Client Conversations & Primers

Manager Scoring

Manager Scoring: Powering a Holistic Investment Process

Ranking investment strategies by quality to guide manager selection decisions

- The Global Investment Committee (GIC) recommends a **multi-faceted process** to reach client goals.
- Selecting high-quality managers on Morgan Stanley's leading platform can bolster **clients' risk-adjusted returns**.

Source: Morgan Stanley Wealth Management GIC

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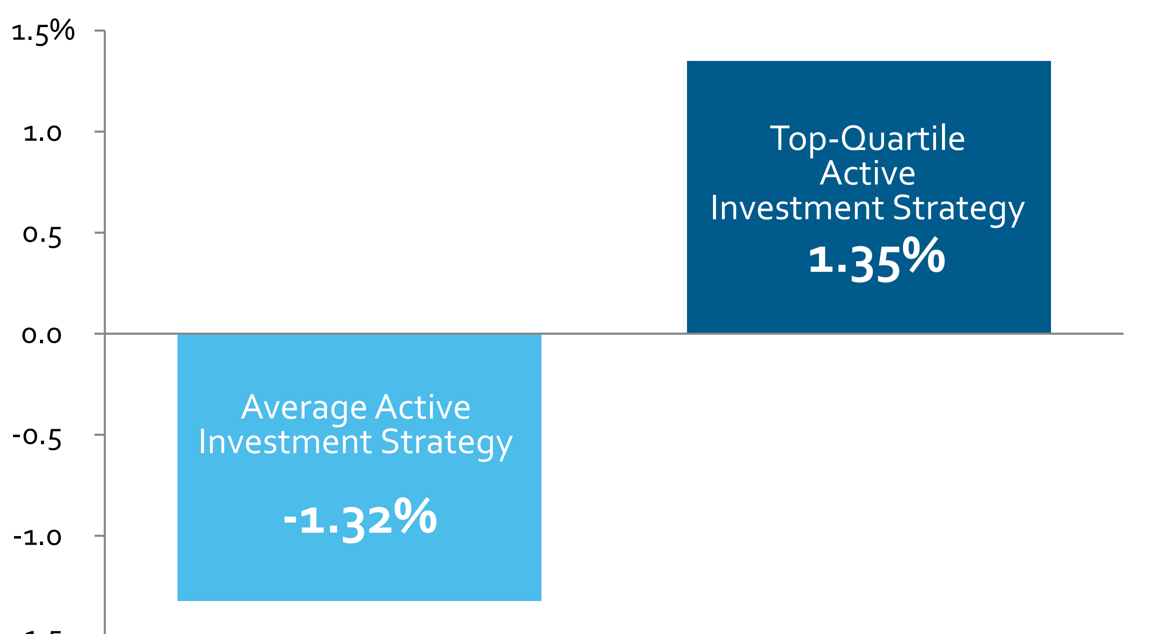
Manager Scoring: Benefits of Identifying Higher-Quality Strategies

Motivated by the demonstrated value of rising above the average

- While the average active investment strategy has **struggled** to deliver excess returns after fees in recent years, top-quartile investment strategies have indeed **outperformed**.
- The **challenge** lies in identifying these higher-quality active investment strategies **ahead of time**.

Active Manager Performance Relative to Indices[1]

10 Years through March 31, 2020



Performance incentives exist for selecting strong active investment strategies

(1) We have based our active manager performance calculations on US equity mutual funds designated with institutional share classes, compared with their relevant Morningstar category benchmark. All performance figures are net of expense ratios. Expense ratio is determined through an annual calculation, where a fund's operating expenses are divided by the average dollar value of its assets under management. The "Top-Quartile Active Manager" category contains the top 25% of funds ranked by excess returns above the Morningstar category benchmark. Source: Calculated by Morgan Stanley Wealth Management Portfolio Analytics, using data provided by Morningstar. (c) 2019 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (i) is proprietary to Morningstar and/or its content providers; (ii) may not be copied or distributed; and (iii) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

