Morgan Stanley

INVESTMENT MANAGEMENT

Overcoming Behavioral Biases: The Importance of Our Proprietary Portfolio Exercises

MACRO INSIGHT | EQUITY TEAM | April 2024

All humans have behavioral biases, those blind spots that can impact decision-making. Some people are overconfident about their abilities; others attribute too much value to things in their possession; some unwittingly attach too much importance to things that are not important at all.

Much has been written on the subject of behavioral biases. Daniel Kahneman won a Nobel Prize in Economics on behavioral economics, the only economics winner who was not an economist (he holds a Ph.D. in psychology). Research has shown that behavioral biases can impact decision-making in a number of fields: judges are inclined to be more severe before eating lunch, more lenient after; doctors have been known to make mistakes based on assumptions about what they have seen in the past, overlooking new data at their fingertips.[1]

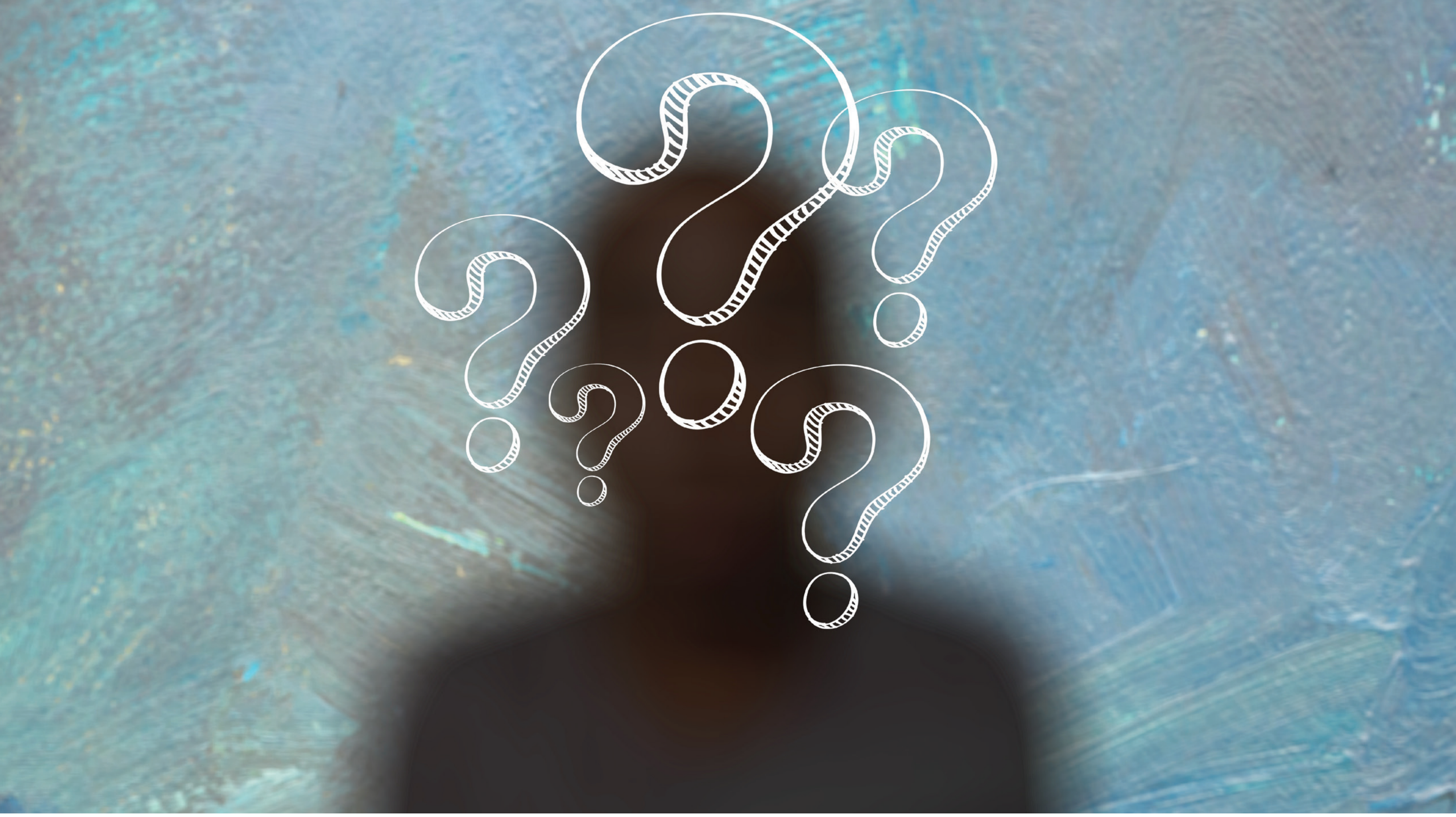
Behavioral biases exist when human beings fail to act “rationally” and process all the information available to them when making decisions. As investment managers, we must recognize that individually, and as an investment team, we are likely to have biases about stocks we own and the process for picking those stocks. Understanding that we have these biases is the first step, but what can we do to proactively overcome them? The Eaton Vance Equity Group believes that having deep company-specific knowledge, training in financial statement analysis, and decades of collective experience are necessary, but insufficient, to achieve strong investment results. Since 2014, we have integrated the discipline of conducting Portfolio Exercises into our investment process, a differentiator in the way we manage money and an important element to our success.

