



Morningstar Investment Management LLC Form ADV Part 2A: Firm Brochure

Institutional Advisory Services

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This brochure provides information about the qualifications and business practices of Morningstar Investment Management LLC. If you have any questions about the contents of this brochure, please contact us at 312.696.6000 or send an email to compliance@morningstar.com. The information in this brochure has not been approved or verified by the United States Securities and Exchange Commission ("SEC") or by any state securities authority.

Additional information about Morningstar Investment Management LLC is available on the SEC's website at www.adviserinfo.sec.gov.

Morningstar Investment Management LLC is registered with the SEC as a registered investment adviser. Registration with the SEC does not imply a certain level of skill or training.

Please retain this brochure for future reference.

All current versions of our firm brochures are available in the Part 2 Brochures section of this record on the SEC's website. You may also request a copy of our current brochure free of charge by contacting our Compliance Department at 312.696.6000, or by email to compliance@morningstar.com. In your request, please indicate the name of the company (Morningstar Investment Management) and the service brochure(s) (Retirement Plan Services for Individuals or Institutional Advisory Services) you are requesting.

Item 2. Material Changes

This annual amendment to the *Investment Advisory Services* Firm Brochure dated March 26, 2018 contains the following material changes since our last Firm Brochure and Brochure Supplement annual update, dated March 28, 2017.

The *Advisory Business* section of our Firm Brochure was updated to reflect that we have filed the appropriate notices to conduct business in Guam.

The *Advisory Business* section was updated to show our assets under management as of December 31, 2017. In early 2018, Morningstar Investment Management undertook a review of agreements relating to arrangements structured in accordance with Department of Labor's Advisory Opinion 2001-09A dated December 14, 2001 (commonly referred to as the "SunAmerica Opinion.") where we service as the independent Financial Expert and reclassified the assets connected to some of those arrangements from *Regulatory Assets under Management* (RAUM) to *Assets under Advisement*. This action resulted in a decrease

in our reported RAUM as compared to 2016. For comparative purposes, if the classifications used in 2016 were applied, the December 31, 2017 RAUM would be \$80,867,200,000 compared to the report December 31, 2016 RAUM of \$64,865,300,000. Conversely, if the classifications used for 2017 were applied in 2016, the December 31, 2016 RAUM would have been \$25,504,100,000 compared to December 31, 2017 RAUM of \$33,601,800,000.

The *Methods of Analysis, Investment Strategies and Risk of Loss* section of our brochure was updated to reflect that our regional governance bodies' selection committees may select security types other than funds, and therefore have been renamed "investment selection committees." We also omitted returns-based style analysis from our Investment Selection for Investment Lineups from our methods of analysis.

We made other edits to our Firm Brochure and Brochure Supplement where necessary to correct grammar or punctuation, to provide clarification or further information, for consistency in terminology or content, or to improve the readability of the brochure. We do not deem these edits to be material in nature. These edits included:

The *Advisory Business* section was updated to include a description of the Guidance service offered through Morningstar® Retirement ManagerSM. While Guidance is not an advisory service, we are including it here so that users of Morningstar Retirement Manager have a complete description of all services offered through that program. We also added a statement to the Select List service to clarify that Morningstar Research Services LLC, our affiliate, acts as a sub-adviser to Morningstar Investment Management for that service.

Throughout this Firm Brochure, we omitted references to the Newsletter Content service as Morningstar Investment Management is not providing advice through this service, nor is it a core offering of our firm.

In the *Fees and Compensation* section, we now separately list the advisory fees for the Morningstar Retirement Manager Managed Account service and the Advice Services, to better reflect the fees we charge clients.

In our Brochure Supplement, Michael Corty replaced John Owens as head of U.S. equity strategies for Morningstar Investment Management. John Owens remains part of the U.S. Equity Strategies team as a Senior Portfolio Manager.

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Item 4. Advisory Business

Firm Information

Morningstar Investment Management LLC ("Morningstar Investment Management", "we", "us" or "our") is a Delaware limited liability company that was incorporated in 1999. Morningstar Investment Management is a wholly owned subsidiary of Morningstar, Inc. ("Morningstar"). Morningstar is a publicly traded company (Nasdaq Ticker: MORN) with Mr. Joseph Mansueto, Executive Chairman of Morningstar, holding more than 50% of Morningstar's outstanding shares. Because of that ownership, Mr. Mansueto is an indirect owner of Morningstar Investment Management.

Morningstar Investment Management is registered with the SEC under Section 203(c) of the Investment Advisers Act of 1940, as amended ("Advisers Act"). Morningstar Investment Management has filed the appropriate notices to conduct business in all 50 states, the District of Columbia, Guam, and the Commonwealth of Puerto Rico.

Morningstar Investment Management is part of Morningstar's Investment Management group, a global investment team composed of more than 90 investment analysts, portfolio managers, and other investment professionals. The Investment Management group consists of Morningstar's subsidiaries that are authorized in the appropriate jurisdiction to provide investment management and advisory services. The Investment Management group's investment and operations teams span the globe, with 10 country offices and primary offices in Chicago, London, and Sydney.

This brochure focuses on the products and services we provide to institutional clients. You may obtain a copy of our brochure describing our products and services for individuals (managed account and advice services for retirement plan participants) by following the instructions above.

Advisory Services We Offer – Overview

Morningstar Investment Management offers various investment advisory services that focus on our core capabilities in asset allocation, investment selection, and portfolio construction to financial or other institutions including, but not limited to, asset management firms, banks, broker/dealers, endowments, foundations, insurance companies, investment fiduciaries, plan sponsors of retirement plans, providers of retirement plan services, trusts, and other business entities (collectively "Institutional Clients" or individually, an "Institutional Client".)

Morningstar® Managed PortfoliosSM

For Institutional Clients who offer a proprietary advisory program, or a platform that makes investment strategies available for use by other financial institutions, we create model portfolios for use through such programs or platforms. These model portfolios are designed for use by a financial professional with their retail investor clients. We generally provide sales support on behalf of the Institutional Client by educating financial professionals who use the program or platform about the model portfolio strategies we provide.

In providing this service, we may act as a discretionary investment manager or non-discretionary model manager. We select and monitor the asset allocation and underlying holdings of each strategy we provide based on a universe of investments defined by the Institutional Client. We typically provide ongoing monitoring of the strategies, along with rebalancing and reallocating recommendations. As an investment manager, we invest each investor's account in their chosen strategy, taking into consideration any requested reasonable restrictions, and submit trade instructions to the investor's custodian. The investor's financial professional is responsible for suitability, choice of custodian, and other services as detailed in the agreement between the Institutional Client and Morningstar Investment Management. As a model manager, the Institutional Client or the financial professional using the advisory program or platform has discretion over the accounts invested in each strategy and may deviate from our model recommendations.

In addition, our subsidiary, Morningstar Investment Services LLC, offers a discretionary managed accounts service and non-discretionary model manager advisory services. Morningstar Investment Management's investment professionals provide model portfolio construction and ongoing monitoring of those model portfolios on behalf of Morningstar Investment Services.

Institutional Asset Management

For Institutional Clients who sponsor registered or pooled investment products, we serve as a portfolio manager, portfolio construction adviser, or sub-adviser. We provide recommendations for asset class allocation targets and/or selection of underlying holdings to fulfill each asset class allocation target. Underlying holdings may include, but are not limited to, open-end mutual funds and exchange-traded funds ("ETFs"). The universe of underlying holdings is generally defined by the Institutional Client and may include investment products that are affiliated with that Institutional Client. This service typically includes ongoing responsibilities such as monitoring the underlying holdings and reviewing and updating asset allocation percentages and/or underlying holdings as necessary.

Asset Allocation Services

We provide Institutional Clients and their financial representatives tools for identifying their clients' investment goals and risk tolerance (such as risk tolerance questionnaires), and a mechanism to match those goals and risks with an appropriate asset allocation strategy. Asset allocation services are typically used by our Institutional Clients in their investment products, wrap programs, variable annuity asset allocation programs, or similar programs. If included in an agreement with an Institutional Client, asset allocation models are reviewed and adjusted as needed, on a periodic basis. We may provide Institutional Clients with rebalancing triggers and recommendations on when the allocations for asset classes should be revisited or adjusted.

Custom Model Portfolios

We construct custom asset allocation model portfolios for use with employer-sponsored retirement plan accounts using the investment options available in a plan's lineup. Model portfolios can be time-based, risk-based, or a combination of time- and risk-based. Model portfolios, including target-date glide paths where relevant, are customized to the specific plan, and can take into account a wide range of factors including the presence of defined benefit assets, company stock holdings, savings rates, and account balances. We provide ongoing monitoring of the model portfolios (and glide paths), making recommendations to change

investment allocations, and/or to add, remove, or modify the model portfolios' underlying investment options when necessary.

Fiduciary Services

We provide Institutional Clients with retirement plan services that include the construction, monitoring, and/or management of plan lineups. These services typically include automated reporting capabilities, marketing and sales support, and an online reporting delivery mechanism. We provide documentation of the process used to select, review, monitor, and update the funds chosen. We offer a workforce profile questionnaire designed to help a plan sponsor identify the investment sophistication, funding status, investment goals, and/or risk tolerance of the retirement plan or its participants. We also typically provide methodology documents, an investment policy statement, quarterly fund and plan performance reports, annual summary reports, and a quarterly market summary.

In providing these services, we serve as a fiduciary, as defined in section 3(21)(A)(ii) of the Employee Retirement Income Savings Act of 1974 ("ERISA"), as amended, and may additionally serve as an investment manager, as defined in section 3(38) of ERISA.

We construct a list of lineup options (including, but not limited to, mutual, money market, and stable value funds) from the universe of investment options defined by the Institutional Client. We provide asset-class requirements for the lineup, with specific investment options identified for each asset class, for use in developing a lineup for a defined contribution or defined benefit retirement plan. This process is designed to provide the Institutional Client with investment choices that will result in a lineup that is appropriately diversified with a sufficient broad range of risk/return characteristics.

Under our standard 3(21) service, we serve as a fiduciary with respect to the investment selection and monitoring we provide, but the Institutional Client retains responsibility for investing plan assets in accordance with our recommendations. We provide ongoing monitoring of the specific investments in the approved investment list and monitor individual plans to ensure they are meeting our asset-class requirements and investing in approved funds. Typically, if we recommend modifications to a lineup, we provide notice to the Institutional Client who has discretion to implement our recommended changes.

For our "flexible" 3(21) service, we offer the services outlined under our standard 3(21) service but allow the Institutional Client the flexibility to choose investments from our approved investment list along with non-approved investment options for their lineup. Our fiduciary support covers the use of investment options from our approved list only. Under this service, we do not provide any fiduciary coverage on the end lineup.

In some cases, Institutional Clients may delegate discretionary management responsibilities to us. For our standard 3(38) service, in addition to the 3(21) services we offer, we act as an investment manager for the plan, with full authority to select, remove and replace investment options from the plan lineup.

For our "flexible" 3(38) service, we offer the services outlined in our standard 3(38) service, but for a period of time allow the Institutional Client the flexibility to request some variability in our standard process, such as the ability to include more approved investment options in asset classes than we allow under our standard service. This service is

designed to help avoid too much disruption in a short period of time as Institutional Clients convert their plans to our service.

We offer Morningstar® Plan AdvantageSM, an online platform designed to help small retirement plan sponsors served by financial professionals of Institutional Clients (1) identify a category-level plan lineup, (2) choose a plan provider (choice of plan provider is limited to those that have entered into an agreement with us and may be further limited by the Institutional Client), and (3) access our 3(38) fiduciary services (as described above) as part of a bundled offering. Once enrolled, plan sponsors can review their lineup and access reports, view notifications, and learn more about plan lineup changes.

Morningstar® Retirement ManagerSM

We offer services to Institutional Clients for use with individual participants in their employer-sponsored retirement plans. These services typically include guidance, advice and/or managed account services, along with an online platform to access those services. Our guidance service includes general and education information and tools to help participants manage their retirement account. Under the guidance service, the participant is responsible for determining the suitability of investments, implementing changes to their retirement account, and monitoring their account on an ongoing basis. Our advice service offers each participant a target retirement income goal, projected retirement income amount, recommendations on savings rate and retirement age, personalized asset allocation strategy, and professional investment selection. Under the advice service, the participant is responsible for the implementation of any changes to and the monitoring of their retirement account. Under our managed accounts service, we will manage the participant's account on an ongoing basis, in addition to the items provided under our advice service. Our account management includes ongoing monitoring, automatic account rebalancing and implementation of changes, quarterly progress reports, and an annual progress report. We use the investment options available in a participant's retirement plan to construct a portfolio and, when applicable, monitor model portfolios designed for participants across a broad range of risk exposure levels.

