB Units and closed-end mutual funds managed by AB are subject to the same pre-clearance process as other Securities, with certain additional Legal and Compliance Department approval required. See the [Statement of Policy and Procedures Concerning Purchases and Sales of AB Units](#) and the [Statement of Policy and Procedures Concerning Purchases and Sales of AB Closed-End Mutual Funds](#). Employees are not permitted to transact in short sales of AB Units.

Note that employees are not permitted to establish dividend reinvestment plans (or DRIPs) for their AB units as it could result in purchases outside of the trading window. However, plans managed by a third-party adviser may be permitted with the review and approval of Legal and Compliance.

Employees who transact in open-end AB mutual funds outside of the Employee Desk at AllianceBernstein Investments or their Voya-sponsored 401K account – i.e., in a regular brokerage account, must pre-clear the transaction via StarCompliance.

i. Securities Being Considered for Purchase or Sale

- i. The Legal and Compliance Department will, subject to the exceptions below, prohibit an Employee from purchasing or selling a Security (or a derivative product), or engaging in any short sale of a Security, in a Personal Account if, at the time of the transaction, the Security is Being Considered for Purchase or Sale for a Client or is being purchased or sold for a Client. Please see the definition of a Security "Being Considered for Purchase or Sale" (Section 1(b)(17) of this Appendix) for a non-exhaustive list of examples which illustrate this prohibition.

ii. **Exceptions: This prohibition does not apply to:**

a. Non-Volitional Transactions, including:

- Transactions in a Personal Account over which the Employee has no direct or indirect influence or control (i.e., managed for an Employee on a discretionary basis by a third person or entity, when the Employee does not discuss any specific transactions for the account with the third-party manager);
- The receipt of any Security received as part of an Employee's compensation (although any subsequent sales must be pre-cleared);
- Any Securities transaction effected in an Employee's Personal Account pursuant to an automatic investment plan, which means a program in which regular periodic purchases (or withdrawals) are made automatically in (or from) a Personal Account in accordance with a predetermined schedule and allocation, and includes dividend reinvestment plans. Additional purchases and sales that are not automatic, however, are subject to this prohibition.

The Legal and Compliance Department may request an Employee to certify as to the non-volitional nature of these transactions.

b. Exercise of Pro Rata Issued Rights

Purchases effected upon the exercise of rights issued by an issuer pro rata to all holders of a class of the issuer's Securities, to the extent such rights were acquired from such issuer, and sales of such rights so acquired. This exemption applies only to the exercise or sale of rights that are issued in connection with a specific upcoming public offering on a specified date, as opposed to rights acquired from the issuer (such as warrants or options), which may be exercised from time-to-time up until an expiration date. This exemption does not apply to the sale of stock acquired pursuant to the exercise of rights.

c. De Minimis Transactions—Fixed Income Securities

Any of the following Securities, if at the time of the transaction, the Employee has no actual knowledge that the Security is Being Considered for Purchase or Sale by a Client or that the Security is being purchased or sold by or for the Client:

- Fixed income securities transactions having a principal amount not exceeding \$25,000; or

- Non-convertible debt securities and non-convertible preferred stocks which are rated by at least one nationally recognized statistical rating organization (“NRSRO”) in one of the three highest investment grade rating categories.

d. De Minimis Transactions–Equity Securities

Any equity Security transaction, or series of related transactions, involving shares of common stock and excluding options, warrants, rights and other derivatives, provided:

- Any orders are entered after 10:00 a.m. and before 3:00 p.m. and are not designated as "market on open" or "market on close;"
- The aggregate value of the transactions do not exceed (1) \$10,000 for Securities of an issuer with a market capitalization of less than \$1 billion; (2) \$25,000 for Securities of an issuer with a market capitalization of \$1 billion to \$5 billion and (3) \$50,000 for Securities of an issuer with a market capitalization of greater than \$5 billion; and
- The Employee has no actual knowledge that the Security is Being Considered for Purchase or Sale by a Client or that the Security is being purchased or sold by or for the Client.