[1] Diagnostic Errors in Medicine, Mark Garber, February 2007

AUTHORS

CHRISTOPHER DYER, CFA
Co-Head of Eaton Vance Equity Group

AARON DUNN, CFA
Co-Head of Value Equity



Behavioral Biases and Their Impact on Investing

We have learned that human beings are not always "rational" and don't process all the information available to them when making decisions. There are over 150 documented behavioral biases that can impact decision-making in life—and in the investing world. Here is a sample.

OVERCONFIDENCE BIAS

People are overconfident about many things: their ability to drive well, their sense of humor, and their certainty that "they are absolutely right" about specific things. Overconfidence bias is defined as a tendency to have a misleading assessment of ourselves, a belief wrapped in ego that we're better than we actually are.

Overconfidence in investing can be toxic. While we want confidence in our professionals, we find that overconfidence tends to be a weakness. Money managers have to understand that sometimes they will be wrong about assumptions and projections—and ultimately the stocks they pick. In one survey, 74% of fund managers responded they believe they were "above average" at investing, the remaining 26% thought they were average.[2] Of course, no one thought they were below average, a statistical impossibility, but not at all surprising.

> "There are over 150 documented behavioral biases that can impact decision-making in life—and in the investing world."

LOSS AVERSION

People don't like to lose, and *loss aversion* is the tendency of people to prefer *avoiding* losses, as opposed to acquiring equivalent gains. Kahneman's research suggested that losses are psychologically twice as powerful as gains, in the sense that someone who loses $100 will feel twice the pain versus the satisfaction of gaining $100, i.e. a person would have to gain $200 for their feelings to equalize.[3]

In the case of investing, individuals and investment teams may stubbornly hold onto investments, in the face of obvious reasons to sell. The thought is that one doesn't lose money if one doesn't sell, a behavior that is not necessarily rational when processing all the available information. In the words of Kenny Rogers sometimes "you gotta know when to fold 'em."

[2] "Behaving Badly," James Montier, 2006
[3] Prospect Theory, Daniel Kahneman and Amos Tversky, 1981
[4] Russo and Schoemaker, 1989

RECENCY BIAS

Studies have shown that people are prone to make decisions based on recent events. A lawyer's closing argument might have much more weight than evidence offered earlier in the week. Employee evaluations are sometimes based on the past month's work, as opposed to the full year. Despite being in first place all year, if a baseball team then loses eight out of nine games, the fans will insist that the manager needs to be fired.

In investing, recent events in markets often hold more weight than a longer-term view. For example, investors will at times buy near the top during market run-ups and sell at the bottom during downturns. In money management there is a firehose of information that needs to be parsed when making investment decisions—some short-term, some longer-term. Many money managers talk about the need to "tune out the short-term noise," but that's often easier said than done. And the press does not help, as fear is a motivator designed to grab attention for their content.