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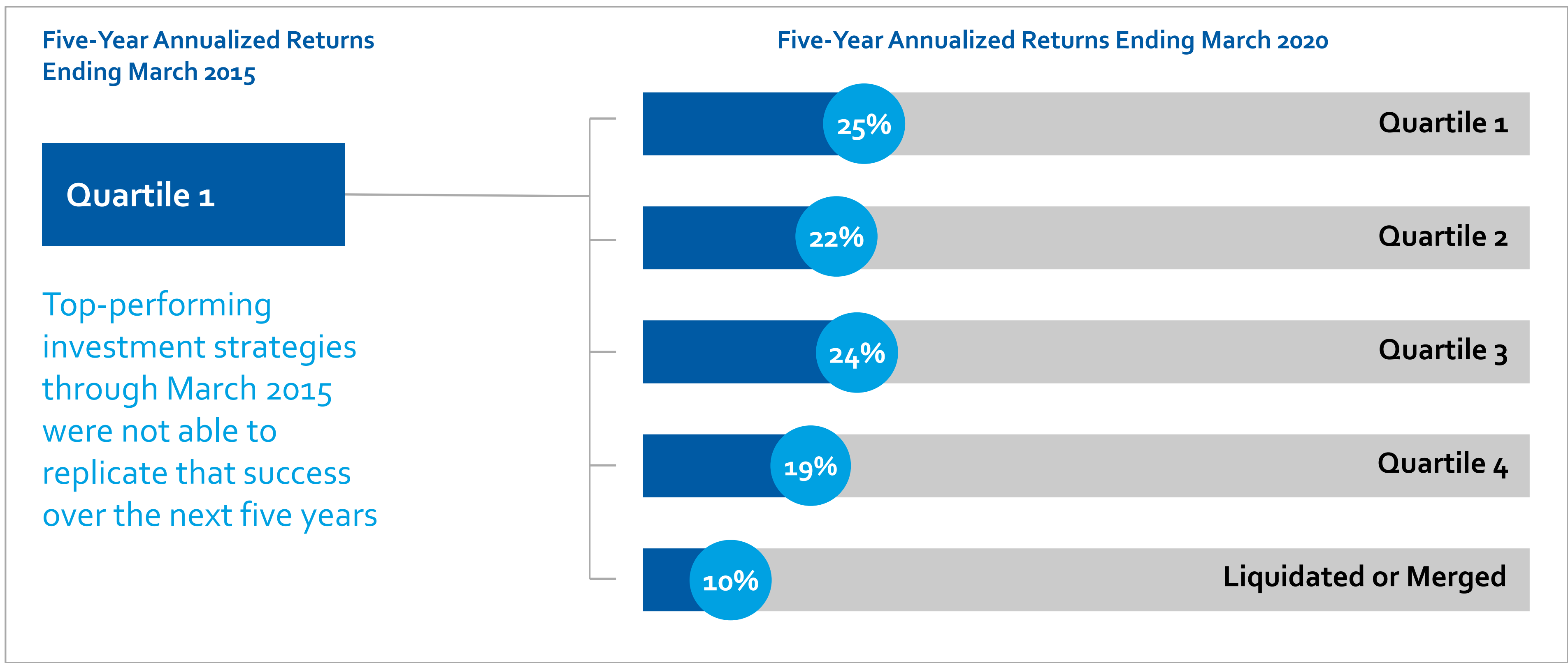
Manager Scoring: Challenges in Identifying Higher-Quality Strategies

Recognizing the insufficiency of managers’ past success as a guide to future outcomes

- While top-quartile investment strategies significantly improve the value proposition for active management, **selecting the past’s top performers has historically fallen short** of providing meaningful insights for the road ahead.

As of March 31, 2020



Source: Calculated by Morgan Stanley Wealth Management Portfolio Analytics, using data provided by Morningstar. (c) 2020 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (i) is proprietary to Morningstar and/or its content providers; (ii) may not be copied or distributed; and (iii) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. The "Top-Quartile Active Manager" category contains the top 25% of funds ranked by excess returns above their relevant Morningstar category benchmark, based on US equity mutual funds designated with institutional share classes. All performance figures are net of expense ratios. Expense ratio is determined through an annual calculation, where a fund's operating expenses are divided by the average dollar value of its assets under management.

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Manager Scoring: Objective and Implementation

Ranking investment strategies by quality to guide manager selection decisions

OBJECTIVE

To **rank investment strategies in each of 53 categories by quality**, according to three critical factors

HALLMARKS

- Leverage the observation that **quality investment processes lead to quality investment results**
- Gain insights on strategies' **prospective performance** by studying **quantitative markers of success**
- Historically have **meaningfully boosted risk-adjusted returns** on a rolling three-year forward basis
- Result in **reasonable annual turnover** of approximately 10 to 15%, promoting consistency

1 Adverse Active Alpha℠

Patented manager selection process that sorts investment strategies by potential prospective profitability and consistency of profitability

2 Risk Score

Proprietary methodology that evaluates investment strategies' effectiveness in managing risk, both in absolute and relative terms

3 Value Score

Proprietary methodology that considers active investment strategies' value proposition relative to their costs

OUTCOMES

Group	Ranking	Guidance
High	Top 40%	Add
Medium	Next 40%	Watch
Low	Bottom 20%	Remove

- Strengthening and enhancing our manager evaluation and selection efforts[1]
- Providing **GIMA**, our Firm-discretionary teams, and Financial Advisors with another perspective on investment strategies' quality

(1) These ranking methodologies have inherent limitations that are discussed in greater detail in the disclosures which should be read and considered carefully.

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Adverse Active Alpha℠: Characteristics

Ranking investment strategies by prospective profitability and consistency

An exclusive approach…

In 2014, Morgan Stanley Wealth Management received a patent grant on the "Adverse Active Alpha" ranking process. We subsequently updated the process in 2016 to include fixed income strategies and in 2018 to include further enhancements.