Advice Services

We offer advice services to Institutional Clients who offer investment advice or managed account programs to individual participants in retirement plans. In most cases, we serve as the independent Financial Expert as noted within the Department of Labor's Advisory Opinion 2001-09A dated December 14, 2001 (commonly referred to as the "SunAmerica Opinion.") We use the investment options available in a participant's retirement plan to construct and, when applicable, monitor model portfolios designed for participants across a broad range of risk exposure levels. We may also use information provided by independent third parties such as mutual fund data or index providers in the construction of advice for the program.

Select Lists

We work with Institutional Clients to analyze an investment universe they determine and create a subset or "select list" of investments that meet specific criteria, including the Institutional Client's proprietary requirements. A select list is typically used by the Institutional Client's financial professionals when working with their clients to put together an investment strategy. Each select list is derived through a combination of quantitative screens and qualitative analysis, resulting in a menu of investments under various asset categories. Typically, we provide

ongoing monitoring of those investments within the select list to help ensure that the investment options initially selected for the select list continue to satisfy the criteria that led to their initial selection. This service may be provided by a sub-adviser, Morningstar Research Services LLC, who is affiliated with Morningstar Investment Management.

Investment Analytics, Monitoring, and Comparative Analysis Reports

We offer Institutional Clients investment performance and style monitoring reports. These reports range from a one-page snapshot view of multiple investments, such as those investments in a defined contribution plan lineup to multi-page, in-depth reports on a single investment that provides information on various aspects of the investment such as profile, style and sector analysis, total return/risk summary, performance, expense, portfolio metrics, top holdings, and an optional written analysis of the investment. To fulfill any monitoring responsibilities, we follow the same comprehensive due diligence process that we use to facilitate our investment selection research in these reports.

Customized Services

At an Institutional Client's request, we will take under consideration a request to provide them with a customized version of the above services or a different type of advisory services that would utilize our core capabilities in asset allocation, investment selection, or portfolio construction. Given the customized nature, the Institutional Client may impose constraints/restrictions on such things as security types, asset classes, or proprietary security requirements and/or wish to collaborate with us on such things as investment methodology and screening criteria.

Wrap Fee Programs

We do not sponsor a wrap fee program, but we do provide portfolio management services to a wrap fee program offered by our subsidiary, Morningstar Investment Services LLC, through the Morningstar Managed Portfolios program.

Assets Under Management

As of December 31, 2017, the discretionary assets under management for Morningstar Investment Management (rounded to the nearest \$100,000) were:

Retirement Services to Individuals: \$ 11,420,800,000
Investment Management Services to Institutional Clients:
\$22,181,000,000

Total Asset Under Management: \$33,601,800,000

The non-discretionary assets under advisement for Morningstar Investment Management (rounded to the nearest \$100,000) were \$130,366,300,000.

Item 5. Fees and Compensation

Fees and Compensation – Overview

We may negotiate our fees, payment terms, and payment schedules on an individual basis with each Institutional Client. The services we provide, the specific fees for such services, and the contract term are governed by the contractual agreement between us and our Institutional Client. Institutional Clients may not receive all of the services listed above. Our fees vary depending on the services selected and may include a fixed fee,

a basis-point fee, and/or a technology licensing fee. Fees for some services take into consideration such factors as the number of services being provided and service specific variables such as the universe of investments, variables in monitoring frequency, delivery type, investment types, and frequency of written analysis.

Morningstar® Managed PortfoliosSM

Morningstar® Managed PortfoliosSM fees are typically non-negotiable and range from 14 – 55 basis points. The actual fee depends on our role in offering the service (including whether we act as a model manager or have discretion over client portfolios), asset size, the complexity involved, and any other services we provide to the Institutional Client. The fee is typically charged monthly and may be charged in advance or arrears. If, in accordance with the contractual terms, the Institutional Client terminates the Morningstar Managed Portfolios agreement they have with us prior to the end of the billing period, we may refund any unearned fees on a pro rata basis after the termination of the contract.

Institutional Asset Management

Our Institutional Asset Management fees are negotiable, but generally include a minimum annual fee and/or an asset-based fee. The asset-based fee typically ranges from 3 to 15 basis points of the assets being managed or consulted upon while the minimum annual fee is \$100,000 - \$200,000. The actual fee depends on a range of variables including our role in providing the services, the type of security we are providing services for, and the amount of assets involved. The fee is typically charged monthly in arrears.

Asset Allocation Services

Our Asset Allocation Services fees are negotiable, but generally range from \$50,000 to \$500,000 annually. The actual amount charged depends on a range of variables including the terms of distribution, number of sets, type and scope of the models requested (including the number of asset classes used in the asset allocation models), and whether the client receives other advisory services from us. The fee is typically charged annually in arrears. In addition to the fee, payment terms and schedules are negotiable.

Custom Model Portfolios

Our Custom Model Portfolio fees are negotiable, but generally include a minimum and an asset-based fee. Asset-based fees generally range between 3 and 8 basis points. Minimum fees typically vary from \$100,000 to \$300,000. The actual fees depend on a range of variables including our fiduciary role, services used, asset size, and whether services are opt-in or opt-out. The licensing and/or minimum fee is typically charged in arrears. The asset-based fee is generally charged quarterly by applying the pro-rated basis point rate to the average assets in a retirement account during the quarter.

Fiduciary Services

Our 3(21) and 3(38) Fiduciary Services fees are negotiable, but generally include a minimum and an asset-based fee. Asset-based fees generally range between 2 and 8 basis points. Minimum fees typically vary from \$100,000 to \$300,000. The actual fees depend on a range of variable including our fiduciary role, service used, asset size, and whether services are opt-in or opt-out. The fee is typically charged quarter in arrears based on assets held at calendar quarter-end.

Our Morningstar Plan Advantage fees are negotiable, but generally include an asset-based fee that typically ranges between 8 and 10 basis

points annually. The actual fee depends on a range of variables including our fiduciary role, services used, and asset size. The fee is typically charged quarterly in arrears by applying the pro-rated basis point rate to the average assets in a plan during the quarter.

Morningstar® Retirement ManagerSM and Advice Services

Our Advice and Morningstar Retirement Manager fees are negotiable, but generally include a minimum, licensing, and an asset-based fee. Minimum and/or licensing fees typically vary from \$100,000 to \$600,000. Asset-based fees for our Morningstar® Retirement ManagerSM Managed Accounts service typically range from 20 to 50 basis points annually. Asset-based fees for our Advice service typically range from 5 to 9 basis points. The actual fees depend on a range of variables including our fiduciary role, services used, asset size, and whether services are opt-in or opt-out. The licensing and/or minimum fee is typically charged annually in advance. The asset-based fee is typically charged quarterly in arrears by applying the pro-rated basis point rate to the average assets in a retirement account during the quarter.

Select Lists

Our Select List fees are negotiable, but generally range from \$50,000 to \$400,000 annually. The actual amount charged depends on a range of variables including the intended use of the Select List, the number of type of securities included, the type of reporting the Institutional Client wishes to receive from us, the degree of customizations or constraints placed on us, and whether the service includes on-going monitoring of the Select List. The fee is typically charged quarterly in advance. If, in accordance with the contractual terms, the Institutional Client terminates the Licensing and Consulting Agreement they have with us prior to the end of the billing period, we may refund any unearned fees on a pro rata basis after the termination of the contract. In addition to the fee, payment terms and payment schedules are negotiable.

Investment Analytics, Monitoring, and Comparative Analysis Reports

Our Investment Analysis, Monitoring, and Comparative Analysis Report fees are negotiable, and vary widely. A flat fee is typically charged per report. The actual amount charged depends on a range of variables including the type of service being sought, the type of securities involved, the intended purpose for our service, the type of output being sought from us, and the intended use of the Morningstar name. The fee is typically charged annually and is due upon delivery of the report(s). In addition to the fee, payment terms and payment schedules are negotiable.

Payment

Payments, payment terms and payment schedules are negotiated and governed by the contractual agreement we enter into with each Institutional Client. We typically send an invoice on a periodic basis (e.g., monthly or quarterly), although in some instances, we may bill annually. For services we provide to an affiliate, fees are charged through an intercompany charge. Fixed and licensing fees are typically paid in advance of services being provided, and basis-point fees are typically charged in arrears.

Other Costs in Connection with Our Advisory Services

For our Morningstar Managed Portfolios service, our fees noted above do not include the underlying fees and expenses charged by the underlying holdings (e.g., mutual funds, ETFs, or equities) including redemption fees, asset- or transaction-based trading fees, and fees and expenses charged

by the proprietary advisory program, platform, and/or clearing firm, if applicable.

Our fees are separate from fees and expenses charged by the investment options, fees and expenses charged by the Institutional Client for their products (including any revenue sharing arrangements that they may have with the investment option's investment adviser and/or distributor), or fees that may be charged by a third party, such as a transfer agent, plan provider, or recordkeeper. The investment options' fees and expenses are described in the prospectus or equivalent. These fees will generally include a management fee, other investment expenses, and possibly a distribution fee (e.g., 12b-1). In some cases, an investment option may also charge an initial or deferred sales charge. Neither Morningstar Investment Management nor any of our employees receive transaction-based compensation for the investment recommendations we make.

Fees Charged in Advance

Our services may be terminated as outlined in the contractual agreement between Morningstar Investment Management and the Institutional Client. Termination of services and refunds of fees, if any, are governed by the contractual agreement between the parties, which is negotiated on an individual basis. Upon termination, any earned, unpaid fees by the Institutional Client are due and payable. If, in accordance with contractual terms, the Institutional Client terminates their contract prior to the end of the billing period, we may refund any unearned fees on a pro rata basis after the termination of the contract.

Compensation from Sales of Securities

We do not expect, accept or receive compensation for the sales of securities, including asset-based sales charges or service fees from the sale of open-end mutual funds.

You may have the option to purchase investment products we recommend or similar services through other investment advisers or financial professionals not affiliated with us.

Revenue Sharing Arrangements

We do not have any revenue sharing arrangements with any registered investment advisers or mutual funds.

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

We do not have performance-based fee arrangements with any qualified client pursuant to Rule 205-3 under the Advisers Act.

Item 7. Types of Clients

Our clients include advisory programs or platforms of third-party advisory or platform providers, entities such as financial institutions, third-party advisory programs, investment companies, and other business entities, plan providers and sponsors who offer investment advice programs to individual participants in defined contribution plans such as 401(k), 457, and 403(b) retirement plans, individual retirement plan participants, and individuals who are in retirement. Please see our Retirement Services for Individuals brochure, available on the SEC website, for further information.

We do not require a minimum account size for our institutional investment advisory services, and we generally do not impose other conditions for using our institutional advisory services.

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

Investment Philosophy

Morningstar Investment Management group's investment philosophy is driven by the investment principles that are promoted throughout our organization. The principles are intended to guide our thinking, behavior and decision making. These principles have been inspired by a number of the most experienced and successful investors in the last century. These principles also reflect and align with the history and foundation of Morningstar. The investment principles are:

- We put investors first
- We're independent-minded
- We invest for the long term
- We're valuation-driven investors
- We take a fundamental approach
- We strive to minimize costs
- We build portfolios holistically

Building upon our investment principles, the Investment Management group's investment philosophy is built on the belief that portfolios should maintain a risk profile commensurate with the desired long-term asset allocation guidelines we provide to the client. We focus extensively on the portfolio structure to maintain a careful balance between being allocated similarly to the portfolio benchmarks and one that reflects our assessment of the value available in the current market environment. We select managers that we believe manage fund assets with a consistent and disciplined process that can provide for sustainable long-term results. We prefer managers with a prudent, logical, and repeatable process and remain keenly focused on the consistency of the implementation of their investment disciplines.

Regardless of whether we are working with discretionary or non-discretionary clients, we build portfolios with the same research- and valuation-driven approach for all clients. We build portfolios holistically, so the asset allocation process begins with idea generation and continues through portfolio construction, where allocation tweaks can be made.

