

## Federated Hermes, Inc.

1001 Liberty Avenue  
Pittsburgh, Pennsylvania 15222

## EXECUTIVE SUMMARY

To help you better understand the performance results of third-party investment manager strategies within our Select UMA Program, we are including additional information within manager profiles that may inform your decision to invest in this strategy:

- The performance results displayed in this profile include a composite of Morgan Stanley accounts enrolled in the strategy. These are **unshaded** in the Investment Results and Portfolio Quarterly Returns sections of the profile with the Select UMA label.
- The results also display the performance of the manager's own composite of accounts invested in its version of the investment strategy, prior to the strategy's inception in the Select UMA program. These are shaded in **grey** and labeled Manager.
- If the transition month between the manager's results and the strategy's results occurs in the middle of a quarter, that quarter or year will be shaded **gold** in the Investment Results and Portfolio Quarterly Returns sections of the profile and labeled Transition.

The manager exercises discretion in selecting securities for your account, but differences between the manager's prior gross results and the strategy's ongoing gross results may arise from variations in who executes the strategy or how it is implemented:

- Some managers may deliver a model portfolio to Morgan Stanley, which may ultimately be responsible for executing those investment decisions.
- In some cases, the manager may act as an "executing manager," which means it implements its investment decisions and transactions directly instead of delivering instructions to Morgan Stanley.
- The manager's prior performance results are based on accounts that do not participate in the Select UMA program, with investment and operational differences such as account size and/or level of customization.
- There may be other reasons why the performance results differ from those of individual Select UMA accounts managed in the same or a substantially similar investment strategy. For example, Morgan Stanley may deviate from strategy models when applying client-requested restrictions.

If you have any questions about any of the information included in this profile, please contact your Morgan Stanley team.

Past performance is not a guarantee of future results. Actual individual account results may differ from the performance shown in this profile. There is no guarantee that any investment strategy will achieve its intended results under all market conditions. Do not rely upon this profile as the sole basis for your investment decisions.

For MAPS Third Party Model Portfolios, 'Manager' illustrated performance is that of the Model Portfolio Provider.

## Federated Hermes, Inc.

1001 Liberty Avenue  
Pittsburgh, Pennsylvania 15222

Style: US Mid Cap Growth  
Sub-Style: Conservative Growth  
Firm AUM: \$668.9 billion  
Firm Strategy AUM: \$936.7 million

Year Founded: 1955  
GIMA Status: Approved  
Program Inception Date: 05/29/2009  
Strategy Minimum: \$75,000

### STRATEGY OVERVIEW

Federated Hermes, Inc.'s ("Federated") philosophy is to seek superior risk-adjusted performance using bottom-up stock selection with a disciplined quantitative process. The Optimum Q process analyzes a diverse universe of approximately 400+ domestic stocks daily, using a disciplined bottom-up, fundamental approach. Selections are made using fix fundamental stock variables. Risk control is achieved through the diversification constraints used in portfolio construction. The constraints are determined in the model development process in an effort to enhance compound annual return, while limiting beta and tracking error. Each day Federated's proprietary process analyzes the most recent data for each stock in the Federated Fed Hermes MDT Mid Cap Growth Inst universe, determining the optimum portfolio, subject to diversification constraints. Since stock selection decisions take into account trading costs, trades are generated only to the extent they are expected to be profitable. The investment team examines all decisions generated by the process to verify that they are based on accurate and current information. MDT Advisers is a division of Federated MDTA LLC.