ADVERSE ACTIVE ALPHA℠ CHARACTERISTICS

Active Management
Significant but controlled returns differentiation from the relevant benchmark

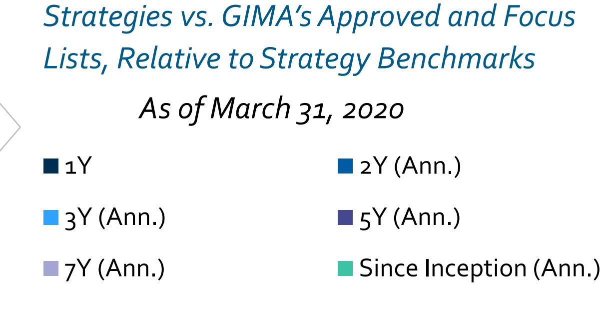
Alpha
Positive rolling alphas, including from security selection, with special focus on "adverse" environments

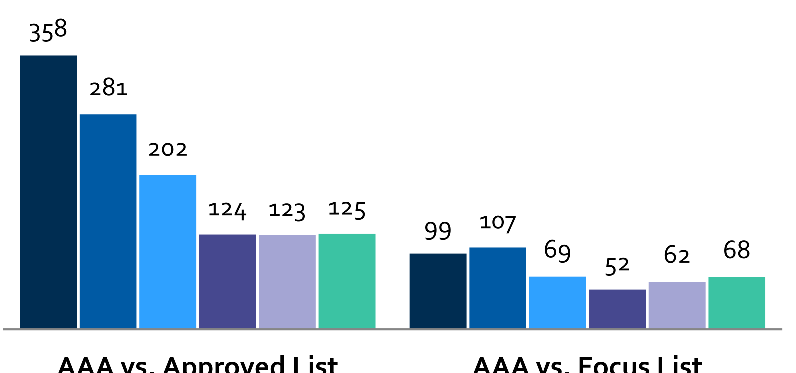
Consistency
Risk-adjusted gauges to assess the "quality" of investment strategies' total and excess returns

…that is compelling in our view

Highly-ranked investment strategies have outperformed benchmarks and peers since implementation, despite the overall challenging environment for active management.

OUTPERFORMANCE OF ADVERSE ACTIVE ALPHA (AAA) STRATEGIES(1)





(1) Does not reflect advisory fees. Performance is relative to each product's appropriate style benchmark. The performance shown is that of all separately managed accounts and mutual funds on the Morgan Stanley platform in the respective categories identified. The purpose of the chart is to show the utility of Adverse Active Alpha methodology in manager selection. The Adverse Active Alpha list incepted on January 1, 2013, and includes Focus List managers that also have received the Adverse Active Alpha designation.

Source: CompSiteIQ, Performance Analytics, Morgan Stanley Wealth Management as of March 31, 2020. From January 1, 2013 to December 31, 2015, the Adverse Active Alpha List includes only equity strategies on the GIMA Focus List that also ranked in the top two quintiles according to the Adverse Active Alpha ranking process. Starting January 1, 2016, the Adverse Active Alpha List has included both equity and fixed income strategies. As of March 31, 2020, the number of products meeting these criteria was approximately 230 out of the approximately 2,300 products covered by GIMA and is subject to change. This data includes SMA performance, gross of advisory fees, and NAV mutual fund performance. Past performance is not a guarantee of future results.

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Adverse Active Alpha℠: Components

Ranking investment strategies by prospective profitability and consistency

MARKER	CALCULATION	WHAT IT MEASURES
INFORMATION RATIOS	Beta-adjusted information ratios, both overall and from security selection	Consistency of excess returns, with a tilt towards rewarding security selection-driven alpha
MONTHLY HIT RATIO	Percentage of months when the manager exceeds the beta-adjusted benchmark return	Consistency of excess returns
SHARPE RATIO	Excess returns over cash, divided by volatility in total returns	Consistency of total returns, relative to total risk (as measured by volatility)
UP-DOWN CAPTURE	Percentage spread between the manager's beta-adjusted up and down capture figures	Consistency of excess returns

Consistency 20%
Alpha 20%
Active Management 60%

MARKER	CALCULATION	WHAT IT MEASURES
ALPHAS (ANN.)	Beta-adjusted alphas, both overall and from security selection	Risk-adjusted performance, with a tilt towards rewarding security selection-driven alpha
PERFORMANCE IN ADVERSE PERIODS	Ranked performance in challenging periods, in excess return terms	Demonstrated ability to handle tough setups for the underlying asset category

MARKER	CALCULATION	WHAT IT MEASURES
ACTIVE MANAGEMENT	$(1 - R^2)$, divided by tracking error	Discipline and consistency in active management

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Adverse Active Alpha℠: Sample Application (Indicative)

Ranking investment strategies by prospective profitability and consistency

ASSET CLASS (CATEGORY)	Large-Cap Growth Equity
MANAGER	Large-Cap Growth Equity (MF)

MARKER	WEIGHT	PERCENTILE IN ASSET CLASS
ACTIVE MANAGEMENT	60%	0.79
ALPHA		
ALPHAS (ANN.)	20%	0.84
PERFORMANCE IN ADVERSE PERIODS		0.85
CONSISTENCY		
INFORMATION RATIOS		0.86
MONTHLY HIT RATIO	20%	0.99
SHARPE RATIO		0.84
UP-DOWN CAPTURE		0.84
	WEIGHTED AVERAGE	0.82
	RE-RANKED	0.92 ●

RANKING PROCESS:

We evaluate each manager versus its peers within each category. For example, this manager, which typically features a concentrated portfolio, ranks near the top quartile by active management score (0.79 percentile).