Global Investment Policy Committee

The Investment Management group's Global Investment Policy Committee and its regional governance bodies are responsible for oversight of the investment methodologies across all our products and services. Members of the Investment Policy Committee may include officers, chief investment officers, managing directors, or managers of Morningstar Investment Management or its affiliates. The regional governance bodies include regional investment policy committees, asset allocation committees, investment selection committees and portfolio construction (peer review) committees. Global best practice working groups also exist with the goal of sharing methodologies and research across regions. These groups focus on specific investment areas such as valuation models driven by our capital markets research and methodologies used for asset allocation, investment selection, portfolio construction for different investment strategies and advice.

An investment team provides the investment advice used in the products and services referenced in this brochure. Information on key members of this investment team is included in the attached Form ADV Part 2B brochure supplement.

Morningstar® Managed PortfoliosSM, Institutional Asset Management, and Asset Allocation Model Portfolios

Investment Process

Our approach to managing money starts with research, and our tradition of researching the fundamental drivers of asset class returns stretches back 40 years. For us, fundamentals are the key driver of returns for long-term investors. Today, our capital markets views are informed by the extensive research conducted by the investment professionals in Morningstar's Investment Management group and the 200-strong equity and credit analysts from Morningstar, Inc. and its affiliates. We look broadly, investigating asset classes, sub-asset classes, sectors, and securities in markets around the world. Our capital markets research extends to more than 200 equity markets, regions, or sectors, while our fixed-income research covers more than 100 sectors. We also track 37 world currencies.

But it's not enough to look at past returns; investors need a framework to help them understand how investments look for the future. Prices can lag fundamentals, giving investors potentially attractive opportunities. Our framework for seeking to understand these dynamics applies not only to securities but to sectors and asset classes, too, enabling us to take a valuation-driven approach to asset allocation.

This valuation-driven approach is designed to integrate our high-conviction investment ideas into portfolios that seek greater reward for a given amount of risk. We hunt the globe for mispricing opportunities. We aim to buy overlooked investments, especially those indicated by our research to offer sound fundamentals at an attractive price. Similarly, we look to trim positions as valuations become rich or we find more attractive options.

But we aren't content to look only at valuation; studying investor sentiment and positioning adds contrarian elements to our process and tells us how the market consensus views an investment idea we're considering. We prefer to invest in ideas contrary to the market consensus because one needs to be different to be able to outperform.

We also look closely at each asset class' risk, which can be complex, multifaceted, and vary over time. We see risk not as market volatility but as the permanent loss of capital. So, a powerful way to help control risk is to focus on buying fundamentally strong assets that are underpriced. Diversification is a great tool, but over-diversification can erode value. When seeking to manage risk and diversification, valuation again is key.

Our in-depth valuation analysis and contrarian indicators, when brought together, are the key ways we generate investment ideas for our own portfolios. These ideas might be names to include in a stock portfolio or our best thinking on reward for risk at the asset class-level. In addition, our valuation-driven asset allocation process paired with our in-house investment selection skill allows us to holistically build portfolios for our clients for the long term. The Investment Management group, as a global team, works around the clock and around the globe to understand markets and opportunities, monitor risk in existing portfolios, and vet ideas to make investment changes. We use this ongoing investment process to manage a variety of equity and multi-asset portfolios for our Institutional Clients.

Investment Selection

Finding investment opportunities isn't just about great ideas; it's also about selecting great investments for our clients. Investments may be securities in a stock portfolio, or active managers and/or passive

exchange-traded products in a multi-asset portfolio. Our research-driven approach to selecting investments is designed to help investors reach their goals and objectives.

Our investment selection process begins with analysis from Morningstar and its affiliates, which covers hundreds of thousands of investment offerings globally, including mutual funds, closed-end funds, separate accounts, exchange-traded products, individual stocks, and hedge funds. We build on Morningstar's quantitative and qualitative fundamental analyses by refining the investment universe and hand-selecting investments we determine are right for our portfolios. Our investment team has years of experience evaluating active investment managers, comparing managerial track records, and determining how an investment may fit into a portfolio.

We know the active managers we use in our portfolios or recommend to clients. They haven't just been screened; we have met each one in person and subjected them to our rigorous review process. We assess whether their investment team is qualified, experienced, and talented; that they follow a consistent and disciplined investment process; that their organization is strong and stable; and that they operate professionally and ethically.

We study managers' holdings using our proprietary tools and analytics to assess how well their strategy may work in combination with those of other managers. And we consider managers' ability to outperform in different market environments. Rather than following simple style analytics or style neutrality blends, we seek process diversification and try to avoid the pitfalls of over-diversification often found in fund-of-fund investment strategies.

Our own assessments lead us to managers that are typically career portfolio managers who oversee a focused and consistent strategy, with investment shops so that investment decisions are not constrained by other parts of the business. We aren't just looking for the best managers but those that we feel fit best into the portfolios we build.

As for passive vehicles, ETFs are often less expensive than their open-end mutual fund counterparts but assessing them has to go beyond this fact. We closely examine the risk characteristics that define ETFs—including tracking to the index, trading volume, bid/ask spread, and premium/discount—to help ensure the goals are realistic and the liquidity is what we expect. As with other funds, we assess ETFs within a portfolio context to achieve access to a particular market segment or sub-asset class.

Specific to our Institutional Asset Management and Asset Allocation Model Portfolio services, the portfolios we build for an Institutional Client are typically constrained to a universe of investment options defined by our client, which may include their affiliated investment products. Our analysis will still include quantitative analytics and fundamental research on the investment options available. We draw on Morningstar's comprehensive database of fund and security analytics as well as utilizing portfolios information provided by our Institutional Client, if applicable. In some instances, we work closely with our Institutional Client to identify and evaluate manager candidates for possible addition to or removal from the available investment universe.

Building Portfolios

Armed with investment ideas, our global team works together to holistically build portfolios suited to each strategy we offer or the

objectives of our clients. Portfolio construction is about ranking and risk management. We seek to gain the largest exposure to our best ideas, while building robust portfolios designed to stand up to challenging investment environments or investment errors.

As our investment ideas are implemented, they are crafted for use in each portfolio we build, a process in which we apply disciplined judgment to a multitude of dimensions. In this way, our choices come from people, not a machine.

This judgment-driven approach helps us to maximize our exposure to our best investment ideas and accounts for the complexity and multifaceted nature of investment risk. We view risk as the permanent loss of capital. Our valuation-based approach (that is, seeking underpriced assets and avoiding overpriced assets), fundamental diversification, and forward-looking approach to viewing asset class co-movements (that is, those that buffer gains and losses), all help mitigate risk in the portfolios we build.

It is important to understand risk looking ahead into the future, not looking at the past. Our research produces insight into not only future investment opportunities but also their attendant fundamental drivers of risk. By better understanding these forward-looking risk drivers, we can diversify portfolios for the future rather than basing these decisions on the past.

To prepare investors for the future, we seek to construct robust portfolios designed to perform well in different environments rather than being considered "optimal" based on expected results or a specific environment. We avoid forecasts and building strategies based on our ability to predict specific environments. Instead, we aim to prepare for different environments through constructing portfolios that will hold up under many possible environments—even ones that we haven't seen before. In effect, this involves trade-offs of aggregate reward for risk and a calibration of the probability and impact of negative outcomes.

Asset allocation guidelines for multi-asset portfolios are developed by our Asset Allocation Committee, which comprises most of the investment professionals in Morningstar's Investment Management group. Our investment professionals serve in different asset-class specialties on the committee. The committee jointly decides on organization-wide portfolio positioning policy, and strategy teams and portfolio managers adapt the positioning decision, as applicable, to their particular strategies and client portfolios. Teams of our portfolio managers are supported by the broad array of investment professionals within the Investment Management group, who contribute to manager research, asset-class research, investment-process enhancement, and the development and maintenance of portfolio management tools used in providing this service. All portfolios are reviewed by a team of peers before we deliver them to our Institutional Client.

Managing Portfolios

Once we've holistically built portfolios, for most clients, we continue to manage them. This part of the process is simply reviewing our positions, continuing to find opportunities, thinking through ways those opportunities might be included in our portfolios, and watching markets closely for any signs that would call for adjustments within the portfolio. Given that markets are dynamic, we continue to reassess the portfolio given the changes in investment ideas, aggregate risks, and portfolio

exposures. This iterative process reconsiders the opportunity set, with a constant eye on fundamental diversification and portfolio allocations.

Portfolio management is not a stop/start process. Each strategy we manage has a set of investment guidelines that outline the investment objectives, risk levels, and investment constraints. These are monitored to stay within the defined ranges.

Turnover and trading reduce returns for investors and therefore any changes should be expected to add value by a comfortable margin. Investment decisions happen in the real world rather than on paper—transaction costs and taxes are real. This means being biased toward inaction and long-term holdings, keeping turnover and transaction costs as low as possible.

Our global investment team works around the clock to understand markets and opportunities, monitor risk in existing portfolios, and vet ideas to make investment changes. This ongoing investment process powers every portfolio managed by the entities within Morningstar's Investment Management group.

We have processes and risk controls in place at multiple levels of the investment process to ensure that our portfolios are created in a manner consistent with their risk and return objectives. We evaluate risk at both the asset class model level and the portfolio level. At the asset class level, we monitor easily observable metrics such as standard deviation, skew, kurtosis, historical beta and overall tracking error relative to our stated benchmark. Our standard deviation and covariance matrix figures are estimated by a proprietary factor analysis system that ensures consistency across multiple asset classes and time periods. We delve deeper by examining conditional value-at-risk and conducting scenario analysis testing under different market conditions.

At the portfolio level, we conduct a detailed style analysis of our underlying funds using holdings information, quantitative regressions, and manager meetings. The underlying styles allow us to determine the effective rolled up portfolio asset class exposures and compare them to our asset allocation targets. Further, we analyze each manager's style consistency to make sure we monitor and adjust for huge swings in our effective asset class exposures. This analysis ensures that we are aware of, and comfortable with, our effective asset class exposures. Additional analysis is done routinely to measure our fund portfolio duration, tracking error, sector exposures and betas.

While actively managed portfolios will exhibit certain biases in terms of asset class weightings or security characteristics relative to their blended benchmarks at times (based on our intended investment decisions and the actions of the underlying managers), they are constrained by setting minimum and maximum allocations to different asset classes, as stated in our investment policy guidelines. Establishing allowable ranges for asset classes helps enable the strategy to take advantage of opportunities and avoid risks at the asset class level, but also keeps the portfolios tethered to their blended benchmarks.

Ongoing monitoring of the underlying position weights is critical to keeping the portfolio exposures as intended. Each fund is assigned a target position and a "deviation threshold," which governs the degree to which a fund may sway from its target. Each fund has a different degree of latitude, based on both its weight in the portfolio and the volatility of the assets in which it typically invests. If a fund deviates from its target

weight, we evaluate whether the accounts that contain the fund need to be adjusted (i.e. rebalanced) to bring the alignment back in order.

For registered or collective investment products we manage on behalf of an Institutional Client, we review and revise portfolio allocation targets on a continuous basis to ensure that asset class targets outlined in the prospectus are maintained. Reviews are implemented to ensure that the underlying investments in the portfolio don't exceed allocations noted in the product's prospectus or breach other restrictions.

Asset Allocation Services – Capital Market Assumptions and Risk Tolerance Questionnaires

As part of our Asset Allocation Services, we typically offer a combination of Asset Class Model Portfolio(s), Risk Tolerance Questionnaire(s) ("RTQ"), and our Capital Market Assumptions ("CMAs"). Our construction method for Asset Class Model Portfolios is described above. This section will focus on our CMA and RTQ methods.

Capital Market Assumptions

We provide forward-looking CMAs for both taxable and tax-deferred account types. Our CMAs consist of expected return, standard deviation and correlation among asset classes based on our proprietary equity, fixed income, currency and risk models. In our CMAs, we use valuation-implied returns, which are based on the idea that asset class returns can be decomposed into underlying corporate and economic fundamentals and the valuations impact near-term returns. Our Capital Markets and Asset Allocation Best-Practice Working Group develop and enhance the capital market model used to determine the estimates on an ongoing basis. We analyze the available opportunity set of asset classes and constructs long-term expected returns, standard deviations, and correlation coefficients for each. We provide further details below on our valuation-implied return forecasts, which are specific to the current valuation and to 10- and 20-year horizons, for different asset classes as well as risk and correlations.