### TARGET PORTFOLIO CHARACTERISTICS

Number of security holdings:	60 to 100
P/E ratio:	Above the S&P 500
Cash level over market cycle:	0 to 2%
Risk (standard deviation):	Above the S&P 500
Average turnover rate:	55 to 85%
Use ADRs:	No
Capitalization:	Medium companies
Eligible Investments:	Individual Stocks

### PORTFOLIO'S EQUITY SECTOR WEIGHTINGS +

Sector	-----12/22-----		06/22
	Federated	Index***	Federated
Energy	5.30	5.04	5.10
Materials	3.30	3.82	3.00
Industrials	15.20	15.97	15.10
Consumer Discretionary	14.80	15.24	14.60
Consumer Staples	4.20	3.03	3.90
Health Care	16.10	17.49	16.70
Financials	6.90	5.86	6.10
Information Technology	28.50	27.49	29.50
Communication Services	4.40	3.75	2.90
Utilities	0.00	0.28	0.00
Miscellaneous	0.00	0.00	0.00
Real Estate/REITs	1.30	2.04	3.10
Cash/Cash Equivalents	0.00	0.00	0.00

### PORTFOLIO STATISTICS

	-----12/22-----		06/22
	Federated	Index***	Federated
Number of security holdings	99	401	100
Dividend Yield	0.9%	0.8%	0.8%
Distribution Rate	—	—	—
Wtd avg P/E ratio <sup>1</sup>	26.57x	21.80x	30.31x
Wtd avg portfolio beta	—	—	—
Mega capitalization +	0.0%	0.0%	0.0%
Large capitalization +	59.8%	75.5%	68.3%
Medium capitalization +	37.5%	24.1%	28.8%
Small capitalization +	2.7%	0.3%	2.9%
Micro capitalization +	0.0%	2.0%	0.0%

### PORTFOLIO'S TOP FIVE SECURITY HOLDINGS

	%
Align Technology, Inc.	3.0
Expedia Group, Inc.	3.0
Zoom Video Communications, Inc.	2.8
Spotify Technology S.A.	2.7
Pegasystems Inc.	2.6

### PORTFOLIO MANAGER DETAILS

Unable to produce graph. Insufficient track record

### MANAGER'S INVESTMENT STRATEGY

- Top-down / portfolio structures based on economic trends  
 Bottom-up / portfolio structure based on individual securities

<sup>1</sup>The P/E used here is calculated by the harmonic mean.

<sup>+</sup>Total may not equal 100% due to rounding.

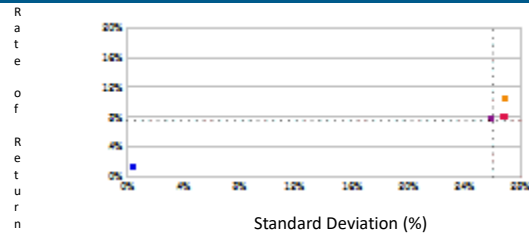
<sup>\*\*\*</sup>Index : Russell Mid Cap Gr

MANAGER'S INVESTMENT PROCESS	RISK CONSIDERATIONS	PORTFOLIO'S ALLOCATION HISTORY (%) <sup>+</sup>															
<ul style="list-style-type: none"> <li>Models are quantitatively based using advanced algorithms and proprietary software</li> <li>The investment process consists of three primary elements: portfolio selection, trading and model construction</li> <li>Portfolio selection and trading occur on a daily basis, while model construction occurs less frequently, approximately once every twenty-four to thirty-six months</li> <li>MDT seeks to control risk by utilizing diversification constraints</li> <li>Trading costs are built into the model to account for potential round-trip cost</li> </ul>	<p>Equity securities prices may fluctuate in response to specific situations for each company, industry, market conditions and general economic environment. Companies paying dividends can reduce or cut payouts at any time. Strategies 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 portfolios that diversify among a broad range of sectors. Investing in securities entails risks, including: The stocks of medium-sized companies are often associated with higher risk than stocks of larger companies, including higher volatility. Investing in smaller/mid-cap companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity. 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. Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. If a strategy expects to hold a concentrated portfolio of a limited number of securities, it should be noted that a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than that of a less concentrated portfolio.</p>	<table border="1"> <thead> <tr> <th></th> <th>12/22</th> <th>09/22</th> <th>06/22</th> <th>03/22</th> </tr> </thead> <tbody> <tr> <td>U.S. Stocks</td> <td>98</td> <td>0</td> <td>97</td> <td>98</td> </tr> <tr> <td>Cash/Cash Equivalents</td> <td>2</td> <td>0</td> <td>3</td> <td>2</td> </tr> </tbody> </table>		12/22	09/22	06/22	03/22	U.S. Stocks	98	0	97	98	Cash/Cash Equivalents	2	0	3	2
	12/22	09/22	06/22	03/22													
U.S. Stocks	98	0	97	98													
Cash/Cash Equivalents	2	0	3	2													
<p><b>% PROCESS BASED ON</b></p> <ul style="list-style-type: none"> <li>0 Asset allocation - cash vs. stock</li> <li>0 Industry or sector weighting</li> <li>100 Stock Selection</li> </ul>																	