PLEASE NOTE: Even if a trade qualifies for a de minimis exception, it must be pre-cleared by the Legal and Compliance Department in advance of being placed.

j. **Restricted List**

A Security may not be purchased or sold in a Personal Account if, at the time of the transaction, the Security appears on the AB Daily Restricted List and is restricted for Employee transactions. The Daily Restricted List is made available each business day to all Employees via the AB [intranet page](#).

k. **Dissemination of Research Information**

- i. An Employee may not buy or sell any Security for a Personal Account that is the subject of "significantly new" or "significantly changed" research during the period commencing with the approval of the research and continuing for twenty-four hours subsequent to the first publication or release of the research. An Employee also may not buy or sell any Security on the basis of research that AB has not yet made public or released. The terms "significantly new" and "significantly changed" include:
 - a. The initiation of coverage by an AB or Sanford C. Bernstein & Co., LLC research analyst;
 - b. Any change in a research rating or position by an AB or Sanford C. Bernstein & Co., LLC research analyst;
 - c. Any other rating, view, opinion, or advice from an AB or Sanford C. Bernstein & Co., LLC research analyst, the issuance (or re-issuance) of which in the opinion of such research analyst, or his or her director of research, would be reasonably likely to have a material effect on the price of the security.

ii. **Exceptions: This prohibition does not apply to:**

a. **Non-Volitional Transactions, including:**

- Transactions in a Personal Account over which the Employee has no direct or indirect influence or control (i.e., managed for an Employee on a discretionary basis by a third person or entity, when the Employee does not discuss any specific transactions for the account with the third-party manager);
- Any Security received as part of an Employee's compensation (although any subsequent sales must be pre-cleared);
- Any Securities transaction effected in an Employee's Personal Account pursuant to an automatic investment plan, which means a program in which regular periodic purchases (or withdrawals) are made automatically in (or from) a Personal Account in accordance with a predetermined schedule and allocation, and includes dividend reinvestment plans. Additional purchases and sales that are not automatic, however, are subject to this prohibition.

The Legal and Compliance Department may request an Employee to certify as to the non-volitional nature of these transactions.

b. **Exercise of Pro Rata Issued Rights**

Purchases effected upon the exercise of rights issued by an issuer pro rata to all holders of a class of the issuer's Securities, to the extent such rights were acquired from such issuer, and sales of such rights so acquired. This exemption applies only to the exercise or sale of rights that are issued in connection with a specific upcoming public offering on a specified date, as opposed to rights acquired from the issuer (such as warrants or options), which may be exercised from time-to-time up until an expiration date. This exemption does not apply to the sale of stock acquired pursuant to the exercise of rights.

c. **De Minimis Transactions—Fixed Income Securities**

This exception does not apply to research issued by Sanford C. Bernstein & Co., LLC.

Any of the following Securities, if at the time of the transaction, the Employee has no actual knowledge that the issuer is the subject of significantly new or significantly changed research:

- Fixed income securities transactions having a principal amount not exceeding \$25,000; or
- Non-convertible debt securities and non-convertible preferred stocks which are rated by at least one nationally recognized statistical rating organization ("NRSRO") in one of the three highest investment grade rating categories.

d. **De Minimis Transactions—Equity Securities**

This exception does not apply to research issued by Sanford C. Bernstein & Co., LLC. Any equity Securities transaction, or series of related transactions, involving shares of common stock and excluding options, warrants, rights and other derivatives, provided:

- Any orders are entered after 10:00 a.m. and before 3:00 p.m. and are not designated as "market on open" or "market on close;"
- The aggregate value of the transactions do not exceed (1) \$10,000 for Securities of an issuer with a market capitalization of less than \$1 billion; (2) \$25,000 for Securities of an issuer with a

market capitalization of \$1 billion to \$5 billion and (3) \$50,000 for Securities of an issuer with a market capitalization of greater than \$5 billion; and

- The Employee has no actual knowledge that the Security is Being Considered for Purchase or Sale by a Client or that the Security is being purchased or sold by or for the Client.

PLEASE NOTE: Even if a trade qualifies for a de minimis exception, it must be pre-cleared by the Legal and Compliance Department in advance of being placed.