For equity valuation-implied returns, we use a supply-side approach to forecast equity returns. The supply-side model is based on the idea that equity returns can be decomposed into underlying economic and corporate fundamentals. Our approach separates the expected return of each equity asset class into four key return drivers:

- 1) **Inflation:** Our long-term inflation expectations are based on several consensus and professional long-term inflation forecasts, as well as central banks' medium- to long-term inflation targets where inflation targeting is part of the monetary policy mandate. We generally prefer inflation forecasts from professional forecasters to market-based measures of inflation expectations due to potential biases induced by current market prices.
- 2) **Total Yield:** We base our estimates of future total yield on an analysis of the historical payout rates and total payout yields for a given asset class. We estimate total yield for each equity asset class at both the country and sector level.
- 3) **Growth:** The growth term measures the change in corporate cash flows per share (excluding repurchases). Our long-run growth expectations are based on forecasts of productivity growth for each country and expected cash flow growth at the equity sector level. We use per-capita GDP growth as our

preferred measure of economic productivity. The expected productivity growth for a given equity market is the weighted average of GDP-per-capita growth and an estimate of the geographic revenue breakdown of the equity market, accounting for the increasingly global revenue base of multinational firms. The expected equity sector cash flow growth is informed by both the historical trend growth and the forward-looking growth expectations of our global equity research team.

- 4) **Change in Valuation:** We use several valuation models to estimate the fair value of equity asset classes and assumes reversion to fair value over a 10-year period. Specifically, our valuation models rely on several forward-looking measures of normalized earnings such as profit margin, return on book-equity, and inflation-adjusted average earnings over the business cycle. The fair values produced by these models are determined at both the regional and sector level.

For fixed-income valuation-implied returns, we use a building-block approach to forecast returns of fixed-income asset classes. The key inputs into our fixed-income model are:

- 1) **Inflation:** The inflation forecast is the same as the one used in our equity model.
- 2) **Real Rate:** The real rate of return is the expected return of cash after inflation. We forecast real rates based on an examination of long-run historical real-rate data and consideration of the macroeconomic environment for each fixed-income asset class. Specifically, we assume that real rates will converge to their long-run equilibrium value over 15 years, as our research suggests that this is an appropriate time period over which interest rates can be expected to revert to their fair value.
- 3) **Term Spread:** We base our forecast of the term spread on the long-run shape of the yield curve, current market data, and surveys. The expected shape of the yield curve also determines our forecast of the roll return of a fixed-income asset class. Our model assumes that term spreads are mean-reverting over a 10-year period.
- 4) **Credit Spread:** We forecast default and recovery rates across credit ratings and industries. Our model takes into account the impact of rating upgrades and downgrades (credit migration) on credit bond prices. Within high-grade credit, default rates are typically relatively low, and credit migration is a key factor in explaining the difference between initial credit spread and effective excess return. Consistent with other variables, our model assumes that that credit spreads revert to their long-run fair values over a 10-year period.

These components form the basis for our forecast of fair interest rates. The valuation-implied return of a fixed-income asset class is the return implied by the convergence of the prevailing interest rate to the fair interest rate. In particular, we rely on an internal rate of return (IRR) calculation to solve for the rate of return implied the current interest rate and the expected future cash flows.

The equation below is a generalization of the return components that make up the expected return:

$$\text{Valuation-Implied Return} = \text{Income Return} + \text{Shift Return} + \text{Roll Return} + \text{Credit Migration Cost} + \text{Default Loss}$$

For currency valuation-implied returns, the currency return is our forecast of the change in the spot exchange rate. In general, for any asset not denominated in the reference currency, the valuation-implied return of the asset is based on the expected return in local currency plus the expected currency return. The currency valuation-implied return has two main components: 1) the inflation differential between the local currency and the reference currency, and 2) the reversion of real exchange rate to its fair value. The inflation differential is the difference between the expected inflation rate of the local and reference currencies, where the inflation forecast is based on the same methodology as the one discussed in the equity section above. In the very long run (i.e., at the unconditional horizon), we expect the inflation differential to be the sole driver of changes in the spot rate. The change in the real exchange rate is estimated based on multiple deflators (including CPI and PPI) to account for potential differences in the importance of the tradable versus nontradable sector in a given economy. These price-based measures of real exchange rates are adjusted for differences in export quality and productivity differentials, accounting for potential differences in the value of goods not reflected in the price indexes. The expected change in the real exchange rate is generally based on the assumption that the real exchange rate will revert to a long-run average.

We decompose hedge fund returns into two components: the systematic market exposure and the value added by hedge fund managers. The systematic factors can be directly linked either to observable market factors or to mechanical trading strategies, and consequently these nontraditional factors have quantifiable performance histories just like those of traditional market factors. At the peer group level, we assume that the aggregate alpha is zero, because our research suggests that performance is well-explained by systematic factors, and the alpha term is generally not statistically significant. In addition to the concurrent factors, we also include lagged factors because hedge funds tend to have lagged reporting of performance to data vendors (due in part to so-called "stale pricing" attributable to illiquid portfolio positions) relative to traditional asset classes. These regression betas are then multiplied by the expected return of the respective market asset classes to find the market portion of the hedge fund expected return.

Similar to the building-block approach to estimating returns for traditional stock, bond, and cash asset classes, we decompose commodity returns into various components. As commodity portfolios represent a basket of fully collateralized commodity futures contracts, the return to a commodity portfolio is driven by two main sources: futures return and collateral return. The return to commodity futures comes from many sources, including changes in commodity spot prices, an insurance or risk premium, a convenience yield, and a diversification/rebalancing return. This return can be measured through historical commodity index excess return series such as the S&P GSCI. Because the weighting for each commodity contract can vary greatly across different index vendors, we consider the makeup of each commodity index in terms of major commodity sectors when estimating the commodity return. The current weight of each sector is applied to the historical excess return series for each series to determine the commodity return. The return to the collateral is measured by the estimate of return to three-month T-bills.

Mean-variance analysis requires a quantifiable measure of risk for each asset class. We forecast standard deviation as an estimate of that risk to represent the dispersion around an average return. We employ a factor model approach to forecasting standard deviation. The idea behind this estimation approach is to model each benchmark as a combination of components ("factors") that explain the systematic variance in that benchmark's returns. These factors are derived from macroeconomic data or tradable market assets. The set of factors chosen to represent each benchmark is based on well-established research and statistical verification.

Mean-CVaR analysis requires a quantifiable measure of Conditional Value at Risk (CVaR) for the resulting portfolio. To calculate this measure, we must provide estimates of skewness and kurtosis to more accurately represent the dispersion of expected monthly returns. Skewness measures the lack of symmetry in the distribution of returns. Kurtosis measures the likelihood of extreme events. We currently employ historical data to forecast skewness and kurtosis because it provides the most accurate representation of any abnormality without subjective input. We calculate historical skewness and kurtosis using all available and relevant data (beginning in 1926 and 1970 for equity and fixed income, respectively).

The risk of a portfolio is based not only on the risk of each asset class, but on the relationship between the returns of asset classes as well. The relationship between the returns of asset classes is measured by the correlation coefficient. We estimate correlation coefficients using the same factor model approach as for standard deviation.

We provide annual updates on our capital market assumptions and asset allocation recommendations.

Risk Tolerance Questionnaire

A Risk Tolerance Questionnaire (RTQ) is a paper-based survey and scoring system designed to assess an investor's willingness and ability to assume investment risk. The RTQs we develop for clients typically consist of 6-8 questions appropriate to determine distinct risk and returns profiles. The scoring system assigns investor responses into distinct risk to map to a standard set of asset allocation profiles.

The primary objective of our RTQ and scoring system is to identify the investor's willingness to accept various level of risk and to determine the investor's capacity to accept risk. To identify this, we focus on risk/return tradeoff, loss aversion, and an investor's ability to stay the course. Like the RTQ itself, the scoring system is divided into time horizon and risk tolerance sections. The time horizon score restricts an investor's access to certain portfolios based on their need for liquidity while the risk tolerance section captures the investor's willingness to take risk.

Our RTQ leverages our history in building capital market assumptions and analyzing the risk and return characteristics of different asset classes. The risk and return estimates referenced in the RTQ are based on our capital market assumptions and can be tied directly to asset allocation profiles. We also do multiple scenario testing with the potential responses to avoid any potential outcomes that would score an investor too far from their intended risk profile.

Custom Model Portfolios

For our Custom Model Portfolios service, the portfolios we build for an Institutional Client are typically constrained to a universe of investment

options defined by our client, which may include their affiliated investment products. Our analysis will include quantitative analytics and fundamental research on the investment options available. We draw on Morningstar's comprehensive database of fund and security analytics as well as utilizing portfolio information provided by our Institutional Client, if applicable.

We believe that asset allocation policy is one of the most important determinants of a portfolio's risk and return characteristics over time. When constructing a model portfolio, we believe it is critical to take advantage of potential diversification benefits over the long run. The primary objective of our investment selection process is to find the best combination of investment options that will maximize alpha (excess return above a benchmark) for any given level of tracking error (risk/standard deviation of the alpha), while hitting the appropriate target asset allocation.

We use a five-step investment process that relies on a number of complex optimization routines to find the right mix of asset classes and managers to meet our objective. We use the following five-step process to construct an investment portfolio for our custom models:

Step 1: Develop Asset Class Inputs

Asset class performance expectations are critical in developing a diversified portfolio that aims to help meet an individual's retirement income goal. We forecast expected risk and returns for each asset class we are considering. To do that, we gather and analyze a broad range of data points, including historical data, current market information, and the correlations between asset classes. More details on this step are provided above, in the Capital Market Assumptions section.

We use historical data for these benchmarks/proxies in an attempt to forecast the expected return, standard deviation, and cross-correlation of the asset classes. We use several statistical techniques to extend the returns data for all domestic equity asset classes back to 1926. Fixed income and non-U.S. equity asset classes go back to 1970, due to significant structural changes in the fixed income market that made the interest rate environment since 1970 inherently different from previous periods. We then use a "building-blocks" approach to help derive expected returns for asset classes. The return building blocks are based on forward-looking assumptions about an asset's underlying economic and corporate fundamentals. We use historical data to help forecast standard deviation. Since most data series only extend back to the 1970s, we use the ratio method to extend the standard deviation estimates of the shorter-lived asset class benchmarks so that they incorporate relevant economic events. The ratio method attempts to extend the standard deviation estimate for certain asset class benchmarks using a short benchmark (an asset class benchmark that does not have historical data over the full, relevant time period starting from 1926 for domestic equities and 1970 for fixed income and non-U.S. equities) and a long proxy (an index that has historical data over the full, relevant time period and is economically similar to the short benchmark). The ratio method leads to an estimate of what the standard deviation of the short benchmark would have been had it existed over the full, relevant period.

We use correlation coefficients derived from the historical returns of the asset class benchmarks, going back from 1970 to the present. Correlation coefficients must be extended for series that do not have history for the full relevant period. In an attempt to create this history, we

use a sophisticated statistical process that extends asset class benchmarks that do not have complete data histories but do have a relatively high correlation coefficient with another proxy (or benchmark). This estimate is an approximation of what the correlation coefficient between the two series might have been if both had existed over the longer time period.

Step 2: Create Asset Allocation Models

Once we've identified the available data, we process the data using a series of optimization routines. These optimization routines serve as a blueprint for how we combine the asset classes to help achieve an optimal portfolio for a given level of risk. We take the additional step of testing the asset class models under a wide range of market conditions and then adjust them based on their performance. This helps us build a portfolio that is better aligned with investor expectations. Our model portfolios include both equity and non-equity asset classes that are chosen to represent a broad range of investment categories available in a plan sponsor's retirement plan menu.

Our asset allocation process requires that there be significant benefit (generally through increased diversification) to adding the asset class to the model portfolios. In addition, investment options within the investment/plan menus must provide significant exposure to the desired asset class in order to be selected. The asset classes that are ultimately used will depend on the available investment options that are considered for the construction of the fund-level model portfolios. In other words, we will only recommend asset classes that can be fulfilled by an investment option or combination of investment options within the plan.

This also applies to optional specialty asset classes such as emerging markets equity, real estate, direct real estate, TIPS, high-yield bonds and foreign bonds. In order to be considered in the investment option-level portfolios, an optional asset class must have an available investment option, which exhibits sufficient exposure to its specialty asset class.