We compute the percentiles across each factor and then aggregate them through a weighted average (e.g., 60% x 0.79 for the active management score).

We then re-rank the managers according to the weighted average (i.e., by computing a percentile rank based on the relative weighted average within each asset class). We assign a "Green" rating to the top 40% of managers in each asset class. This manager scored quite well, falling in the top decile among its peers..

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Risk Score: Characteristics

Ranking investment strategies by prospective risk management

2 Risk Score

GAUGING THE QUALITY OF INVESTMENT STRATEGIES' RISK MANAGEMENT FRAMEWORKS ...

Complementing Adverse Active Alpha℠ and the Value Score, the Risk Score tracks investment strategies' risk management discipline, looking at both upside and downside potential. We believe that investment strategies' prospective success depends heavily on the consistency and rigor of their risk management processes, and the Risk Score quantitatively assesses this critical dimension of quality.

DOWNSIDE MITIGATION

Minimizing potential disappointments in absolute and relative returns

- Performance in Adverse Periods
- Return-to-Average Drawdown
- Volatility of Volatility

UPSIDE OPPORTUNITY

Preparing for solid upside potential through disciplined active management

- Active Management
- Fees-to-Tracking Error

CONSISTENCY

Delivering positive, consistent risk-adjusted returns

- Sharpe Ratio
- Sortino Ratio
- Up-Down Capture

Source: Morgan Stanley Wealth Management Portfolio Analytics

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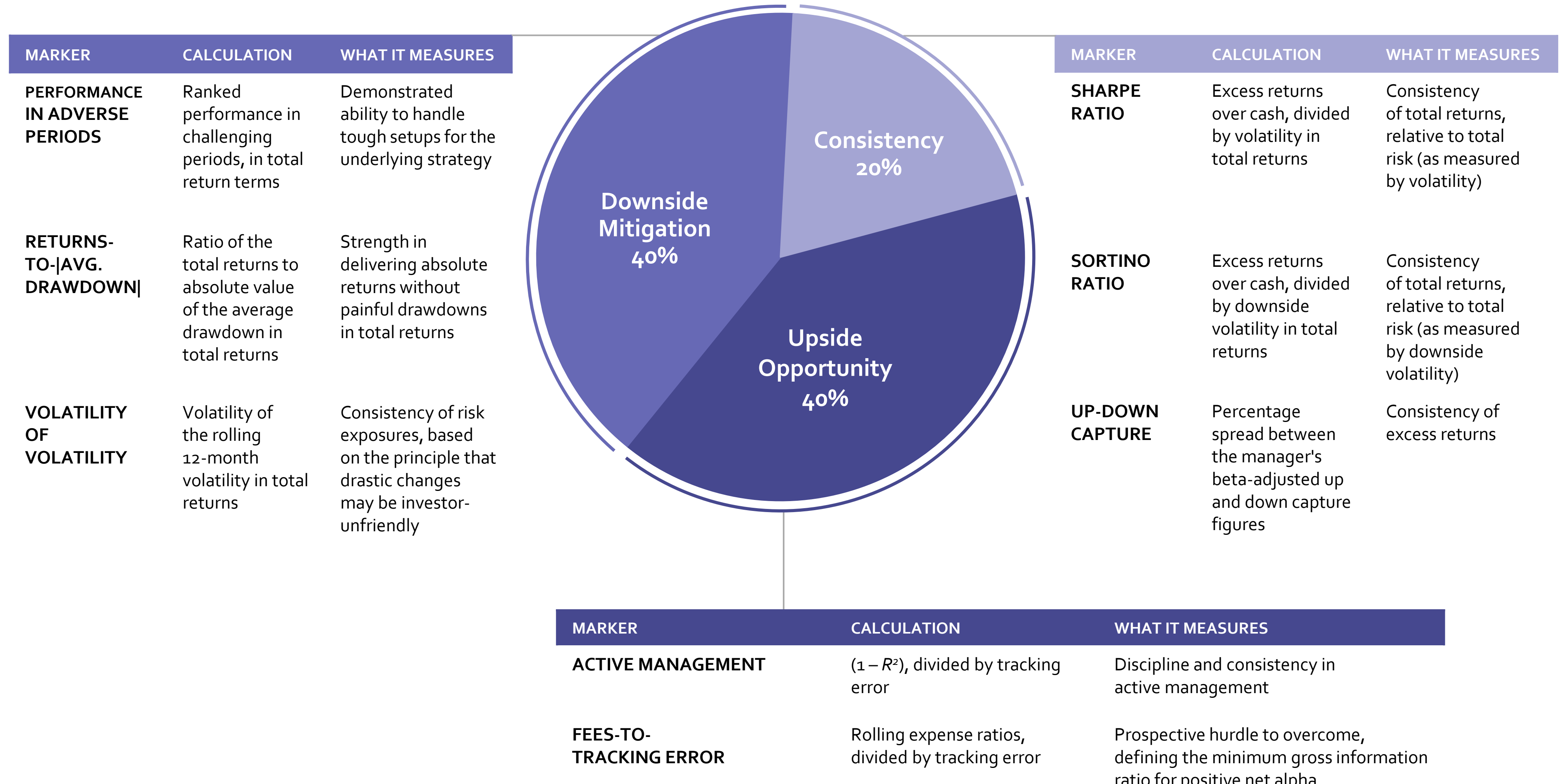
Risk Score: Components