See important notes and disclosures pages for a discussion of the sources of the performance data used to calculate the performance results and related analyses shown above.

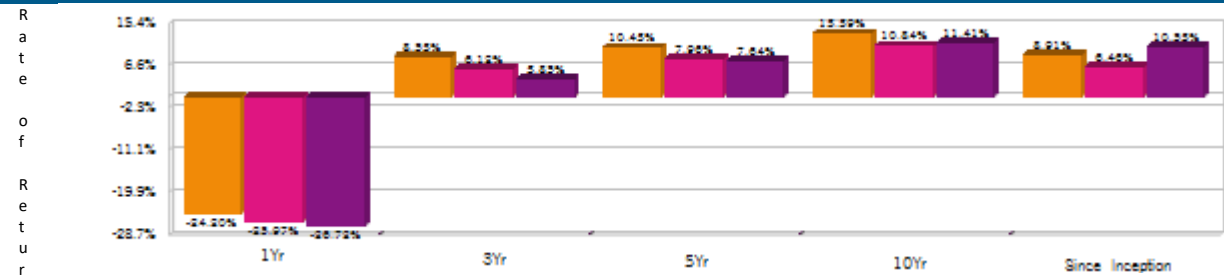
Morgan Stanley Composite Start Date: 01/2007<sup>3</sup>  
 Strategy Inception Date: 08/2000<sup>3</sup>

### RISK/RETURN ANALYSIS<sup>2</sup> - 5 YEARS ENDING 12/31/22



	STD	ROR
Federated (Gross)	27.01	10.43
Federated (Net)	26.92	7.96
Primary Benchmark	26.02	7.64
Risk-free Benchmark	0.54	1.24

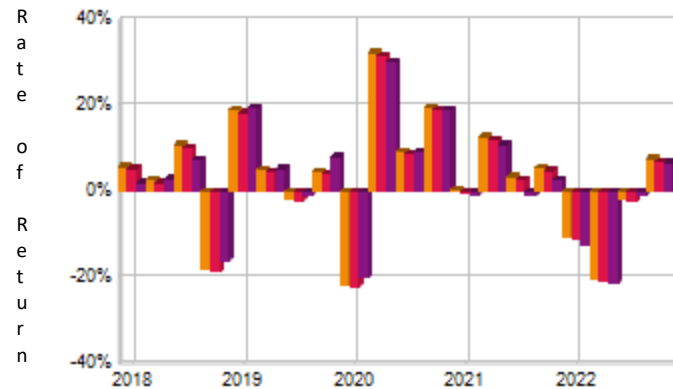
### AVERAGE ANNUAL TOTAL RETURN (%) -



### INVESTMENT RESULTS<sup>2</sup>

	Annual Rates of Return (%)										10 Year - Ending 12/31/22		
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Inc. Incpt.	Annual	Std. Dev.
Federated (Gross)	40.87	12.57	-3.92	10.97	26.57	-0.82	29.51	36.14	23.89	-24.20	8.91	13.39	20.21
Federated (Net)	37.78	9.98	-6.10	8.38	23.76	-3.11	26.67	33.21	21.18	-25.97	6.46	10.84	20.14
Primary Benchmark	35.76	11.92	-0.20	7.32	25.27	-4.75	35.47	35.59	12.73	-26.72	10.53	11.41	19.16