The foundation of our asset class model portfolio construction is mean-variance optimization (MVO); a mathematical process for calculating the asset class mix that can provide a portfolio with the maximum expected return for any given level of risk. Conversely, the portfolio may also provide the minimum risk for any given expected return. MVO requires three inputs for each asset class: expected returns, expected standard deviations, and expected cross-asset class correlations.

Although the conceptual foundation of MVO is considered to be solid and its use has greatly enhanced the portfolio management process, it can produce portfolios that are not suitable for real-life application. This is primarily because the inputs are statistical estimates (created by analyzing current and historical data), and therefore are subject to estimation error. As a result, MVO can result in over-allocation in some asset classes and under-allocation in others, along with frequent shifts between asset classes.

We use a variety of methods to minimize the effects of various MVO shortcomings by applying practical considerations to the results and constraining certain allocations to limit the amount of over-weighting or underweighting to certain asset classes.

In addition, we employ a statistical technique called "resampling", which combines MVO and a Monte Carlo simulation. Monte Carlo simulation generates thousands of variations of the original MVO inputs. By

incorporating multiple possible scenarios for asset class performance, resampling considers a wider range of outcomes and can create more diversified portfolios, which are less sensitive to imperfections in performance forecasts. We also conduct sensitivity analysis to ensure that the portfolio recommendations are consistent under a variety of market scenarios.

Step 3: Analyze Investment Options

Investment screening is particularly important when working with investment menus that have many options for an investment option-level model portfolio from which to choose. Once we've built the asset allocation targets for the portfolio, we determine which investment options from the lineup to use to meet our asset class targets and our standards for quality. Our selection process relies on both quantitative and qualitative measures. The selection criteria we use to narrow the available universe include manager experience, performance record, manager history, alpha, style consistency, fund type, and fund fees. Here is an overview of the some of the key steps:

Investment options with less than 36 months of history for actively managed funds and 12 months of history for index funds, sector funds; target-date funds; and risk-based funds will not be recommended.

Once investment options pass the initial screening, we then peer group all remaining funds for further analysis. The peer grouping process begins by evaluating investments based on their Morningstar Category (if available). Returns Based Style Analysis ("RBSA"), which looks at the "behavior" of an investment option rather than its actual holdings, is used to determine the appropriate category, because it takes a longer-term view of an investment option's style and consistency, which is important for peer grouping. The category is validated through a series of regression analyses against sets of benchmark returns. The Morningstar Category determines which set of benchmarks is used in the initial regression. Based on this initial regression result, R-square, and benchmark exposures, the investment option may be sent for further regression analysis to better determine the appropriate peer group. If the R-square of the final regression is greater than or equal to 65, then the peer group is assigned. If through all sets of regression analysis, the investment option does not achieve an R-square of 65 or greater, then the investment option is unclassified and may not be used.

If an investment option is not a public fund or does not have a Morningstar Category, the same process is followed, but the initial set of benchmarks used in the regression analyses is a general set. Again, the investment option goes through a series of regression tests to determine the best peer group fit.

One of the quantitative inputs we use when constructing fund-level portfolios is a proprietary measurement known as forward-looking alpha ("FLA"). This measure helps us identify managers that we believe will add alpha and help drive the long-term positive performance of their portfolios.

FLA uses historical data to forecast how well an investment option is likely to perform in the near-term future. Unlike traditional methods of calculating alpha, FLA is based on alpha over two time periods (12 months and 60 months), and rewards managers for consistent performance over both the short and long term. By using these two time periods, we believe that they are better able to predict how a manager might perform in the future.

From the investment options that pass all of the prior screening criteria above, we will form a “main” list, and ultimately a “select” list of the funds that are included in the final fund optimization process. However, arriving at the select list is a two-tiered screening process. To form the main list, index funds are ranked by their tracking error. The top two funds in each peer group (with the lowest tracking error) form the main list. When there aren’t enough index funds available, the actively managed fund with the lowest tracking error is chosen instead. The two index funds on the main list are then ranked by expense ratio, and the one with the lowest expense ratio is included in the select list. Actively managed funds are evaluated based on their information ratio and FLA. The three funds in each peer group with the highest information ratio and FLA form the main list. Active funds are then ranked on R-square relative to a single peer-group primary benchmark, the number of years the fund outperformed its customized benchmark from the RBSA results over the past five years, and a customized consistency score from the RBSA results. One fund from the “highest information ratio” main list and one fund from the “highest FLA” main list, each with the highest average score, form the select list.

In addition to using the above quantitative steps based, we may also consider qualitative measures such as an investment option’s holdings, style changes, style drift over time, manager changes, and SEC actions. These qualitative steps are mainly used when the quantitative results are questionable due to low statistical significance, quantitative results differing from expectations, or simply to ensure that the quantitative techniques are accurate. For example, this analysis may help confirm the peer group and style analysis, confirm that the processes in place that generated past returns are still relevant, and gives us an opportunity to apply human judgment to the process.

Step 4: Construct the Portfolio

Once we determine the asset class models and which funds from the plan’s lineup will be included in the portfolio, our portfolio construction team then determines what combination of these funds will help us reach our asset class weights. The team also considers the combination of funds that we think will help drive the portfolio’s performance in the future.

Using the select list, we construct the fund-level model portfolios using a proprietary alpha-tracking error optimization process. The primary objective is to find the best combination of investment options (for each of seven risk levels) that will maximize the FLA for any given level of tracking error, while hitting the asset class allocation targets.

This alpha-tracking error optimization is similar to MVO described earlier. MVO is conducted using as inputs the expected return, standard deviation, and correlations of the asset class returns. The alpha-tracking error optimization, however, is conducted using the FLA and tracking errors of each investment option. The asset class exposures of the available investment options are determined using HBSA.

HBSA calculates the exposure of a fund based on the characteristics of each of its underlying securities. The most recent portfolio available in our database is used for this analysis. In addition, there are certain tolerances, constraints, and maximum fund allocations.

The alpha-tracking error frontier offers an entire spectrum of efficient allocations among all funds for the target asset allocation. We select the

appropriate portfolio based on multiple iterations of evaluating possible outcomes, starting with a higher emphasis on alpha (i.e., portfolios with higher excess returns). If the portfolio is found to be outside these tolerances, the emphasis on alpha is lowered and a new set of portfolios is generated for evaluation.

The final step is to generate portfolios that place all the emphasis on the tracking error, to help ensure the asset allocation targets are met. If at this point the portfolios generated are not within the tolerances set, including hitting the asset allocation targets, then the investment menu would not qualify for our advice services. This multiple iterative process helps ensure that for each portfolio the investment options chosen maximize the potential portfolio alpha within the tolerances for tracking error while hitting the asset allocation targets.

We first attempt to build fund-level portfolios at the highest level of complexity/granularity. The large-, mid-, and small-cap asset classes are split into growth and value; aggregate bonds are split into long- and short-term bonds. If we are unable to hit the asset class targets at the highest complexity, then a second attempt is made at a lower complexity. The process continues until the asset class targets are met (within the tolerances), while minimizing tracking error and maximizing alpha. If an investment menu fails at all of the asset class complexities, we will not be able to construct fund-level portfolios.

Step 5: Monitor the Portfolio

Once the portfolio is constructed, we will monitor and re-evaluate the investments on an ongoing basis to ensure it is still aligned with asset allocation targets and diversification objectives.

When a new fund is added to an investment menu, we reevaluate the new investment mix and determines if new asset class and fund-level model portfolios are necessary. When a fund that is used in a portfolio is dropped from a plan menu or closes, the plan’s portfolios will be immediately rebalanced, as it would not be possible to implement the existing fund-level portfolios.

We monitor fund lineups on a quarterly basis to determine if changes are needed. We review and rebalance the fund-level portfolios quarterly. We’ve established a range of +/- 5% based on the most recently delivered fund-level allocations to prevent large fluctuations in investment option allocations from quarter to quarter. If a more attractive alternative is present, an investment option will be phased out over time rather than in one quarter, to minimize large portfolio reallocations on a quarterly basis. This approach also helps to minimize short-term redemption fees to investors, should they exist. All asset class model portfolios are updated annually, as we review and update the MVO inputs (expected returns, standard deviations, and cross- correlation).

Glide Path Construction

Our approach to constructing the glide path is based on a significant number of assumptions.

At a high level, our approach to determining the glide path is based on using the financial assets (i.e., the 401k plan balance) as a “completion portfolio” that is optimized based on the other assets owned by the investor and the risk attributes of those assets (a concept referred to as background risk). Determining the glide path effectively means determining the appropriate stock/bond split for different participants, a process we generally refer to as “portfolio assignment”. Our approach

towards portfolio assignment considers an individual's total wealth, of which human capital is a dominate asset for younger individuals.

When building a glide path, we determine the optimal allocation for each participant individually, and then aggregate the individual allocations into an aggregate cohort portfolio (e.g., into a 2040 Target Date portfolio). These cohort portfolios can then be viewed in combination to form the glide path. The actual portfolio selected to represent a given cohort can be based on a number of different factors, and it is possible for us to create different glide paths for different groups of employees (e.g., hourly versus salary, union versus non-union). This enables to determine the relative difference for different employee groups and cohorts. It is worth noting that our glide path approach is not static, and the actual portfolios will change over time based on the risk characteristics of the defined contribution plan participants in that cohort.

Fiduciary Services

Investment Selection for Investment Lineups

For our Fiduciary Services, the lineups we build for an Institutional Client are typically constrained to a universe of investment options (typically a subset of the entire universe of investment options publicly available for purchase by investors) defined by our client, which may include their affiliated investment products. We have no ability to choose the investment options that are made available under our Institutional Client's products and contracts and may have more favorable opinions of certain investment options which are not included in the defined universe of investment options. Our analysis includes quantitative analytics and fundamental research on the investment options available, holdings-based style analysis to determine an investment's style over time. We draw on Morningstar's comprehensive database of fund and security analytics as well as utilizing portfolio information provided by our Institutional Client, if applicable.

When analyzing investment options or managers for use in a lineup, our goal is to determine their true investment style, identify what we believe to be best-in-class managers, and identify the factors contributing to their performance and risk characteristics with the aim of assessing whether their performance appears to be sustainable over time.

We start with a propriety peer grouping analysis using the available investment options. Once investment options have been placed into their appropriate peer groups, our methodology begins with a quantitative review process. First, we apply a series of screens designed to flag funds that exhibit characteristics that are apt to hinder long-term performance in order to efficiently filter a large universe of investment options to focus our efforts on a more manageable opportunity set. Second, we use a multitude of statistics to begin to assess the overall quality of an investment option. We gather current and historical data points to evaluate investment style, structure, and performance and consider key factors that include fees, management tenure, style consistency, alpha, volatility, fund size, asset class exposure, and holdings concentration.

We conduct further style analyses on managers that pass our initial screens to identify nuances of their style positioning. Just as important as selecting qualified managers is determining how well an investment option will fit with other investments in the lineup. We want each investment to fill a distinct stylistic role within a plan lineup, so we carefully assess how it can be expected to complement other options we are recommending in adjacent styles. In general, we want to have a

number of strategies investing in a specific space while employing different investment approaches.

To accomplish this, we rely largely on a holdings-based style analysis to build a picture of an investment option's style positioning based on its underlying holdings. This means drilling down to examine the asset class exposure within the investment option. We evaluate overall diversification to ensure that the investment option is not exposed to undue security or sector specific risk. We also require an investment option to reveal a minimum level of exposure to its primary asset class. The goal is to provide a selection of investments that are likely to meet their investment mandate, but also to provide options that differ in their pursuit of that objective.

After an extensive quantitative review, we review an investment from a qualitative perspective. The purpose here is to allow our investment professionals to gain conviction in their investment thesis by developing a firm fundamental understanding of the strategy. Our professionals draw from their extensive experience in evaluating investment managers to analyze the people and process behind the investment. In doing so, our goal is to anticipate how an investment option is likely to be positioned in the future, which helps us build expectations of performance and capability of consistently playing a specific portfolio role.

In our fundamental assessment, we review a number of characteristics of the investment option and its manager that could be relevant to how well it can fill the role for which it is being considered. Those include reviewing the manager's performance and risk record against his or her peers in the same style—not just at the manager's current fund but also any other investment vehicles they've managed in the past. We analyze the subtleties of the manager's investment process to understand what drives performance. We observe which types of markets the investment option fares best in and which types are trouble for its style. We also determine what it is about their style that explains the performance pattern.