2 Risk Score

Ranking investment strategies by prospective risk management



MARKER	CALCULATION	WHAT IT MEASURES
PERFORMANCE IN ADVERSE PERIODS	Ranked performance in challenging periods, in total return terms	Demonstrated ability to handle tough setups for the underlying strategy
RETURNS-TO-|AVG. DRAWDOWN|	Ratio of the total returns to absolute value of the average drawdown in total returns	Strength in delivering absolute returns without painful drawdowns in total returns
VOLATILITY OF VOLATILITY	Volatility of the rolling 12-month volatility in total returns	Consistency of risk exposures, based on the principle that drastic changes may be investor-unfriendly

MARKER	CALCULATION	WHAT IT MEASURES
SHARPE RATIO	Excess returns over cash, divided by volatility in total returns	Consistency of total returns, relative to total risk (as measured by volatility)
SORTINO RATIO	Excess returns over cash, divided by downside volatility in total returns	Consistency of total returns, relative to total risk (as measured by downside volatility)
UP-DOWN CAPTURE	Percentage spread between the manager's beta-adjusted up and down capture figures	Consistency of excess returns

MARKER	CALCULATION	WHAT IT MEASURES
ACTIVE MANAGEMENT	($1 - R^2$), divided by tracking error	Discipline and consistency in active management
FEES-TO-TRACKING ERROR	Rolling expense ratios, divided by tracking error	Prospective hurdle to overcome, defining the minimum gross information ratio for positive net alpha

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Risk Score: Sample Application (Indicative)

Ranking investment strategies by prospective risk management

ASSET CLASS (CATEGORY)	International Core Equity
MANAGER	International Core Equity (MF)

MARKER	WEIGHT	PERCENTILE IN ASSET CLASS
UPSIDE OPPORTUNITY		
ACTIVE MANAGEMENT	40%	0.85
FEES-TO-TRACKING ERROR		0.39
DOWNSIDE MITIGATION		
PERFORMANCE IN ADVERSE PERIODS	40%	0.94
RETURN-TO-AVERAGE DRAWDOWN		0.87
VOLATILITY OF VOLATILITY		0.54
CONSISTENCY		
SHARPE RATIO	20%	0.87
SORTINO RATIO		0.86
UP-DOWN CAPTURE		0.86
	WEIGHTED AVERAGE	0.77
	RE-RANKED	0.88 ●

RANKING PROCESS:

We evaluate each manager versus its peers within each category. For example, this manager ranks well in terms of Consistency for each of the three subcomponents: Sharpe Ratio, Sortino Ratio, and Up-Down Capture (0.87, 0.86, and 0.86 percentile, respectively).

2

We compute the percentiles across each factor and then aggregate them through a weighted average. For this manager, the weighted-average percentile is 0.77.

We then re-rank the managers according to the weighted average (i.e., by computing a percentile rank based on the relative weighted average within each asset class). We assign a "Green" rating to the top 40% of managers in each asset class. This manager scored well, falling in the top quintile among its peers.

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Value Score: Characteristics

3 Value Score

Ranking investment strategies by prospective "excess value"

A PROPRIETARY METHODOLOGY...

Complementing the patented Adverse Active Alpha℠ and Risk Score tools, Morgan Stanley Wealth Management's Value Score gauges investment strategies' quality by comparing current expense ratios and potential prospective value.

...THAT EVALUATES INVESTMENT STRATEGIES ON A COST-BENEFIT BASIS

We assess investment strategies' "fair value" by studying quantitative markers that have historically driven forward-looking value. We then compare this "fair value" vs. actual expense ratio to compute "excess value." We may then rank investment strategies within a given asset class by "excess value."

ACTIVE MANAGEMENT

Significant but controlled manager differentiation from the relevant benchmark

RISK-ADJUSTED PERFORMANCE

Positive, consistent, "quality" active returns

- Alphas (Ann.)
- Information Ratios
- Monthly Hit Ratio

RISK MANAGEMENT

Mitigating portfolios' risk exposures by monitoring investment strategies' business- and performance-related risks

- Net Flows (Ann.)
- Right-Left Tail Capture
- Up-Down Capture

Source: Morgan Stanley Wealth Management Portfolio Analytics

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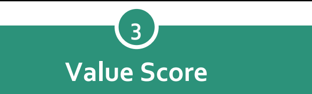
Value Score: Computing "Excess Value"



Ranking investment strategies by prospective "excess value"

- We may estimate **"excess value"** by first computing a **"fair value"** and then comparing it against **actual costs**, as illustrated in this home-buying analogy.