### RISK VOLATILITY (%)<sup>2</sup>



	Number Of	Up Qtrs.	Down Qtrs.
Federated (Gross)		14	6
Federated (Net)		13	7
Primary Benchmark		12	8

### PORTFOLIO'S QUARTERLY RETURNS (%)

	Quarter1		Quarter2		Quarter3		Quarter4	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
2013	11.29	10.68	3.86	3.27	9.70	9.11	11.10	10.48
2014	2.06	1.45	3.09	2.50	-0.18	-0.76	7.18	6.58
2015	3.25	2.64	-1.17	-1.74	-7.45	-7.98	1.73	1.17
2016	1.31	0.67	-5.03	-5.59	9.71	9.12	5.13	4.50
2017	8.50	7.90	1.06	0.49	5.81	5.21	9.09	8.49
2018	5.95	5.38	2.78	2.18	11.04	10.41	-17.98	-18.51
2019	19.17	18.55	5.27	4.68	-1.49	-2.04	4.80	4.19
2020	-21.59	-22.04	32.50	31.84	9.44	8.86	19.74	19.05
2021	0.43	-0.15	12.83	12.22	3.53	2.96	5.60	5.04
2022	-10.38	-10.97	-20.13	-20.65	-1.65	-2.16	7.68	7.10

### PORTFOLIO'S RISK STATISTICS - PERIODS ENDING 12/31/22<sup>1,2</sup>

	3 Year	5 Year
Standard Deviation	31.13%	27.01%
Standard Deviation of Primary Benchmark	30.16%	26.02%
Sharpe Ratio	0.25	0.34
Sharpe Ratio of Primary Benchmark	0.10	0.25
Alpha	4.61%	2.62%
Beta	1.03	1.03
Downside Risk	1.11%	2.04%
R-Squared	0.99	0.98
Tracking Error	3.22%	4.05%
Information Ratio	1.45	0.69

0 ■ Manager ■ Transition □ Select UMA

- Statistics are calculated using gross of fee performance only.
- Russell Mid Cap Gr was used as the Primary Benchmark, the 90-Day T-Bills Index as the Risk-free Benchmark
- For more information on these dates please see the Glossary of Terms section

### PORTFOLIO DIVERSIFICATION<sup>2</sup> - R<sup>2</sup>(10 YEARS ENDING 12/22)+

Federated vs. Primary Benchmark	R <sup>2</sup>	0.95
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+Statistics are calculated using gross of fee performance only.

**IMPORTANT NOTES AND DISCLOSURES****COMPOSITE DISCLOSURES**

**The disclosures provided below apply to performance information in this profile, if any. Past performance is not a guarantee of future results. Actual individual account results may differ from the performance shown in this profile. There is no guarantee that this investment strategy will achieve its intended results under all market conditions. Do not rely upon this profile as the sole basis for your investment decisions.**

Performance results in this profile are calculated assuming reinvestment of dividends and income. Returns for more than one calendar year are annualized and based on quarterly data. Returns for periods of less than a calendar year show the total return for the period and are not annualized. No representation is being made that any portfolio will or is likely to achieve profits or losses similar to those shown. Returns will fluctuate and an investment upon redemption may be worth more or less than its original value. Performance shown does not reflect the impact of fees and expenses of the underlying mutual fund and ETFs, as applicable.