We assess whether a manager's investment process leads to a more aggressive or more conservative performance profile relative to its style peers, and how a manager's process might lead to persistent over- or under-weights in certain sectors. For periods of underperformance or outperformance, we assess how much is attributable to style traits or market timing versus manager skill. We also assess how performance, both absolute and relative to a peer group, has changed as a manager's assets have grown.

Our selection process entails an investment thesis for each investment option which spells out the rationale for its selection, the barometers by which we'll measure its performance, and highlights the specific factors we'll watch on an ongoing basis to ensure it continues to fill the role for which we selected it. We use many factors to evaluate funds depending on the specific situation and the questions we are trying to answer including investment sub-style, manager skill, impact of asset growth on performance, sources of investment ideas, investment decision-making process, actions in previous market environments, manager ownership, process repeatability, and performance attribution.

Lineup Design and Construction

The area of behavioral finance has shown that investors don't always behave rationally and that the manner in which a problem is posed can impact individual actions. We are mindful of simple heuristics employed by participants in making investment-related decisions and design lineups

that attempt to drive better action on the part of investors. When constructing a lineup, we consider issues around choice overload, naïve allocations, and loss aversion. We strive to select investments to fill a distinct stylistic role within a lineup, and carefully assess how each investment can be expected to fit with other investments. We strive to choose funds that are clearly different from one another, rather than similar or redundant. The goal is to establish a specific role for each investment option in the lineup that minimizes holdings overlap and maximizes diversification.

Managing Lineups

We formally review investment options in our investment lineups quarterly. The majority of our watch-list notifications (a notice to indicate an investment option is under extra scrutiny due to factors such as performance, risk, straying from its stated investment style, or management changes) and approval changes occur on a regular quarterly schedule. However, we are always monitoring our approved investment options and if something occurs intra-quarter that we believe merits immediate action, we will take action outside of the normal review schedule.

When an investment option is removed by one of our investment professionals, a memo to the plan is produced outlining the rationale for such a decision, and for Institutional Clients of our 3(21) services, a timeframe is typically noted for a plan to make a particular change. If the plan opts out of the replacement investment option or fails to choose a replacement investment option from the approved list of investment option, the plan is terminated from the service. A negative consent process for changes can also be implemented whereas an investment option change is automatically implemented if the plan does not take any action within a specified window of time. For Institutional Clients of our 3(38) services, we will implement the change as detailed in the memo.

For Institutional Clients utilizing our Fiduciary Services website, notices are sent to the plan sponsor via the website portal. For those Institutional Clients who opt to own communications to plan sponsors, they are responsible for creating their own notifications, but we will provide memos outlining our rationale for making any change decision.

Advice Services, Morningstar® Retirement ManagerSM

Investment Process

In providing our Advice services and employer-sponsored retirement plan participant-level advice and managed accounts services through Morningstar Retirement Manager, we start with investment process detailed above in the Custom Model Portfolios section to build model portfolios. Plan data that is incorporated in the recommendations include the plan's investment lineup and plan design requirements such as plan limits and matching formulas.

For these services, the portfolios we build are typically constrained to a universe of investment options defined by our Institutional Client, which may include their affiliated investment products. Our analysis will still include quantitative analytics and fundamental research on the investment options available. We draw on Morningstar's comprehensive database of fund and security analytics as well as utilizing portfolios information provided by our Institutional Client, if applicable.

We use a combination of model portfolios and customization as part of a larger portfolio construction and fund implementation process. We generate 589 unique model portfolios (ranging from conservative to

aggressive) for each plan using a customized approach to blending traditional asset allocation models with liability-driven investing and decumulation strategies. Which asset classes and sub-asset classes are used to build these model portfolios is dependent on the specific fund lineup for each plan. We always try to build the model portfolios with the greatest number of sub-asset classes, but this is contingent on whether the funds available in the plan can fulfill each asset class.

Each participant that receives investment advice is assigned into one of the 589 model portfolios. The large number of model portfolios is to address the personalization that is needed by participants. These model portfolios account for not only varying equity/fixed-income allocations but also how close the participant is to retirement. As the participant nears retirement, the sub-asset allocation changes to reflect a liability-driven investment overlay used in the model portfolios for a participant near or in retirement. Any change within the model portfolios is reflected at the individual level as soon as the participant is reevaluated each quarter.

In creating the participant recommendations, we believe that the more information the participant provides to us, the better the investment solution we are able to deliver. We collect information the plan provider is able to provide to us. For Morningstar Retirement Manager, we pre-populate the participant data so that upon entry into the user interface, the participant is prompted to provide any additional data that wasn't available from the plan provider. After collecting those key pieces of data, the participant is presented with an initial strategy as a starting point. The participant can model many scenarios by changing variables such as retirement age, desired retirement income, and savings rate. We will dynamically update the participant's retirement strategy to reflect any changes made. The participant is also encouraged to enter additional retirement account information such as out-of-plan assets or benefits for themselves or their spouse/partner in order to further personalize the recommendations. They can provide detail regarding the investments or select from one of the pre-defined investment styles. We do not provide advice or guidance on outside assets, but will take those into consideration when determining the investment strategy for the plan assets. The portfolio recommendation for the plan assets will take into account the amount of advisable plan assets relative to outside assets as well as the equity/fixed composition of those outside assets.

We start with all of the available participant-specific data and then makes assumptions about certain pieces of information. A participant can review and refine some of these assumed data points through the user interface. These assumptions can have a significant impact on the strategies we will create for them and are related to social security income, salary growth, inflation rates, retirement income goal, and risk capacity. We combine this information with other factors into a proprietary software program that can provide investment recommendations and a projection of different outcomes. Using this model, we develop an investment strategy tailored to each participant's investment goals.

For those participants that are accumulating for retirement, our investment strategy is generally based on information such as the participant's retirement account balance, expected retirement age, contribution rate and other preferences. If a participant has already retired, and our Institutional Client makes available our In-Retirement services, our strategy is based on information such as the participant's current account balance, additional cash flows and life expectancy. This retirement strategy may include some or all of the following:

Retirement Income Goal (accumulation phase). We define the retirement income goal as the projected amount of money that the participant will need during retirement. We calculate this amount based on current income, adjusted to reflect the estimated dollar value at retirement age. Typically, we use an amount equal to 100% of take-home pay, however, plan providers may request we use a different rate. We then project the value of that amount at retirement age to determine the retirement income goal. A participant using our user interface has the option to change this projected retirement income amount.

Income Outlook (accumulation phase). We define the income outlook as a projection of the annual income that the participant may receive during retirement. We base this on an annualized view of the investment wealth accumulated, combined with social security benefits and any pension or other income the participant might receive.

Total Retirement Income (in-retirement phase). For those plans that offer our In-Retirement service, we define total retirement income as the projected amount of money, typically at some level of probability that the participant can expect to receive on an annual basis in order to maintain income throughout retirement.

For our Advice services, many of our Institutional Clients offer a similar experience to participants either through our user interface or their proprietary user interface.

We believe in long-term strategic asset allocation based on an individual's risk capacity. Changes in an investor's financial situation, such as the addition of outside retirement accounts, pension benefits, or contribution rates, may result in a change to their model portfolio assignment. In addition, changes to their personal situation, such as the addition of a spouse or partner or a different retirement age, could also impact the model portfolio assignment. For the managed account service through Morningstar Retirement Manager, we will typically review portfolios on a quarterly basis to determine if market shifts require a rebalancing of the portfolio. Participant wealth re-forecasting occurs on an annual basis for our managed accounts service. For our advice service through Morningstar Retirement Manager, we encourage participants to re-enter our user interface on a periodic or as-needed basis, in order to review their information and receive an updated strategy. At a minimum, we recommend that a participant portfolio is rebalanced on an annual basis. At this point, the participant is one year closer to retirement and we will shift the participant along their glide path.

Our projections are provided based upon an investor's personal financial situation using our total wealth approach. We use MVO, resampling the mean-variance outputs using a Monte Carlo simulation, and our process incorporates liability-relative optimization. We solve for a 70% probability of success when determining the sustainable retirement income. The Monte Carlo simulation uses our long-term capital market assumptions when projecting the future returns for the various asset classes.

Approximately 20,000 participant cases are used to routinely test engine functionality to help ensure our recommendations are in line with our expectations. The test data consists of real participant information as well as generated cases, and covers a gamut of possible ages, balances, salaries, and other optional data points. Running these cases and

analyzing the results help ensure we are confident in the advice we provide participants.

Key Assumptions

Social Security - We can incorporate Social Security for both the participant and their spouse. This can be calculated using an estimate based on current salary information or input by the participant. To calculate the estimate, a participant/spouse must have 35 years of contributions. If the participant/spouse has more than 35 years of service remaining, all projections are forward-looking. If the participant/spouse has fewer than 35 years of service remaining, the difference in contributions is back-calculated. Social Security payments are inflated using a simulated cost-of-living allowance designed to replicate the actual Social Security Administration formulas and are applied at the maximum benefit age as defined by the Social Security Administration. Participants can override the estimate by including information from their Social Security statement. In addition to standard payments, we account for reduction in payments while working in retirement, increases in benefits for the spouse 50% rule and increased benefits for the surviving spouse 100% rule. The program assumes the participant/spouse completes all applications required to collect the maximum benefit. We treat Social Security as similar to income from fixed-income investments. We also take Social Security into consideration while analyzing income replacement. We default to the age at which the participant will receive full benefits from the Social Security Administration. Participants can adjust the benefit amount and start age if desired, however, the start age must be between the ages of 62 and 70.

Salary Growth - To estimate future salary, we use a salary growth curve based on academic research rather than assuming a single, fixed growth rate. This curve takes into account the fact that salaries tend to grow most rapidly for young employees, peak around age 51, and then slightly decline later in life.

Retirement Age - We assume a default retirement age of 67, or the participant's current age plus one year if they are older than 67. Participants have the option to change this to a different retirement age.

Estimated Tax - We estimate federal and state income, and capital gains taxes based on marginal tax rate calculations. Tax data is updated annually based on U.S. Internal Revenue Code (IRC) and similar state tax data. We use income data for the participant, as well as for a spouse/partner, to estimate federal and state tax exposure. Tax exposure is appropriately reduced for pretax deferrals, tax-deferred capital gains, and yield and distribution of Roth proceeds. Based on the information we know about the participant, we provide an estimate of tax exposure, but may not include all tax considerations.

Inflation Assumptions - When projecting the growth of various income sources and expenses, we use a variety of different inflation rates. These rates are reviewed and updated annually by our research team. Different inflation rates are used for different projections and major expenses. We believe that our multifaceted approach to calculating inflation results in more realistic and more accurate projections compared with using one set rate.

IRS Limitations and Application of Penalties - We incorporate all IRS contribution limits, eligibility requirements, and withdrawal penalties into the retirement strategies.

Select Lists

For our Select List service, our analysis is typically constrained to a universe of investment options defined by our Institutional Client, which may include their affiliated investment products. Our analysis will still include quantitative analytics and fundamental research on the investment options available. We draw on Morningstar's comprehensive database of fund and security analytics as well as utilizing portfolio information provided by our Institutional Client, if applicable. Select lists are fully customized around a firm's asset allocation, portfolio construction, and investment objective needs. We work with our Institutional Client to determine the universe of investment options from which we are to choose from, the asset classes to be addressed, the number of investment selections per asset class, the intended users of the list, and the intended account type (e.g., taxable or tax-deferred). We typically update select lists quarterly, or on another basis as defined by our client.

To build the select list, we employ a disciplined process incorporating quantitative screens (e.g., manager tenure, portfolio exposure, and risk and return characteristics) to the available investment universe to narrow the list. Investment options passing those initial quantitative screens are then subject to a qualitative analysis. During that analysis, we are assessing each security on its own merits. During the qualitative analysis phases, we are also assessing how the investment options compares to others in its asset class as well among all the asset classes, paying attention to diversification of investment approach within each asset class and overall.

The investment selection process is guided by a proprietary due diligence process, which combines quantitative analysis with qualitative assessment of an investment's management team and investment process. The assessment we make represents our overall level of conviction in an investment based on various factors that we believe are important in determining which investments have the best chance of delivering above-average risk-adjusted performance in the future. These factors include the following:

Process – We strive to identify managers who employ a disciplined and prudent investment process that has been executed in a consistent fashion. We favor attributes such as insightful security analysis, a robust valuation discipline, and sound risk management and portfolio construction.