Schools

Neighborhood

Proximity to Transportation

Baseline Value
based on number of acreage, square footage, and beds/baths

"Excess Value"

Actual Cost

"Fair Value" = Actual Cost + "Excess Value"

Source: Morgan Stanley Wealth Management Portfolio Analytics

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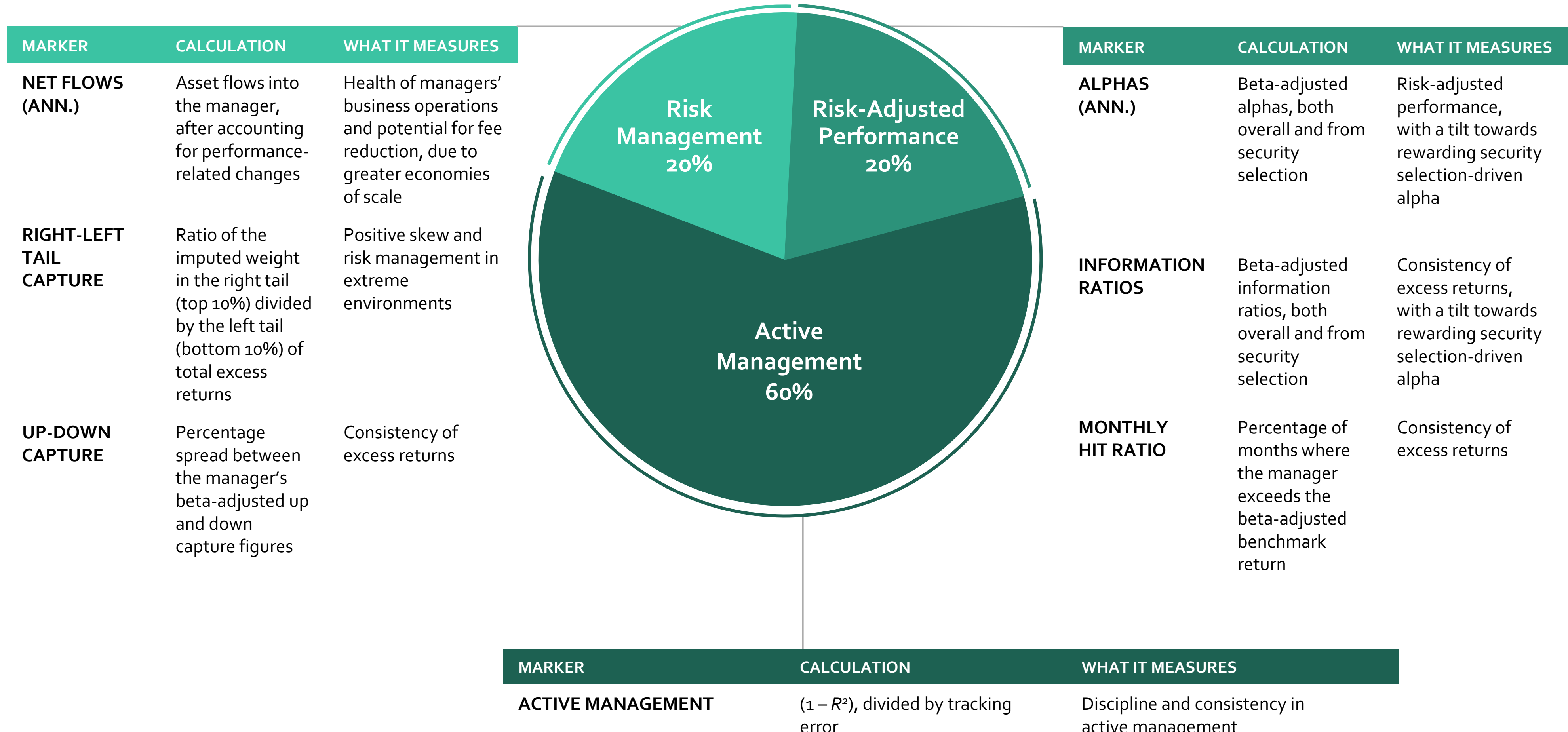
Value Score: Components

3 Value Score

Ranking investment strategies by prospective "excess value"



MARKER	CALCULATION	WHAT IT MEASURES
NET FLOWS (ANN.)	Asset flows into the manager, after accounting for performance-related changes	Health of managers' business operations and potential for fee reduction, due to greater economies of scale
RIGHT-LEFT TAIL CAPTURE	Ratio of the imputed weight in the right tail (top 10%) divided by the left tail (bottom 10%) of total excess returns	Positive skew and risk management in extreme environments
UP-DOWN CAPTURE	Percentage spread between the manager's beta-adjusted up and down capture figures	Consistency of excess returns

MARKER	CALCULATION	WHAT IT MEASURES
ALPHAS (ANN.)	Beta-adjusted alphas, both overall and from security selection	Risk-adjusted performance, with a tilt towards rewarding security selection-driven alpha
INFORMATION RATIOS	Beta-adjusted information ratios, both overall and from security selection	Consistency of excess returns, with a tilt towards rewarding security selection-driven alpha
MONTHLY HIT RATIO	Percentage of months where the manager exceeds the beta-adjusted benchmark return	Consistency of excess returns

MARKER	CALCULATION	WHAT IT MEASURES
ACTIVE MANAGEMENT	$(1 - R^2)$, divided by tracking error	Discipline and consistency in active management

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Value Score: Sample Application (Indicative)

Ranking investment strategies by prospective "excess value"