ANCHORING

People often become fixated on an "anchor" which can irrationally impact their decision-making. In a famous study, people were asked to take the last three digits of their phone number and add 400, and then asked the year Attila the Hun was defeated (which few know, which was the point). Their answers formed a perfect regression despite the fact that the phone number plus 400 had absolutely nothing to do with Attila. The fabricated number had become an irrational anchor.[4]

There are many real-life anchors in the world of investing. Individual investors can create anchors about "how they should be doing" based on things like reading the paper ("market at a new high!"), watching investment news ("our expert says now is the time to buy gold") even talking to their neighbors ("I've quadrupled my money on X stock"). For investment managers, anchors could be the price you paid for a stock, its 52-week high or a recent earnings estimate, and while it's important to analyze these data points, managers shouldn't let their decisions get weighed down by them.

ENDOWMENT EFFECT

The endowment effect refers to the fact that people will place a higher value on something they own than on an identical good they do not. This bias can influence a fan with

a concert ticket or a CEO selling a company, both of whom perceive their item is more valuable than what the market might indicate, *just because they own it*. In these cases, mere possession can impair rational decision-making.

Investors should realize that just because they own a particular investment, regardless for how long, it doesn't necessarily mean it is more valuable than other alternatives in the market.

HERDING/GROUPTHINK

Herding is when people follow the crowd instead of their own instincts and/or analysis. In a well-known study, participants were asked to answer a question by a show of hands (so that everyone in the group could see how everyone else was answering). In the first part of the test, the answer was obvious and everyone got it right. But in the second part, there were "plants" in the group who intentionally answered incorrectly—and guess what? Many more participants got the answer wrong, a classic example of herding, where people might be lazy, indifferent, question their own judgment or perception, or just don't want to "look stupid."[5]

We do not think it is a good idea for investors to follow the crowd, i.e., the markets or other investors. Economist John Maynard Keynes once said, "Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally." To achieve success in investing, we believe it is critical for people to think for themselves.

[4] Russo and Schoemaker, 1989

[5] Asch Conformity Study, Solomon Asch, 1951

Proprietary Portfolio Exercises

Eaton Vance Equity Investment Teams study behavioral biases and how they might impact investment decisions. More specifically, we have developed and use over 30 proprietary Portfolio Exercises that are designed to help portfolio managers and analysts systematically recognize—and overcome—their personal investment biases. In essence, we are trying to define the problem, the biases, and develop a solution, the Portfolio Exercises. These exercises are an integral part of our investment process, and performed by our investment teams on a regular basis to help us overcome bias.

"TWO MISTAKES I MADE LAST YEAR"

At some point early in the year, we ask everyone on the team to think about two mistakes they made over the past 12 months. For example, "the stock price hit my target, but I talked myself into holding on just a little bit longer" or "the CFO abruptly left the company, which I know is a red flag, but I dismissed it, and they subsequently had to restate their financial statements." Everyone in the group then presents their "mistakes" to the rest of the group.

There are a couple of important reasons why we do this. One goal is to have people learn from their own and their colleagues' mistakes. Another is to wipe the slate clean for those coming off of a difficult year so they are not hampered by the baggage of history. Likewise, it brings a dose of humility to those who need it.

The behavioral bias we hope to address is overconfidence. Good money managers are confident, not arrogant, and confession is good for the soul.

Building and Leading an Effective Investment Team

Certain behavioral biases affect us as individuals, while others are more prominent in group settings. One way to guard against groupthink and conformity is to be thoughtful about the design and management of an investment team. Debate and disagreement are hallmarks of effective working groups. While it is tempting for a hiring manager to seek out people who are "just like me," this can result in a lack of cognitive diversity and pressure to "go along to get along," features that are not conducive to good decision-making.

An alternative approach is one in which the team leader identifies a list of must-have attributes, such as curiosity, independence of thought, intelligence, honesty, and a strong work ethic. On top of that foundation, team members should have diverse skill sets and backgrounds. One person might be especially strong at accounting, another at reading people. One might be eloquent, another shy. One might be from an Ivy League business school, another from the school of hard knocks.

Once the team is built, the leader should be careful to conduct group and one-on-one interactions in a way that minimizes the pressure to conform or shut down debate. Techniques for doing this include regularly stating the expectation that respectful disagreement is encouraged from each member of the team; the leader admitting to mistakes in front of the group; the leader resisting the urge to tell others what they think of an investment idea before the discussion is completed and arguments have been heard. Other valuable tools include giving individuals the "cover of anonymity" by using blind votes and anonymous submissions in order to invite dissent rather than conformity.