Parent – The culture and structure of a firm can have a significant impact on its ability to attract and retain talent and its penchant for serving in the best interests of shareholders. We look at ownership structure of the firm, its organizational stability and financial strength. We also place considerable emphasis on stewardship by favoring investments where the firm has shown a tendency to act in the best interests of shareholders and where the portfolio managers eat their own cooking, so to speak, and have their incentives aligned with shareholders.

People – We judge the depth and capabilities of members of the investment team and the stability of the organization. We look beyond the lead portfolio manager to assess the quality of research analysts.

Performance – We strive to identify investments that have shown the ability to deliver solid risk-adjusted performance over time. We

evaluate performance from several angles and over various time periods. We favor managers that have added value over an appropriate benchmark or peer group in a consistent manner.

Price – Research indicates that expenses are one of the most important factors in predicting mutual fund performance. While a lower expense ratio is always better, we put expenses into the proper context and consider factors such as the size of the fund, trend in expenses, and investment strategy.

Our access to fund managers allows us to conduct constant research, and face-to-face meetings are an important part of our process. We not only check in with our fund managers when they release their quarterly holdings, but also remain in touch as markets shift or management teams change. This deepens our understanding of the processes these managers use and gives us valuable perspective on the state of the economy and capital markets.

After creating a new select list, we will conduct monitoring, typically on a quarterly basis, following the same process used for the initial selection. We also maintain a watch list, which includes investment options that have undergone changes we believe may negatively affect its long-term prospects. The intent of the watch process is to ensure that the investments initially selected continue to satisfy the criteria that led to their initial selection. Generally, an investment option's watch period is two to four quarters, at which point, we will make a recommendation to remove the option from the select list or take it off watch. In addition, if any investments experience significant change prior to the quarterly update, such as a manager change, we will notify the client as the case arises.

Investment Analytics, Monitoring, and Comparative Analysis Reports

For Institutional Clients that request investment analytics, monitoring, or comparative analysis reports, we begin the process by defining the scope of the report(s) in consultation with the Institutional Client. During this phase, various items are determined including, but not limited to, the universe of investments or asset classes from which we are to work from, the number of investments, the intended user(s) of the report(s), the type of display for the report(s), and the data points or written analysis to be included. If the Institutional Client requests ongoing monitoring of a universe of investments, we will determine how often report(s) are to be generated. We then utilize our resources to create the requested reports. Our reporting services typically are one-time projects in which we do not provide ongoing reviews or updates.

Risk of Loss and Strategy Risk

Investments in securities are subject to market risk, risk of loss, and other risks and will not always be profitable. There is no assurance or guarantee that the intended investment objectives of our recommendations will be received. We do not represent or guarantee that our investment recommendations can or will predict future results, will successfully identify market highs or lows, or will result in a profit or protect clients from loss. Past performance of a security may or may not be sustained in the future and is no indication of future performance. A security's investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. We are unable to predict or forecast market fluctuations or other uncertainties that may affect the value of any investment.

Asset allocation and diversification are investment strategies which spread assets across various investment types for long-term investing. However, as with all investment strategies, these strategies do not ensure a profit and do not guarantee against losses.

Capital market assumptions are forecasts which involve known and unknown risks, uncertainties, and other factors which may cause the actual results to differ materially and/or substantially from any future results, performance, or achievements expressed or implied by those projections for any reason. Past performance does not guarantee future results.

Income projections used in our Advices and Morningstar Retirement Manager services are based on hypothetical performance data and do not represent actual or guaranteed results. Projections may vary over time and with each use of our service.

Our recommendations are made without taking into consideration potential tax consequences and we do not provide tax advice. Potential tax consequences may exist. We encourage you to consult with a tax professional about these and other tax consequences.

Information Sources

Our global resources used in the formulation of our advisory services go down to our roots—the data and analysis from Morningstar that form the base of our investment process. This expansive, in-house network of global data and investment analysis spans asset classes and regions to help drive timely new ideas. More than 300-plus analysts of Morningstar or its affiliates cover more than 500,000 investment options. The extensive data, analysis, and methodologies from these resources, along with external research reports, data, and interviews with investment managers are combined with financial publications, annual reports, prospectuses, press releases, and SEC filings to serve as the basis of our primary sources of information.

For some of our services, we combine this information with other factors—including actuarial data, stock market exposure, probability analysis, and mean-variance optimization—into a proprietary software program to analyze a complex set of market data and variables that results in an advanced model that can provide investment recommendations and a projection of different outcomes.

Methodology Updates

Our CMA, asset allocation, and advice methodology committees all meet monthly. These committees have oversight for their respective areas of expertise. If any of these committees makes an adjustment, the changes are thoroughly reviewed and tested before being implemented. These changes are manifested in participant portfolios through expected future returns, and asset allocations. CMAs are updated on an annual basis. We also update our methodologies with updated tax limits on an annual basis. Asset allocation and advice methodologies are updated only when there is a regulatory change that requires an update or when research we have completed warrants enhancing our asset allocation process or advice methodology.

Item 9. Disciplinary Information

We are required to disclose all material facts regarding any legal or disciplinary events that would influence a potential client to engage us. We do not have any material legal or disciplinary events to disclose.

Item 10. Other Financial Industry Activities and Affiliations

Morningstar Investment Management is a wholly-owned subsidiary of Morningstar. Our offerings center on advisory services in our core capabilities of asset allocation, investment selection, and portfolio construction that we offer to individual investors (advice and managed accounts services to retirement plan participants) and institutions (including the services described in this brochure.)

Our portfolio managers and their team members who are responsible for the day-to-day management of our portfolios are paid a base salary plus a discretionary bonus. The discretionary bonus is based in part on the investment performance of select portfolios over three-, five-, and seven-year time periods, and in part on Morningstar's overall annual revenue and profitability, and the individual's contribution to the business unit. Benchmarks are used as a measure of investment performance and are chosen by senior personnel and approved by the Global Investment Policy Committee's Regional Investment Policy Committee. To mitigate the conflict of interest that could arise from partially basing an employee's bonus on performance of a select portfolio or portfolios, all investment decisions made within a portfolio must be peer reviewed by a regional governance body within the Regional Investment Policy Committee, which includes asset allocation committees, manager selection committees, and portfolio construction (peer review) committees.

For many of our advisory services, the universe of investment options from which we make our investment selections is defined by our Institutional Client. In some cases, this universe of investment options may include proprietary investment options of the Institutional Client. To mitigate any actual or potential conflict of interests presented by this situation, we subject all investment options to the same quantitative and qualitative investment selection methodology, based on several factors, including performance, risk, and expense so that the proprietary nature of an investment option does not influence our selection.

We may provide consulting or advisory services to Institutional Clients that offer registered or pooled investment products, such as mutual funds, variable annuities, collective investment trusts, or model portfolios. To mitigate the conflict of interest presented by our role in these investment products, we exclude such investment products from the universe of investment options from which we make our recommendations to other clients.

We receive compensation for our research and analysis activities (e.g., research papers) from a variety of financial institutions including large banks, brokerage firms, insurance companies, and mutual fund companies. In order to mitigate any actual or potential conflicts of interest that may arise from this service, we ensure that our research and analytical activities are non-biased and objective given our business relationships. Employees who provide research and analysis for clients are separate from our sales and relationship manager staff in order to mitigate the conflict of interest that an employee may feel pressure to present results in such a way as to maintain existing or gain new business. In addition, as noted above, all investment decisions must be peer reviewed by a regional governance body within the Regional Investment Policy Committee, which mitigates the conflict of interest by providing checks and balances so that no employee can act unilaterally in making recommendation decisions.

Our investment professionals provide portfolio construction and ongoing monitoring and maintenance for the portfolios within Morningstar Investment Services' Morningstar® Managed PortfoliosSM program on Morningstar Investment Services' behalf. While the same or similar portfolios are offered by us to our Institutional Clients under the Morningstar Managed Portfolios program, we do not believe these responsibilities create any material conflicts of interest for our clients. In order to mitigate any perceived conflict of interest, when we offer discretionary services under the Morningstar Managed Portfolios program, transactions for our clients are placed at the same time as transactions for Morningstar Investment Services' discretionary clients as part of block trades. We have procedures in place to ensure that trades are allocated in such a manner as to not favor one client over another. When we offer non-discretionary services under the Morningstar Managed Portfolios program, our Institutional Clients receive trade recommendations just after trades are placed for discretionary clients, due to our heightened fiduciary responsibilities to our discretionary clients. In addition, all non-discretionary clients are notified of transaction recommendations after the close of the trading day, so that no one such client has an advantage over another.

When we, along with Morningstar and/or our other affiliates offer services to the same client, we may enter into a bundled agreement with the client that encompasses all or part of those services. Additional fee(s) for such product(s) or service(s), if required, will be set forth in our agreement with the client. In these situations, clients may pay a fee directly to us and each such affiliate for its products or services, or as part of a joint fee schedule which encompasses all services.

Affiliations – Investment Management Group Registered Entities

Morningstar has an Investment Management group that consists of various subsidiaries across the globe that are each registered with and governed by the applicable regulatory body or bodies in that country. We are part of this group and share resources, as described earlier in this brochure. One member of this group, Morningstar Investment Services LLC, is our subsidiary and is also an investment adviser registered under the Advisers Act. Morningstar Investment Services is additionally registered with the Securities and Exchange Commissions as a broker-dealer and a member of the Financial Industry Regulatory Authority (FINRA). Morningstar Investment Services' offerings include discretionary managed portfolios and model manager services under the Morningstar Managed Portfolios brand name, plan sponsor services, and retirement plan services for institutional and retail clients.

In some cases, our senior management members have management responsibilities to these other affiliated entities. We do not believe that these management responsibilities create any material conflicts of interests for our clients.

The Investment Management group has set up a shared services team, composed of employees of our affiliate and located at our affiliate's office in Mumbai, India. We compensate our affiliate for services rendered via an intercompany charge. The services and compensation will be governed by an intercompany agreement. This compensation will likely be lower than compensation negotiated with non-affiliated firms for the same or similar services. To mitigate any conflict of interest between us and our affiliate we have established dual reporting lines for employees on the shared services team so that such employees report up to our Director of Operations. We've also established information security boundaries and technology separation to protect our non-public

information and Morningstar's compliance department monitors the personal trading activity of these employees.

Affiliations – Other Registered Entities

Morningstar Research Services LLC is not part of the Investment Management group but is also a wholly-owned subsidiary of Morningstar and an investment adviser registered under the Advisers Act. Morningstar Research Services' offerings center around the production of investment research reports and investment consulting services to financial institutions/institutional investors who themselves are registered with and governed by a regulatory body. Conflicts of interests between us and Morningstar Research Services are mitigated by such things as the maintenance of separate legal entities and reporting/organization lines, and the utilization of physical (i.e. separate floors) and technological separation. Morningstar Research Services also maintains a committee structure so as to limit any unilateral decisions. Morningstar's compliance department monitors the personal trading activities of Morningstar Research Services' employees.

We may engage Morningstar Research Services to perform investment manager due diligence and/or fund selection services on our behalf as a sub-adviser. The notification to and authorization by the Institutional Client to our engaging Morningstar Research Services is addressed in our agreement with the Institutional Client. On such occasions, we compensate Morningstar Research Services for services rendered via an intercompany charge. The services and compensation will be governed by an intercompany agreement. This compensation will likely be lower than compensation negotiated with non-affiliated financial institutions/institutional investors for same or similar services. Morningstar Research Services' employees who are engaged to provide manager due diligence and/or fund selection service are prohibited from using non-public/confidential information obtained because of their engagement in its investment research reports and/or investment consulting services to clients, including us.

Morningstar Research Services provides information to the public about various securities, including open-end mutual funds and ETFs, which may include written analyses of these investment products. Although we use certain products, services, or databases that contain this information, we do not participate in or have any input in the written analyses that Morningstar Research Services produces. While we consider the analyses of Morningstar Research Services, our investment recommendations are typically based on our separate and independent research and analysis of the available investment product.

Morningstar Research Services may issue investment research reports on securities we may hold in our portfolios or recommend to our clients, but they do not share any yet-to-be published views and analysis and/or changes in estimates (i.e., their confidential information) with us on these securities. Other than the use of their publicly available analysis as part of our review process, we do not solicit the input of Morningstar Research Services prior to making investment decisions or recommendations (unless we engage them as a sub-adviser as noted under the 2nd paragraph of the *Affiliations – Other Registered Entities* section), nor do we have access to their analysis prior to its public dissemination. We mitigate any actual or potential conflicts of interest that could arise from the access of their analysis prior to publication through measures such as informational barriers (both physical and technological), maintaining separate organizational reporting lines, and monitoring by the compliance department.