I. Initial Public Offerings

No Employee, or other person whose Personal Accounts are covered under this Code (see Section 1(b)(14)) shall acquire for a Personal Account, any equity Security issued in an Initial Public Offering.

m. Limited Offerings/Private Placements

No Employee, or other person whose Personal Accounts are covered under this Code (see Section 1(b)(14)), shall acquire any Security issued in any limited or private offering (please note that hedge funds are sold as limited or private offerings) unless the Chief Compliance Officer (or designee) and the Employee's Business Unit Head give express prior written approval and document the basis for granting approval after due inquiry. The Chief Compliance Officer, in determining whether approval should be given, will take into account, among other factors, whether the investment opportunity should be reserved for a Client and whether the opportunity is being offered to the individual by virtue of his or her position with AB. Employees authorized to acquire Securities issued in a limited or private offering must disclose that investment when they play a part in any Client's subsequent consideration of an investment in the issuer, and in such a case, the decision of AB to purchase Securities of that issuer for a Client will be subject to an independent review by Investment Personnel with no personal interest in such issuer.⁸ Additional restrictions or disclosures may be required if there is a business relationship between the Employee or AB and the issuer of the offering. See also - additional restrictions that apply to employees of the Fund of Funds Group (Section 6).

3. Additional Restrictions—Portfolio Managers

In addition to the requirements and restrictions on Employee trading in Section 2 of this Appendix A of the Code, the following restrictions apply to all persons acting in the capacity of a portfolio manager of a Client account. For purposes of the restrictions in this section, a portfolio manager is defined as an Employee who has decision-making authority regarding specific securities to be traded for Client accounts, as well as such Employee's supervisor. Please see Section 6 for restrictions relating to the Alternate Investment Strategies Group.

⁸ Any Employee who acquires (or any new Employee with a pre-existing position in) an interest in any private investment fund (including a "hedge fund") or any other Security that cannot be purchased and held in an account at a Designated Broker shall be exempt from the Designated Broker requirement as described in this Appendix A of the Code. The Legal and Compliance Department may require an explanation as to why such Security cannot be purchased and held in such manner. Transactions in these Securities nevertheless remain subject to all other requirements of this Code, including applicable private placement procedures, pre-clearance requirements and blackout-period trading restrictions.

General Prohibition: No person acting in the capacity of a portfolio manager will be permitted to trade for a Personal Account, a Security that is an eligible portfolio investment in that manager's product group (e.g., Large Cap Growth).

This prohibition does not apply to transactions directed by spouses or other persons whose Personal Accounts are covered under this Code (see Section 1(b)(14)) provided that the employee has no input into the investment decision. Nor does it apply to sales of securities held prior to the application of this restriction or employment with the firm. However, such transactions are subject to the following additional restrictions.

a. Blackout Periods

No person acting in the capacity of a portfolio manager will be permitted to trade a Security for a Personal Account within seven calendar days before and after any Client serviced in that manager's product group (e.g., Large Cap Growth) trades in the same Security. If a portfolio manager engages in such a personal securities transaction during a blackout period, the Chief Compliance Officer may break the trade or, if the trade cannot be broken, the Chief Compliance Officer may direct that any profit realized on the trade be disgorged.

b. Actions During Blackout Periods

No person acting in the capacity of a portfolio manager shall delay or accelerate a Client trade due to a previous purchase or sale of a Security for a Personal Account. In the event that a portfolio manager determines that it is in the best interest of a Client to buy or sell a Security for the account of the Client within seven days of the purchase or sale of the same Security in a Personal Account, the portfolio manager must contact the Chief Compliance Officer immediately, who may direct that the trade in the Personal Account be canceled, grant an exception or take other appropriate action.

c. Transactions Contrary to Client Positions

No person acting in the capacity of a portfolio manager shall trade a Security in a Personal Account contrary to investment decisions made on behalf of a Client, unless the portfolio manager represents and warrants in the personal trading request form that (1) it is appropriate for the Client account to buy, sell or continue to hold that Security and (2) the decision to purchase or sell the Security for the Personal Account arises from the need to raise or invest cash or some other valid reason specified by the portfolio manager and approved by the Chief Compliance Officer and is not otherwise based on the portfolio manager's view of how the Security is likely to perform.