"Debate and disagreement are hallmarks of effective working groups. While it is tempting for a hiring manager to seek out people who are "just like me," this can result in a lack of cognitive diversity and pressure to "go along to get along," features that are not conducive to good decision-making."

"ONE UP, ONE OUT"

The assignment is for everyone on the team to look at the portfolio and pick one stock outside of their own area of direct responsibility where they would add more to the position, another that they would liquidate entirely. The goal is to empower team members and make them accountable for decisions.

We believe the exercise helps members come to grips with loss aversion, in the sense that they have to get rid of something, even if it is showing a loss at the time. It is also designed to hold sector-specific analysts accountable for "the whole portfolio experience" in order to align them with our clients.

"ROBINSON CRUSOE"

As you might remember from English Lit 101, Robinson Crusoe was a castaway who spent 28 years on a remote tropical desert island. In this exercise, we ask investment team members to imagine being stranded on a desert island for seven to ten years, without access to information or the ability to trade. Then, as Robinson Crusoe, identify the ONE stock you would want to own for that time period.

The goal here is for members to overcome any recency bias (or short-termism) they might be experiencing. For example, we do not want team members to be obsessed with the current market environment or to hold out for the perfect entry-point price when buying a stock in a great long-term business. We keep a running list of stocks identified in the exercise, so that when the market drops dramatically.

"TIME-TRAVELING REPORTER"

Another exercise to help overcome recency bias or short-term noise is the Time-Traveling Reporter. We ask each team member to think of themself as a financial journalist with access to a time machine that can leap forward 1, 3, or 5 years into the future. We then ask for a potential newspaper headline from that future date. For example, what might the newspaper say a year from today? Has inflation peaked and dropped? Where is the Fed on interest rates? Is the war in Ukraine over?

One might argue it's a fool's errand to try and predict the future. But the point of the exercise is not about predicting the future, but identifying scenarios that may come to pass that are not in the current narrative of the market. It helps us to avoid overemphasizing recent events when making long-term decisions for our clients.

"We have developed and use over 30 proprietary Portfolio Exercises that are designed to help portfolio managers and analysts systematically recognize—and overcome—their personal investment biases."

"DESIGNATED BEAR"

Counterargument can be the linchpin of good investment decisions. Whereas everyone on the team might feel great about an investment thesis, a well-researched counterargument might uncover something the team is missing. In the Designated Bear exercise, we ask the analyst who covers a particular sector to present the case for a particular stock in that sector, and then assign someone to be the Bear and present the case that this is actually a bad investment idea. This is borrowed from the military (red team/blue team) and sports (scout team), where it can be helpful to seek out the perspective of your adversary.

We prefer volunteers in this exercise because research shows the best results occur when the Bear fully believes in what they are presenting, rather than going through the motions of acting out the contra case. The goal of the exercise is designed to systematically break down any herd mentality, and complacency, that might have infected the group.

In summary

Behavioral biases are well-documented phenomena that are nonetheless quite prevalent in the investment world. Overconfidence, herding, loss aversion, anchoring, recency bias are all potential blind spots that can impact the objective decision-making of the professionals on any investment team.

To address these biases we have developed proprietary Portfolio Exercises that are fully integrated into our investment process. The exercises have proven to be a great tool for the group, helping both individuals and the team as a whole deliver better client outcomes. We find that some exercises result in immediate changes to our portfolios, and others stimulate new thinking and ideas. We believe these Portfolio Exercises are important differentiators that set us apart from other investment managers in the industry.

Risk Considerations

There is no assurance that a portfolio will achieve its investment objective. Portfolios are subject to market risk, which is the possibility that the market values of securities owned by the fund will decline and that the value of fund shares may therefore be less than what you paid for them. Market values can change daily due to economic and other events (e.g. natural disasters, health crises, terrorism, conflicts and social unrest) that affect markets, countries, companies or governments. It is difficult to predict the timing, duration, and potential adverse effects (e.g. portfolio liquidity) of events. Accordingly, you can lose money investing in this portfolio. Please be aware that this portfolio may be subject to certain additional risks. In general, **equities securities'** values also fluctuate in response to activities specific to a company. Stocks of **small- and medium-capitalization companies** entail special risks, such as limited product lines, markets and financial resources, and greater market volatility than securities of larger, more established companies. Illiquid securities may be more difficult to sell and value than publicly traded securities (liquidity risk). **Non-diversified portfolios** often invest in a more limited number of issuers. As such, changes in the financial condition or market value of a single issuer may cause greater volatility. **Derivative instruments** may disproportionately increase losses and have a significant impact on performance. They also may be subject to counterparty, liquidity, valuation, correlation and market risks.