Some of Morningstar Research Services' clients may be sponsors of funds or associated with other securities that we may recommend to our Institutional Clients. We mitigate any actual or potential conflicts of interests resulting from this fact through such measures as informational barriers (both physical and technological), maintaining separate organizational reporting lines, and monitoring by the compliance department. In addition, we do not factor in the relationship between Morningstar Research Services when analyzing investments or making recommendations.

Morningstar Investment Management serves as an investment adviser to investment companies registered under the Investment Company Act of 1940, as amended, and to other pooled investment products. To mitigate conflicts of interest, Morningstar Research Services does not prepare qualitative analysis on nor recommend as part of their investment consulting services any investment company we are an investment adviser to.

Affiliations – Morningstar, Inc.

Our parent company, Morningstar, Inc., is publicly traded (Ticker Symbol: MORN). We may recommend an investment product that holds a position in publicly-traded shares of Morningstar's stock. Such an investment in Morningstar's stock is solely the decision of the investment product's portfolio manager. We have no input into a portfolio manager's investment decision nor do we require that the investment products we recommend own shares of Morningstar. An investment product's position in Morningstar has no direct bearing on our investment selection process. We mitigate any actual or potential conflicts of interest by not factoring Morningstar's publicly traded stock into our qualitative or quantitative analysis nor in our recommendations.

Morningstar offers various products and services to the public. Some of Morningstar's clients are service providers (e.g., portfolio managers, advisers, or distributors affiliated with a mutual fund or other investment option). We may have a contractual relationship to provide consulting or advisory services to these same service providers or we may recommend the products of these service providers to our advisory clients. To mitigate any actual or potential conflicts of interest, we do not consider the relationship between Morningstar and these service providers when making recommendations. We are not paid to recommend one investment option over another, including products of service providers with which Morningstar has a relationship.

Morningstar provides information to the public about various investment products, including open-end mutual funds and ETFs. In some cases, this information includes written analyses of these investment products. Although we may use certain products, services, or databases of Morningstar, we do not participate in or have any input in the written analyses that Morningstar provides its licensees. While we consider the analyses of Morningstar, our investment recommendations are typically based on our separate and independent research and analysis of the available investment product.

Morningstar offers various products and services to retail and institutional investors. In certain situations, we may recommend an investment product that tracks an index created and maintained by Morningstar. In such cases, the investment product sponsor has entered into a licensing agreement with Morningstar to use such index. To mitigate any conflicts of interest arising from our selection of such investment products, we

may use solely quantitative criteria established by our advisory client to make such selection, or, in the alternative, Morningstar's compensation from the investment product sponsor will not be based on nor will it include assets that are a result of our recommendation to our advisory client to invest in those investment products. In other cases, some of Morningstar's clients may be sponsors of funds that we may recommend to our clients. Morningstar does not and will not have any input into our investment decisions, including what investment products will be recommended for our recommended portfolios. We mitigate any actual or potential conflicts of interest by imposing informational barriers (both physical and technological), maintaining separate organizational reporting lines, and monitoring by the compliance department. In addition, we do not factor in the relationship between Morningstar when analyzing investments or making recommendations. We mitigate any actual or potential conflicts of interests resulting from that by not producing qualitative analysis on any such exchange-traded fund as well as imposing informational barriers (both physical and technological), maintaining separate organizational reporting lines between, and monitoring by the compliance department.

Morningstar has and maintains accounts which they invest in accordance with investment strategies created and maintained by us. Those investment strategies are deployed using equity securities. As we have discretion over these accounts, Morningstar's accounts are traded at the same time as our and Morningstar Investment Services' other discretionary client accounts in order to ensure that Morningstar's accounts are not treated more favorably than our client accounts. Some of Morningstar's accounts are used as the subject of newsletters offered by Morningstar. In order to ensure that Morningstar's newsletter subscribers are not treated more favorably than our clients, which would result in a breach of our fiduciary duty, we do not report trades in Morningstar's accounts invested in our strategies to newsletter subscribers until after our client accounts have been traded or our non-discretionary clients have been notified.

As a wholly-owned subsidiary, we use the resources, infrastructure, and employees Morningstar and its affiliates to provide certain support services in such areas as technology, procurement, human resources, account, legal, compliance, information security, and marketing. We do not believe this arrangement presents a conflict of interests to us in terms of our advisory services. Employees of Morningstar that provide support services to us may maintain their Financial Industry Regulatory Authority ("FINRA") security licenses under Morningstar Investment Services' limited broker/dealer registration, if appropriate for their current job responsibilities. Morningstar Investment Services utilizes its broker/dealer registration solely for the receipt of 12b-1 fees, therefore, we believe no conflict of interest exists due to the maintenance of these security licenses.

We may make our clients aware of various products and services offered by Morningstar or its affiliates. We do not receive compensation for that introduction. Morningstar and its affiliates, in turn, may make their clients aware of various products and services offered by us. Morningstar and its affiliates do not receive any compensation from us for that introduction.

Affiliations – Morningstar, Inc.'s Subsidiaries

Equity and manager research analysts based outside the United States are employed by various wholly-owned subsidiaries of Morningstar. These analysts follow the same investment methodologies and process as Morningstar Research Services, as well as being held to the same

conduct standards. As a result, we do not believe this structure causes actual or a potential for a conflict of interest.

Affiliations – Credit Rating Agency

One of Morningstar's subsidiaries, Morningstar Credit Ratings LLC, is a credit rating agency registered with the Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (NRSRO). In our analysis of certain securities, we may use the publicly available credit rating and analysis issued by Morningstar Credit Ratings. Because of our use of Morningstar Credit Ratings' ratings and analysis is limited to that which is publicly available, we do not believe there is an actual or potential conflict of interest that arises from such use.

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

Code Of Ethics

We have in place a Code of Ethics pursuant to Rule 204A-1 under the Advisers Act ("Code of Ethics"). Our Code of Ethics strives to uphold the highest standards of moral and ethical conduct, including placing our clients' interest ahead of our own. Our Code of Ethics covers all our officers and employees as well as other persons who have access to our non-public information (collectively "Access Persons"). Our Code of Ethics addresses such topics as professional and ethical responsibilities, compliance with securities laws, our fiduciary duty, and personal trading practices. Our Code of Ethics also addresses receipt and/or permissible use of material non-public information and other confidential information our Access Persons may be exposed and/or have access to given their position. The Code of Ethics is provided upon hire and at least annually thereafter and at each time, the Access Person must certify in writing that she or he has received, read, and understands the Code of Ethics and that they agree to or have complied with its contents.

A copy of our Code of Ethics is available to existing and prospective clients by sending written request to compliance@morningstar.com.

Interest In Client Transactions

Our Access Persons may maintain personal investment accounts and may purchase or sell investments in those accounts that are the same as or different from the investments we recommend to clients. Because we generally recommend mutual funds and ETFs, our Access Persons' personal investing activities should not conflict with our advisory activities or the timing of our recommendations. In addition, our Code of Ethics is designed to ensure that Access Persons' personal trading activities will not interfere with our clients' interests, while allowing our Access Persons to invest in their own accounts.

We do not engage in principal transactions (transactions where we, acting in our own account or in an affiliated account, buy a security from or sell a security to a client's account) nor do we engage in agency cross transactions (transactions where we or our affiliate executes a transaction while acting as a broker for both our client and the other party in the transaction).

Interest In Securities That We May Recommend

Morningstar Investment Management has and maintains a number of seed accounts (accounts used to establish a strategy we may wish to offer), many of which follow strategies we offer to clients. We place block trades for our accounts, therefore trade requests for our seed

accounts are placed at the same time as trades are placed for those client accounts invested in the same strategy and for which we have discretion. Block trades are allocated in such a manner as to ensure that our seed accounts do not receive more favorable trades than our clients' accounts. Client accounts that we manage on a discretionary basis and thus, our seed accounts, are traded just before we provide model portfolio trade recommendations to other clients using our U.S. managed portfolios. However, our model portfolio clients receive trade recommendation after the close of the trading day, so that no one model portfolio client is favored over another.

Personal Trading By Access Persons

Our Code of Ethics is designed to ensure that Access Persons' personal trading activities does not interfere with our clients' interests. While our Access Persons may maintain personal investment accounts, they are subject to certain restrictions. Our Code of Ethics includes policies designed to prevent Access Persons from trading based on material non-public information. Access Persons in possession of material non-public information may not trade in securities which are the subject of such information and may not tip such information to others. In certain instances, we employ information blocking devices such as restricted lists to prevent illegal insider trading. Morningstar's compliance department monitors the activities in the personal accounts of our Access Persons (and any accounts in which they have beneficial ownership) upon hire and thereafter. Access Persons are required to pre-clear IPO and private placement transactions with Morningstar's compliance department.

Item 12. Brokerage Practices

Where we exercise investment discretion, we will generate trade instructions for each portfolio that requires investment, reallocation or rebalancing and forward those instructions to the appropriate institution as designated by the client. As a result, we do not have the ability to make decisions regarding which broker is used to execute the transactions. We do not participate in any soft dollar practices.

Item 13. Review of Accounts

If included in our contract with the Institutional Client, we will provide ongoing monitoring of the underlying holdings in investment portfolios and reallocation or rebalancing of investment portfolios. The frequency and nature of our reviews and rebalancing is governed by our contract with each Institutional Client.

In instances where we act as a discretionary investment manager through Morningstar Managed Portfolios, financial advisors of the Institutional Client or financial advisors using the Institutional Client's platform are typically responsible for periodically reviewing client accounts.

We do not provide periodic reviews or ongoing monitoring of plan participant accounts where we solely provide recommendations or advice to the Institutional Client regarding their retirement plan and are not providing managed accounts services to the participants in the plan. We may provide periodic reports to our Institutional Clients on the investment portfolios and the underlying holdings or retirement plan lineup if included in our contract with the Institutional Client.

Our model portfolios and valuation models are reviewed on at least an annual basis. Investment-specific model portfolios for an employer sponsored retirement plan are reviewed on a quarterly basis. The

participants' financial situation (reforecast) is reviewed on at least a quarterly basis.

Item 14. Client Referrals and Other Compensation

We may make direct or indirect cash payments to our affiliates or to unaffiliated third parties for recommending our services as described in Item 4 above. If such payments occur, they will be done pursuant to Rule 206(4)-3(a)(2)(ii) of the Advisers Act. Clients referred by third party solicitors may in some cases pay a higher fee than clients who contract with us directly. Solicited Clients referred by a third-party solicitor should refer to the disclosure document for information on the effect of the fees paid to third-party solicitors.

Item 15. Custody

We do not serve as a custodian of client assets. However, in cases where we have the ability to debit fees directly from client accounts, we may be deemed to have custody of client assets under Rule 206(4)-2 of the Advisers Act, even if we do not act as a custodian. The Institutional Client is responsible for selecting the custodian for assets.

Item 16. Investment Discretion

In some cases, we may have complete investment discretion in managing investment portfolios, retirement plans, or registered funds for our Institutional Clients. In other cases, we may make investment recommendations to an investment committee, board, or other person(s) within an institution, but the institution has the discretion to accept, reject, or modify our recommendations. In offering our services to plan sponsors, we typically provide the Institutional Client with information designed to help them make investment choices regarding their retirement plans, but they retain responsibility for managing the investments in their plans. However, in some cases investment management discretion is delegated to us.

As described in our Retirement Services for Individuals firm brochure, we may also have complete investment discretion in managing plan participant accounts through our retirement plan services managed accounts program. In other cases, we may make investment recommendations to retirement plan participants through our retirement plan services advice or guidance programs, but the participants have the discretion to accept, reject, or modify our recommendations.

The extent of our investment discretion is set forth in our contract with the Institutional Client or participants in our retirement plan services program.

Item 17. Voting Client Securities

For all of our institutional advisory service arrangements, we do not have the authority to and will not vote proxies. Proxies or other solicitations will be sent directly to the Institutional Client. We cannot provide information or advice in regard to questions an Institutional Client has about a particular solicitation.

Item 18. Financial Information

We are required to provide you with certain financial information or disclosures about our financial condition. We do not have any financial commitment that impairs our ability to meet our contractual and fiduciary commitments to clients, have we been the subject of any bankruptcy proceeding.