4. Additional Restrictions—Research Analysts

In addition to the requirements and restrictions on Employee trading in Section 2 of this Appendix A of the Code, the following restrictions apply to all persons acting in the capacity of a research analyst. To be clear, these additional restrictions apply to both sell-side and buy-side research analysts. However, sell-side (Bernstein) research analysts (and associates) and their family members are subject to additional restrictions to address various regulatory requirements applicable to Bernstein's global research business. Employees in Bernstein's research department should refer to Bernstein's Global Research Compliance Manual for details on those additional restrictions.

General Prohibition: No person acting in the capacity of research analyst will be permitted to trade for his or her Personal Account, any security of an issuer that is in the sector covered by such research analyst (i.e., an equity research analyst cannot trade in the fixed income securities of a covered issuer nor can a fixed income analyst trade in the equity securities of one). This prohibition does not apply to transactions directed by

spouses or other persons whose Personal Accounts are covered under this Code (see Section 1(b)(14)), provided that the employee has no input into the investment decision. Nor does it apply to sales of securities held prior to the application of this restriction or employment with the firm. However, such transactions are subject to the following additional restrictions.

a. Blackout Periods

No person acting as a research analyst shall trade a Security for a Personal Account within seven calendar days before and after making a change in a rating or other published view with respect to that Security. If a research analyst engages in such a personal securities transaction during a blackout period, the Chief Compliance Officer may break the trade or, if the trade cannot be broken, the Chief Compliance Officer may direct that any profit realized on the trade be disgorged.

b. Actions During Blackout Periods

No person acting as a research analyst shall delay or accelerate a rating or other published view with respect to any Security because of a previous purchase or sale of a Security in such person's Personal Account. In the event that a research analyst determines that it is appropriate to make a change in a rating or other published view within seven days of the purchase or sale of the same Security in a Personal Account, the research analyst must contact the Chief Compliance Officer immediately, who may direct that the trade in the Personal Account be canceled, grant an exception or take other appropriate action.

c. Actions Contrary to Ratings

No person acting as a research analyst shall trade a Security (to the extent such Security is included in the research analyst's research universe) contrary to an outstanding rating or a pending ratings change or traded by a research portfolio, unless (1) the research analyst represents and warrants in the personal trading request form that (as applicable) there is no reason to change the outstanding rating and (2) the research analyst's personal trade arises from the need to raise or invest cash, or some other valid reason specified by the research analyst and approved by the Chief Compliance Officer and is not otherwise based on the research analyst's view of how the security is likely to perform.

5. Additional Restrictions—Buy-Side Equity Traders

In addition to the requirements and restrictions on Employee trading in Section 2 of this Appendix A of the Code, the following restrictions apply to all persons acting in the capacity of Trader on any buy-side equity trading desk.

General Prohibition: *No person acting in the capacity of buy-side equity trader will be permitted to trade for his or her Personal Account, a Security that is among the eligible portfolio investments traded on that Desk.*

This prohibition does not apply to transactions directed by spouses or other persons whose Personal Accounts are covered under this Code (see Section 1(b)(14)) provided that the employee has no input into the investment decision. Nor does it apply to sales of securities held prior to the application of this restriction or employment with the firm. Such transactions are, of course, subject to all other Code provisions.

6. Additional Restrictions—Alternate Investment Strategies Groups

In addition to the requirements and restrictions on Employee trading in Section 2 of this Appendix A of the Code, the following restrictions apply to all members of the firm's Alternative Investment Management Group,

as well as to the members of the Investment Policy Group and Board of Directors of Bernstein Alternative Investment Strategies, LLC.