**Sources of Performance Results and Other Data:** The performance data and certain other information for this strategy (including the data on page 1 of this profile) may include one or more of the following: (i) the performance results of a composite of Morgan Stanley accounts managed by the third party investment manager, (ii) the performance results for accounts and investment products managed by the third party investment manager, in the same or a substantially similar investment strategy outside of the applicable Morgan Stanley program, and/or (iii) in the case of Model Portfolio Strategies, the Model Portfolio Provider's results in managing accounts outside of the Morgan Stanley Select UMA program prior to Model Portfolio Strategy's inception in the Morgan Stanley Select UMA program. For periods through June 2012, the Fiduciary Services program operated through two channels – the Morgan Stanley channel and the Smith Barney channel and any performance and other data relating to Fiduciary Services accounts shown here for these periods is calculated using accounts in only one of these channels.) Please note that the Fiduciary Services program was closed on January 2, 2018. Although the Fiduciary Services and Select UMA programs are both Morgan Stanley managed account programs, the performance results and other features of similar investment strategies in the two programs may differ due to investment and operational differences. Performance in one program is not indicative of potential performance in the other. For example, the individual investment strategies in Select UMA program accounts may contain fewer securities, which would lead to a more concentrated portfolio. The automatic rebalancing, wash sale loss and tax harvesting features of the Select UMA program, which are not available in Fiduciary Services, also could cause differences in performance. In addition, any performance results included in this profile that are based on a third party investment manager's accounts that are not part of the Morgan Stanley program accounts or institutional accounts that are part of the Model Portfolio strategy may differ due to investment and operational differences as well. As such, performance results of the third party investment manager's composites and the third party Model Portfolio Strategies may differ from those of Select UMA accounts managed in the same or a substantially similar investment strategy. For example, in the case of Model Portfolio Strategies, Morgan Stanley, as the investment manager, may deviate from the Third Party Model Portfolios.

**Manager Performance:**

Federated Hermes, Inc.'s ("Federated") Fed Hermes MDT Mid Cap Growth Inst performance prior 1/1/2007 represents a composite of all fully discretionary fee-paying institutional Mid Cap Growth equity accounts managed by Federated. The composite was asset-weighted and consisted of 1 account with a market value of \$0.42 million as of 9/30/2006. Performance subsequent to 9/30/2006 represents a composite of all fully discretionary, fee-paying Mid Cap Growth wrap accounts managed by Federated. The composite is asset-weighted and consisted of 24 fee paying (not in Morgan Stanley Fiduciary Services program) accounts with a market value of \$10.6 million as of 12/31/22.

**Morgan Stanley Performance:**

The composite consists of **127** account(s) with a market value of **\$62.0 million** as of **12/31/2022**. In this profile, the performance from January 1, 2007 through June 30, 2012 consists of accounts managed by the investment manager in this strategy in either the Morgan Stanley or the Smith Barney form of the Fiduciary Services program. From July 1, 2012 through December 31, 2015, performance consists of all Fiduciary Services (FS) accounts managed by the investment manager in this strategy, subject to any other limitations stated in this profile. From January 1, 2016, performance consists of the performance of all FS accounts (as described in the previous sentence) as well as the performance of all single style Select UMA accounts managed by the investment manager in this strategy, subject to any other limitations stated in this profile. Performance composites calculated by Morgan Stanley include all fee-paying portfolios with no investment restrictions. New accounts are included beginning with the second full calendar month of performance. Terminated accounts are removed in the month in which they terminate (but prior performance of terminated accounts is retained). Performance is calculated on a total return basis and by asset weighting the individual portfolio returns using the beginning of period values.

**Gross Performance:** Federated's gross results do not reflect a deduction of any investment advisory fees or program fees, charged by Federated or Morgan Stanley, but are net of commissions charged on securities transactions.

**Net Performance for all Periods:** Net performance results reflect a deduction from gross performance of two components: 0.50% maximum quarterly (2.0% maximum annual) MS Advisory Fee plus the quarterly SMA Manager Fee currently charged by this investment manager to clients for managing their assets in this strategy in the Select UMA program. The SMA Manager Fees range from 0% to 0.1875% per Quarter (0% to 0.75% per year) and may differ from manager to manager, and from investment returns details in this report. Historical net fees reflect the maximum Advisory Fee as of October 1, 2018. Morgan Stanley program fees are calculated quarterly for the performance illustrated in this profile and have a compounding effect on performance. The Morgan Stanley program fee, which differs among programs and clients, is described in the applicable Morgan Stanley ADV brochure, which is available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV) or on request from your Financial Advisor or Private Wealth Advisor.