A separately managed account may not be appropriate for all investors. Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing. A minimum asset level is required.

For important information about the investment managers, please refer to Form ADV Part 2

This material is a general communication, which is not impartial, is for informational and educational purposes only, not a recommendation to purchase or sell specific securities, or to adopt any particular investment strategy. Information does not address financial objectives, situation or specific needs of individual investors.

DISTRIBUTION

This material is only intended for and will only be distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

MSIM, the asset management division of Morgan Stanley (NYSE: MS), and its affiliates have arrangements in place to market each other's products and services. Each MSIM affiliate is regulated as appropriate in the jurisdiction it operates. MSIM's affiliates are: Eaton Vance Management (International) Limited, Eaton Vance Advisers International Ltd, Calvert Research and Management, Eaton Vance Management, Parametric Portfolio Associates LLC, and Atlanta Capital Management LLC.

This material has been issued by any one or more of the following entities:

EMEA

This material is for Professional Clients/Accredited Investors only.

In the EU, MSIM and Eaton Vance materials are issued by MSIM Fund Management (Ireland) Limited ("FMIL"). FMIL is regulated by the Central Bank of Ireland and is incorporated in Ireland as a private company limited by shares with company registration number 616661 and has its registered address at 24-26 City Quay, Dublin 2, DO2 NY19, Ireland.

Outside the EU, MSIM materials are issued by Morgan Stanley Investment Management Limited (MSIM Ltd) is authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA.

In Switzerland, MSIM materials are issued by Morgan Stanley & Co. International plc, London (Zurich Branch) Authorised and regulated by the Eidgenössische Finanzmarktaufsicht ("FINMA"). Registered Office: Beethovenstrasse 33, 8002 Zurich, Switzerland.

Outside the US and EU, Eaton Vance materials are issued by Eaton Vance Management (International) Limited ("EVMI") 125 Old Broad Street, London, EC2N 1AR, UK, which is authorised and regulated in the United Kingdom by the Financial Conduct Authority.

Italy: MSIM FMIL (Milan Branch), (Sede Secondaria di Milano) Palazzo Serbelloni Corso Venezia, 16 20121 Milano, Italy. The **Netherlands**: MSIM FMIL (Amsterdam Branch), Rembrandt Tower, 11th Floor Amstelplein 1 1096HA, Netherlands. **France**: MSIM FMIL (Paris Branch), 61 rue de Monceau 75008 Paris, France. **Spain**: MSIM FMIL (Madrid Branch), Calle Serrano 55, 28006, Madrid, Spain. **Germany**: MSIM FMIL Frankfurt Branch, Große Gallusstraße 18, 60312 Frankfurt am Main, Germany (Gattung: Zweigniederlassung (FDI) gem. § 53b KWG). **Denmark**: MSIM FMIL (Copenhagen Branch), Gorrissen Federspiel, Axel Towers, Axeltorv2, 1609 Copenhagen V, Denmark.

MIDDLE EAST

Dubai: MSIM Ltd (Representative Office, Unit Precinct 3-7th Floor-Unit 701 and 702, Level 7, Gate Precinct Building 3, Dubai International Financial Centre, Dubai, 506501, United Arab Emirates. Telephone: +97 (0)14 709 7158).

This document is distributed in the Dubai International Financial Centre by Morgan Stanley Investment Management Limited (Representative Office), an entity regulated by the Dubai Financial Services Authority ("DFSA"). It is intended for use by professional clients and market counterparties only. This document is not intended for distribution to retail clients, and retail clients should not act upon the information contained in this document.

This document relates to a financial product which is not subject to any form of regulation or approval by the DFSA. The DFSA has no responsibility for reviewing or verifying any documents in connection with this financial product. Accordingly, the DFSA has not approved this document or any other associated documents nor taken any steps to verify the information set out in this document, and has no responsibility for it. The financial product to which this document relates may be illiquid and/or subject to restrictions on its resale or transfer. Prospective purchasers should conduct their own due diligence on the financial product. If you do not understand the contents of this document, you should consult an authorised financial adviser.