General Prohibition: *No member of the groups listed above will be permitted to directly invest in a privately offered fund or other investment product that is managed by an adviser other than AB and is within the scope of the current or contemplated funds or other products in which the Alternative Investment Management Group may invest. All such investments by members of these groups shall be made through the AB Alternative Investment Services platform.*

7. Reporting Requirements

a. Duplicate Confirmations and Account Statements

All Employees must direct their brokers to supply to the Chief Compliance Officer, on a timely basis, duplicate copies of broker trade confirmations of, and account statements concerning, all Securities transactions in any Personal Account. Even for Designated Brokers, each Employee must verify that the Employee's account(s) is properly "coded" for AB to receive electronic data feeds.

The Compliance Department will review such documents for Personal Accounts to ensure that AB's policies and procedures are being complied with, and make additional inquiries as necessary. Access to duplicate confirmations and account statements will be restricted to those persons who are assigned to perform review functions, and all such materials will be kept confidential except as otherwise required by law.

b. Initial Holdings Reports by Employees

An Employee must, within 10 days of commencement of employment with AB, provide a signed (electronic in most cases) and dated Initial Holdings Report to the Chief Compliance Officer. New employees will receive an electronic request to perform this task via the StarCompliance Code of Ethics application. The report must contain the following information current as of a date not more than 45 days prior to the date of the report:

- i. Securities (including private investments as well as any AB-managed mutual funds) held in a Personal Account of the Employee, including the title and type of Security, and as applicable, the exchange ticker symbol or CUSIP number, number of shares and/or principal amount of each Security/fund beneficially owned;
- ii. The name of any broker-dealer or financial institution with which the Employee maintains a Personal Account in which any Securities are held for the Employee; and
- iii. Details of any outside business affiliations.

Employees must then take all necessary actions to bring their accounts into compliance with the designated broker guidelines detailed in Section 2(c) of this Appendix.

c. Quarterly Reports by Employees—including Certain Funds and Limited Offerings

Following each calendar quarter, the Legal and Compliance Department will forward (electronically via the StarCompliance Code of Ethics application) to each Employee, an individualized form containing all Securities transactions in the Employee's Personal Accounts during the quarter based on information

reported to AB by the Employee's brokers. Transactions in Personal Accounts over which the Employee has no direct or indirect influence or control (i.e., managed for an Employee on a discretionary basis by a third person or entity) or pursuant to an automated investment program need not be included for purposes of this reporting requirement.

Within thirty (30) days following the end of each calendar quarter, every Employee must review the form and certify its accuracy, making any necessary changes to the information provided on the pre-populated form (generally this will include those shares of mutual funds sub-advised by AB and held directly with the investment company and Securities issued in limited offerings which are not sent directly to the Compliance Department). For each such Security, the report must contain the following information:

(1) the date of the transaction, the title, and as applicable the exchange ticker symbol or CUSIP number, interest rate and maturity date, number of shares, and principal amount of each Security involved; (2) the nature of the transaction (i.e., purchase or sale or any other type of acquisition or disposition); (3) the price of the Security at which the transaction was effected; (4) the name of the broker or other financial institution through which the transaction was effected; and (5) the date the Employee submits the report.

In addition, any new Personal Account established during the calendar quarter must be reported, including (1) the name of the broker or other financial institution with which the account was established and (2) the date the account was established.

d. Annual Certification by Employees with Managed Accounts

On an annual basis, by a date to be specified by the Compliance Department (typically August 15th), each Employee who has reported managed accounts in the StarCompliance Code of Ethics application must provide to the Chief Compliance Officer, a signed and dated (or electronically certified via the StarCompliance application) certification. This certification confirms:

- i. All managed accounts have been disclosed by the Employee in the StarCompliance application; and
- ii. The Employee had no influence or investment discretion as to the transactions or holdings of such accounts.

e. Annual Holdings Reports by Employees

On an annual basis, by a date to be specified by the Compliance Department (typically February 15th), each Employee must provide to the Chief Compliance Officer, a signed and dated (or electronically certified via the StarCompliance Code of Ethics application) Annual Holdings Report containing data current as of a date not more than forty five (45) days prior to the date of the submission.⁹ The report must disclose:

- i. All Securities (including shares of mutual funds managed by AB and limited offerings), held in a Personal Account of the Employee, including the title and type of security, and as applicable the exchange ticker symbol or CUSIP number, number of shares and/or principal amount of each Security beneficially owned); and
- ii. The name of any broker-dealer or financial institution with which the Employee maintains a Personal Account in which any Securities are held for the Employee.