**Focus List, Approved List, and Watch Status:**

Global Investment Manager Analysis ("GIMA") uses two methods to evaluate investment products in applicable advisory programs. In general, strategies that have passed a more thorough evaluation may be placed on the "Focus List", while strategies that have passed through a different and less comprehensive evaluation process may be placed on the "Approved List". 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 evaluation 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 to address any concerns. GIMA may, but is not obligated to, note the Watch status in this report with a "W" or "Watch" on the cover page.

For more information on the Focus List, Approved List, and Watch processes, please see the applicable Morgan Stanley ADV brochure ([www.ms.com/adv](http://www.ms.com/adv)). Your Financial Advisor or Private Wealth Advisor can provide on request a copy of a paper entitled "GIMA: At A Glance".

#### ADDITIONAL DISCLOSURES

Actual account holdings, performance and other data will vary depending on the size of an account, cash flows within an account, and restrictions on an account. Holdings are subject to change daily. The information in this profile is not a recommendation to buy, hold or sell securities.

Actual portfolio statistics may vary from target portfolio characteristics.

If this strategy includes eligible mutual funds or exchange traded funds in addition to individual stocks or bonds, the portfolio characteristics within this profile reflect the funds' underlying holdings.

The Top Five Portfolio Holdings listed herein are provided for informational purposes only and should not be deemed to be a recommendation to purchase or sell the securities mentioned. Portfolio characteristics in this profile are based on an allocation weight in the strategy model. There are no guarantees that any of the securities mentioned will be held in a client's account. It should not be assumed that the securities transactions or holdings discussed were or will prove to be profitable.

The Model Portfolio Provider or Investment Manager may use the same or substantially similar investment strategies, and may hold similar portfolios of investments, in other portfolios or products it manages (including mutual funds). These may be available at Morgan Stanley or elsewhere, and may cost an investor more or less than this strategy in Morgan Stanley's Select UMA program.

Generally, investment advisory accounts are subject to an annual asset-based fee (the "Fee") which is payable monthly in advance (some account types may be billed differently). In general, the Fee covers Morgan Stanley investment advisory services, custody of securities with Morgan Stanley, trade execution with or through Morgan Stanley or its affiliates, as well as compensation to any Morgan Stanley Financial Advisor. In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable. If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV).

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may affect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instance, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees.

Those costs will be included in the net price of the security, not separately.

The portfolio may, at times, invest in exchange-traded funds (ETFs), which are a form of equity security in seeking to maintain continued full exposure to the broad equity market.

**Please consider the investment objectives, risks, charges and expenses of exchange traded fund (ETF) carefully before investing. The prospectus contains this and other information about the fund(s). To obtain a prospectus, contact your financial advisor. Please read the prospectus carefully before investing.**

Morgan Stanley investment advisory programs may require a minimum asset level and, depending on your specific investment objectives and financial position, may not be suitable for you. Investment advisory program accounts are opened pursuant to a written client agreement.

Consulting Group's unified managed account program, Select UMA, allows Financial Advisors to combine separately managed accounts (SMAs), mutual funds and exchange-traded funds (ETFs) within a single investment advisory account for clients.