ASSET CLASS (CATEGORY)	US Mid-Cap Value Equity
MANAGER	Mid-Cap Value (SMA)

MARKER	WEIGHT	PERCENTILE IN ASSET CLASS
ACTIVE MANAGEMENT	60%	0.59
RISK-ADJUSTED PERFORMANCE	20%	
ALPHAS (ANN.)		0.62
INFORMATION RATIOS		0.66
MONTHLY HIT RATIO		0.55
RISK MANAGEMENT	20%	
NET FLOWS (ANN.)		0.93
RIGHT-LEFT TAIL CAPTURE		0.94
UP-DOWN CAPTURE		0.67
	RE-RANKED WEIGHTED AVERAGE	0.64
	"FAIR VALUE" EXPENSE RATIO	0.83%
	LESS ACTUAL EXPENSE RATIO	0.30%
	"EXCESS VALUE" (EV)	0.53%
	PERCENTILE OF "EV" WITHIN ASSET CLASS	0.89

RANKING PROCESS:

1. We measure the percentile rankings of managers' ex-post quantitative markers across a given asset class and compute a weighted average of these percentile rankings.
2. We compute each manager's "fair value" expense ratio by calculating the expense ratio that corresponds to the weighted-average percentile rankings. In this case, the 64th-percentile ranking translates into an expense ratio of 0.83%.
3. We then compare to the manager's actual expense ratio to compute its "excess value"—in this case, 0.53%.
4. Finally, we rank each manager's "excess value" within its asset class, with higher-quality managers rising to the top. We assign a "Green" or "Yes" rating to the top 40% of managers. This particular manager ranks in the 89th percentile.

Source: Morgan Stanley Wealth Management Portfolio Analytics

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Manager Scoring: Enhancing Value-Added in Manager Selection

Complementing and strengthening Morgan Stanley's holistic manager analysis process[1]

Only 1% of products make the Focus List and rank highly according to the three Manager Scoring tools—Adverse Active Alpha℠, the Risk Score, and the Value Score.

STRONG GOVERNANCE

- Over 50 analysts continually review investment managers
- An experienced Investment Committee governs status list decisions
- Extensive library of analyses are made available to Financial Advisors and clients

PROPRIETARY MANAGER SCORING

- Adverse Active Alpha℠ seeks to identify investment strategies that can potentially enhance your portfolio's risk-reward profile
- The Risk Score seeks to evaluate investment strategies' effectiveness in managing risk, in terms of both total and excess returns
- The Value Score seeks to rank investment strategies by their prospective value above expense ratios

(1) The functions of manager analysis and review are only available through advisory accounts.

A majority of investments reviewed and selected by GIMA pay or cause to be paid an ongoing fee to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase such investments. Please see the disclosures at the end of this presentation for more information

Source: Morgan Stanley Wealth Management Portfolio Analytics, Global Investment Manager Analysis

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Global Investment Manager Analysis (GIMA) Focus List, Approved List and Tactical Opportunities List; Watch Policy. GIMA uses two methods to evaluate investment products in applicable advisory programs: **Focus** (and investment products meeting this standard are described as being on the Focus List) and **Approved** (and investment products meeting this standard are described as being on the Approved List). In general, Focus entails a more thorough evaluation of an investment product than Approved. Sometimes an investment product may be evaluated using the Focus List process but then placed on the Approved List instead of the Focus List. Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status). GIMA has a '**Watch**" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved." The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager or fund to address any concerns. Certain investment products on either the Focus List or Approved List may also be recommended for the **Tactical Opportunities List** based in part on tactical opportunities existing at a given time. The investment products on the Tactical Opportunities List change over time. For more information on the Focus List, Approved List, Tactical Opportunities List and Watch processes, please see the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management. Your Financial Advisor or Private Wealth Advisor can also provide upon request a copy of a publication entitled "Manager Selection Process."

The **Global Investment Committee** is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

Adverse Active AlphaSM 2.0 is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be

appropriate for all investors.

The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see *Adverse Active AlphaSM 2.0: Scoring Active Managers According to Potential Alpha* and *Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios*. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

The Global Investment Manager Analysis (GIMA) Services Only Apply to Certain Investment Advisory Programs GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA Status changes even though it may give notice to clients in other programs.

Strategy May Be Available as a Separately Managed Account or Mutual Fund Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account ("SMA") and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program. In most Morgan Stanley Wealth Management investment advisory accounts, fees are deducted quarterly and have a compounding effect on performance. For example, on an advisory account with a 3% annual fee, if the gross annual performance is 6.00%, the compounding effect of the fees will result in a net performance of approximately 3.93% after one year, 1 after three years, and 21.23% after five years. **Conflicts of Interest:** GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS & Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts , and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS & Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account .

Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a "revenue-sharing payment," on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

Overlay Managers or Executing Sub-Managers ("managers") in some of Morgan Stanley's Separately Managed Account ("SMA") programs may affect transactions through broker-dealers other than Morgan Stanley or our affiliates. If your manager trades with another firm, you may be assessed costs by the other firm in addition to Morgan Stanley's fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain managers have historically directed most, if not all, of their trades to outside firms. Information provided by managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/ADV, or contact your Financial Advisor/Private Wealth Advisor.