In the event that AB already maintains a record of the required information via duplicate copies of broker trade confirmations and account statements received from the Employee's broker-dealer, an Employee may satisfy this requirement by (i) confirming in writing (which may include e-mail) the

⁹ Employees who join the Firm after the annual process has commenced will submit their initial holdings report (see Section 7(b)) and complete their first Annual Holdings Report during the next annual cycle and thereafter.

accuracy of the record on at least an annual basis and (ii) recording the date of the confirmation.

f. Report and Certification of Adequacy to the Board of Directors of Fund Clients

On a periodic basis, but not less than annually, the Chief Compliance Officer shall prepare a written report to the management and the board of directors of each registered investment fund (other than a unit investment trust) in which AB acts as investment adviser setting forth the following:

- i. A certification on behalf of AB that AB has adopted procedures reasonably necessary to prevent Employees and Directors from violating the Code;
- ii. A summary of existing procedures concerning personal investing and any changes in procedures made during the past year; and
- iii. A description of any issues arising under the Code or procedures since the last report to the Board including, but not limited to, information about material violations of the Code or procedures and sanctions imposed in response to the material violations.

AB shall also submit any material changes to this Code to each Fund's Board at the next regular board meeting during the quarter following the change.

g. Report Representations

Any Initial or Annual Holdings Report or Quarterly Transaction Report may contain a statement that the report is not to be construed as an admission by the person making the report that he or she has any direct or indirect Beneficial Ownership in the Security to which the report relates.

h. Maintenance of Reports

The Chief Compliance Officer shall maintain the information required by this Section and such other records, if any, and for such time periods required by Rule 17j-1 under the Investment Company Act and Rules 204-2 and 204A-1 under the Advisers Act. All reports furnished pursuant to this Section will be kept confidential, subject to the rights of inspection and review by the General Counsel, the Chief Compliance Officer and his or her designees, the Code of Ethics Oversight Committee (or subcommittee thereof), the Securities and Exchange Commission and by other third parties pursuant to applicable laws and regulations.

8. Reporting Requirements for Directors who are not Employees

All Affiliated Outside Directors (i.e., not Employees of AB, but employees of an AB affiliate) and Outside Directors (i.e., neither Employees of AB, nor of an AB affiliate) are subject to the specific reporting requirements of this Section 8 as described below. Directors who are Employees of AB, however, are subject to the full range of personal trading requirements, restrictions and reporting obligations outlined in Sections 1 through 7 of this Appendix A of the Code, as applicable. In addition, all Directors are expected to adhere to the fiduciary duties and high ethical standards described in the Code.

a. Outside Directors / Affiliated Outside Directors

- i. **In general, pursuant to various regulatory rule exceptions and interpretations, no reporting is required of Outside Directors and Affiliated Outside Directors. However, if an Outside or Affiliated Outside Director knew, or in the ordinary course of fulfilling his or her official duties as a Director should have known, that during the 15-day period immediately before or after the Outside or Affiliated Outside Director's transaction in a Security for a Personal Account, a Client**

bought or sold the Security, or the Client or AB considered buying or selling the Security, the following reporting would be required.

Transaction Report

In the event that a transaction report is required pursuant to the scenario in the preceding paragraph, other than for accounts over which the director had no influence or control, each outside director must within thirty (30) days following the end of each calendar quarter, provide to the Chief Compliance Officer, a signed and dated report disclosing all Securities transactions in any Personal Account. For each such Security, the report must contain the following information:

- a. The date of the transaction, the title, and as applicable the exchange ticker symbol or CUSIP number, interest rate and maturity date, number of shares, and principal amount of each Security involved;
- b. The nature of the transaction (i.e., purchase or sale or any other type of acquisition or disposition);
- c. The price of the Security at which the transaction was effected; and
- d. The name of the broker or other financial institution through which the transaction was effected.