E\*Trade Capital Management LLC and E\*Trade Securities LLC are affiliates of Morgan Stanley Smith Barney LLC ("MSSB"). Certain SMA strategies, ETFs and Mutual Funds that are sponsored, managed or sub advised by, or receive other services from, MSSB or our affiliates, including but not limited to Morgan Stanley Investment Management ("MSIM") and Eaton Vance Management ("EVM"), Boston Management and Research, Calvert Research and Management, Atlanta Capital Management Company and Parametric Portfolio Associates, may be included in a client's account. Morgan Stanley Global Investment Manager Analysis ("GIMA") evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs. Please see the applicable Form ADV, which can be accessed at [www.morganstanley.com/adv](http://www.morganstanley.com/adv), for information about affiliated investment products that are not reviewed or evaluated by GIMA, as well as additional disclosures and conflicts of interest applicable to affiliated products, that could be included in a strategy.

Diversification does not guarantee a profit or protect against a loss.

#### *No obligation to notify*

Morgan Stanley has no obligation to notify you when information in this profile changes.

#### *Sources of information*

Material in this profile has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness or timeliness. Third party data providers make no warranties or representations relating to the accuracy, completeness or timeliness of the data they provide and are not liable for any damages relating to this data.

#### *No tax advice*

Morgan Stanley and its affiliates do not render advice on legal, tax and/or tax accounting matters to clients. Each client should consult his/her personal tax and/or legal advisor to learn about any potential tax or other implications that may result from acting on a particular recommendation.

#### Not an ERISA fiduciary

Morgan Stanley is not acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended, or under section 4975 of the Internal Revenue Code of 1986, as amended, in providing the information in this profile.

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Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain sub-managers have historically directed most, if not all, of their trades to outside firms. Information provided by sub-managers concerning trade execution away from Morgan Stanley is summarized at: [www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf](http://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](http://www.morganstanley.com/ADV), or contact your Financial Advisor/Private Wealth Advisor.

**Please note that the primary benchmark "since inception" performance is as of the benchmark inception date, and the strategy "since inception" performance is as of the strategy inception date.**

## INDEX DESCRIPTIONS

### 90-Day T-Bills

The 90-Day Treasury Bill is a short-term obligation issued by the United States government. T-bills are purchased at a discount to the full face value, and the investor receives the full value when they mature. The difference of discount is the interest earned. T-bills are issued in denominations of \$10,000 auction and \$1,000 increments thereafter.

### Russell Mid Cap Gr

The Russell Mid Cap Growth Index contains Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth Index.

### S&P 500

The S&P 500 Total Return has been widely regarded as the best single gauge of the large cap U.S. equities market since the index was first published in 1957. The index has over \$5.58 trillion benchmarked, with index assets comprising approximately \$1.31 trillion of this total. The index includes 500 leading companies in leading industries of the U.S. economy, capturing 75% coverage of U.S. equities. This index includes dividend reinvestment.

**Indices are unmanaged and have no expenses. You cannot invest directly in an index. Depending on your account holdings and investment objectives, indices included may not be an appropriate measure for comparison purposes and are presented for illustration only. The strategy shown does not necessarily seek to track the index, may not be restricted to securities in the index and may be more volatile than the index. The benchmark presented may differ from the benchmark assigned by the manager.**

## GLOSSARY OF TERMS

**Alpha** is a mathematical estimate of risk-adjusted return expected from a portfolio above and beyond the benchmark return at any point in time.

**American Depositary Receipts (ADRs)** are receipts for shares of a foreign-based corporation held in the vault of a U.S. bank.

**Average Portfolio Beta** is a measure of the sensitivity of a benchmark or portfolio's rates of return to changes against a market return. The market return is the S&P 500 Index. It is the coefficient measuring a stock or a portfolio's relative volatility.

**Beta** is a measure of the sensitivity of a portfolio's rates of return to changes in the market return. It is the coefficient measuring a stock or a portfolio's relative volatility.

**Bottom-Up Stock Selection** Emphasis primarily on individual stock selection. Considerations of economic and industry factors are of secondary importance in the investment decision-making process.

**Capitalization** is defined as the following: Mega (Above \$100 billion), Large (\$12 to \$100 billion), Medium (\$2.5 - \$12 billion), Small (\$.50 - \$2.5 billion) and Micro (below \$.50 billion).