U.S.

NOT FDIC INSURED. OFFER NO BANK GUARANTEE. MAY LOSE VALUE. NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY. NOT A DEPOSIT.

LATIN AMERICA (BRAZIL, CHILE COLOMBIA, MEXICO, PERU, AND URUGUAY)

This material is for use with an institutional investor or a qualified investor only. All information contained herein is confidential and is for the exclusive use and review of the intended addressee, and may not be passed on to any third party. This material is provided for informational purposes only and does not constitute a public offering, solicitation or recommendation to buy or sell for any product, service, security and/or strategy. A decision to invest should only be made after reading the strategy documentation and conducting in-depth and independent due diligence.

ASIA PACIFIC

Hong Kong: This material is disseminated by Morgan Stanley Asia Limited for use in Hong Kong and shall only be made available to "professional investors" as defined under the Securities and Futures Ordinance of Hong Kong (Cap 571). The contents of this material have not been reviewed nor approved by any regulatory authority including the Securities and Futures Commission in Hong Kong. Accordingly, save where an exemption is available under the relevant law, this material shall not be issued, circulated, distributed, directed at, or made available to, the public in Hong Kong. **Singapore**: This material is disseminated by Morgan Stanley Investment Management Company and should not be considered to be the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under section 304 of the Securities and Futures Act, Chapter 289 of Singapore ("SFA"); (ii) to a "relevant person" (which includes an accredited investor) pursuant to section 305 of the SFA, and such distribution is in accordance with the conditions specified in section 305 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the

SFA. This publication has not been reviewed by the Monetary Authority of Singapore. **Australia**: This material is provided by Morgan Stanley Investment Management (Australia) Pty Ltd ABN 22122040037, AFSL No. 314182 and its affiliates and does not constitute an offer of interests. Morgan Stanley Investment Management (Australia) Pty Limited arranges for MSIM affiliates to provide financial services to Australian wholesale clients. Interests will only be offered in circumstances under which no disclosure is required under the Corporations Act 2001 (Cth) (the "Corporations Act"). Any offer of interests will not purport to be an offer of interests in circumstances under which disclosure is required under the Corporations Act and will only be made to persons who qualify as a "wholesale client" (as defined in the Corporations Act). This material will not be lodged with the Australian Securities and Investments Commission.

JAPAN

For professional investors, this material is circulated or distributed for informational purposes only. For those who are not professional investors, this material is provided in relation to Morgan Stanley Investment Management (Japan) Co., Ltd. ("MSIMJ")'s business with respect to discretionary investment management agreements ("IMA") and investment advisory agreements ("IAA"). This is not for the purpose of a recommendation or solicitation of transactions or offers any particular financial instruments. Under an IMA, with respect to management of assets of a client, the client prescribes basic management policies in advance and commissions MSIMJ to make all investment decisions based on an analysis of the value, etc. of the securities, and MSIMJ accepts such commission. The client shall delegate to MSIMJ the authorities necessary for making investment. MSIMJ exercises the delegated authorities based on investment decisions of MSIMJ, and the client shall not make individual instructions. All investment profits and losses belong to the clients; principal is not guaranteed. Please consider the investment objectives and nature of risks before investing. As an investment advisory fee for an IAA or an IMA, the amount of assets subject to the contract multiplied by a certain rate (the upper limit is 2.20% per annum (including tax)) shall be incurred in proportion to the contract period. For some strategies, a contingency fee may be incurred in addition to the fee mentioned above. Indirect charges also may be incurred, such as brokerage commissions for incorporated securities. Since these charges and expenses are different depending on a contract and other factors, MSIMJ cannot present the rates, upper limits, etc. in advance. All clients should read the Documents Provided Prior to the Conclusion of a Contract carefully before executing an agreement. This material is disseminated in Japan by MSIMJ, Registered No. 410 (Director of Kanto Local Finance Bureau (Financial Instruments Firms)), Membership: the Japan Securities Dealers Association, The Investment Trusts Association, Japan, the Japan Investment Advisers Association and the Type II Financial Instruments Firms Association.

morganstanley.com/im

CRC 4369904 Exp. 10/31/2026 10299154_KC_0425 Lit-Link: BEHBIASES1022 LTR