Consider Your Own Investment Needs: The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this profile as the sole basis for investment decisions. They should consider all relevant information, including their existing portfolio, investment objectives, risk tolerance, liquidity needs and investment time horizon. Such a determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether CGCM is an appropriate program for you.

No obligation to notify – Morgan Stanley Wealth Management has no obligation to notify you when the model portfolios, strategies, or any other information, in this material changes.

Please consider the investment objectives, risks, fees, and charges and expenses of mutual funds, ETFs, closed end funds, unit investment trusts, and variable insurance products carefully before investing. The prospectus contains this and other information about each fund. To obtain a prospectus, contact your Financial Advisor or Private Wealth Advisor or visit the Morgan Stanley website at www.morganstanley.com. Please read it carefully before investing.

An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at $1.00 per share, it is possible to lose money by investing in the fund.

The type of mutual funds and ETFs discussed in this presentation utilizes nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted investment strategies or categories or which seek exposure to the following markets: (1) commodities (e.g., agricultural, energy and metals), currency, precious metals; (2) managed futures; (3) leveraged, inverse or inverse leveraged; (4) bear market, hedging, long-short equity, market neutral; (5) real estate; (6) volatility (seeking exposure to the CBOE VIX Index). Investors should keep in mind that while mutual funds and ETFs may, at times, utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods allowing them to pursue investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."
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KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in **emerging markets and frontier markets**. **Small- and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. In addition, the securities of small- and mid-capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies. The value of **fixed income securities** will fluctuate and, upon a sale, may be worth more or less than their original cost or maturity value. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. **High yield bonds** are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. In the case of **municipal bonds**, income is generally exempt from federal income taxes. Some income may be subject to state and local taxes and to the federal alternative minimum tax. Capital gains, if any, are subject to tax. **Treasury Inflation Protection Securities' (TIPS)** coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments ("ESG")** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors' risk of loss. The risk of loss due to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund's net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases shares of a closed-end fund, shares may have a market price that is above or below NAV. Portfolios that invest a large percentage of assets in only one industry **sector** (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; Risks associated with the operations, personnel, and processes of the manager; and Risks associated with cybersecurity. As a diversified global financial services firm,

Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients , including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. 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These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Composite index results are shown for illustrative purposes and do not represent the performance of a specific investment. Individual funds have specific tax risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum , are distributed by Morgan Stanley Wealth Management and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley Wealth Management or any of its affiliates, (3) are not guaranteed by Morgan Stanley Wealth Management and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Wealth Management is a registered broker-dealer, not a bank. 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Investment products in this category may employ various investment strategies and techniques for both hedging and more speculative purposes such as short -selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. Alternative investments are not appropriate for all investors. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients , including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund. Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements,

hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.
Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias.

Hedge Funds of Funds and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor's goals by the pre-established year or "target date." A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are appropriate only for the risk capital portion of an investor's portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors. **Rebalancing** does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

Tax laws are complex and subject to change. Morgan Stanley Smith Barney LLC ("Morgan Stanley"), its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors do not provide tax or legal advice and are not "fiduciaries" (under ERISA, the Internal Revenue Code or otherwise) with respect to the services or activities described herein except as otherwise provided in writing by Morgan Stanley and/or as described at www.morganstanley.com/disclosures/dol. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a retirement plan or account, and (b) regarding any potential tax, ERISA and related consequences of any investments made under such plan or account.

Annuities and insurance products are offered in conjunction with Morgan Stanley Smith Barney LLC's licensed insurance agency affiliates.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be an appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

This material is not a financial plan and does not create an investment advisory relationship between you and your Morgan Stanley Financial Advisor. We are not your fiduciary either under the Employee Retirement Income Security Act of 1974 (ERISA) or the Internal Revenue Code of 1986, and any information in this report is not intended to form the primary basis for any investment decision by you, or an investment advice or recommendation for either ERISA or Internal Revenue Code purposes. Morgan Stanley Private Wealth Management will only prepare a financial plan at your specific request using Private Wealth Management approved financial planning signature.

We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act in your best interest. We may be paid both by you and by others who compensate us based on what you buy. Our compensation, including that of your Private Wealth Advisor, may vary by product and over time.

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For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

GLOBAL INVESTMENT COMMITTEE (GIC) ASSET ALLOCATION MODELS: The Asset Allocation Models are created by Morgan Stanley Wealth Management's GIC.

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FEES REDUCE THE PERFORMANCE OF ACTUAL ACCOUNTS: None of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, fees) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley's standard advisory fees is available in the Form ADV Part 2, which is available at www.morganstanley.com/adv. The following hypothetical illustrates the compound effect fees have on investment returns: For example, if a portfolio's annual rate of return is 15% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.1% and the five-year return net of fees would be 96.8%. Fees and/or expenses would apply to clients who invest in investments in an account based on these asset allocations, and would reduce clients' returns. The impact of fees and/or expenses can be material.

Variable annuities are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fixed income** asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely

tracked.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.
Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision. **Credit ratings** are subject to change. **Duration**, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some $25 or $1000 **par preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.
Companies paying **dividends** can reduce or cut payouts at any time.

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.
Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.
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