**Distribution Rate** is defined as the most recent distribution paid, annualized, and then divided by the current market price. Distribution rate may consist of investment income, short-term capital gains, long-term capital gains, and /or returns of capital.

**Dividend** a portion of a company's profit paid to common and preferred shareholders.

**Dividend Yield** annual dividend per share divided by price per share. Dividend Yield for the portfolio is a weighted average of the results for the individual stocks in the portfolio.

**Downside Risk** is a measure of the risk associated with achieving a specific target return. This statistic separates portfolio volatility into downside risk and upside uncertainty. The downside considers all returns below the target return, while the upside considers all returns equal to or above the target return.

**Duration** is a measure of price sensitivity expressed in years.

**High Grade Corporate Bonds** corporate bonds from issuers with credit ratings of AA or AAA.

**Information Ratio** is a measure of the investment manager's skill to add active value against a given benchmark relative to how stable that active return has been. Essentially, the information ratio explains how significant a manager's alpha is. Therefore, the higher the information ratio, the more significant the alpha.

**Investment Grade Bonds** are those rated by Standard & Poor's AAA (highest rated), AA, A or BBB (or equivalent rating by other rating agencies or, in the case of securities not rated, by the investment manager).

**Morgan Stanley Composite Start Date** is the date when Morgan Stanley began to calculate the composite performance of the strategy using qualifying advisory accounts.

**Program Inception Date** is the date that the strategy was launched in the Select UMA program.

**Price/Book Ratio (P/B)** weighted average of the stocks' price divided by book value per share. Book value per share is defined as common equity, including intangibles, divided by shares outstanding times the adjustment factor.

**Price/Cash Flow Ratio** a ratio used to compare a company's market value to its cash flow. It is calculated by dividing the company's market cap by the company' operating cash flow in the most recent fiscal year (or the most recent four fiscal quarters); or, equivalently, divide the per-share stock price by the per-share operating cash flow.

**Price/Earnings Ratio (P/E Ratio)** shows the multiple of earnings at which a stock sells. Determined by dividing current stock price by current earnings per share (adjusted for stock splits). Earnings per share for the P/E ratio are determined by dividing earnings for past 12 months by the number of common shares outstanding. The P/E ratio shown here is calculated by the harmonic mean.

**Price/Sales Ratio** determined by dividing current stock price by revenue per share (adjusted for stock splits). Revenue per share for the P/S ratio is determined by dividing revenue for past 12 months by number of shares outstanding.

**R2 (R-Squared)/Portfolio Diversification** indicates the proportion of a security's total variance that is benchmark-related or is explained by variations in the benchmark.

**Sharpe Ratio** measures the efficiency, or excess return per unit of volatility, of a manager's returns. It evaluates managers' performance on a volatility-adjusted basis.

**Standard Deviation** is a statistical measure of historical variability or spread of returns around a mathematical average return that was produced by the investment manager over a given measurement period. The higher the standard deviation, the greater the variability in the investment manager's returns relative to its average return.

**Strategy Inception Date** is the date that the Manager started to calculate the performance of the strategy.

**Top-Down/Economic Analysis** Emphasis primarily on macroeconomic trends as opposed to bottom-up stock selection.

**Tracking Error** represents the standard deviation of the difference between the performance of the investment strategy and the benchmark. This provides a historical measure of the variability of the investment strategy's returns relative to its benchmark.

**U.S. Treasury Bonds** a marketable, fixed interest U.S. government debt security with a maturity of more than 10 years. Treasury bonds make interest payments semi-annually and the income that holders receive is only taxed at the federal level.

**Volatility** a measure of risk based on the standard deviation of the asset return. Volatility is a variable that appears in option pricing formulas, where it denotes the volatility of the underlying asset return from now to the expiration of the option. There are volatility indexes. Such as a scale of 1-9; a higher rating means higher risk.

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